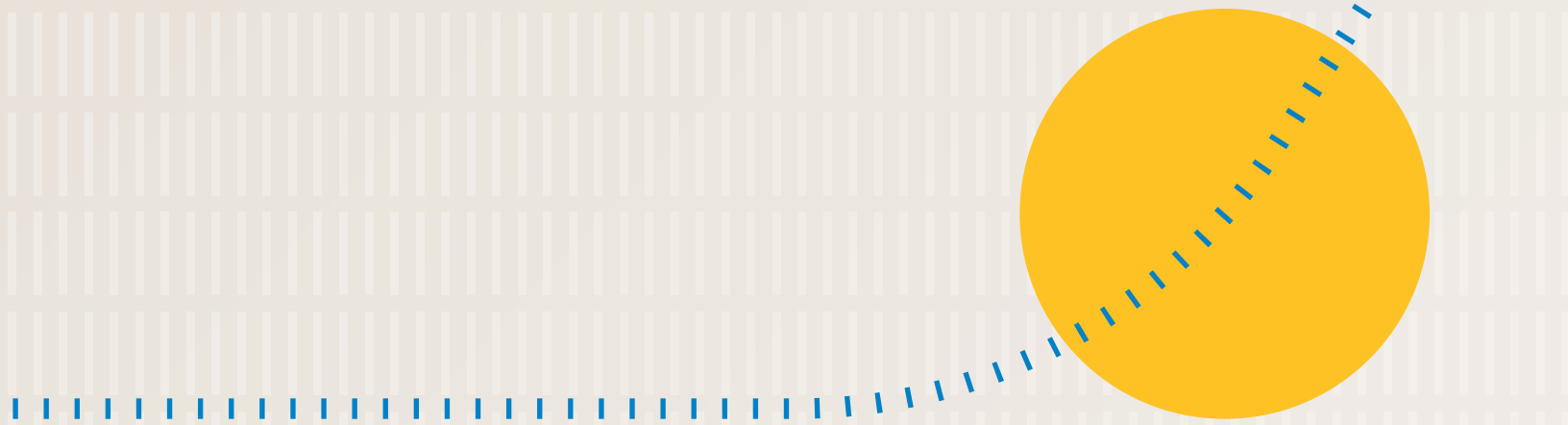
CAS Monograph Series | No. 17

Foundations of Actuarial Professionalism

Principles and Practice Across Jurisdictions

Joshua Taub, FCAS



Casualty Actuarial Society

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Casualty Actuarial Society

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Foundations of Actuarial Professionalism
By Joshua Taub, FCAS

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Preface

Professionalism is the cornerstone upon which the public's trust in actuaries is built, yet it is a subject that many actuaries absorb gradually rather than study systematically, picking up concepts from a professionalism course here, a continuing education session there.

The purpose of this work is to present a unified treatment of actuarial professionalism, bringing together the foundational concepts, organizational structures, and regulatory frameworks that govern the conduct of actuaries. After an opening chapter on what professionalism means in the actuarial context and why it matters, the book is organized in three parts.

The first part, "The Foundation," surveys the institutional landscape, describing the organizations that credential actuaries, establish codes of conduct and professional standards, and administer disciplinary procedures. It then turns to the regulatory framework, maintained both by the profession itself and by government, within which actuaries work.

The second part, "The Four Pillars," examines the four pillars of the professionalism framework: the qualification frameworks that establish why an actuary's professional judgment can be relied upon, codes of conduct that define ethical boundaries, standards of practice that guide how actuarial work is performed, and the disciplinary process through which complaints are handled and sanctions imposed.

The third part, "Beyond the Four Pillars," looks past the binding requirements to nonbinding guidance, such as practice notes, and to emerging issues facing the profession: large language models and AI agents in actuarial work, bias and fairness in actuarial models, and the growing number of actuaries working in nontraditional roles where the boundary of professional obligations is less clear.

This monograph is intended for actuarial candidates learning about professionalism requirements for the first time, newly credentialed actuaries seeking a deeper understanding of their professional obligations, and experienced practitioners who wish

to have a comprehensive reference on professionalism topics. It is my hope that this work will serve as both an educational resource and a practical guide for navigating the professional responsibilities that accompany the actuarial credential.

Important disclaimer

This monograph presents the author's interpretation and summary of actuarial professionalism requirements. It is intended for educational purposes only and does not constitute official guidance from any actuarial organization. The authoritative sources for professional requirements are the official documents of the relevant actuarial organizations (codes of conduct, standards of practice, qualification standards, and related guidance) as well as applicable laws and regulations. Professional standards evolve over time, and readers should always consult the current versions of official documents for authoritative and up-to-date information. This text does not provide legal advice, and actuaries facing specific professional conduct questions should consult the appropriate resources provided by their actuarial organizations.

Acknowledgments

This monograph is a product of the CAS Professionalism Education Working Group. The Working Group's mission of advancing professionalism education has been the driving force behind this project, and I am grateful to have worked alongside its members over many years and for everything I have learned from them about actuarial professionalism.

I thank the early reviewers who provided feedback on drafts of the monograph: David Cummings, Ed Lee, Brian Jackson, Yvonne Palm, Morgan Bugbee, Mallika Bender, Ralph Blanchard, Chris Smerald, Rade Musulin, David Minty, Maryellen Coggins, Pat Teufel, Janice Young, Ken Williams, and Larry Stern. Their feedback helped strengthen the clarity and accuracy of the presentation. The monograph would not have been possible without the collective knowledge and experience of the Working Group and these reviewers. All final wording and any remaining errors or omissions are my own.

Finally, I thank the Casualty Actuarial Society for its commitment to professionalism education, and the CAS Monograph Editorial Board for supporting the development of this monograph as part of the CAS Monograph Series.

AI Use Disclosure

I used generative AI tools in preparing this monograph. They served two purposes. The first was drafting and editing: producing first drafts of sections from my outlines and notes, suggesting alternative wording and structure, checking the manuscript for internal consistency and redundancy, and generating the code behind the figures and tables. The second was research assistance: locating primary sources and summarizing lengthy documents such as codes of conduct, standards of practice, and regulatory materials across the jurisdictions covered here.

The tools were not used to make substantive judgments about content. The structure, the arguments, the selection of topics, and the conclusions are my own, informed by the CAS Professionalism Education Working Group and the reviewers named in the Acknowledgments. I treated AI output as a draft to be checked rather than as a source: Factual claims, citations, and quotations were verified against primary sources, and I reviewed and revised all final wording. Any errors or omissions are mine.

About the Author

Joshua Taub, FCAS, is the Director of CAS Exams at The Infinite Actuary, where he teaches both basic and advanced ratemaking and has helped more than 8,000 students globally prepare for their exams. With more than 20 years of actuarial experience, Josh built the claims actuarial analytics team at Farmers Insurance and worked in product management for both personal and commercial lines. He later served as vice president of product and pricing and chief actuary at insurtech startup Swyfft, where he helped develop homeowners and commercial package products. Josh frequently speaks at actuarial events on professionalism and AI in insurance and currently serves as vice chair of the CAS Professionalism Education Working Group. An alumnus of the University of California, Santa Barbara, he continues to serve on the university's Actuarial Advisory Board. He is a two-time recipient of the CAS Above & Beyond Achievement Award.

1. Introduction to Actuarial Professionalism

The first time many actuaries hear the term *professionalism* is when it becomes a requirement for obtaining their credential. They may initially dismiss it as dry compliance training: a box to check once a year and otherwise put out of mind. But as they begin to understand what professionalism actually entails, many discover it is far more substantive and thought-provoking than they expected. In fact, professionalism sessions are consistently among the top-rated sessions at Casualty Actuarial Society (CAS) meetings, precisely because the topics are more engaging, and more relevant to daily practice, than most actuaries anticipate.

To illustrate, consider the following situation:

Pressure to take on new work

David is a credentialed actuary at a consulting firm, with 10 years of experience in personal auto reserving. A long-standing firm client, a regional insurer, has recently acquired a small medical malpractice book of business and has asked the firm to perform a reserve analysis of this new line to support the client's internal financial planning. The firm has handled medical malpractice engagements in the past, but the senior actuary who led that work retired last year. David's partner asks him to take on the engagement, noting that the book is small and that the firm can bring in an outside specialist if specific issues arise.

How should David respond? Personal auto and medical malpractice both fall within the casualty practice area, but the underlying risk dynamics, data, and reserving techniques can differ significantly. Is David's general background, combined with the availability of outside specialist support, sufficient? What steps, if any, could he take to make the engagement appropriate for him to accept? What are his options if his partner insists?

This scenario and others like it throughout this monograph illustrate why professionalism matters. These are not abstract hypotheticals; they are the kinds of judgment

calls actuaries face regularly. The chapters that follow provide frameworks for thinking through such situations.

1.1. What is professionalism?

Professionalism is a multifaceted concept that encompasses the knowledge, skills, conduct, and ethical standards expected of members of a profession. What distinguishes a profession from an ordinary occupation is that it rests on specialized knowledge acquired through extensive education and training; controls entry and continued practice typically through examinations, credentialing, and continuing education requirements; and binds its members to a shared commitment to the public. At its core, that commitment is a social contract between the profession and the public, summarized in the following box.

The social contract of professionalism

Professionals receive **privileges**:

- Recognized credentials
- Public trust
- Exclusive access to certain roles
- Often significant compensation
- In many jurisdictions, a degree of self-regulation

In exchange, they accept **responsibilities**:

- Maintaining competence
- Acting with integrity
- Placing the public interest above self-interest (and sometimes above the interests of clients)
- Protecting the reputation of the profession on which all members depend
- Submitting to professional discipline

When this contract is honored, everyone benefits. When it is broken, the profession risks losing public trust and whatever regulatory autonomy it may have.

The actuarial profession is one such profession, and actuaries are party to this same contract. For actuaries, professionalism means more than simply performing technically competent work: An actuary who produces mathematically correct work but

does so in a misleading manner or who fails to disclose material limitations in an analysis has fallen short of professional standards regardless of technical accuracy. Professional obligations are not limited to conduct occurring in a professional context. Just as professional athletes can face suspension for personal misconduct, actuaries can face discipline for conduct outside of work that reflects poorly on the profession or undermines public trust. An actuary convicted of fraud or other serious misconduct, even if entirely unrelated to actuarial work, could face expulsion from their actuarial organization, because such conduct damages the profession's reputation and the public's confidence in all actuaries.

The concept of professionalism also includes what might be called "professional judgment," roughly defined as the ability to apply technical knowledge appropriately to specific situations, recognizing when standard approaches may be insufficient and when additional care or disclosure is warranted. Such judgment is developed over years of practice and is informed by both technical training and an understanding of professional standards and expectations.

These principles of professionalism (the social contract, the emphasis on competence and integrity, the responsibility to the public) are not unique to any one country or actuarial organization. The International Actuarial Association (IAA), the global umbrella body for the profession, sets baseline expectations that its member associations agree to meet or exceed. While this monograph draws its most detailed examples from US-based organizations, it also surveys IAA standards and practices from other jurisdictions throughout. The specific codes, standards, and organizational structures may differ, but the underlying commitment to honesty, competence, and public service is universal to the actuarial profession.

1.2. Why professionalism matters for actuaries

The actuarial profession occupies a position of significant trust in society. Actuaries are relied upon to perform analyses and render opinions that affect the financial security of millions of people. Insurance policyholders depend on actuarial work to ensure that the companies insuring them will be able to pay claims. Pension plan participants rely on actuarial valuations to confirm that their retirement benefits are adequately funded. Regulators use actuarial opinions as a key tool in monitoring the solvency of insurance companies and pension plans. In each of these contexts, those who depend on actuarial work (whether they interact with it directly, like regulators reviewing an opinion, or indirectly, like policyholders whose premiums reflect actuarial judgments) are typically unable to independently verify the accuracy or appropriateness of the actuary's conclusions. They must trust that the work was performed

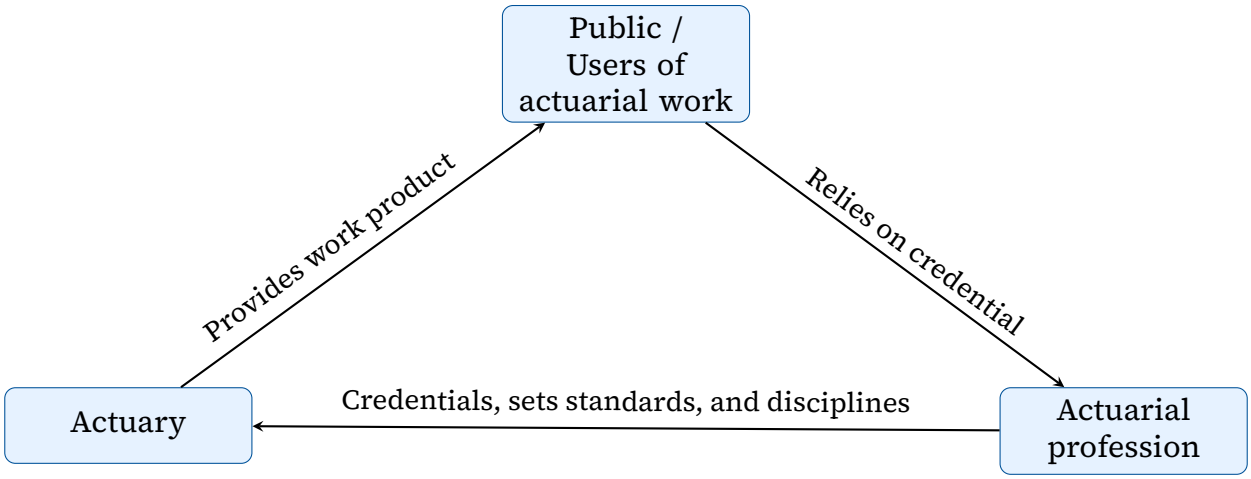


Figure 1.1. The Trust Triangle: How the professionalism framework bridges the information asymmetry between actuaries and users, who cannot directly verify the quality of actuarial work.

competently and in accordance with professional standards. Figure 1.1 shows how the professionalism framework bridges that gap.

This asymmetry of information creates both an opportunity and an obligation. Because most consumers of actuarial work cannot evaluate its quality directly, they must rely on signals of competence and trustworthiness. The actuarial credential—which takes many forms worldwide, including ACAS and FCAS (Associate and Fellow, respectively, of the Casualty Actuarial Society), ASA and FSA (Associate and Fellow, respectively, of the Society of Actuaries), FIA (Fellow of the Institute and Faculty of Actuaries), FIAA (Fellow of the Actuaries Institute (Australia)), FCIA (Fellow of the Canadian Institute of Actuaries), and FASSA (Fellow of the Actuarial Society of South Africa)—serves as such a signal, representing that the holder has demonstrated a specified level of knowledge and has agreed to abide by professional standards. If that signal loses its meaning because credentialed actuaries routinely produce substandard or misleading work, the value of the credential diminishes for all actuaries, and the public's ability to identify trustworthy practitioners is impaired.

This credibility also facilitates commerce. Many business transactions (mergers, acquisitions, reinsurance agreements, regulatory filings) depend on actuarial certifications and opinions. When parties to a transaction can rely on the quality and objectivity of actuarial work, transactions proceed more efficiently. If actuarial opinions were viewed as unreliable or subject to manipulation, additional verification would be required, increasing costs and friction throughout the insurance and financial services industries.

The importance of professionalism is perhaps most visible when actuaries fail to uphold it. Cases in which actuaries have been disciplined for professional misconduct (whether for producing misleading reserve opinions, for certifying work they did not adequately review, or for other violations) serve as reminders of the consequences when professional standards are not upheld. Those consequences extend beyond the individual actuary to affect employers, clients, and ultimately the public.

When actuaries fail to uphold professional responsibilities: Lessons from insurance insolvencies

Several high-profile insurance company failures have involved actuarial work that fell short of professional standards. While the causes of insolvency are always multifaceted, inadequate reserves have been a recurring factor. In some cases, actuaries have signed reserve opinions that significantly understated liabilities, often under pressure from management seeking to present favorable financial results. When actual claims exceeded the inadequate reserves, companies became insolvent, leaving policyholders with unpaid claims.

These failures resulted not only in harm to policyholders and other stakeholders but also in disciplinary action against the actuaries involved, damage to the profession's reputation, and increased regulatory scrutiny.

1.3. From informal norms to formal standards

For much of the early history of the actuarial profession, professionalism was maintained largely through informal means.[1] The actuarial community was small, practitioners often knew one another personally, and reputation served as a powerful incentive for ethical behavior. Formal codes of conduct and standards of practice were minimal or nonexistent; it was assumed that competent actuaries would know how to conduct themselves appropriately.

This informal approach began to prove insufficient as the profession grew and its work became more consequential. Several developments prompted a shift from informal norms to more formalized professionalism structures. Some reflected external pressures on the informal approach; others reflected the profession's own evolving view of what self-regulation required:

- **Growth of the profession.** As the actuarial population grew in mature jurisdictions, the small-community conditions on which earlier informal expectations

1 The transition from informal norms to formal structures described in this section is not uniformly complete worldwide. In some jurisdictions, particularly developing insurance markets, the local actuarial profession remains small and the infrastructure of standards, credentialing, and discipline is still being built. Considerations specific to these settings are addressed in Appendix A.

had relied no longer held, creating the need for explicit codes and standards that did not depend on personal acquaintance.

- **Increased regulatory reliance on actuarial work.** As regulators in many jurisdictions came to rely on actuarial work for insurance and pension oversight, the profession responded by issuing more formal guidance on how such work should be performed and supported.
- **High-profile failures.** Notable instances of insurance company failures that included actuarial misconduct highlighted the need for stronger professional oversight.
- **Increasing complexity of actuarial work.** As financial products, regulatory requirements, and analytical methods grew more sophisticated, the profession recognized that explicit guidance on appropriate practice was expected, both from within and from outside. What was once "obvious" to experienced practitioners needed to be documented for a larger, more diverse profession.
- **Professional self-regulation and identity.** Beyond responding to external pressures, the profession came to accept that established, self-regulating professions are expected to maintain their own codes of conduct, published standards of practice, and qualification processes. Formalizing these structures was a proactive assertion of professional identity and an acknowledgment that a profession must take ownership of its own standards rather than wait for failures to force its hand.

In response to these pressures, actuarial organizations around the world developed more comprehensive professionalism frameworks. Although the specific structures vary by jurisdiction (some countries rely primarily on professional bodies, others on government regulation, and many on a combination), the general trajectory has been consistent: from informal expectations to formal standards, from assumed competence to demonstrated qualification, and from individual reputation to institutional oversight.

This evolution continues today. As new challenges emerge, from predictive analytics and artificial intelligence (AI) to climate risk and evolving business models, the profession must continually adapt its standards and guidance. The specific organizations and regulatory structures that support actuarial professionalism are examined in Part I, "The Foundation."

1.4. Questions to consider

The scenario at the beginning of this chapter illustrated one type of professional dilemma actuaries face. Here are several more situations to consider as you work

through this monograph. Each raises questions about how professional standards and expectations apply in practice.

Cross-border practice

James is a Fellow of the Institute and Faculty of Actuaries (IFoA) based in London. He works remotely for a reinsurance company headquartered in Bermuda, and his current assignment involves reviewing reserve estimates for a portfolio of liability business written in the United States. James holds no credentials from any US-based actuarial organization.

Which professional standards govern James's work? Is he bound by the IFoA standards, the US Actuarial Standards of Practice, Bermuda requirements, or some combination? If the standards conflict, which takes precedence? Does it matter whether James's work will be relied upon by US regulators?

The pension actuary's dilemma

Fatima is a pension actuary in Canada who performs funding valuations for a corporate defined benefit plan. The plan sponsor asks her to use mortality assumptions that would result in lower reported liabilities. The assumptions the sponsor prefers are within the range used by other actuaries, but Fatima believes they do not reflect the actual mortality experience of this plan's participants, who are mostly white-collar professionals.

How should Fatima respond? Can she use assumptions that are "within the range" even if she believes they are not the most appropriate for this specific plan? What are her disclosure obligations? What if the sponsor threatens to find another actuary who will use their preferred assumptions?

Working in an evolving practice area

Kenji is developing a climate risk model for a global insurer to assess the long-term impact of climate change on property catastrophe exposures. Existing actuarial standards on modeling, data, and communication apply to his work, but climate risk is a rapidly evolving area where additional guidance is still being developed.

What are Kenji's professional obligations? How should he approach his work in an area where broad standards apply but additional guidance is limited? What documentation and disclosure obligations might apply when the methodology itself is evolving?

Observing a colleague's conduct

Sofia works at a consulting firm in Australia and notices that a senior colleague appears to be signing actuarial opinions for work that Sofia believes he has not adequately reviewed. She has no direct evidence, but based on the volume of opinions signed and her knowledge of his workload, she suspects he cannot be giving each opinion appropriate attention.

What, if anything, should Sofia do? Does she have a professional obligation to report her concerns, or would doing so be inappropriate given that she lacks direct evidence? To whom would she report: her firm, the Actuaries Institute, or someone else? What might the consequences be for her colleague, for herself, and for those who rely on those opinions, including members of the public who may be customers of the entities receiving the opinions?

These questions span the range of issues the professionalism framework is designed to address. Whereas some have clear answers once one understands the relevant guidance, others involve genuine judgment where reasonable actuaries might differ. The chapters that follow describe that framework: qualification frameworks, codes of conduct, standards of practice, and disciplinary processes. Knowing the framework will not eliminate difficult judgment calls, but it provides the foundation for making them thoughtfully and defensibly.

1.5. Overview of this monograph

This monograph is organized around a single image: the infrastructure of actuarial professionalism, visualized as a temple (Figure 1.2). Actuarial organizations provide the institutional foundation, serving as or creating most of the bodies that credential actuaries, set standards, and administer discipline. The regulatory framework, whether self-regulation or government oversight, establishes the rules under which these organizations operate. On this foundation rest the four pillars that give professionalism its substance: qualification and credentialing, codes of conduct, standards of practice, and discipline and enforcement. Together, these elements translate the social contract described in Section 1.1 into a concrete, enforceable system.

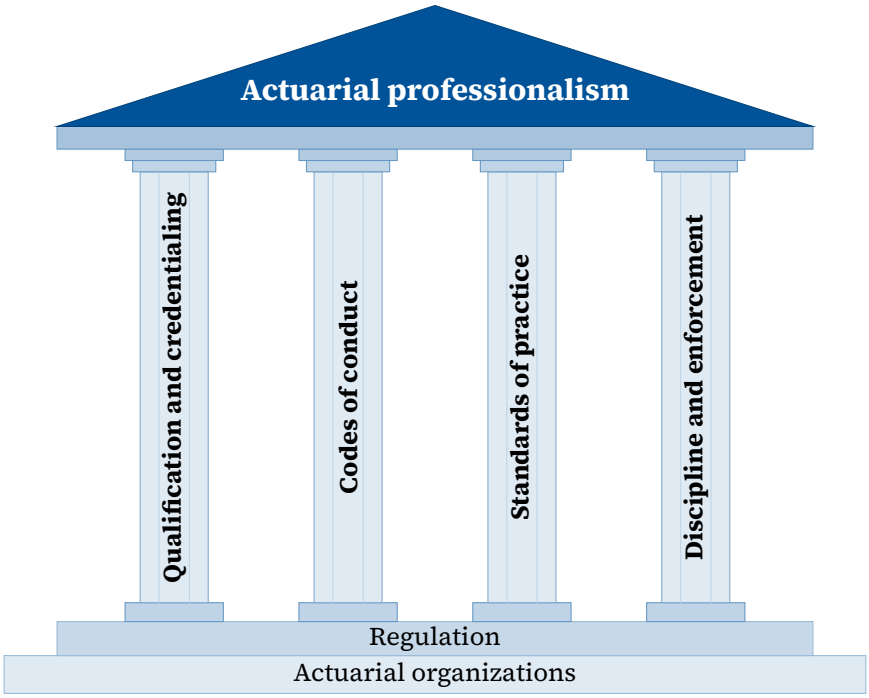


Figure 1.2. The infrastructure of actuarial professionalism. Actuarial organizations and the regulatory framework form the foundation on which the four pillars rest.

- **Part I: The Foundation** covers the institutional infrastructure on which the four pillars rest: actuarial organizations (Chapter 2) and the regulatory frameworks within which they operate (Chapter 3).
- **Part II: The Four Pillars** devotes a chapter to each pillar in Figure 1.2: qualification and credentialing (Chapter 4), codes of conduct (Chapter 5), standards of practice (Chapter 6), and discipline and enforcement (Chapter 7).
- **Part III: Beyond the Four Pillars** looks past the binding requirements to nonbinding guidance such as practice notes (Chapter 8) and emerging issues such as large language models and AI agents, bias and fairness, and nontraditional roles (Chapter 9).

Throughout this monograph, readers will find that certain themes recur: the importance of competence and integrity, the responsibility to communicate clearly and honestly, and the commitment to serving the public interest. These themes reflect the core values of actuarial professionalism worldwide and provide a unifying thread across the diverse topics covered.

Key takeaways

- Professionalism is a **social contract**: privileges (credentials, trust, exclusive access to roles, self-regulation) in exchange for responsibilities (competence, integrity, public service, professional reputation, accountability).
- Technical accuracy alone is insufficient: Actuaries must also communicate clearly, disclose limitations, and act with integrity even when facing pressure from employers or clients.
- The asymmetry of information between actuaries and those who depend on their work, whether directly or indirectly, creates both the need for professionalism and the opportunity to abuse trust.
- Professional obligations extend beyond work conduct; personal misconduct that damages the profession's reputation can also result in discipline.
- Professionalism frameworks evolved from informal norms to formal standards as the profession grew, regulatory reliance increased, and the consequences of failures became more visible.
- The core principles of professionalism (competence, integrity, and public service) are universal across actuarial organizations and practice areas worldwide.

Common mistakes to avoid

- **Equating technical correctness with professionalism.** An analysis can be mathematically correct but still violate professional standards if it is misleading, fails to disclose material limitations, or omits important caveats.
- **Assuming professionalism is only about avoiding misconduct.** Professionalism is also about proactive obligations: maintaining competence, communicating clearly, and supporting the profession's standards.
- **Viewing professionalism requirements as bureaucratic burdens.** These requirements exist to protect the public and maintain the trust that makes the actuarial credential meaningful.

Discussion questions

1. In the opening scenario, David is asked to take on a reserving analysis for a property and casualty line for which he lacks direct experience. Based on

the concepts discussed in this chapter, what professional principles are in tension? What factors should David weigh in deciding how to respond?

2. How does the "asymmetry of information" between actuaries and those who depend on their work affect the importance of professional standards? Consider both direct users (like regulators) and indirect beneficiaries (like policyholders).
3. The chapter discusses how professionalism evolved from informal norms to formal standards. What are the advantages and disadvantages of formalized professional requirements compared with relying on informal expectations and reputation?
4. Consider the cross-border practice scenario involving James. What challenges arise when an actuary's work spans multiple jurisdictions with different professional requirements? How might the profession address those challenges?

Part I

The Foundation

2. Actuarial Organizations

In the temple of actuarial professionalism introduced in Chapter 1 (Figure 1.2), actuarial organizations form the foundation on which everything else rests. Without organizations to credential actuaries, set standards, and enforce ethical requirements, the four pillars would have no institutional home.

Every jurisdiction with a developed actuarial profession has such organizations. The next section sets out what those bodies do; the rest of the chapter then surveys who they are, starting with the international landscape and zooming in on the United States as a detailed example.

2.1. What actuarial organizations do

Across jurisdictions, actuarial organizations perform a recurring set of functions. Some such functions translate directly into the four pillars of professionalism covered in Part II; others operate as scaffolding that this monograph will not return to in detail but that is no less essential to a healthy profession.

Four functions become the pillars:

- **Qualification and credentialing.** Admitting members, awarding credentials, and setting the education, experience, and continuing education requirements that govern who can hold a credential and who can take on particular roles or types of work. Some of these requirements come from actuarial organizations themselves; the US Qualification Standards (USQS) are one example. Others come from governments for statutorily defined roles such as the Enrolled Actuary in the United States or the Appointed Actuary in various jurisdictions. Chapter 4 covers both.
- **Code of conduct.** Adopting and maintaining a written code of professional conduct that binds members. The code is the ethical core of the profession and is discussed in Chapter 5.

- **Standards of practice.** Promulgating technical standards that govern the performance of actuarial work. Some organizations write their own standards, some delegate to a separate standards board, and in some markets the regulator sets standards directly. Chapter 6 takes up this pillar.
- **Discipline and enforcement.** Investigating alleged breaches of conduct and imposing sanctions, which can range from private counseling to revocation of credentials. Chapter 7 covers this pillar.

The remaining functions are foundational without being pillars:

- **Continuing education.** Offering the meetings, seminars, webinars, and publications through which members stay current.
- **Research and the body of knowledge.** Funding and publishing the experience studies, call papers, and applied research that help advance the actuarial profession.
- **Public voice.** Representing the profession to regulators, legislators, accounting bodies, and the public.
- **Community.** Convening practitioners, supporting regional and topical sections, and giving the profession an institutional home.

How these functions are distributed across organizations varies. In some jurisdictions a single body performs nearly all of them; in others they are split across several specialized organizations.

2.2. International actuarial organizations

The actuarial community is international, and frameworks for credentialing, standards, and professional conduct are increasingly similar across jurisdictions, though notable differences remain in qualification requirements, continuing education obligations, and the scope of disciplinary authority.

2.2.1. International Actuarial Association

The International Actuarial Association (IAA) serves as the worldwide organization of actuarial associations. Founded in 1895 as the Comité Permanent des Congrès d'Actuaires, the IAA was reconstituted in its current form in 1998. The organization is headquartered in Ottawa, Canada.

The IAA's membership consists not of individual actuaries but of actuarial associations. Full Member status carries voting rights and is reserved for associations that

meet the IAA's membership requirements, which cover the association's code of conduct, disciplinary process, standards-setting process, and Education Syllabus. Associate Members participate without voting rights and without being required to meet the full set of requirements. As of May 2026, the IAA has 73 Full Member Associations and 25 Associate Members. Four of the five US-based actuarial organizations are Full Members of the IAA: the Casualty Actuarial Society (CAS), the Society of Actuaries (SOA), the Conference of Consulting Actuaries (CCA), and the American Society of Enrolled Actuaries (ASEA). Membership is concentrated in a handful of large associations, with a long tail of smaller national bodies. Figure 2.1 shows the IAA's largest member associations.

The IAA pursues several objectives relevant to professionalism:

- **Supporting developing markets.** The IAA helps build actuarial capacity in emerging jurisdictions through education guidelines, model documents, and structured dialogue between established and emerging associations. Appendix A discusses developing markets in more detail.
- **Model standards.** The IAA develops model International Standards of Actuarial Practice (ISAPs) that member associations may adopt or adapt for their jurisdictions. These standards help promote consistency in actuarial practice across borders. ISAPs do not automatically apply to actuaries; their applicability depends on whether a member association adopts or reflects them, and adoption has been limited primarily to smaller jurisdictions, with more established actuarial markets maintaining their existing standards.
- **Education guidelines.** The IAA maintains an Education Syllabus organized into core subjects (considered essential knowledge for all actuaries) and elective subjects, each containing topics and learning objectives. Member associations seeking Full Member status must demonstrate that their education programs cover all core subjects to the IAA's benchmark (broadly more than 80% of the relevant learning objectives) and that the program as a whole is appropriate in depth and breadth.
- **Code and discipline guidance.** The IAA publishes model documents and guidance that member associations can adopt or adapt when building and maintaining their own codes of professional conduct and disciplinary processes, helping associations meet the IAA's membership requirements described earlier.
- **Promoting the profession.** The IAA represents the actuarial profession to international bodies such as the International Association of Insurance Supervisors, the International Accounting Standards Board, the Organisation for Economic Co-operation and Development, and the World Bank.



Figure 2.1. The IAA's largest Full Member Associations. Bars show the 19 IAA Full Member Associations with at least 1,000 credentialed members in 2026. Country codes after each organization name and the region colors indicate where the organization is based, not where its members practice; several of these associations (notably the SOA, the CAS, the IFoA, and the Actuaries Institute) have substantial memberships working in jurisdictions outside their home country. Together these 19 associations account for roughly 101,000 of the 111,213 credentialed memberships reported across Full Members. Counts are memberships, not unique individuals: Some actuaries hold credentials from more than one association (e.g., a Canadian actuary may belong to both the Canadian Institute of Actuaries and the SOA), so the totals overstate the unique-individual count. The American Academy of Actuaries (20,000+ members) is not shown because it withdrew from the IAA in 2019. MWAC (member with an actuarial credential) is the IAA's count of credentialed members at each Full Member Association, excluding students, affiliates, and other noncredentialed members. Source: IAA, "Number of MWACs Reported by March 17, 2026."

- **Facilitating cooperation.** Through its committees, forums, and task forces, the IAA provides venues for actuaries from different countries to share knowledge and address common challenges.

While IAA membership at the institutional level is limited to actuarial associations, the IAA also organizes six topical sections that individual actuaries may join directly. The sections function as international communities of practice in specialized areas:

- **ASTIN** (Actuarial STudies In Non-life insurance)[2]
- **AFIR-ERM** (Actuarial Approach for Financial Risks and Enterprise Risk Management)
- **IAAHS** (IAA Health Section)
- **IAALS** (IAA Life Section)
- **IACA** (International Association of Consulting Actuaries)
- **PBSS** (Pensions, Benefits and Social Security Section)

Sections support continuing professional development through colloquia, webinars, working groups, and publications, and provide a venue for cross-border collaboration on technical and professional questions within their respective practice areas.

2.2.2. Actuarial organizations by region

Actuarial associations exist in most countries with developed insurance and pension systems, and the profession continues to grow in emerging markets. While such organizations perform similar functions (credentialing or admitting actuaries, setting standards, and enforcing professional conduct), they differ in legal origin. Some were established by national statute (such as Canada's Canadian Institute of Actuaries and India's Institute of Actuaries of India) or royal charter (the Institute and Faculty of Actuaries), while others (including the US-based organizations) are private associations. The regulatory frameworks they operate under also vary, and statutory origin does not by itself determine the regulatory model; Chapter 3 examines those frameworks in detail.

The pathways to becoming a credentialed actuary also differ significantly across jurisdictions, ranging from professional examinations (as in the United States, Canada, and the United Kingdom) to university-based qualification (as in Spain, France, and several Scandinavian countries) to hybrid models. Chapter 4 examines these pathways in detail.

The following discussion surveys actuarial associations by region, highlighting selected organizations and regional characteristics of particular interest.

2 Outside the United States, property and casualty (P&C) insurance is often referred to as "general insurance" and sometimes even "non-life insurance."

North America

The Canadian Institute of Actuaries (CIA) is the national organization for the actuarial profession in Canada. Founded in 1965, the CIA serves as both a credentialing body and a standards-setting organization. Standards of practice applicable to actuarial work in Canada are developed by the Actuarial Standards Board (ASB, a separate body from the US ASB, though sharing the same name), which operates independently within the CIA's organizational structure. Canadian actuaries often hold credentials from both the CIA and a US-based organization (CAS or SOA), reflecting the integrated nature of the North American insurance market. In Mexico, the Colegio Nacional de Actuarios (CONAC) is the IAA Full Member Association. Mexico also has the Asociación Mexicana de Actuarios (AMA) and the Asociación Mexicana de Actuarios Consultores (AMAC), which are parties to the North American cross-border discipline agreement discussed in Section 7.4. The five US-based organizations are discussed in detail in Section 2.3.

Europe

Europe has a rich actuarial tradition, with 36 IAA Full Member Associations, more than any other region. The Actuarial Association of Europe (AAE) serves as the regional coordinating body, representing national actuarial associations from across the European Union and broader Europe. The AAE engages with European Union institutions on regulatory matters affecting actuarial practice and promotes harmonization of professional standards across member countries.

The Institute and Faculty of Actuaries (IFoA) is the United Kingdom's only chartered professional body dedicated to actuaries. Formed in 2010 through the merger of the Institute of Actuaries (England, founded 1848) and the Faculty of Actuaries (Scotland, founded 1856), the IFoA represents one of the oldest actuarial traditions in the world.

Asia

The actuarial profession has grown substantially across Asia, with 15 IAA Full Member Associations spanning the region. The Institute of Actuaries of Japan is one of the region's oldest actuarial bodies; Japan also has the Japanese Society of Certified Pension Actuaries as a separate IAA Full Member. The China Association of Actuaries has expanded rapidly alongside China's growing insurance market, and the Institute of Actuaries of India has grown substantially alongside the expansion of India's insurance and pension sectors. Other Asian IAA Full Members include the Institute of Actuaries of Korea, the Actuarial Society of Hong Kong, the Singapore Actuarial Society,

and associations in Chinese Taipei, Indonesia, Kazakhstan, Malaysia, Pakistan, the Philippines, Sri Lanka, and Thailand.

Middle East and North Africa

The actuarial profession in the Middle East and North Africa region has been developing alongside the growth of insurance and takaful (Islamic insurance) markets. Four IAA Full Member Associations are based in the region: the Association Marocaine des Actuaires (Morocco), the Egyptian Society of Actuaries, the Israel Association of Actuaries, and the Lebanese Association of Actuaries. The Gulf Cooperation Council countries have seen growing actuarial activity, with actuarial communities in the United Arab Emirates, Saudi Arabia, Bahrain, and other Gulf states, though these do not yet have IAA Full Member Associations.

Sub-Saharan Africa

The actuarial profession in sub-Saharan Africa continues to develop, with four IAA Full Member Associations in the region: the Actuarial Society of South Africa (ASSA), the Actuarial Society of Ghana, the Actuarial Society of Kenya, and the Nigeria Actuarial Society. South Africa has the continent's most established actuarial community. ASSA, founded in 1948, credentials actuaries and sets professional standards for actuarial practice in South Africa. South African actuaries qualified by writing IFoA examinations until 2010, when ASSA introduced its own Fellowship (FASSA) and Associate (AMASSA) credentials while continuing to outsource certain subjects to the IFoA. Regional efforts to develop actuarial capacity across Africa reflect the growing importance of insurance and pension systems in the continent's economic development.

Central and South America

Five IAA Full Member Associations are based in Central and South America: the Instituto Brasileiro de Atuária (IBA), the Asociación Colombiana de Actuarios, the Consejo Profesional de Ciencias Económicas de la Ciudad Autónoma de Buenos Aires (Argentina), the Ecuadorian Actuarial Association, and the Asociación Centroamericana de Actuarios (ACEA) based in Panama. The IBA is the region's largest, reflecting Brazil's substantial insurance and pension markets.

Caribbean and Bermuda

The Caribbean Actuarial Association (CAA), founded in 1991 in Jamaica, is the Caribbean's only IAA Full Member Association and serves actuaries across the region.

Bermuda and the Cayman Islands warrant particular mention given their outsized roles in global insurance and reinsurance markets. Bermuda is one of the world's largest reinsurance domiciles, while the Cayman Islands ranks among the top captive insurance domiciles globally and has a rapidly growing reinsurance sector. Both jurisdictions have substantial actuarial communities relative to their populations but no local actuarial credentialing organization, so actuaries practicing there typically hold credentials from US, UK, or other international organizations.

Oceania

Two IAA Full Member Associations serve Oceania. The Actuaries Institute (formally the Institute of Actuaries of Australia) is the professional body for actuaries in Australia. The New Zealand Society of Actuaries serves the actuarial profession in New Zealand, and the two organizations maintain close ties given the integrated nature of the Australasian market.

Awareness of international associations becomes relevant in several contexts: when working on multinational insurance or pension programs, when actuarial work product may be used in other jurisdictions, when collaborating with actuaries credentialed abroad, or when considering the portability of credentials for international career opportunities. The mutual recognition agreements between some associations (for example, those allowing credit for examinations passed with another organization) facilitate international mobility within the profession.

2.3. US-based actuarial organizations

The actuarial profession in the United States is organized through five recognized US-based actuarial organizations: the Casualty Actuarial Society (CAS), the Society of Actuaries (SOA), the American Academy of Actuaries (AAA, or the Academy), the Conference of Consulting Actuaries (CCA), and the American Society of Enrolled Actuaries (ASEA). Unlike in most countries, where the profession is housed in a single body, the US profession is distributed across these multiple organizations, which share a common professionalism infrastructure. Figure 2.2 illustrates how the organizations relate to that shared professionalism infrastructure.

Each of these organizations has adopted the Code of Professional Conduct, a shared set of ethical principles and rules that governs the behavior of their members in any jurisdiction where they practice. Under the Code, members are also required to observe applicable standards of practice and satisfy applicable qualification standards. For practice in the United States, the applicable standards are the Actuarial Standards

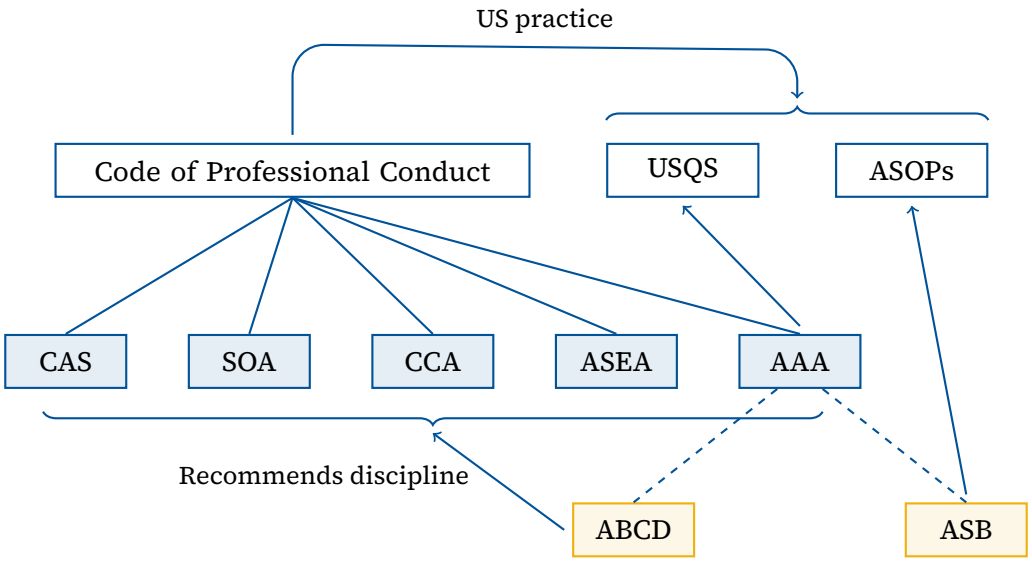


Figure 2.2. US actuarial organizational structure. The five US-based actuarial organizations share a common professionalism infrastructure: the Code of Professional Conduct (adopted by all five), the US Qualification Standards (USQS, promulgated by the American Academy of Actuaries (AAA)), and the Actuarial Standards of Practice (ASOPs, promulgated by the Actuarial Standards Board (ASB)). The Code requires members practicing in the United States to follow the USQS and ASOPs. The ASB and the Actuarial Board for Counseling and Discipline (ABCD) operate independently, housed within the AAA. Disciplinary recommendations from the ABCD flow back to credentialing organizations for action.

of Practice (ASOPs), promulgated by the Actuarial Standards Board (ASB), and the USQS, promulgated by the American Academy of Actuaries (AAA). The USQS specify requirements for issuing Statements of Actuarial Opinion[3] in connection with US work, a term defined broadly in the USQS to include essentially any actuarial opinion intended to be relied upon by another party, not only formal regulatory filings. While the Code applies to members regardless of where they practice, the USQS and ASOPs apply specifically to actuarial work rendered in the United States. The Actuarial Board for Counseling and Discipline (ABCD) provides a unified mechanism for addressing professionalism concerns across all five organizations. Both the ASB and the ABCD operate under the auspices of the AAA, though they maintain independence in their respective functions. The sections that follow describe the US-based organizations in more detail.

3 This term is a common source of confusion. "Statement of Actuarial Opinion" is often associated only with specific regulatory filings, such as the NAIC opinion that P&C Appointed Actuaries file annually on loss reserve adequacy. The USQS definition is much broader, and the distinction between the general and specific cases is discussed in detail in Section 4.4.

2.3.1. Casualty Actuarial Society

The Casualty Actuarial Society is the only actuarial credentialing organization in the world exclusively focused on property and casualty insurance, and while headquartered in Arlington, Virginia, it operates globally with members in numerous countries. Founded in 1914 as the Casualty Actuarial and Statistical Society of America, the CAS was established to address the unique actuarial challenges of casualty insurance. The organization adopted its current name in 1921.

The CAS offers two credentials: Associate of the Casualty Actuarial Society (ACAS) and Fellow of the Casualty Actuarial Society (FCAS). Both credentials require passing a series of rigorous examinations and completing additional educational requirements, with the Fellowship credential requiring more advanced examinations beyond the Associate level.

2.3.2. Society of Actuaries

The Society of Actuaries is headquartered in Schaumburg, Illinois, and like the CAS operates globally with members in numerous countries. The SOA traces its history to 1949, when it was formed through the merger of the Actuarial Society of America (founded 1889) and the American Institute of Actuaries (founded 1909).

The SOA credentials actuaries practicing in life insurance, health insurance, retirement benefits, finance/investment fields, and general insurance. Like the CAS, the SOA offers Associate (ASA) and Fellow (FSA) designations, with candidates completing a series of examinations and other educational requirements to earn each credential.

2.3.3. American Academy of Actuaries

The American Academy of Actuaries occupies a unique position in the US actuarial organizational structure. Unlike the CAS and the SOA, the Academy does not administer its own examination process or grant credentials based on examinations it develops. Instead, Academy membership is open to actuaries who hold a credential from a recognized actuarial organization and who meet the Academy's education and experience requirements, which include demonstrating baseline knowledge of US actuarial laws, practices, and professionalism. Academy members may use the MAAA (Member of the American Academy of Actuaries) designation.

Founded in 1965, the Academy provides input on public policy issues in the United States where actuarial expertise can help inform the public. When legislators, regulators, or other governmental bodies seek actuarial input on policy questions, the Academy typically provides that input through its practice councils, committees, and work groups. The Academy's practice areas include casualty, health, life, pension, and risk management/financial reporting.

The Academy plays a central role in the profession's self-regulatory framework. Two bodies operating under the Academy's auspices are critical to professionalism:

- **The Actuarial Standards Board** promulgates Actuarial Standards of Practice, which provide guidance to actuaries when rendering actuarial services in the United States. The ASB operates independently in setting standards, though it is organizationally housed within the Academy. Chapter 6 discusses the ASB and ASOPs in detail.
- **The Actuarial Board for Counseling and Discipline** provides confidential guidance to actuaries with questions about professional conduct and investigates complaints of professional misconduct. Like the ASB, the ABCD operates independently, though organizationally housed within the Academy. The ABCD's jurisdiction covers members of the five US-based actuarial organizations regardless of where they practice, with cross-border agreements with certain non-US organizations extending or modifying this jurisdiction in specific circumstances. The ABCD can recommend disciplinary action to the organization or organizations of which the actuary is a member. Chapter 7 discusses the ABCD, the disciplinary process, and the cross-border agreements in detail.

The Academy also maintains the USQS, which specify the basic education, experience, and continuing education requirements that actuaries must meet to issue Statements of Actuarial Opinion for actuarial services rendered in the United States.

The Academy is headquartered in Washington, D.C., reflecting its focus on public policy engagement.

2.3.4. Conference of Consulting Actuaries

The Conference of Consulting Actuaries serves actuaries who provide consulting services when practicing in the United States. The CCA was founded in 1949 as the Conference of Actuaries in Public Practice, adopting its current name in 1991. Unlike the CAS and the SOA, the CCA does not administer a separate examination process. Membership is open to credentialed actuaries who are engaged in consulting practice.

The CCA provides continuing education programs, professional development resources, and networking opportunities for consulting actuaries on topics relevant to US consulting practice.

2.3.5. American Society of Enrolled Actuaries

The American Society of Enrolled Actuaries serves Enrolled Actuaries: actuaries authorized to practice before the Internal Revenue Service and the Department of Labor on pension matters. The Enrolled Actuary designation is conferred by the Joint Board for the Enrollment of Actuaries, a US federal body. ASEA was known as the ASPPA College of Pension Actuaries (ACOPA) until January 2020, when it adopted its current name to better reflect its focus on Enrolled Actuaries. ACOPA itself was formed in 2008 when the American Society of Pension Professionals & Actuaries (ASPPA) and the College of Pension Actuaries (COPA) combined. ASEA now operates within the American Retirement Association, an umbrella organization that also includes ASPPA and other retirement industry associations.

Membership in ASEA is open to all Enrolled Actuaries. The organization offers the Member of the Society of Enrolled Actuaries (MSEA) and Fellow of the Society of Enrolled Actuaries (FSEA) credentials, which build on the Enrolled Actuary designation with additional requirements. The FSEA can be earned through an examination track (requiring additional exams and an oral presentation) or an experience track (requiring at least 15 years of practice and demonstrated thought leadership). ASEA members often also hold credentials from the SOA.

2.3.6. Regional affiliates, actuarial clubs, and affinity groups

Beyond the organizations just described, numerous regional affiliates, actuarial clubs, and affinity groups operate throughout the United States, such as the Casualty Actuaries of New England, the Organization of Latino Actuaries, and the Twin Cities Actuarial Club. These groups do not credential actuaries, set professional standards, or exercise disciplinary authority; instead, they provide networking, continuing education, and professional community, often in a more informal and cost-effective setting. Some are formal affiliates of the CAS or the SOA, while others operate independently.

Key takeaways

- Actuarial organizations perform a recurring set of functions across jurisdictions: credentialing, maintaining a code of conduct, promulgating standards

of practice, and administering discipline (the four pillars), plus continuing education, research, public voice, and community.

- The **IAA** is the worldwide organization of actuarial associations. Its Full Member requirements (covering codes of conduct, disciplinary processes, standards of practice, and education) shape how member associations develop those pillars, and the IAA publishes model standards (ISAPs), education guidelines, and other resources that promote consistency across jurisdictions.
- Actuarial associations vary in **legal origin** (e.g., national statute, private association), in **structure** (unified bodies such as the IFoA versus multi-organizational systems such as the US system), and in **qualification pathway** (professional examinations, university-based, or hybrid).
- The United States is unusual in housing the actuarial profession across **five** organizations rather than one: CAS, SOA, AAA, CCA, and ASEA. The **CAS** and the **SOA** are the primary US credentialing organizations, granting Associate and Fellow designations through examination.
- The **American Academy of Actuaries** (Academy or AAA) houses the ASB (which sets standards) and the ABCD (which provides guidance and investigates complaints) and maintains the US Qualification Standards (USQS) that actuaries must meet to issue Statements of Actuarial Opinion for US practice.

Common mistakes to avoid

- **Assuming actuarial credentials are interchangeable.** Qualification requirements vary across organizations, and credentials from one organization or jurisdiction may not be automatically recognized in another.
- **Believing Academy membership determines standards applicability.** Both the ASOPs and the USQS are binding through the Code of Professional Conduct for US practice, not through Academy membership. Actuaries subject to the Code must comply regardless of whether they are Academy members.

Resources

- International Actuarial Association (IAA): actuaries.org
- Institute and Faculty of Actuaries (IFoA): actuaries.org.uk
- Canadian Institute of Actuaries (CIA): cia-ica.ca

- Actuaries Institute (Australia): actuaries.asn.au
- Casualty Actuarial Society (CAS): casact.org
- Society of Actuaries (SOA): soa.org
- American Academy of Actuaries (AAA): actuary.org
- Conference of Consulting Actuaries (CCA): ccactuaries.org
- American Society of Enrolled Actuaries (ASEA): asppa-net.org/asea
- Actuarial Standards Board (ASB, US): actuarialstandardsboard.org
- Actuarial Board for Counseling and Discipline (ABCD): abcdboard.org

Discussion questions

1. Some actuarial bodies were established by national statute or royal charter, while others operate as private associations. How might the legal origin of a body affect its effectiveness in carrying out its professionalism functions, and is there a clear case for either model?
2. Different jurisdictions credential actuaries through professional examinations, university-based programs, or hybrid approaches. What are the strengths and weaknesses of each pathway?
3. What advantages and challenges does the US multi-organization model present for practitioners, regulators, and the public, compared with single-body structures elsewhere?
4. If you hold both CAS and AAA designations and face a disciplinary complaint, how does the process work? Which organization would impose discipline?
5. What are the advantages and disadvantages of having the ABCD recommend discipline rather than impose it directly?

3. Regulation of the Actuarial Profession

The second layer of the foundation in the temple of actuarial professionalism (Figure 1.2) is the regulatory framework. Where Chapter 2 examined the actuarial organizations themselves, this chapter examines the rules that govern actuarial work. Different countries have developed approaches suited to their own legal traditions, their own regulatory infrastructure, and the maturity of their actuarial professions.

This chapter first lays out the conceptual framework that applies across jurisdictions and then examines how individual jurisdictions instantiate it. Considerations specific to developing markets and nascent actuarial professions, including a decision framework for regulators establishing actuarial oversight, are addressed in Appendix A.

3.1. Sources of an actuary's obligations

A useful way to organize the framework around actuarial work is to ask where an actuary's obligations come from. Two primary sources dominate: the profession and government. Most jurisdictions draw on both; what varies is how much of the work is governed by the profession rather than the state and, within the state's domain, through which channels.

- **The profession (self-regulation).** The rules and processes a profession sets for its own members are the means of self-regulation. The work of regulating actuaries spans qualification and credentialing, codes of conduct, standards of practice, and discipline; how much of it the profession establishes itself, rather than the state, varies by jurisdiction. These are the four pillars, each examined in its own chapter in Part II.
- **Government.** Government's involvement reaches actuarial work through three distinct channels:
  - **Direct regulation of actuaries.** Here a government body regulates the individual actuary directly, most often by licensing or registering them.

This is a state requirement separate from, and additional to, the credential the profession confers. Its reach varies: At one extreme, no one may practice as an actuary without it; at the other, it is required only for a specific, high-stakes kind of work.

- **Regulation of insurers and pension plans that flows through to actuaries.** Government supervises the insurer or pension plan under regulation aimed specifically at those sectors, and requires that certain actuarial work meet specified regulations. The entity's compliance obligation creates the requirement. Such mandates serve a range of purposes: prudential regulation, to protect policyholders and plan members; market-conduct regulation, to keep consumer treatment fair; and financial reporting, to inform investors and markets. Whatever the purpose, these mandates reach the actuary through the entity. In some jurisdictions an actuary engaged in such regulated work also bears a duty to report the entity's breaches of law directly to the supervisor (*supervisory whistleblowing*), a duty owed to the regulator rather than to the profession.[4]
- **Generally applicable laws.** Some laws and regulations are aimed neither at actuaries nor at insurers and pension plans specifically but still constrain how actuarial work may lawfully be done. These reach the actuary in two ways. Some bind the actuary's own conduct directly, such as the criminal prohibitions on fraud and false statements and the tort-law duty to exercise reasonable care. Others bind the entity, and so constrain the work through it: Data-protection and privacy law governs how personal data may be collected and used, equality law may bar the use of protected characteristics such as sex or race even where they are predictive, and competition law constrains how firms may behave in the market. Either way, these laws and regulations bind regardless of whether any actuary-specific requirement is engaged, and they originate not only in domestic legislatures and regulators but also in the courts and, in some regions, supranational bodies.

The line between these two primary sources is not always sharp. In some jurisdictions government does more than regulate alongside the profession: It oversees the profession's own self-regulation. Elsewhere the profession governs itself with no equivalent government oversight body. A single function such as standard setting may likewise be housed within the profession in one country and assigned to a government body in another. Section 3.2 takes up this variation in detail.

4 See the IAA's *Position Paper on Whistle-blowing Requirements* (2009) for further discussion.

Beyond these regulatory sources, an actuary's obligations also arise from a nonregulatory one: the relationship with the principal the actuary serves, whether a client or an employer. That relationship creates duties such as deliverables and deadlines that appear in no code or statute. It is often formalized in an engagement letter or employment agreement, though not always; an employee may have no written contract, and an actuary volunteering their services pro bono may have neither contract nor fee, yet in each case the duties they take on bind all the same. Either way, the obligation arises by agreement rather than regulation, so it sits outside the structure above, yet it carries real force. Some of these duties even double as professional ones: Confidentiality, for instance, is owed both to the principal and under the codes of conduct of actuarial organizations, so a breach can be a violation subject to professional discipline as well as a breach of the engagement.

Whatever the source, an obligation matters only if its breach carries consequences. These obligations are given force in several ways: through professional discipline, the subject of Chapter 7; through government enforcement where a law or licensing requirement is broken, ranging from regulatory fines and the loss of a license to, in some cases, criminal penalties; and through civil liability in the courts where the work causes harm. Figure 3.1 draws these sources together.

In most jurisdictions the sources are cumulative, not alternatives: A single piece of work can be governed by the profession's rules, by government regulation, and by generally applicable law at the same time. They also reinforce one another. A government requirement that work be done by a qualified actuary may rely on the profession's own credential rather than building a parallel one, and the profession's standards of practice may serve as the benchmark a court applies when it judges, in a malpractice claim, whether the work met generally accepted practice.

A single statute can also operate through more than one source at once. A pension system law, for example, may both create a government license for actuaries who certify the funding of defined benefit plans (direct government regulation) and require those plans to obtain such certifications (entity regulation). The two operate on different parties but flow from the same statute.

3.2. Regulation across jurisdictions

Self-regulation is a component of every jurisdiction with an actuarial organization, and the functions of self-regulation (qualification and credentialing, codes of conduct, professional standards, and discipline) are taken up in Chapters 4–7. The following examples illustrate some variations that appear in government regulation across jurisdictions, followed by one requirement that applies across many of them.

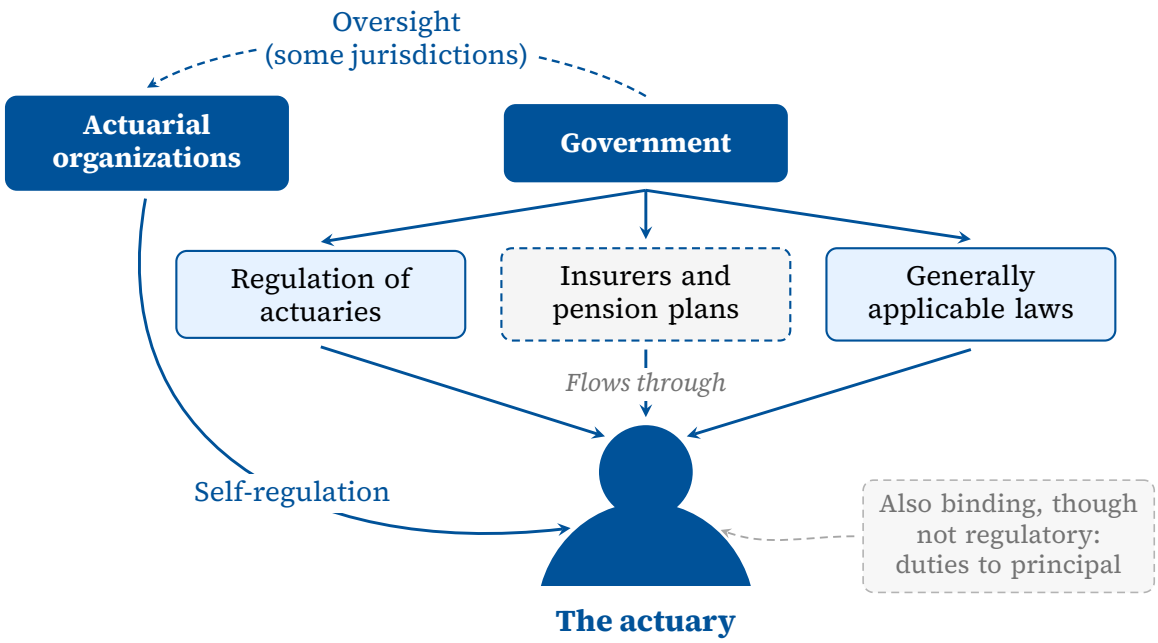


Figure 3.1. The sources of an actuary's professional obligations, arranged as a hierarchy that converges on the actuary. Two primary sources sit at the top: the actuarial profession (through self-regulation) and government. Government reaches the actuary through three channels: direct regulation of actuaries (by licensing the profession itself or a specific kind of work); regulation of insurers and pension plans that flows through the regulated entity (shown dashed, because the entity is a conduit rather than a source of obligation); and generally applicable laws not aimed at actuaries, which bind the actuary's own conduct directly and also constrain the work through the entity. In some jurisdictions, though not all, government also oversees the profession's own self-regulation (the dashed arrow at top). The actuary's relationship with their principal (client or employer) also binds the actuary, but by agreement rather than regulation.

3.2.1. United States

Direct government regulation of actuaries: The Enrolled Actuary regime

While actuaries in the United States generally face no governmental licensing requirement and no law prohibits the use of the title "actuary" by noncredentialed individuals, there is a notable exception. The Employee Retirement Income Security Act requires that actuarial certifications for certain defined benefit pension plans be performed by "Enrolled Actuaries" who meet requirements established by the Joint Board for the Enrollment of Actuaries, a federal body. Enrolled Actuary status requires passing examinations and meeting experience and continuing education requirements. In granting and revoking enrollment, the Joint Board performs what is essentially a government licensing function: The state, rather than a professional

body, controls who may do the work. Enrolled Actuary status accordingly exists independent of membership in any actuarial association. The federal regime is, moreover, largely self-contained: The Joint Board not only sets the requirements for enrollment but also prescribes standards of conduct for Enrolled Actuaries and can suspend or terminate enrollment for misconduct. An Enrolled Actuary who belongs to no US-based actuarial organization is therefore qualified, governed, and disciplined entirely through government, standing outside the profession's self-regulation. In practice many Enrolled Actuaries also hold membership in a US-based organization and are bound by the profession's self-regulation as well, but the federal regime does not require it.

Insurance regulation flowing to actuaries through the entity

Appointed Actuary requirements. Insurance regulators, through the National Association of Insurance Commissioners (NAIC) and state insurance laws, require that insurance companies have an "Appointed Actuary" who meets specified qualification requirements and issues a prescribed Statement of Actuarial Opinion on the company's reserves and related actuarial items. These requirements effectively mandate the use of qualified actuaries for this critical function. The NAIC's Annual Statement Instructions set those qualification requirements, defining a "Qualified Actuary" by reference to recognized actuarial designations and qualification standards; the specifics are taken up in Chapter 4.

Rating and market-conduct regulation. States also regulate how insurers set and apply their rates, and these requirements reach the actuary through the insurer. Some states require that certain rate filings be certified by a qualified actuary; state insurance codes prohibit unfair discrimination in rating, limiting the risk classifications an insurer may use; and several states now regulate insurers' use of external data, algorithms, and predictive models, notably Colorado's 2021 law (SB 21-169). The NAIC's 2023 model bulletin *Use of Artificial Intelligence Systems by Insurers* is not itself binding, but it sets supervisory expectations that a growing number of states have adopted.

Systemic-risk supervision of insurance groups. Under the Dodd–Frank Act of 2010, insurance groups designated as systemically important by the Financial Stability Oversight Council became subject to Federal Reserve supervision; American International Group (AIG) was among the three so designated, and that supervision reached its actuarial work in practice. A 2016 proposed rule would have gone further, requiring each such group to appoint a *chief actuary* accountable for enterprise-wide reserve adequacy and model oversight. The rule was never finalized and every insurer designation has since been rescinded, so no group is subject to it today, though the statutory authority remains.

Generally applicable laws

The United States reaches actuarial work through this third channel with doctrines and statutes made outside the insurance regulatory system. Malpractice liability, grounded in the common-law duty of care, binds the actuary's own conduct directly. Other laws constrain the inputs the work may use: the Fair Credit Reporting Act governs consumer-report data, including the credit-based scores used in some insurance pricing; the Genetic Information Nondiscrimination Act restricts the use of genetic information; the Health Insurance Portability and Accountability Act governs the use and disclosure of protected health information; and a patchwork of federal and state privacy laws governs personal data more broadly.

3.2.2. United Kingdom

The United Kingdom provides an instructive contrast to the US model. The Institute and Faculty of Actuaries (IFoA) is the professional body for actuaries in the United Kingdom; however, unlike the US-based actuarial organizations, the IFoA does operate under governmental oversight. The Financial Reporting Council (FRC) serves as the independent regulator overseeing the actuarial profession (alongside accountants and auditors) in the United Kingdom. The FRC's responsibilities include the following:

- Setting Technical Actuarial Standards, applicable to actuarial work within the United Kingdom
- Overseeing the IFoA's regulatory arrangements, including its disciplinary processes
- Conducting independent investigations into matters of public concern involving actuarial work
- Taking enforcement action directly in public interest cases through its Actuarial Scheme

This model preserves a significant role for the professional body while providing external oversight to address concerns about self-regulatory conflicts of interest. The FRC can investigate matters that the IFoA might be reluctant to pursue and provides an independent check on the profession's self-governance.

The UK system developed in response to several high-profile cases in which actuarial work was criticized, including issues related to pension fund valuations and insurance company failures. Those cases prompted the Morris Review of the Actuarial Profession (2005), commissioned by HM Treasury, leading to the current framework in

which the FRC assumed responsibility for actuarial oversight in 2006, with technical standard setting consolidated within the FRC from 2012 onward.

The FRC's oversight of the profession sits alongside a second layer of government regulation, much like the Appointed Actuary regimes found elsewhere: Financial and pension regulators require regulated firms and schemes to appoint actuaries to reserved roles. An insurer must have a Chief Actuary (and, for with-profits business, a With-Profits Actuary). These are senior management functions: The firm selects the holder, but the individual must receive regulatory approval before taking up the role. A defined benefit pension scheme's trustees must appoint a Scheme Actuary, whose statutory duties include reporting breaches to The Pensions Regulator. The Lloyd's of London market likewise requires each syndicate to have a Syndicate Actuary and imposes its own methodology, validation, and reporting requirements, a private-market analog to entity regulation. Eligibility for all of these reserved roles runs through the IFoA's Practising Certificates, the qualification layer taken up in Chapter 4.

The IFoA has substantial membership outside the United Kingdom. The FRC's Technical Actuarial Standards apply specifically to UK actuarial work, but the FRC has on occasion exercised disciplinary jurisdiction over IFoA members' conduct outside the United Kingdom where UK public interest was implicated.

3.2.3. Canada

The Canadian Institute of Actuaries (CIA) is the professional body, but government regulation comes from both federal and provincial authorities. Canada's insurance regulators coordinate through the Canadian Council of Insurance Regulators (CCIR), broadly analogous to the NAIC in the United States. At the federal level, the Office of the Superintendent of Financial Institutions (OSFI) supervises federally regulated insurers and pension plans; the Insurance Companies Act requires each federally regulated insurer to have an Appointed Actuary. At the provincial level, insurance and pension legislation imposes its own requirements. For example, provincial pension legislation governs the actuarial valuation of most registered pension plans, and provincial insurance legislation may require actuarial involvement in certain functions.

3.2.4. Australia

The Actuaries Institute is the professional body, but actuarial work in certain contexts is regulated by government agencies. The Australian Prudential Regulation Authority (APRA) requires insurers to have an Appointed Actuary and sets the professional

obligations of the role. APRA also imposes actuarial requirements for certain superannuation (pension) funds, particularly defined benefit funds.

3.2.5. European Union

EU member states have varying approaches to actuarial regulation, but EU directives (particularly Solvency II for insurance regulation) establish common requirements that affect actuarial practice across the union. Solvency II requires insurance companies to have an "actuarial function," effectively mandating actuarial involvement in key areas. This is an entity-regulation regime operating at the supranational level: The directive regulates the insurer, and the actuary's obligations follow from the insurer's compliance.

EU actuarial work is also shaped by generally applicable laws. The Court of Justice of the European Union's 2011 *Test-Achats* ruling struck down the exemption that had allowed insurers to use gender in pricing, requiring unisex premiums and benefits from December 2012 even where actuarial data showed gender to be predictive. The General Data Protection Regulation governs the personal data that feeds actuarial models. The EU Artificial Intelligence Act, adopted in 2024, classifies AI systems used for risk assessment and pricing of individuals in life and health insurance as high risk, subjecting them to additional governance requirements.

3.2.6. Brazil

Brazil illustrates direct regulation of actuaries, in which the state rather than the profession licenses entry to the actuarial profession itself. Before practicing, an actuary must register with a government labor authority and present a recognized actuarial science degree. Separately, the professional body, the Instituto Brasileiro de Atuária (IBA), supplies an examination-based designation that the financial regulators require of the responsible actuary who signs regulated work. This mirrors the Appointed Actuary regimes in other jurisdictions, which likewise require a professional qualification.

3.2.7. A requirement that spans jurisdictions

Not every requirement that reaches actuaries is jurisdiction-specific. Insurers reporting under International Financial Reporting Standards (IFRS) must measure their insurance-contract liabilities under IFRS 17, which has been adopted across the European Union and in the United Kingdom, Canada, Australia, and many other jurisdictions. Even US actuaries may encounter it, where an employer belongs to a group

that reports on that basis or files IFRS financial statements with the US Securities and Exchange Commission.

Two things distinguish this requirement from the jurisdiction-specific requirements described previously. It does not originate with a regulator: IFRS 17 is set by the International Accounting Standards Board, a private international standard setter, and it acquires legal force in a jurisdiction only because that jurisdiction has adopted or endorsed it and company or securities law requires audited financial statements prepared on that basis. And it does not displace the prudential requirements already in place, the capital and reserving rules that exist to make sure the insurer can pay its claims. An insurer subject to both measures the same liability twice, on a prudential basis for its supervisor (Solvency II in the EU, for example) and on an IFRS 17 basis for its financial statements. Different figures for the same obligation are not a contradiction; they answer different questions for different intended users, and the actuary needs to be clear about the basis on which a given number rests.

3.3. The case for and against self-regulation

Understanding the strengths and limitations of self-regulation is valuable both for actuaries practicing within it and for jurisdictions considering whether to adopt a similar approach.

3.3.1. Arguments supporting self-regulation

- **Expertise.** Actuaries themselves are best positioned to understand the technical complexities of actuarial work and to develop appropriate standards. Government regulators may lack the specialized knowledge necessary to evaluate actuarial methodologies or to determine what constitutes competent practice.
- **Track record.** The actuarial profession has maintained a generally positive reputation for competence and integrity. Major scandals directly attributable to actuarial failures have been relatively rare compared with some other professions. The notable failures that did occur, several involving insurer insolvencies, were themselves a spur to the formal standards and qualification requirements the profession now maintains (see Section 1.3).
- **Sanctions with real consequences.** Although self-regulatory bodies lack the state's power to impose criminal penalties, their sanctions carry genuine force. Suspension and expulsion bar a disciplined actuary from any work that requires the credential or a formal qualification (issuing Statements of Actuarial Opinion, for instance, or holding a reserved role), and public discipline at any

level can carry significant market consequences, including loss of employer trust, regulator scrutiny, and client unwillingness to engage. Self-regulation can thus produce effective enforcement even without formal legal teeth (see Chapter 7).

- **Flexibility.** Self-regulatory bodies can generally adapt more quickly to changes in practice than governmental agencies, which may be constrained by legislative or administrative procedures. As actuarial practice evolves (for example, with the increasing use of predictive modeling and data analytics), the profession can develop standards addressing new issues without waiting for legislative action.
- **Efficiency.** Self-regulation may be more cost-effective than governmental regulation, as it draws on volunteer efforts by practicing actuaries and is funded by professional membership dues rather than taxpayer resources.
- **Market incentives.** Actuaries have strong incentives to maintain professional standards because their value depends on the credibility of their credentials. If actuarial opinions were perceived as unreliable, demand for actuarial services would decline, harming all practitioners.
- **Professional autonomy.** Self-regulation preserves the profession's ability to govern its own affairs, which may attract talented individuals who value professional independence.
- **Complementary external accountability.** Self-regulation rarely operates alone. The most consequential actuarial work is also subject to governmental oversight, which reduces the need for broader government regulation of the profession, and ongoing dialogue between the profession and regulators (such as American Academy of Actuaries committee engagement with the NAIC's actuarial committees) both educates regulators and feeds back into self-regulation. Actuaries also remain exposed to civil liability in the courts, whose determinations rest outside the profession's control. Because the profession is therefore not the only check on actuarial conduct, these external mechanisms temper the conflict-of-interest and limited-enforcement concerns discussed next.

3.3.2. Arguments against self-regulation

- **Conflict-of-interest concerns.** Critics argue that self-regulatory bodies may be inclined to protect the interests of practitioners rather than the public. The profession has an interest in maintaining the value of credentials and the demand for actuarial services, which could potentially conflict with aggressive enforcement of standards.

- **Limited enforcement powers.** Professional bodies cannot impose criminal penalties (only the state can), and their monetary authority is limited: Some self-regulatory bodies can levy fines or recover investigation costs, but others, including the US-based organizations, cannot. The more fundamental limit is that where there is no governmental license to practice as an actuary, even suspension or expulsion cannot prevent a disciplined individual from continuing to perform actuarial work that requires no credential.
- **Public unawareness.** Members of the public who rely on actuarial work may not understand the self-regulatory system or how to file complaints. The profession's disciplinary processes may be less visible and accessible than governmental regulatory mechanisms, though the profession can improve access, for instance by guiding regulators, who are among those most likely to identify problems, on how to file complaints.
- **Capacity requirements.** Self-regulation depends on having enough experienced actuaries to develop standards, staff committees, and conduct disciplinary processes in an unbiased manner. In jurisdictions where the profession is still growing, this capacity may not yet exist, making governmental or international oversight a practical necessity.
- **Confidentiality constraints on enforcement.** Self-regulatory enforcement depends heavily on actuaries reporting apparent violations by their peers, yet much actuarial work is subject to confidentiality. Codes of conduct may require actuaries to protect confidential client and employer information, and an actuary's duty to report misconduct may give way where reporting would reveal such information. The Code of Professional Conduct of the US-based organizations, for example, makes a confidentiality exception to the reporting obligation explicit (Section 5.3). Note that codes of conduct for some other actuarial organizations do not have this exception. Where the exception does apply, misconduct embedded in confidential engagements may never reach the profession's disciplinary bodies. Government regulators, by contrast, can often compel disclosure through subpoena, examination, or audit powers that professional organizations lack, and where actuarial work falls within a regulated domain, statutory whistleblower protections can encourage insiders to come forward despite confidentiality concerns or fear of retaliation.

The actuarial profession has taken steps to address some of these concerns. The involvement of public members on certain boards, the transparency of the standard-setting process through public exposure drafts, and the publication of disciplinary actions all serve to enhance accountability.

Where self-regulation is the primary model, the arrangement is not guaranteed to continue. If significant failures of actuarial professionalism were to occur, particularly failures with substantial public impact, the case for governmental oversight would strengthen considerably. The accounting profession's experience illustrates the risk: Before the Enron and related scandals, auditing of public companies was largely self-regulated through the American Institute of Certified Public Accountants. In response to those failures, the US Congress passed the Sarbanes–Oxley Act of 2002, creating the Public Company Accounting Oversight Board with authority to register firms, set auditing standards for public-company audits, conduct inspections, and impose discipline. The profession lost control over setting those standards, and audit firms and their personnel became subject to PCAOB inspection and discipline.

Key takeaways

- An actuary's obligations come from two primary sources: the profession (self-regulation) and government. Government acts through three channels: direct regulation of actuaries (by licensing the profession itself or specific roles), regulation of insurers and pension plans that flows through to actuaries, and generally applicable laws. Obligations also arise from the actuary's relationship with the principal (client or employer).
- The balance between self-regulation and government regulation varies by jurisdiction, as does the form the government's involvement takes.
- Self-regulation offers advantages (expertise, flexibility, efficiency) but faces criticisms (conflict of interest, lack of formal legal sanctions) and requires a sufficient base of experienced actuaries to function effectively.
- Self-regulation is a privilege that can be revoked. Every actuary's conduct contributes to the profession's reputation and its ability to retain some degree of self-regulation.

Common mistakes to avoid

- **Conflating direct government regulation of actuaries with government regulation of the entities they serve.** Using the US example: Enrolled Actuary status comes from an individual federal license; Appointed Actuary status is a qualification gate within state insurance law.
- **Treating self-regulation as permanent, or as someone else's responsibility.** It is a privilege that lasts only as long as the profession polices itself effectively, and every actuary's conduct affects whether it survives.

Resources

- National Association of Insurance Commissioners (NAIC, US): naic.org
- Joint Board for the Enrollment of Actuaries (US): irs.gov/tax-professionals/enrolled-actuaries
- Financial Reporting Council (FRC, UK): frc.org.uk
- Australian Prudential Regulation Authority (APRA): apra.gov.au
- Office of the Superintendent of Financial Institutions (OSFI, Canada): osfi-bsif.gc.ca
- Canadian Council of Insurance Regulators (CCIR): www.ccir-ccrra.org
- International Actuarial Association (IAA): *Position Paper on Whistle-blowing Requirements* (2009)
- *Morris Review of the Actuarial Profession* (HM Treasury, 2005)
- *NAIC Model Bulletin: Use of Artificial Intelligence Systems by Insurers* (2023)
- Solvency II (Directive 2009/138/EC)
- International Accounting Standards Board (IASB): IFRS 17, *Insurance Contracts*
- EU Artificial Intelligence Act (Regulation (EU) 2024/1689)
- Court of Justice of the EU: *Test-Achats* (Case C-236/09, 2011)

Discussion questions

1. Is self-regulation adequate to protect the public interest, or should actuaries be subject to government licensing (and if so, broadly or only for specific roles)?
2. Suppose a wave of insurer insolvencies were traced to actuarial professionalism failures under pressure from management, prompting calls for more government oversight of actuaries. What could the profession have done to prevent such failures, and how does each actuary's conduct bear on whether self-regulation survives?
3. How should the profession weigh the expertise advantages of self-regulation against concerns about conflicts of interest?
4. If you observed a colleague engaging in conduct that violated professional standards, what would you do, and what factors would you weigh? How

might your decision affect the profession's ability to self-regulate? (Chapter 5 discusses how codes of conduct typically address reporting obligations; the question here is about the practical and personal challenges.)

5. Confidentiality agreements can limit the ability of actuarial organizations to identify and respond to actuarial misconduct. How should the profession try to overcome this challenge?
6. Some actuaries are licensed and regulated entirely by government, and so fall outside the profession's self-regulation. If such an actuary does poor or unethical work, how might that damage the reputation of the profession as a whole, even though no actuarial organization credentialed them or can discipline them? What could the profession do about this?

Part II

The Four Pillars

4. Qualification and Credentialing

Self-regulation is a privilege the profession keeps only by governing itself credibly (Chapter 3), and qualification and credentialing are how it ensures the competence on which credibility depends. As the first of the four pillars introduced in Chapter 1 (Figure 1.2), this pillar establishes who is competent enough to be entrusted with actuarial work and with particular assignments. At its core are two questions: What must someone know, and what must they have done, before others can safely rely on their work?

Qualification and credentialing are related but distinct:

- **Credentialing** is what an actuarial organization confers on a member who has met its education and (for some organizations) experience requirements.[5]
- **Qualification** is what allows an actuary to take on a specific assignment: issuing a Statement of Actuarial Opinion in the United States, holding a Practising Certificate for a reserved role in the United Kingdom, serving as an Appointed Actuary in Canada or Australia, or fulfilling whatever other competence requirements a jurisdiction has established for the work in question.

The two overlap since a credential is usually a prerequisite for qualification, but they are not the same. A newly credentialed actuary may not yet be qualified for any specific role or opinion, and a credentialed actuary qualified for one type of work is not automatically qualified for another. They also differ in reach: A credential is conferred by an actuarial organization and travels with its holder, whereas what it takes to be qualified is defined by the jurisdiction the actuarial services are directed to.

This chapter examines how the profession credentials its members and how jurisdictions establish what those members must do to be qualified for particular types of work. The US system, which makes this distinction structurally explicit, serves as a detailed example, but the underlying concepts are shared across the profession.

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5 This book uses *credential* for a qualification earned by completing an organization's own education and experience requirements. Not every designation is a credential in this sense: Some are membership or recognition markers granted without such requirements, often presupposing a credential earned elsewhere.

4.1. Foundations

Before taking credentialing and qualification in turn, this section sets out what they share. Formalizing each creates a common baseline: Everyone holding a given credential has met the same standard to earn it, and everyone qualified for a kind of work has cleared the same qualification requirements, so those who rely on actuarial work get a predictable level of competence whoever performs it.

Across jurisdictions, credentialing and qualification draw on three primary building blocks. Each is introduced here in concept; the rest of the chapter develops them.

Three building blocks

- **Basic education.** The foundational knowledge of actuarial science and practice that every actuary must demonstrate
- **Experience.** Relevant, responsible work applying that knowledge under real conditions
- **Continuing education.** Ongoing learning that keeps an actuary current as the field evolves

4.2. Credentialing

This section covers the education and experience requirements that lead to a credential, and what distinguishes an Associate from a Fellow.

4.2.1. Education

The International Actuarial Association's (IAA's) Education Syllabus specifies a common core of competencies that its Full Member Associations' education programs must cover. Of its six core subjects, five are technical (statistics, financial mathematics, data analysis, modeling, and risk management); the sixth, notably for the themes of this book, is professional practice, which the IAA treats as essential for every actuary and expects each member association to cover even when it relies on a university or another source for the rest of the material. Actuarial organizations have flexibility in how these competencies are covered, with several common pathways used:

- **University-based education.** An accredited university degree satisfies the education requirement, sometimes paired with a final qualifying assessment administered by the actuarial body rather than a separate examination system. This approach is common across much of continental Europe, including Spain and France.

- **Professional examinations.** The exams are usually set by the organization, commonly combined with credit for university coursework, as with the Society of Actuaries (SOA), the Casualty Actuarial Society (CAS), and the Institute and Faculty of Actuaries (IFoA).
- **Recognition of a credential earned elsewhere.** A body may grant a designation to actuaries who already hold a qualifying credential from another organization, as with the Singapore Actuarial Society. Mutual recognition agreements between organizations work the same way, letting an actuary credentialed by one obtain recognition from another without repeating the full process, which eases international mobility while still requiring compliance with the local jurisdiction's professional requirements.

Beyond examinations or coursework, most actuarial organizations also require candidates to complete formal professionalism education before earning their credentials. The CAS, for example, requires completion of its Course on Professionalism (a multiday course covering the Code of Professional Conduct, the Actuarial Standards of Practice, the US Qualification Standards, and ethical decision-making) as a condition of the Associate (ACAS) credential. The SOA has a similar requirement, and the IFoA embeds professional skills training into its qualification pathway. These requirements ensure that newly credentialed actuaries have a foundation in the professionalism framework before they begin practicing under it.

4.2.2. Experience

However a credential is structured, actuaries develop competence through supervised work before assuming full professional responsibility; what varies is whether that experience is also a formal requirement, and where any such requirement attaches.

Unlike basic education, experience is not something the IAA requires of its Full Member Associations, and many do not make it a condition of the credential. A few do: The IFoA, for example, builds supervised practical experience into the credential through its Personal and Professional Development requirement, under which candidates cannot qualify as Associates or Fellows without demonstrating, under supervisory assessment, that they can apply their knowledge in professional settings. Other associations credential on education alone, including the CAS, which does not have an experience requirement to earn the Associate (ACAS) or Fellow (FCAS) credentials.

That a credential carries no experience requirement does not mean experience plays no formal role. Even where it is not a condition of the credential, experience can be a

prerequisite to performing particular work: The US Qualification Standards (USQS), for instance, require a period of relevant experience before an actuary may issue a Statement of Actuarial Opinion. We take up qualification requirements in Section 4.3 and the USQS in detail in Section 4.4.

4.2.3. Associate versus Fellow: What difference does Fellowship make?

The large exam-based organizations typically award their credential in two tiers: an Associate designation, earned first, and a more advanced Fellow designation that requires further examinations. The CAS, for example, confers the Associate (ACAS) and Fellow (FCAS), the SOA the ASA and FSA, and the IFoA the AIA and FIA. For an actuary weighing whether to continue past the Associate level, a natural question is what the senior designation actually confers. Both tiers are full credentials; the differences, where they exist, fall into a few categories, summarized in Table 4.1.

Table 4.1. What Fellowship adds beyond the Associate credential.

Dimension	How the Fellow designation differs
Depth of assessment	Fellowship requires additional, more advanced examinations, demonstrating competence across a broader and deeper body of material.
Access to high-stakes work	Some roles are reserved for Fellows or are easier for them to qualify for. For example, the Canadian Appointed Actuary must be a Canadian Institute of Actuaries (CIA) Fellow. In the United States, Fellowship can shorten the qualification requirements for certain Statements of Actuarial Opinion.
International mobility	Mutual recognition agreements usually operate at the Fellow level; only a few extend to Associates.
Governance within the organization	Fellowship often carries fuller membership rights, such as voting and eligibility for office. Under the CAS Bylaws, Fellows hold these rights in full immediately. An Associate becomes a voting member only five years after admission. Even then, an Associate votes only for the board and officers, not on amendments to the bylaws. Those amendments remain a vote of the Fellows alone, and the most senior offices are reserved for Fellows as well.
Market and career factors	Fellows typically command higher compensation and prestige, and are often presumed more knowledgeable, aiding hiring and advancement even where the credential is not formally required.
What does *not* differ	Both are bound by the same code of conduct and disciplinary process, and may perform the great majority of actuarial work, provided they meet the applicable qualification requirements.

4.3. Qualification

Consider a patient who needs back surgery. Would that patient feel comfortable having the operation performed by a brain surgeon? Although brain surgeons are undoubtedly smart enough to perform back surgery and may even be able to perform it without issues, most patients would prefer a surgeon with experience in back surgery. The same concept applies to actuaries, whose education and experience vary: A principal would likewise prefer an actuary whose background is aligned with the work at hand.

Holding a credential is usually the starting point; qualification is what an actuary must satisfy to take on particular work. This section examines what work triggers a formal qualification requirement, how practice-area competence is handled, how qualification is maintained over time, and how the framework copes with emerging risks.

4.3.1. Types of work that require formal qualification

Codes of professional conduct typically require actuaries to perform work only when qualified, but they state that obligation in broad terms, requiring competence without defining precisely what competence means for any particular type of work. Qualification frameworks replace that open-ended duty with specific, measurable requirements for certain types of work: which credentials an actuary must hold, how much relevant experience is required, and what continuing education must be completed. Where the profession sets such requirements, the code typically requires compliance with them, making them enforceable through its disciplinary process; where a regulator sets them, the regulator can enforce them directly as well, outside that process. But not every jurisdiction has adopted formal qualification requirements for every type of actuarial work, and where they have not, the code's broad competence obligation still governs: The actuary remains professionally responsible for undertaking only work for which they are qualified, with that determination resting on the actuary's own honest judgment rather than on externally defined thresholds. In the Code of Professional Conduct of US-based organizations, for instance, Precept 2 requires actuaries to perform services only when qualified "on the basis of basic and continuing education and experience," independent of any formal qualification requirement.

Although many jurisdictions impose some form of qualification requirement for actuarial work, the way they define the *scope* of that requirement varies considerably. The paragraphs that follow describe the main approaches in turn.

United States: Statements of Actuarial Opinion

In the United States, qualification standards apply to Statements of Actuarial Opinion (SAOs), which are defined broadly as any opinion expressed by an actuary in the course of performing actuarial services and intended to be relied upon by the person or organization to which it is addressed. This definition encompasses far more than regulatory filings: It covers essentially any actuarial communication that the actuary intends to be relied upon, whether written or oral, formal or informal. The FAQs on the USQS emphasize that breadth, noting that many actuarial communications fall under the definition and recommending that practicing actuaries endeavor to meet the qualification standards rather than seeking interpretations that support exemption. Defining the trigger this way means qualification in the United States turns on the nature of the work product rather than on whether the actuary holds a specific role. Within this work-product framework, the US system distinguishes between a *General* Qualification Standard (requirements applicable to any SAO) and *Specific* Qualification Standards that impose additional requirements for particular high-stakes opinions, such as a National Association of Insurance Commissioners (NAIC) Annual Statement opinion signed by a company's Appointed Actuary. As the following discussion shows, the designated-role requirements in other jurisdictions are broadly analogous to these Specific Qualification Standards.

United Kingdom: Practising Certificates and reserved roles

The IFoA frames qualification requirements around designated roles rather than work products. The reserved roles themselves, and the regulators that require them, are described in Section 3.2.2; the qualification layer is the Practising Certificate. An actuary cannot fill one of these roles without holding the corresponding IFoA Practising Certificate, which carries additional obligations beyond baseline membership requirements. The certificate attaches to the person filling the role, not to any particular document they produce.

Canada and Australia: Appointed Actuary roles

Canada frames its most significant qualification requirements around designated roles, most notably the statutory role of Appointed Actuary, which is reserved for a Fellow of the CIA who meets specific experience requirements. Federal and provincial pension statutes likewise require that certain pension valuations be prepared by a Fellow of the CIA. Australia follows a similar designated-role model, with the Australian Prudential Regulation Authority setting qualification requirements for the Appointed Actuary of a regulated insurer. The regulators that impose these roles are de-

scribed in Sections 3.2.3 and 3.2.4; what matters here is that each layers an additional, role-specific qualification requirement on top of the credential.

European Union: Solvency II actuarial function

Solvency II requires insurers to establish an actuarial function, but it sets only a high-level standard for who may perform it: knowledge of actuarial and financial mathematics proportionate to the business, demonstrable relevant experience, and a "fit and proper" assessment.[6] It stops short of requiring a formal actuarial credential, leaving member states to decide whether one is needed: Some require a recognized actuarial qualification, and others apply only that competence-and-propriety test.

The common thread

Despite these differences in framing, each jurisdiction layers an additional qualification requirement on top of the credential for its highest-stakes work, ensuring that the actuaries who perform it have demonstrated competence specific to that work. Whether that layer is defined by work product (US Specific Qualification Standards), designated role (Canadian Appointed Actuary), or Practising Certificate (UK reserved roles), the principle is the same: Holding a credential alone is not sufficient for the highest-stakes work. The United States is unusual in going a step further, applying a formal General Qualification Standard to every SAO, where other jurisdictions tend to leave everyday work to the credential and the code's general competence obligation.

4.3.2. Practice areas and subject-matter specialization

Actuarial work spans diverse practice areas (e.g., property/casualty insurance, life insurance, health insurance, pensions), and expertise in one area does not necessarily translate to competence in another. Jurisdictions differ in how they handle the relationship between credentials and practice-area competence. How far a jurisdiction restricts practice by area depends in part on the size of its actuarial population: Where actuaries are few, narrow restrictions could leave some work without any qualified candidate, so some smaller jurisdictions favor a generalist model in which a credentialed actuary may perform all types of actuarial work rather than restricting practice to specialized subareas.

6 "Fit and proper" is a standard concept in UK, EU, and Commonwealth financial-services regulation that has no exact counterpart in US terminology. A fit-and-proper assessment asks whether an individual is suitable to hold a regulated role, typically across two or three dimensions: honesty, integrity, and reputation (is the person of good character?); competence and capability (do they have the knowledge and experience the role demands?); and, in some regimes, financial soundness.

The United States

The USQS require that actuaries meet particular education and/or experience requirements in an area of practice before issuing an SAO within that area. For specific types of opinions covered by the Specific Qualification Standards, the threshold is higher and the requirements are tailored to the particular SAO being issued. Section 4.4 discusses those requirements in detail.

The United Kingdom

For reserved roles, the IFoA's Practising Certificates are themselves practice-area-specific: A Scheme Actuary certificate is specific to pensions, a With-Profits Actuary certificate to life insurance, and so on. An actuary cannot serve in a reserved role without holding the corresponding certificate. Outside reserved roles, no certificate is required, and practice-area competence is governed instead by the Actuaries' Code's competence principle, which requires members to ensure they have an appropriate level of relevant knowledge and skill for the work they undertake.

Canada

Practice-area requirements attach to reserved roles rather than to the credential: The Appointed Actuary role is insurance-specific and carries its own experience requirement. Outside that role, the CIA's Rules of Professional Conduct require actuaries to work competently, as the Actuaries' Code does in the United Kingdom.

4.3.3. Maintaining qualification: Continuing education and attestation

Qualification is not a one-time achievement. Many actuarial organizations require members who are actively practicing to maintain competence through continuing professional development and to periodically affirm that they have done so. The specific terminology varies: In the United States, the Qualification Standards and the CAS use *continuing education* (CE), while the SOA uses *continuing professional development* (CPD), the term also used in the United Kingdom and Canada. The underlying principle, however, is widely shared: The actuarial credential represents an ongoing commitment to competence, not merely past achievement.

This expectation is becoming close to universal: In 2026 the IAA adopted a policy requiring all Full Member Associations to maintain a continuing professional development requirement for their credentialed members, enforced from January 1, 2030.

The policy is deliberately flexible (an association may run its own scheme, accept another's, or rely on a regulator's mandate), so the effect is a shared baseline rather than a single global rule.

Continuing education requirements by jurisdiction

The specific structures of continuing education requirements differ considerably across jurisdictions:

- **Canadian Institute of Actuaries.** Members must complete 80 hours over a rolling two-year period, including at least 30 hours of guided (organized) CPD and a mandatory Professionalism Module every two years. Members may instead be deemed compliant with the hours in certain cases (for example, students, and nonresident members who do no Canadian work and meet another association's requirements), but the Professionalism Module remains mandatory in every case.
- **Institute and Faculty of Actuaries.** Members must complete 15 hours of CPD annually, including at least 2 hours of professional skills training. Practising Certificate holders are subject to an additional 15 hours of role-related technical CPD. Members must also complete a reflective practice discussion each year.
- **Enrolled Actuaries.** Enrolled Actuaries are subject to CE requirements, focused on pension-related topics, set by the Joint Board for the Enrollment of Actuaries. These operate separately from the requirements of any actuarial organizations to which they belong.

It is worth noting that the US-based credentialing organizations, the CAS and the SOA, maintain their own continuing education policies, but those largely work by requiring a member to follow whichever recognized continuing education requirement applies, rather than by imposing a wholly separate requirement. The CAS Continuing Education Policy applies to Associates and Fellows who provide actuarial services. Rather than setting a requirement of its own, it has them meet the continuing education portion of whichever recognized national standard applies to the work, such as the USQS for services used in the United States (discussed in Section 4.4). A member not covered by any of these standards chooses the one most relevant to their work and meets it. The SOA's CPD requirement is built on the same idea and recognizes a similar set of standards. It also offers an alternative basic requirement of its own: a set number of credits over a two-year cycle that a member may use instead.

Annual attestation

Some actuarial organizations require credentialed members to submit annual attestations or declarations confirming compliance with professional requirements. The consequences of non-attestation vary but can affect an actuary's ability to use their credentials and practice. These consequences can arise even when the actuary has substantively met all requirements but simply failed to complete the administrative step of attesting. The attestation mechanism thus serves both as a compliance tool and as a periodic prompt for actuaries to confirm that they remain qualified to do the work they are doing.

Stepping away from practice and returning

Not every credentialed actuary is actively providing actuarial services at all times. Some organizations allow members to maintain their credential in good standing without meeting CE requirements by attesting that they are not currently providing actuarial services in any capacity, paid or volunteer. The CAS, for example, offers this option. This preserves the membership, but it does not preserve qualification. Returning to active practice after such a hiatus requires satisfying the applicable CE requirements before resuming qualified work. The specifics (how much CE is needed, over what period, and whether the returning actuary must make up missed requirements or simply satisfy them going forward) depend on the jurisdiction and the length of the gap. Actuaries contemplating a return to practice after an extended absence should consult their organization's current CE policies.

Actuaries holding multiple credentials

Some actuaries hold credentials from more than one actuarial organization, and thus are subject to the CE requirements of each. An actuary who also holds a nonactuarial designation, such as a legal or accounting qualification, will have that profession's CE obligations to meet as well. Some CE activities may count toward multiple organizations' requirements simultaneously, but that should not be assumed. Actuaries in this situation should understand the specific requirements of each organization and plan their professional development accordingly.

4.3.4. Qualification and emerging risks

Qualification requirements are most straightforward when relevant experience exists to be gained: An actuary can spend years working in a practice area, learning its patterns and pitfalls, before taking on work on which others rely. But the framework

must also accommodate situations where an entirely new risk emerges and no one has deep experience.

This is not a hypothetical question. Cyber liability, autonomous vehicle risk, cannabis-related coverages, pandemic business interruption, and climate-based catastrophe models have all presented situations where actuaries were asked to do work in areas where traditional experience bases were thin or nonexistent. The qualification framework must accommodate these realities without abandoning the principle that experience matters.

The experience paradox

Qualification requirements typically require several years of relevant, responsible experience. When a new line of business or risk category emerges, this creates a circular problem: No one can qualify because no one has experience, and no one can gain experience because the work does not yet have an established practice base. The profession navigates this tension in several ways.

Transferable expertise. Actuaries working with emerging risks rarely start from zero. Cyber liability draws on techniques from professional liability and technology errors-and-omissions coverages. Climate risk modeling extends catastrophe modeling methods that property/casualty actuaries have worked with over decades. Autonomous vehicle risk builds on existing auto liability and product liability frameworks. The qualification question becomes whether an actuary's adjacent experience provides a sufficient foundation, not whether the actuary has direct experience in a line of business that barely existed a few years ago.

The role of professional judgment under codes of conduct. When formal qualification requirements do not yet address an emerging area, the profession falls back on the more general ethical obligation that actuaries perform work only when qualified by education and experience. This is inherently more flexible than a formal qualification framework, and more demanding of judgment. With no fixed experience threshold to point to, the actuary faces what is sometimes called the "look in the mirror" test: They have to look at themselves honestly and judge whether their education and transferable experience form an adequate foundation for the specific work, and decline it if they do not.

Continuing education as a bridge. CE requirements serve a particularly important function in emerging risk areas. As the profession develops expertise in new domains, CE

programs allow actuaries to build knowledge even before substantial hands-on experience is available. An actuary who has completed rigorous CE in cyber risk modeling, studied the emerging literature, and applied transferable skills from adjacent practice areas may be better positioned to do competent work than an actuary with years of experience in an unrelated line.

Appropriate humility and disclosure

Working in an area where the profession's collective experience is limited requires particular honesty about uncertainty: the uncertainty inherent in the emerging area itself and any uncertainty arising from the actuary's own limited experience with it. In practice, that honesty tends to show up directly in the actuary's communications, which acknowledge the limited data and experience base in the field, disclose the actuary's relevant background and the steps taken to address experience gaps, explain the methods and analogies used, and clearly communicate the resulting uncertainty. This transparency is not a weakness but a mark of responsible professional practice, and it is what the profession's codes require: Every code obliges actuaries to act with honesty and integrity and to communicate their findings clearly enough that users understand what the work does and does not support (Chapter 5). An actuary who presents conclusions about a novel risk with the same confidence as conclusions about a well-established line would be misleading users.

The framework adapts over time

As experience accumulates in new areas, the profession's qualification framework naturally adapts. CE programs expand to cover emerging topics. Actuaries gain direct experience that satisfies traditional qualification requirements. Professional guidance is developed. What begins as a novel risk with no established practice base eventually becomes an area with its own body of expertise, qualification expectations, and professional standards. The profession's history includes many risks that were once novel (workers' compensation, environmental liability, managed care) and are now well-established practice areas with robust qualification frameworks.

Qualifying for an emerging risk

Priya is an FCAS with eight years of property/casualty experience, primarily in personal auto and commercial liability. Her company is developing an insurance product for flying cars, electric vertical takeoff and landing (eVTOL) vehicles expected to enter commercial service, and asks her to develop the pricing and reserving methodology for the new line.

Analysis: Priya has no direct experience with flying car insurance, but neither does anyone else, since the vehicles are only now entering service. Her auto liability and commercial liability background provides relevant transferable skills: She understands bodily injury and property damage claims, liability coverage structures, and reserving under uncertainty. However, flying cars present distinctive characteristics (three-dimensional collision dynamics, novel regulatory frameworks, battery and software failure modes, infrastructure that does not yet exist at scale) that her existing experience does not fully address.

How might Priya approach this? A sound response might combine several elements:

1. Invest in targeted continuing education on eVTOL technology: industry conferences, aviation safety research, and cross-disciplinary study of aerospace engineering and air traffic management.
2. Study available data from drone operations, helicopter insurance, and early eVTOL test programs, understanding the limitations of such analogies.
3. Consult with underwriters, aviation safety experts, and vehicle manufacturers to understand the risks from multiple perspectives.
4. Be transparent in any communications about the limited experience base, the analogies being used, and the resulting uncertainty.
5. Assess honestly whether her combined experience and education are sufficient, and seek peer review or cosigning arrangements if appropriate.

Priya's path illustrates how qualification in emerging areas depends on transferable expertise, targeted learning, intellectual honesty, and appropriate disclosure, rather than waiting for experience that does not yet exist in the profession.

4.4. US Qualification Standards

This section uses the USQS as a detailed example of how a jurisdiction implements the qualification concepts discussed in Section 4.3. The discussion reflects the USQS effective January 1, 2022, which remain current as of June 2026; because the Qualification Standards are periodically revised, readers should consult the current version of the *Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States*, published by the American Academy of Actuaries (Academy or AAA), for the official and authoritative requirements.

The USQS promulgated by the AAA apply to Statements of Actuarial Opinion, broadly defined as "an opinion expressed by an actuary who is subject to the Code of Professional Conduct by virtue of membership in a U.S.-based actuarial organization, where such opinion is expressed in the course of performing Actuarial Services and intended by that actuary to be relied upon by the person or organization to which the opinion is addressed." The standards are organized into a General Qualification Standard (baseline education, experience, and CE requirements for all SAOs) and Specific Qualification Standards that impose additional requirements for particular high-stakes opinion types, currently the three categories of NAIC Annual Statement opinions: the NAIC Life, Accident & Health, and Fraternal Annual Statement; the NAIC Property and Casualty Annual Statement; and the NAIC Health Annual Statement.

Expanding on the three building blocks described in Section 4.1, the US system adds two further components: US-specific knowledge and subject area knowledge. An actuary issuing an SAO must satisfy all five, under the General Standard and any applicable Specific Standard. Table 4.2 summarizes how the two tiers compare.

Table 4.2. General versus Specific qualification requirements.

Component	General Standard	Specific Standards
Basic education	CAS or SOA credential (Associate or Fellow), Enrolled Actuary designation, or Academy membership	Successful completion of relevant examinations on opinion-specific topics, or alternative basic education
Experience	Minimum 3 years of responsible actuarial experience	3+ years of responsible experience relevant to the subject of the SAO, under review by a qualified actuary
Continuing education	30 hours of relevant CE per calendar year; at least 6 organized, 3 professionalism, 1 bias; max 3 general business	15 hours per calendar year directly relevant to opinion type; 6 hours must be organized activities
US-specific knowledge	Knowledge of US law applicable to the SAO and of US actuarial practices and principles	No additional requirements beyond General Standard
Subject area knowledge	Demonstrated through Fellowship plus relevant education/experience, or 3 years supervised experience in the subject	No additional requirements beyond General Standard

Basic education

Like most qualification frameworks, the USQS begin with a credential requirement. The US General Standard recognizes three pathways: (1) a Fellow or Associate des-

ignation from the SOA or the CAS; (2) the Enrolled Actuary (EA) designation; or (3) membership in the AAA through its approval process, a pathway most commonly used by actuaries holding non-US credentials. The USQS emphasize that the requirement focuses on credentials *earned* rather than on continued membership: An actuary who has obtained a credential has met the basic education requirement even if they later discontinue membership in a particular organization.

The EA designation is treated specially because Enrolled Actuaries are qualified through a separate federal regime, in which the Joint Board for the Enrollment of Actuaries independently sets their education, experience, and CE requirements (Section 3.2.1). For pension SAOs under the Employee Retirement Income Security Act or Treasury Circular 230, an EA is accordingly deemed to satisfy the entire General Standard; for other SAOs, an EA must meet the remaining components separately. The same regime marks a limit on the USQS themselves, which by their own terms govern only actuaries subject to the Code of Professional Conduct by virtue of membership in a US-based organization: An EA who belongs to no such organization falls outside the USQS entirely, with the Joint Board's framework supplying the whole of their qualification.

For Specific Standards, the basic education requirements go further: An actuary must have completed relevant examinations on topics specific to the opinion type or satisfy the requirement through alternative basic education documented by a signed statement from a qualified actuary. In practice, the NAIC's regulatory guidance illustrates how these requirements translate into specific credential expectations. For example, as of the 2025 NAIC Regulatory Guidance, an Appointed Actuary signing the NAIC Property and Casualty Annual Statement opinion is expected to be one of the following: an FCAS with credit for Exam 6, Regulation and Financial Reporting (US version); an ACAS with credit for both Exam 6 (US) and Exam 7, Advanced Estimation of Claims Liabilities; or an FSA whose basic education includes the SOA's general-insurance coursework, with its US-specific regulatory and financial-reporting components. Alternatively, an actuary evaluated by the Academy's Casualty Practice Council and determined to be a Qualified Actuary may also serve.

Experience

The General Standard requires a minimum of three years of responsible actuarial experience, defined as work that requires knowledge and skill in solving actuarial problems. This requirement is framed broadly: It does not specify a particular practice area. Specific Standards are more targeted: three years of responsible experience *relevant to the subject of the SAO*, under review by a qualified actuary (neither standard requires that this experience be recent).

Because the US system separates credentialing from qualification, an actuary may earn a credential before accumulating three years of experience. This is entirely normal: The actuary holds a credential but is not yet qualified to issue SAOs, and should continue building experience rather than attempting to issue opinions prematurely. A related question is what counts as "actuarial" experience in the first place. The USQS define it as work requiring "knowledge and skill in solving actuarial problems," but the boundary between actuarial work and related technical work (data science, financial modeling, risk analytics) is not always crisp. Actuaries in roles that blend actuarial and nonactuarial responsibilities must exercise judgment about which portions of their experience genuinely qualify.

Transition to ACAS: What changes?

Maria has worked as an actuarial analyst for two and a half years in the United States at a regional insurance company. She recently passed her final ACAS examination, and the CAS has approved her membership application. Maria wonders exactly what changes with her new credential.

What changes immediately:

- Maria is now bound by the full Code of Professional Conduct in place of the Candidate Code (Section 5.4). In practical terms, she must meet the US Qualification Standards before issuing any Statement of Actuarial Opinion and comply with the applicable Actuarial Standards of Practice. She also now bears responsibility for compliance and is subject to the ABCD's discipline process (Section 7.4).
- She must begin tracking continuing education credits and will need to attest annually to her compliance with professional requirements.

What does not change immediately:

- Maria cannot yet independently issue SAOs in the United States. The USQS require three years of experience, and Maria has only two and a half.
- She should continue working under the direction of qualified actuaries who review her work and issue any required SAOs in their own name.

Looking ahead: In approximately six months, Maria will likely meet the experience requirement under the USQS and would be able to issue SAOs at that time, assuming she also meets the General Standard's other requirements, including CE.

Continuing education

The CE requirement ensures that actuaries remain current in an evolving field. The General Standard requires 30 hours of relevant CE each calendar year (where an "hour" is defined as 50 minutes, and fractions of an hour may be counted). The USQS treat CE as "relevant" if it broadens or deepens the actuary's understanding of the work they do, exposes them to new or evolving techniques for addressing actuarial issues, expands their knowledge of related disciplines that bear directly on their work, or facilitates their entry into a new area of practice. Relevance is not confined to narrow technical topics within the actuary's own specialty (it expressly includes professionalism, bias, and general business skill content), and the actuary is responsible for making a reasonable, good-faith determination of what will genuinely enhance their ability to practice. Within this total, at least six hours must come from "organized activities" (conferences, seminars, webcasts, courses, or committee work involving interaction with outside professionals); at least three hours must address professionalism topics (the Code of Professional Conduct, the Actuarial Standards of Practice, and related professionalism guidance); at least one hour must address bias topics (identifying biases in data, assumptions, algorithms, and models); and no more than three hours may be on general business skill topics. The remaining hours may come from organized activities or "other activities" such as reading actuarial literature, writing professional papers, or listening to recordings of seminars. The 30-hour requirement is typically met in the calendar year preceding the year in which the actuary issues an SAO; if a shortfall exists, it can be made up before issuing any SAO that year, but make-up hours cannot double-count for the current year. Conversely, hours completed beyond the 30-hour minimum in a given year may be carried forward to the following year (one year only), subject to the US Qualification Standards' category-specific limits. Specific Standards impose their own CE requirement: 15 hours per calendar year directly relevant to the opinion type, of which 6 must be organized activities. These hours may also count toward the General Standard's 30-hour total.

US-specific knowledge

The USQS formally require that actuaries be knowledgeable about (1) the US law applicable to the SAO and (2) US actuarial practices and principles. "Law" is defined broadly to include statutes, regulations, judicial decisions, and other legally binding authority. The expectation that actuaries understand the legal and professional context in which they work is not unique to the United States (most jurisdictions address this through codes of conduct that require compliance with applicable law), but the US system is distinctive in elevating it to an explicit component of the qualification framework rather than relying solely on conduct obligations.

Subject area knowledge

The General Standard requires that an actuary demonstrate knowledge specific to the area of practice in which they are issuing an SAO. This can be satisfied through one of two pathways: (1) Fellowship in the CAS or the SOA (or the highest non-US designation) plus either relevant education or one year of supervised experience in the subject; or (2) three years of supervised experience in the particular subject under a qualified actuary.

An important question is how granular the "subject area" requirement is. The USQS identify four areas of actuarial practice (casualty, health, life, and pension) but also refer to "particular subjects within an area of actuarial practice," suggesting that specialization may be required at a finer level than the broad practice area. This question is especially pointed in casualty practice, which covers a broad range of insurance types. A single practice area spans everything from personal auto and homeowners to workers' compensation, medical malpractice, and property catastrophe, and on to more specialized lines such as cyber liability, product warranty, pet insurance, and film production coverage. An actuary with deep experience in workers' compensation reserving might question whether that experience qualifies them to issue a pricing opinion on the same line, or to issue a reserve opinion on medical malpractice, even though all three activities fall within the casualty practice area. The USQS do not draw bright lines at this level; instead, the actuary must exercise professional judgment about whether their education and experience are sufficient for the specific work. This contrasts with jurisdictions such as the United Kingdom, where the IFoA does not impose a formal subject area knowledge requirement within its qualification framework, relying instead on the Actuaries' Code's general competence obligation, which requires actuaries to ensure they have appropriate relevant knowledge and skill for the work they undertake.

Key takeaways

- Credentialing and qualification are built using **three primary building blocks**: basic education, experience, and continuing education.
- Jurisdictions frame qualification requirements differently: The United States defines them by **work product** (Statements of Actuarial Opinion), while the United Kingdom, Canada, and Australia define them by **designated roles** or Practising Certificates.
- **Practice-area competence** is expected everywhere, but jurisdictions vary in how formally they require it, from the US subject area knowledge require-

ment to the UK and Canadian reliance on their codes' general competence requirement.

- **Annual attestation** of compliance with professional requirements is required by some actuarial organizations, and actuaries holding multiple credentials must satisfy each organization's requirements.
- Qualification frameworks can accommodate **emerging risks** through transferable expertise, targeted continuing education, and professional judgment, with suitable disclosure.

Common mistakes to avoid

- **Assuming credentials equal qualification.** Holding a credential may be necessary but is not sufficient: An FCAS without relevant experience cannot issue an SAO, and an FIA without a Practising Certificate cannot serve as a Scheme Actuary.
- **Ignoring continuing education requirements.** Qualification is not permanent. Where CE or CPD requirements apply, you must maintain compliance to remain qualified.
- **Underestimating practice-area boundaries.** Although some qualification frameworks allow alternative pathways such as additional education in lieu of direct experience, actuaries should not assume that expertise in one area transfers automatically to another. Qualification requirements exist precisely because practice areas involve distinct knowledge and judgment.
- **Overlooking attestation deadlines.** Failing to complete the administrative step of attesting can affect your ability to use your credentials and practice, even when you have substantively met all the underlying requirements.
- **Reading "SAO" too narrowly.** In the United States, a Statement of Actuarial Opinion is not only the formal NAIC Annual Statement opinion but essentially any actuarial opinion intended to be relied upon, all subject to the General Qualification Standard.

Resources

- American Academy of Actuaries (AAA): *Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States*

- National Association of Insurance Commissioners (NAIC, US): *Regulatory Guidance on Property and Casualty Statutory Statements of Actuarial Opinion* (2025)
- Casualty Actuarial Society (CAS): *Continuing Education Policy* and *Constitution and Bylaws*
- Society of Actuaries (SOA): *Continuing Professional Development Requirement*
- International Actuarial Association (IAA): *Education Syllabus* and *Education Guidelines* (2025)

Discussion questions

1. What are the advantages and disadvantages of framing qualification requirements around work products versus designated roles?
2. Your company asks you to develop the pricing methodology for a new line of business where no one in the profession has deep experience. How would you assess whether you are qualified to do this work, and what steps would you take to build competence?
3. Why do you think the US system separates credentialing from qualification (allowing actuaries to earn credentials before accumulating sufficient experience to issue opinions), while the UK system embeds practical experience into the credentialing process itself? What are the implications of each approach?
4. Some actuarial organizations confer two credential tiers (Associate and Fellow). Should the CAS and similar bodies continue to offer both an Associate and a Fellow designation, or move to a single Fellow credential? Weigh the advantages and disadvantages for candidates, employers, the public, and the profession.

5. Codes of Conduct

A code of conduct establishes the ethical and professional obligations that members of a profession agree to uphold. It is the second of the four pillars: Where qualification and credentialing establish the competence a member must have, the code sets out what is ethically expected of them, and the standards of practice and disciplinary mechanisms covered in Chapters 6 and 7 derive much of their authority from the code's foundational ethical commitments. This chapter begins by examining the general purposes that codes of conduct serve within the actuarial profession and the common principles that the International Actuarial Association (IAA) requires the codes of its Full Member Associations to embody. It then provides a detailed look at the Code of Professional Conduct adopted by the five US-based actuarial organizations and the Casualty Actuarial Society (CAS) Code of Professional Ethics for Candidates, as illustrative examples. The chapter concludes with a brief survey of codes of conduct used by actuarial organizations in other countries.

5.1. Purpose of codes of conduct

Codes of conduct serve multiple purposes within a profession. At the most fundamental level, they articulate the values and principles that define professional behavior, providing guidance to practitioners about what is expected of them. Beyond this educational function, codes serve several additional purposes:

- **Public protection.** Codes establish minimum standards of conduct designed to protect clients, employers, and the public from incompetent or unethical practice. By requiring honesty, competence, and appropriate disclosure, codes help ensure that those who rely on professional work can do so with confidence.
- **Professional identity.** Codes help define what it means to be a member of the profession. By articulating shared values, such as integrity, objectivity, and service to the public, codes contribute to a sense of professional identity that transcends individual employment relationships.
- **Guidance for difficult situations.** Practitioners inevitably encounter situations where the right course of action is not immediately clear. Codes provide a framework for analyzing ethical dilemmas and reaching appropriate decisions.

- **Basis for discipline.** Codes establish the standards against which professional conduct is judged in disciplinary proceedings. Without clear articulation of expected behavior, discipline would be arbitrary and unpredictable.
- **Support for self-regulation.** The existence of a meaningful code of conduct, effectively enforced, demonstrates that the profession takes its responsibilities seriously. This supports the case for self-regulation by showing that the profession can police itself.

5.2. The IAA's common principles for member codes

The IAA does not impose a code of conduct directly on individual actuaries. Instead, it requires each of its Full Member Associations to maintain a code of professional conduct as a condition of membership, and that code must be consistent with 11 principles set out in IAA Internal Regulation 2.2.2(a). An association's code may word them differently and add to them, but it may not lower the obligations they impose.

The 11 common principles

In plain language, the principles are as follows:

- **Integrity, skill, and care.** Performing professional services honestly, with skill and due care, and fulfilling the actuary's responsibility to the client or employer
- **Responsibility to the public.** Fulfilling the profession's responsibility to the public and upholding the reputation of the profession, including by not engaging in false or misleading advertising or solicitation
- **Cooperation and confidentiality.** Cooperating with others serving the same principal and protecting confidential information acquired through the work
- **Competence.** Performing services only when competent and appropriately experienced to do so
- **Conformity with practice standards.** Ensuring the work satisfies applicable standards of practice
- **Communication of findings.** Taking responsibility for communicated findings and indicating the extent to which supplementary information on scope, methods, and data is available
- **Identification of client and capacity.** Identifying the principal for whom findings are made and the capacity in which the actuary serves

- **Management of conflicts of interest.** Declining work that involves an actual or potential conflict unless the actuary can act fairly and the conflict has been disclosed
- **Consultation with a prior actuary.** When taking over work from another actuary, considering whether consultation with the predecessor is appropriate
- **Disclosure of material compensation.** Disclosing to the principal any material compensation the actuary receives from other parties in connection with a service performed for that principal
- **Accountability to disciplinary procedures.** Remaining subject to the disciplinary procedures prescribed in the rules of the actuary's association, including the right of appeal

5.3. The Code of Professional Conduct of the US-based organizations

The Code of Professional Conduct is the unified code of ethics applicable to members of all five US-based actuarial organizations: the American Academy of Actuaries, the American Society of Enrolled Actuaries, the CAS, the Conference of Consulting Actuaries, and the Society of Actuaries (SOA). The current version of the Code was adopted effective January 1, 2001, replacing the separate codes that had previously existed for different organizations.

The adoption of a single, unified Code represented a significant step in the profession's approach to ethics. Before then, an actuary who was a member of more than one organization was bound by all of their codes at once, and those codes did not always impose identical requirements. The unified Code eliminated this complexity for the US organizations and established consistent expectations across the profession. This issue still exists for actuaries who are members of organizations in more than one country, and it is discussed in Section 5.6.

5.3.1. Relationship to law

The Code recognizes that legal requirements take precedence when they conflict with the Code's provisions. Several precepts explicitly carve out exceptions for situations where compliance with the Code would be contrary to law. For example, an actuary may be required by law to disclose information that would otherwise be considered confidential under Precept 9. When such conflicts arise, the actuary must comply with applicable legal requirements.

5.3.2. Geographic applicability

The Code applies to members of the adopting organizations as a condition of membership, regardless of where they are located or where their services are rendered. A CAS member practicing entirely outside the United States remains bound by the Code, even if the work has no US connection. However, such an actuary may also be subject to local laws and regulations governing actuarial work in the jurisdiction where they are practicing, and if the actuary is also a member of a local actuarial organization, that organization's code applies as well.

5.3.3. Precepts and annotations

The Code is structured around 14 precepts, each of which establishes a fundamental principle of professional conduct. The precepts are binding requirements; violation of a precept may result in disciplinary action.

Each precept may be accompanied by one or more annotations. The annotations provide additional guidance on interpreting and applying the precept.

The Code also includes definitions of key terms, such as *actuarial services*, *principal*, and *actuarial communication*. Understanding such definitions is essential to understanding when and how the Code applies.

It is worth noting that the 14 precepts are organized thematically, with some topics spanning multiple precepts. Specifically, Precepts 4, 5, and 6 all address communications and disclosures, while Precepts 13 and 14 both address violations of the Code.

The following sections present the text of each precept and relate it to the IAA principles introduced in Section 5.2, illustrating how those baseline principles can be implemented as specific, enforceable requirements. Actuaries should consult the full text of the Code, including its annotations and definitions, for the official requirements.

Precept 1: Professional Integrity

> *An Actuary shall act honestly, with integrity and competence, and in a manner to fulfill the profession's responsibility to the public and to uphold the reputation of the actuarial profession.*

Precept 1 implements two IAA principles: *integrity, skill, and care* and *responsibility to the public*. It establishes the foundational expectation that actuaries will act honestly and competently in all their professional dealings. The closing phrase carries two distinct obligations. The first, fulfilling the profession's responsibility to the public, reflects the social contract introduced in Chapter 1: The actuary is not merely a hired advocate, and where the public interest comes into tension with the actuary's own self-interest or a client's interest, the public interest may take precedence. The second, upholding the reputation of the actuarial profession, recognizes that the profession's standing is a shared asset on which every member depends and which makes self-regulation possible. Because reputation can be damaged by conduct of any kind, this obligation reaches beyond the workplace. Precept 1 is therefore not limited to conduct in the course of performing actuarial services: Conduct entirely unrelated to actuarial work, such as committing a crime, has been found to constitute a violation as it may cause damage to the actuarial profession.

Precept 2: Qualification Standards

> *An Actuary shall perform Actuarial Services only when the Actuary is qualified to do so on the basis of basic and continuing education and experience, and only when the Actuary satisfies applicable qualification standards.*

Precept 2 implements the IAA principle of *competence*. It requires both that the actuary possess the necessary education and experience for the specific work undertaken and that the actuary satisfy any applicable formal qualification requirements (discussed in Chapter 4) for the jurisdictions in which they render actuarial services.

Precept 3: Standards of Practice

> *An Actuary shall ensure that Actuarial Services performed by or under the direction of the Actuary satisfy applicable standards of practice.*

Precept 3 implements the IAA principle of *conformity with practice standards*. By making compliance with the actuarial standards of practice (discussed in Chapter 6) that apply in the jurisdictions for which the actuary renders actuarial services a requirement of the Code, Precept 3 bridges the profession's ethical obligations and its technical standards: A violation of promulgated actuarial standards of practice can also constitute a Code violation. This requirement also benefits those who rely on actuarial work: Because actuaries performing the same service draw on a common body of

standards, a principal can expect comparable services to follow a consistent, recognized approach rather than varying with each practitioner's individual preferences. The precept extends to work performed under the actuary's direction, reinforcing their responsibility for supervised work. The annotations to Precept 3 preserve a role for professional judgment: Where the applicability of a standard is unclear, the actuary must exercise judgment in determining it, and where no applicable standard exists, they may rely on professional judgment.

Precepts 4, 5, and 6: Communications and Disclosure

Precepts 4, 5, and 6 collectively implement the IAA principles of *communication of findings* and *identification of client and capacity*. Precept 6 also implements *disclosure of material compensation*, requiring disclosure of compensation arrangements that could create the appearance of bias.

Precept 4 establishes a general standard for actuarial communications:

> *An Actuary who issues an Actuarial Communication shall take appropriate steps to ensure that the Actuarial Communication is clear and appropriate to the circumstances and its intended audience, and satisfies applicable standards of practice.*

Precept 5 addresses identification and capacity:

> *An Actuary who issues an Actuarial Communication shall, as appropriate, identify the Principal(s) for whom the Actuarial Communication is issued and describe the capacity in which the Actuary serves.*

Precept 6 addresses disclosure of compensation:

> *An Actuary shall make appropriate and timely disclosure to a present or prospective Principal of the sources of all direct and indirect material compensation that the Actuary or the Actuary's firm has received, or may receive, from another party in relation to an assignment for which the Actuary has provided, or will provide, Actuarial Services for that Principal. The disclosure of sources of material compensation that the Actuary's firm has received, or may receive, is limited to those sources known to, or reasonably ascertainable by, the Actuary.*

Precept 7: Conflict of Interest

> *An Actuary shall not knowingly perform Actuarial Services involving an actual or potential conflict of interest unless:*
>
> *(a) the Actuary's ability to act fairly is unimpaired;*
>
> *(b) there has been disclosure of the conflict to all present and known prospective Principals whose interests would be affected by the conflict; and*
>
> *(c) all such Principals have expressly agreed to the performance of the Actuarial Services by the Actuary.*

Precept 7 implements the IAA principle of *management of conflicts of interest*. Rather than prohibiting all conflicts of interest, the Code permits an actuary to proceed when certain impartiality and disclosure requirements are met and agreed upon.

Precept 8: Control of Work Product

> *An Actuary who performs Actuarial Services shall take reasonable steps to ensure that such services are not used to mislead other parties.*

Precept 8 has no direct counterpart among the IAA's 11 principles; it is one of the points at which the Code reaches beyond the international baseline. Its annotations frame the concern as guarding against the "misquotation, misinterpretation, or other misuse" of the actuary's communication by others and direct the actuary, where appropriate, to place limitations on how the work may be distributed and used. The duty is one of reasonable steps, not a guarantee against every possible misuse.

Precept 9: Confidentiality

> *An Actuary shall not disclose to another party any Confidential Information unless authorized to do so by the Principal or required to do so by Law.*

Precept 9 implements the confidentiality element of the IAA principle of *cooperation and confidentiality*.

Precept 10: Courtesy and Cooperation

> *An Actuary shall perform Actuarial Services with courtesy and professional respect and shall cooperate with others in the Principal's interest.*

Precept 10 implements the cooperation element of that same IAA principle, and its emphasis on courtesy and professional respect goes somewhat beyond the IAA's text. It requires actuaries to treat colleagues with respect and to work collaboratively in the principal's interest, recognizing that professional courtesy ultimately serves clients and the public. This is particularly relevant when actuaries hold differing professional opinions, as disagreements should be addressed constructively.

Precept 11: Advertising

> *An Actuary shall not engage in any advertising or business solicitation activities with respect to Actuarial Services that the Actuary knows or should know are false or misleading.*

Precept 11 implements the *responsibility to the public* principle, which forbids false or misleading advertising or solicitation.

Precept 12: Titles and Designations

> *An Actuary shall make use of membership titles and designations of a Recognized Actuarial Organization only in a manner that conforms to the practices authorized by that organization.*

Precept 12 has no dedicated IAA counterpart; it extends the spirit of *responsibility to the public* to the use of titles and designations, another respect in which the Code is more specific than the IAA baseline. It covers both membership titles (organizational roles such as CAS Vice President, Admissions) and designations (credentials such as Fellow of the CAS (FCAS) or Associate of the SOA (ASA)), requiring that each be used only as authorized by the granting organization.

Precepts 13 and 14: Violations of the Code of Professional Conduct

Precepts 13 and 14 together implement the IAA principle of *accountability to disciplinary procedures*. The main "counseling and discipline body" referenced in these pre-

cepts is the Actuarial Board for Counseling and Discipline (ABCD). Precept 13's reporting obligation can feel uncomfortable, but self-regulation depends on it: Actuaries are better positioned than those outside the profession to recognize when standards have not been met, and unchecked misconduct by even a few individuals can undermine public trust in the profession as a whole.

Precept 13 addresses an actuary's obligation when they observe apparent violations:

> *An Actuary with knowledge of an apparent, unresolved, material violation of the Code by another Actuary should consider discussing the situation with the other Actuary and attempt to resolve the apparent violation. If such discussion is not attempted or is not successful, the Actuary shall disclose such violation to the appropriate counseling and discipline body of the profession, except where the disclosure would be contrary to Law or would divulge Confidential Information.*

The confidentiality exception built into this reporting duty is notable: Because much actuarial work is confidential, it can meaningfully limit the duty's reach, which is why it appears among the constraints on self-regulatory enforcement discussed in Section 3.3.

Precept 14 addresses cooperation with disciplinary processes:

> *An Actuary shall respond promptly, truthfully, and fully to any request for information by, and cooperate fully with, an appropriate counseling and disciplinary body of the profession in connection with any disciplinary, counseling, or other proceeding of such body relating to the Code. The Actuary's responsibility to respond shall be subject to applicable restrictions on Confidential Information and those imposed by Law.*

5.4. CAS Code of Professional Ethics for Candidates

While the Code of Professional Conduct applies to credentialed actuaries, the Casualty Actuarial Society has also established a Code of Professional Ethics for Candidates (Candidate Code), effective January 1, 2008.[7] This code applies to individuals who have not yet earned the Associate of the Casualty Actuarial Society (ACAS) or FCAS credential; candidates agree to abide by it when they register for CAS examinations.

The existence of a separate code for candidates reflects the recognition that professionalism obligations begin before an individual earns their credential. Those pursu-

7 Unlike the Code of Professional Conduct, which is identical across all five US-based organizations, candidate codes are maintained separately by each organization and are not uniform.

ing actuarial credentials may already be performing actuarial work and are representing themselves as future credentialed members of the profession. It is appropriate that they be held to ethical standards, even if those standards differ in some respects from those applicable to credentialed actuaries.

5.4.1. The seven rules

The CAS Candidate Code consists of seven rules.

Rule 1: Integrity and competence

> *An actuarial candidate shall act honestly, with integrity and competence, to uphold the reputation of the actuarial profession.*

This rule parallels Precept 1 of the Code of Professional Conduct. It establishes the foundational expectation that candidates will conduct themselves with honesty and integrity, even before they have earned their credentials.

Rule 2: Professional conduct

> *An actuarial candidate shall not engage in any professional conduct involving dishonesty, fraud, deceit, or misrepresentation or commit any act that reflects adversely on the actuarial profession.*

Rule 2 parallels Annotation 1-4 of Precept 1, making explicit that candidates must avoid dishonest conduct and behavior that would reflect poorly on the profession.

Rule 3: Professional respect

> *An actuarial candidate shall perform actuarial services with courtesy and professional respect and shall cooperate with others in the principal's interest.*

This rule parallels Precept 10 of the Code of Professional Conduct, requiring candidates to interact professionally with colleagues and to prioritize their principal's interests.

Rule 4: Examination discipline

> *An actuarial candidate shall adhere to the CAS Policy on Examination Discipline.*

Rule 4 is unique to the Candidate Code and addresses the examination context. The examination system is central to the credentialing process, and maintaining the integrity of examinations is essential to the value of actuarial credentials. The CAS Policy on Examination Discipline addresses matters such as cheating, unauthorized materials, and other examination misconduct. Violations of examination rules can result in sanctions including invalidation of exam results and suspension from future examinations.

Rule 5: Membership designations

> *Actuarial candidates are not authorized to use membership designations of the CAS until they are admitted to membership by the CAS Executive Council.*

This rule parallels Precept 12 of the Code of Professional Conduct, applied to the candidate context: It prevents candidates from claiming credentials they have not yet earned.

Rule 6: Confidentiality

> *An actuarial candidate shall not disclose to another party any confidential information unless authorized to do so by the principal or required to do so by law, statute, or regulation. Confidential information includes information of a proprietary nature and information that is legally restricted from circulation.*

This rule parallels Precept 9 of the Code of Professional Conduct, requiring candidates to protect confidential information obtained in the course of their work.

Rule 7: Cooperation with the CAS

> *An actuarial candidate shall respond promptly, truthfully, and fully to any request for information by, and cooperate fully with, appropriate counseling and disciplinary body of the CAS in connection with any disciplinary, counseling or other proceeding of such body relating to the Candidate Code. The actuarial candidate's responsibility to respond shall be subject to applicable restrictions listed in Rule 6 and those imposed by law, statute, or regulation.*

This rule parallels Precept 14, requiring candidates to cooperate with CAS disciplinary processes. Because candidates are not yet members of the CAS, they are not subject to the ABCD's jurisdiction (unless they already hold membership in one of the other US-based actuarial organizations), so violations of the Candidate Code are disciplined by the CAS directly.

5.4.2. Comparison: Candidate Code versus Code of Professional Conduct

The Candidate Code is considerably shorter and simpler than the full Code of Professional Conduct. Candidates typically work under supervision and do not have the same level of independent responsibility as credentialed actuaries. They generally are not qualified to sign actuarial opinions and generally do not take primary responsibility for actuarial communications. As a result, some of the requirements that appear in the Code of Professional Conduct are less directly applicable to candidates.

Despite these differences, the core ethical principles are consistent between the two codes. Both emphasize honesty, integrity, confidentiality, professional respect, and cooperation with disciplinary processes. The Candidate Code can be understood as establishing the ethical foundation that will expand into the fuller set of obligations under the Code of Professional Conduct once the candidate earns their credential.

5.5. Codes of conduct around the world

Actuarial organizations around the world maintain their own codes of conduct. Because the IAA requires its Full Member Associations' codes to reflect the common principles discussed in Section 5.2, these codes share much in substance even as they differ in structure, numbering, and wording. The following examples also share a structural feature that sets them apart from the CAS approach: In each of the organizations listed, students are themselves noncredentialed members, so the same code that binds credentialed members applies to them as well. The CAS, by contrast, has no student members.

5.5.1. Institute and Faculty of Actuaries

The IFoA's Actuaries' Code applies everywhere its members practice and, like the Code of Professional Conduct, extends to nonactuarial conduct that could reasonably be considered to reflect upon the profession. The IFoA Code is principles-based, organized around six principles (integrity, competence and care, impartiality, compliance, speaking up, and communication), each accompanied by amplifications that clarify specific requirements. The IFoA Code distinguishes between "must" (mandatory) and "should" (a presumption of compliance, with recognized room for justified departure).

Five of the six IFoA principles have clear counterparts among the IAA's 11 common principles. The sixth, *speaking up*, is distinctive. It provides that members should speak up if they believe or have reasonable cause to believe that a course of action is unethical or unlawful, and should challenge others' noncompliance with legal, regulatory, and professional requirements. They must report to the IFoA any matter that appears to constitute misconduct by another member. This principle is broader in some respects than Precept 13 of the Code of Professional Conduct, which is limited to apparent violations of the Code itself: The IFoA's speaking up principle also encompasses unethical or unlawful conduct more generally and even encourages members to speak up when others are being treated unfairly or excluded unreasonably.

5.5.2. Actuaries Institute (Australia)

The Actuaries Institute's Code of Conduct, effective in its current form from July 2025, is principles-based and closely modeled on the IFoA's Actuaries' Code. It is organized around the same six principles, each with numbered amplifications: integrity, compliance, competence and care, objectivity (corresponding to the IFoA's "impartiality"), speaking up, and communication.

5.5.3. Canadian Institute of Actuaries

The CIA's Rules of Professional Conduct are structured similarly to the Code of Professional Conduct, with numbered rules accompanied by annotations that provide interpretive guidance. The substantive coverage is also closely parallel, addressing professional integrity, qualification standards, standards of practice, disclosure of compensation, conflicts of interest, control of work product, confidentiality, courtesy and cooperation, advertising, titles and designations, and reporting of violations. Although the CIA Rules and the Code of Professional Conduct are closely aligned, they are not identical. Differences exist in areas such as the scope of the control-of-work-product

obligation, the treatment of successor actuary consultations, and the procedures for reporting violations. Because many actuaries, particularly Canadian actuaries, hold credentials from both a US-based organization and the CIA, they must navigate both sets of requirements simultaneously; Section 5.6 discusses how actuaries subject to multiple codes can manage their overlapping obligations.

5.5.4. Actuarial Society of South Africa

ASSA's Code of Professional Conduct (2015) is structured around a "Professional Promise" organized into three broad principles (knowledge and expertise, values and behavior, and professional accountability), followed by 31 numbered specific requirements grouped under those headings. The other codes surveyed here similarly pair principle or rule statements with amplifying text, but the ASSA Code is distinctive in including explicit requirements for peer review of professional work and compliance with applicable whistleblowing legislation, provisions that are more prescriptive than their counterparts in the other codes discussed in this section.

5.6. Navigating multiple codes of conduct

Because codes of conduct apply by virtue of membership, an actuary who belongs to organizations in more than one country is subject to multiple codes simultaneously, regardless of where the actuary practices or where the work is performed. A Canadian actuary who holds both CIA and CAS credentials but works entirely within Canada on Canadian business is nonetheless bound by both the CIA Rules and the Code of Professional Conduct.

The US–Canada relationship is the most common example, with many actuaries holding credentials from both a US-based organization (such as the CAS or the SOA) and the CIA. Because the two sets of requirements are structurally similar and address the same core ethical principles, compliance with one will in most cases satisfy the spirit of the other. But the two are not interchangeable, and an actuary in this situation should be attentive to areas where they diverge. In practice, the safest approach is to identify the more demanding requirement in each area and comply with it, since doing so will generally satisfy the less demanding one as well. Where the requirements are different in kind rather than merely in degree (for example, where one code requires a step that the other does not address), the actuary should seek to comply with both. When genuine conflicts arise, the actuary should consider seeking guidance from the relevant professional organizations.

Actuaries who hold memberships in organizations across other national boundaries face similar considerations. Codes may differ in the specificity of their requirements,

the procedures for reporting violations, or the standards for particular types of work. For example, under the Code adopted by the US-based organizations, the reporting obligation yields to confidentiality (an actuary need not report a suspected violation where doing so would divulge confidential information), while the CIA's Rules take the opposite approach: Confidentiality is expressly subject to the duty to report. The IAA plays an important role in promoting consistency: By requiring its Full Member Associations to maintain codes consistent with common principles, it helps reduce the potential for conflicting requirements. Nevertheless, actuaries who belong to multiple organizations should familiarize themselves with each organization's code and should not assume that compliance with one ensures compliance with another. For practitioners navigating these complexities, the IAA's Professionalism Guideline PG2 (*Governance of International Actuarial Work*) provides further guidance on professionalism considerations specific to cross-border actuarial services.

Key takeaways

- Codes of conduct serve several purposes: **public protection**, defining **professional identity**, providing **guidance** for ethical dilemmas, establishing a **basis for discipline**, and supporting **self-regulation**.
- The **IAA** requires every Full Member Association's code to embody **11 common principles** that form the baseline that codes around the world share.
- The **Code of Professional Conduct**, binding on members of the five US-based organizations, consists of 14 precepts that translate the IAA principles into specific, enforceable requirements and add a few of its own, such as control of work product.
- **Integrity** is the foundational obligation of actuarial codes, and codes commonly extend it beyond technical work to any conduct that could reflect poorly on the profession.
- Codes **bridge ethics and technical standards** by making compliance with applicable standards of practice an ethical requirement, and they **support self-regulation** by requiring actuaries to report apparent violations and to cooperate with disciplinary processes.
- The **CAS Code of Professional Ethics for Candidates** extends professionalism obligations to individuals before they earn their credentials, with additional focus on examination integrity.
- Codes apply by virtue of **membership**, not by where services are rendered. An actuary who belongs to organizations in more than one country is bound by each code at once.

Common mistakes to avoid

- **Assuming technically sound work is enough.** Technically correct work does not by itself satisfy a code of conduct; an actuary can produce accurate, well-executed analysis and still breach the code through dishonesty, undisclosed conflicts of interest, or other lapses in conduct.
- **Failing to recognize conflicts of interest.** A conflict exists whenever there is potential for inappropriate bias, even if no improper act results and even if the actuary is confident they can remain objective. Codes generally treat disclosure to, and the consent of, affected principals as central to managing such a conflict.
- **Overlooking the "speaking up" obligation.** Under the Code of Professional Conduct (Precept 13) and several codes elsewhere, actuaries have an affirmative duty to address or report apparent violations by others, not merely to avoid violations themselves. The specifics of this obligation, however, can differ materially across codes.
- **Assuming compliance with one code satisfies another.** Codes of different organizations may overlap substantially but are not interchangeable. An actuary subject to multiple codes should identify where they diverge and seek to comply with both.

Resources

- *Code of Professional Conduct* (jointly adopted by the five US-based actuarial organizations)
- Casualty Actuarial Society (CAS): *CAS Code of Professional Ethics for Candidates*
- Institute and Faculty of Actuaries (IFoA): *Actuaries' Code*
- Canadian Institute of Actuaries (CIA): *Rules of Professional Conduct*
- Actuaries Institute (Australia): *Code of Conduct*
- International Actuarial Association (IAA): *Internal Regulations*, 2.2.2(a) (the 11 principles every Full Member Association's code must embody)
- IAA: *Professionalism Guideline 2: Governance of International Actuarial Work* (2020)

Discussion questions

1. The IAA requires each Full Member Association to maintain its own code consistent with 11 common principles, rather than prescribing a single code with uniform wording for all of them. What are the advantages and disadvantages of letting codes vary by organization, and when might a uniform, centrally worded code be preferable?
2. Should an organization hold candidates and students to the same code of conduct as fully credentialed members, or to a separate, lighter set of obligations? What considerations bear on this choice?
3. Codes generally extend to nonactuarial conduct that could reflect poorly on the profession. Is it appropriate for a professional code to reach a member's conduct outside their actuarial work, and where should the line be drawn?
4. Codes take differing positions on whether the duty to report another member's misconduct yields to confidentiality, or the reverse. Which approach better serves the public interest, and why?
5. A code supports self-regulation only if it is meaningfully enforced. Beyond the words on the page, what features make a code of conduct credible in practice?
6. An actuary is a member of actuarial organizations in two different countries whose codes directly conflict on some point, so that complying with one necessarily breaches the other. What are the actuary's options in such a situation?

6. Standards of Practice

While codes of conduct establish broad ethical principles and qualification requirements ensure that actuaries possess the necessary competence, the third pillar, standards of practice, translates those principles into technical guidance. Standards of practice are known by various names in different jurisdictions, including Actuarial Standards of Practice (ASOPs) in the United States, Technical Actuarial Standards (TASs) in the United Kingdom,[8] and Standards of Practice in Canada. They set out the considerations and guidance that apply when actuaries perform specific types of actuarial work.

This chapter begins by examining the purposes that standards of practice serve within the actuarial profession. It then turns to the foundational concepts that recur across standards frameworks worldwide, before surveying the International Actuarial Association's (IAA's) model International Standards of Actuarial Practice (ISAPs) as a global framework and examining the US ASOP system in detail as an illustrative example of how these common concepts are implemented in a specific jurisdiction.

6.1. Purpose and role of technical standards

Standards of practice are the most operational layer in the architecture of actuarial professionalism, governing the conduct of the work itself: what an actuary should consider, document, and disclose when performing a particular type of assignment.

Many actuarial jurisdictions have developed standards of practice, and although the specific content and structure vary, they share common purposes:

- **Ensuring consistency and quality.** Without standards of practice, two equally qualified actuaries performing the same type of analysis might address different considerations or provide different disclosures, not because professional judgment leads to different conclusions (which is expected and healthy), but because there is no shared understanding of what factors must be considered

8 These are the United Kingdom's *technical* standards. The Institute and Faculty of Actuaries separately maintains a set of Actuarial Profession Standards (APSs) covering a range of topics, such as peer review and acting as an expert witness in legal proceedings.

or what must be communicated. Standards establish a common baseline—a shared understanding of what considerations and disclosures constitute sound actuarial practice for particular types of work—while leaving the choice of methods and approaches to the actuary's professional judgment. Because standards are periodically reviewed and updated, they also help keep practice current as methods, data sources, and regulatory expectations evolve. This consistency also protects the profession's reputation: When adherence to common standards makes actuarial work reliable across practitioners, users come to trust the work of actuaries generally rather than only that of particular individuals, and isolated lapses are less likely to color perceptions of the profession as a whole.

- **Protecting the public.** Actuarial work products affect insurance consumers, pension beneficiaries, investors, and the broader public. Standards of practice establish minimum quality requirements that help ensure actuarial work is performed competently and that users of actuarial work receive the information they need to make informed decisions. When an actuary opines that reserves are reasonable or that insurance rates are not inadequate, excessive, or unfairly discriminatory, the public is entitled to assurance that the actuary followed recognized professional standards in reaching that conclusion.
- **Providing guidance for practitioners.** Actuarial practice presents countless situations where the right approach is not immediately obvious. Standards of practice provide a framework for navigating those situations, drawing on the collective wisdom of the profession to help individual practitioners make sound decisions. A newly credentialed actuary performing their first reserve analysis, for example, benefits from standards that identify what to consider when reviewing the data, selecting methods and assumptions, and disclosing limitations.
- **Supporting self-regulation.** Standards of practice give substance to the profession's claim of self-regulation. A profession that says "trust us, we're competent" is making a much weaker claim than one that says "trust us, we have detailed, publicly available standards that govern how our members perform their work, and we enforce compliance with those standards through our disciplinary process." Standards provide the measurable benchmarks against which professional conduct can be evaluated. Conversely, compliance with applicable standards can serve as evidence of sound practice if an actuary's work is challenged in a civil or disciplinary proceeding.
- **Facilitating regulatory reliance.** Regulators around the world rely on actuarial work in overseeing insurance companies, pension plans, and other financial institutions. Standards of practice give regulators confidence that actuar-

ial work meets recognized professional requirements. In many jurisdictions, regulators incorporate standards of practice by reference, require that actuarial filings comply with applicable standards, or consider standards compliance when evaluating actuarial work products. Beyond government regulators, some specialty markets impose their own operational standards on actuaries working within them. Lloyd's is a prominent example, issuing detailed Actuarial Function Guidance and reviewing syndicate submissions against it, alongside the profession-level obligations that continue to apply.

- **Bridging ethics and technique.** Standards of practice connect the profession's ethical commitments to its technical work. When a code of conduct says an actuary must communicate clearly, a standard of practice specifies what "clearly" means for a particular type of work: what information must be included, what limitations must be disclosed, and what assumptions must be documented. Codes generally require compliance with applicable standards of practice (in the United States through Precept 3 of the Code of Professional Conduct; in other jurisdictions through analogous compliance principles), making a violation of technical standards also a violation of ethical obligations.

6.2. Common concepts in technical standards

Although standards frameworks differ in structure and detail across jurisdictions, certain foundational concepts recur in virtually all of them. These concepts represent the profession's shared understanding of what sound actuarial practice requires, regardless of the specific regulatory or organizational context. Understanding these concepts is essential for any actuary, because they inform not only the interpretation of specific standards but also the exercise of professional judgment in situations where no specific standard exists. Taken together, they describe a logical progression: Understand what you have been asked to do and for whom, determine what matters, exercise informed judgment, vet your inputs, make defensible analytical choices, communicate results transparently, and maintain appropriate documentation.

The discussion that follows is intended to build a working mental model for navigating any standards framework; it is not a substitute for the actual standards in force in any jurisdiction. Actuaries must consult and comply with the specific standards applicable to their work. The binding requirements come from those standards, not from the synthesis here.

6.2.1. Scope and intended use

> *What am I being asked to do, for whom, and in what capacity?*

Answering this is the first step in any actuarial analysis. Pinning down the assignment means establishing its purpose, scope,[9] and expected deliverables; any constraints on it; and the capacity in which the actuary is acting (in some cases, for instance, the actuary is only peer-reviewing another actuary's work). It also means identifying the intended users, because actuarial work is always performed for someone: a board of directors, a regulator, a client, or management. Their identity and needs shape the work, so that a ratemaking analysis prepared for internal management decision-making may appropriately differ in scope, detail, and presentation from one prepared for a regulatory filing, even when the underlying data is the same. A clear scope, finally, protects everyone involved: It keeps the actuary focused on what the assignment requires, tells users what the work does and does not cover, and, through disclosure of any limitations, prevents reliance on the work for purposes it was never designed to serve.

6.2.2. Materiality

> *Does this matter enough to affect the intended user's decisions?*

Materiality is the principle that lets an actuary focus effort and disclosure where they count, rather than treating every item in an analysis as equally important.

Several important principles govern how materiality operates in practice:

- **User-centered standard.** Materiality is not defined by what the actuary considers important, but by what could influence the *intended user's* decisions. An actuary might find a technical detail fascinating, but if it would not affect the user's decisions, it is not material. Conversely, something the actuary considers routine might be highly material if it could change how the user acts.
- **Reasonable expectation.** The concern is typically whether an omission or misstatement "could reasonably be expected" to influence decisions, not whether it definitely would. This is a lower threshold than certainty. If a reasonable person would expect the information to affect decisions, it is likely material.

9 "Scope" here means the scope of the actuary's *assignment*: the work to be performed and for whom. This is distinct from the "Scope" section that opens a standard such as an ASOP (Section 6.4.2), which instead delineates the types of work to which the standard itself applies.

- **Context-dependent.** What is material depends on the circumstances, such as these:
  - The nature of the assignment and the decisions the user will make
  - The magnitude of the item relative to the overall analysis
  - The sensitivity of results to the item in question
  - The sophistication of the intended user
  - Regulatory or contractual requirements that may specify materiality thresholds
- **No bright-line test.** No major standards framework establishes a specific percentage or dollar threshold for materiality. A 5% difference might be immaterial in one context and highly material in another. Determining what is material for each assignment is a matter of judgment, not mechanical thresholding.

Materiality requires judgment

There is no universal formula for materiality. Consider these examples:

Example 1. A $500,000 difference in a $2 billion reserve estimate (0.025%) is likely immaterial for most purposes; it typically falls well within the range of estimation uncertainty.

Example 2. A $500,000 difference that would change a company's risk-based capital ratio from above to below a regulatory action level is almost certainly material, regardless of percentage.

Example 3. A methodological issue that has no impact on current results but could significantly affect results in future periods may be material and warrant disclosure, even though current numbers are unaffected.

The key question is always: *Could this reasonably be expected to affect the user's decisions?*

Materiality governs the scope of disclosure obligations in actuarial work products: An actuary who fails to disclose a material limitation has not met professional standards, even if all calculations are correct. It determines when deviations require disclosure, the test being whether knowledge of the deviation could affect the user's decisions. Materiality has limits, however. Where law or regulation mandates a specific calculation or method, that mandate governs; departure cannot be justified on the ground that the resulting difference is immaterial.

6.2.3. Actuarial judgment

> *Is my reasoning informed, reasonable, and supportable?*

Standards of practice worldwide recognize that actuarial work requires the exercise of professional judgment. Standards are principles-based rather than prescriptive: They establish expectations for what an actuary should consider, document, and disclose, but they do not prescribe a single method, mandate a particular outcome, or attempt to anticipate every situation an actuary might face. Standards are therefore not a substitute for judgment but are predicated upon its proper exercise, providing the analytical framework within which judgment operates while leaving to the actuary the task of applying training and experience to the specifics of each assignment.

What is actuarial judgment?

Actuarial judgment is the reasoned application of professional knowledge and experience to reach conclusions when the available information does not dictate a single answer. Critically, this judgment is exercised under real-world constraints (limited time, incomplete data, and competing considerations), which is what distinguishes professional judgment from theoretical analysis. It may include the following:

- Evaluating data and identifying its strengths and limitations
- Selecting or developing methods appropriate to the assignment
- Choosing assumptions that reflect available information and reasonable expectations
- Weighing conflicting indicators and reaching balanced conclusions
- Recognizing uncertainty and determining how to address it

The reasonable range

Many actuarial analyses involve selecting a point estimate from within a range of reasonable values. Here are the key principles:

The range has boundaries. Not every answer is reasonable. Professional judgment operates *within* the range of values that qualified actuaries could support, not outside it.

Different points may be appropriate for different purposes. A *central* estimate (e.g., expected value) is appropriate for some purposes; a *conservative* estimate

(toward the adverse end of the range) may be appropriate for others. The appropriate point depends on the purpose of the analysis and the needs of the user.

Selecting a point does not make the range disappear. When the actuary produces a point estimate, accompanying it with information about the range or uncertainty helps avoid false precision: A single number can suggest more certainty than the analysis supports.

Judgment is not advocacy. Selecting assumptions at the favorable end of every reasonable range simply because each individual selection is "defensible" is not an exercise of judgment. The cumulative effect of consistently favorable selections can produce an overall result outside the reasonable range.

How judgment is developed

Actuarial judgment is cultivated, not innate. It develops through the combination of rigorous education, practical experience applying techniques to real-world problems, deepening understanding of the business contexts in which actuarial work is used, mentorship from experienced practitioners, and ongoing professional development. A newly credentialed actuary has the technical foundation to begin exercising judgment, but judgment matures as the actuary encounters a wider range of situations and learns, often from mistakes, which factors matter most and how analytical choices play out in practice. This developmental nature of judgment is one reason why qualification frameworks usually emphasize both initial education and continuing professional development.

Intellectual humility

Good judgment requires the discipline to question one's own conclusions. It is tempting to focus on evidence that supports an initial result, but sound practice demands the opposite: actively considering what could be wrong, testing the sensitivity of results to key assumptions, and being willing to say "I don't know" (and, when the answer is knowable, "I will find out") rather than speculating beyond the boundaries of one's analysis. An actuary who approaches their work with appropriate skepticism (toward their own methods and assumptions, not just the data) is more likely to identify problems before they affect users of the work.

Judgment under pressure

Professional judgment is exercised independently, based on the actuary's own assessment of the relevant factors. An actuary who abandons that judgment under pressure from management, clients, or others has violated professional standards, even when the pressured conclusion falls within a technically defensible range.

Disagreement in adversarial settings

The same latitude that allows competent actuaries to reach different conclusions in good-faith practice can also produce opposing views when an actuary's conduct is subject to formal challenge. When such conduct is at issue in litigation or arbitration proceedings, standards of practice and codes of conduct often serve as the benchmark against which it is evaluated, and opposing expert actuaries may reach different conclusions about whether the same conduct met that benchmark, each pointing to the same provisions but giving different weight to the judgment-based elements within them.

6.2.4. Data quality

> *Is the data fit for the purpose I am using it for?*

Actuarial analysis is fundamentally dependent on data, and across jurisdictions standards frameworks impose responsibilities that go beyond simply accepting whatever data is provided. Whether data is appropriate for the intended analysis depends on the scope of the assignment, the availability and quality of the sources, and the relevance of the data to the questions being addressed. A review appropriate to the assignment can surface errors, inconsistencies, bias, missing values, or data that may be unreliable, with the extent of that review depending on the nature of the work and the potential materiality of any problems. Because all data has limitations, recognizing them and considering how they affect the analysis and conclusions is itself part of sound practice. Finally, actuaries often rely on data provided by others, whether employers, clients, data vendors, or other professionals, and standards frameworks address when such reliance is appropriate and what disclosures should accompany it. Actuaries are not auditors and are not expected to verify all data independently, but they are generally expected to apply professional skepticism, evaluate whether the data appears reasonable for the intended analysis, and take reasonable steps to understand its quality.

6.2.5. Assumptions and methodology

> *Can I justify each method and assumption, and are the results they produce reasonable?*

Every actuarial analysis requires the actuary to select or develop methods and assumptions. Those choices can be among the most consequential decisions in an actuarial assignment, and standards frameworks worldwide address or establish considerations to apply when making them.

- **Selection of methods.** Method selection turns on the nature of the assignment, the available data, and the intended use of the results. No single method is universally "correct"; the appropriate method depends on the circumstances. Standards frameworks generally call for consideration of the strengths and limitations of available methods.
- **Development of assumptions.** Assumptions are typically grounded in relevant data, information, and professional knowledge, and they are internally consistent and appropriate for the intended purpose of the analysis. Standards frameworks generally call for the actuary to be able to articulate the basis for each significant assumption.
- **Reasonableness.** Standards frameworks typically call for an assessment of whether the selected methods and assumptions produce results that are reasonable in light of the available information and the purpose of the analysis. Results inconsistent with expectations warrant investigation and explanation.
- **Sensitivity.** The sensitivity of results to changes in key assumptions and methods is often a relevant consideration. When results are highly sensitive to particular assumptions, that sensitivity may itself be material information for intended users.
- **Consistency over time.** Changes in methods or assumptions from one analysis to the next are typically made for substantive reasons, not arbitrarily. Understanding the impact of such changes, and communicating it as appropriate, is part of sound practice.
- **Multiple approaches.** Many standards frameworks encourage the use of multiple methods or approaches when feasible, to provide additional perspective on the reasonableness of results. The reconciliation of results from different approaches can be a valuable analytical tool.

6.2.6. Communication and disclosure

> *Will the intended user understand the work, its conclusions, and its limits?*

Communicating the results of actuarial work is another important item typically addressed by standards. This reflects a recognition that even technically excellent work can fail its purpose if the results are not communicated clearly and completely to those who need to use them.

Common principles governing actuarial communication include the following:

- **Clarity.** Effective actuarial communications are understandable by their intended audience. This does not mean avoiding technical content; it means presenting technical content in a way that the intended user can comprehend and act upon. A communication to a sophisticated reinsurer may appropriately use different language than one to a board of directors with limited actuarial background.
- **Completeness.** Sufficient information allows the intended user to understand the scope of the work, any material limitations, and the conclusions reached. Omitting information that users need to make informed decisions, even if the omission simplifies the communication, falls short of widely shared expectations.
- **Identification.** Communications typically identify the actuary responsible for the work, along with the capacity in which they are acting and the principal for whom the work is performed. This accountability ensures that users know who stands behind the work and can seek clarification if needed.
- **Disclosure of limitations.** All actuarial work has limitations: in the data used, the methods applied, the assumptions made, or the scope of the analysis. Standards frameworks typically call for material limitations to be disclosed, so that users understand the boundaries of the conclusions presented.
- **Disclosure of reliance.** Actuaries frequently rely on information, data, or analysis provided by others. When such reliance is material, disclosure helps users understand what the actuary has independently verified and what they have accepted from other sources.
- **Disclosure of deviations.** When standards permit deviation from recommended practices, the deviation and the reasons for it are typically subject to disclosure.

These communication principles serve the broader goals of transparency and accountability that codes of conduct establish. They ensure that actuarial work is not a "black box" but rather a transparent process whose inputs, methods, and limitations are available for scrutiny.

6.2.7. Documentation

> *Could another qualified actuary pick up my work and understand what I did and why?*

Standards frameworks usually require that actuarial work be adequately documented. Documentation serves multiple critical functions: It supports the quality and defensibility of the actuary's work, enables peer review and regulatory examination, facilitates the transition of work between actuaries, and provides a record if questions arise later.

Common principles governing actuarial documentation include these:

- **Sufficiency.** Sufficient documentation enables another qualified actuary to understand what was done, what data and information were used, what assumptions and methods were selected, and why.
- **Retention.** Documentation is typically retained for an appropriate period. What constitutes "appropriate" depends on the nature of the work, applicable regulations, and organizational policies. For many types of actuarial work, retention periods of several years are common.
- **Documenting judgment.** When the actuary has exercised judgment (in selecting assumptions, choosing methods, or reaching conclusions), recording the basis for that judgment is part of sufficient documentation. Documentation that shows only results without explaining the reasoning behind them falls short of widely shared expectations.

The suddenly unavailable test

Here's a practical way to think about documentation sufficiency: If you were suddenly unavailable, could another qualified actuary pick up your work, understand what you did and why, and continue or review it without having to start over? If not, the documentation is likely insufficient. This test reflects the common expectation across jurisdictions: documentation that stands on its own.

Table 6.1. Levels of obligation in standards frameworks.

Level of obligation	What it requires	Departure and disclosure
Mandatory requirement	An action the actuary must take	Departure is a deviation and *must be disclosed*
Recommended practice	An action the actuary should normally take, but may depart from when professional judgment supports it	Departure permitted, but the departure and its reasons *must be disclosed*
Consideration	A matter the actuary should think about, but need not necessarily act upon	Deciding not to act is *not a deviation*; no disclosure required
Permissible alternative	A discretionary action or approach the actuary is permitted but not required to take	Choosing otherwise is *not a deviation*; no disclosure required

6.2.8. Compliance and deviations

Beyond the substantive concepts just presented, a final cross-cutting topic is how standards frameworks handle compliance and, critically, when and how deviation from standard guidance is permitted.

Most standards frameworks distinguish between different levels of obligation using specific language conventions. Although the exact terminology varies, the underlying structure is remarkably consistent, as Table 6.1 shows.

The graduated structure in the table acknowledges that one-size-fits-all rules cannot govern the full range of actuarial practice, but it still establishes clear expectations and requires transparency when those expectations are not followed.

The disclosure principle

An important feature of the structure is the disclosure requirement for deviations: When an actuary departs from standard guidance, users of the work are told, so that they can assess the implications for themselves.

Subject to applicable law

This entire structure operates within the law. Where a legal or regulatory requirement conflicts with a standard of practice, the law governs. A standard cannot authorize an actuary to do something the law forbids, nor relieve the actuary of something the law requires.

6.3. International Standards of Actuarial Practice

The IAA promulgates model International Standards of Actuarial Practice to give actuarial associations professionally developed standards they can draw on when developing their own. They are especially valuable to an association that has no standards of its own to build on, offering a ready foundation rather than a blank page. Greater consistency in actuarial practice across jurisdictions follows from this shared reference, but it is more a by-product than the primary aim. ISAPs are developed by the IAA's Actuarial Standards Committee through a deliberative process broadly similar to the one used by national standard setters such as the US Actuarial Standards Board: drafting by a working group, public exposure for comment, revision in light of comments received, and formal adoption. The early ISAPs drew substantially on guidance already embodied in well-established jurisdictional standards, with volunteers from those jurisdictions participating in the drafting alongside other contributors. ISAPs are periodically revised; the following reflects the standards in effect as of June 2026, and readers should consult the IAA website for the current text of each ISAP. Table 6.2 summarizes the ISAPs currently in force.

Table 6.2. Current International Standards of Actuarial Practice.

ISAP	Title	Focus
1	General Actuarial Practice	All actuarial work; embodies the common concepts of Section 6.2 (data, assumptions, methodology, communication, documentation)
2	Financial Analysis of Social Security Programs	Broader than US usage; also covers workers' compensation
3	IAS 19 Employee Benefits	IAS 19 is an international accounting standard
4	IFRS 17 Insurance Contracts	IFRS 17 is an international financial reporting standard
5	Insurer Enterprise Risk Models	The models themselves, as distinct from the enterprise risk management programs covered by ISAP 6
6	Enterprise Risk Management Programs and IAIS Insurance Core Principles	The IAIS is the International Association of Insurance Supervisors
7	"Current Estimates" and Other Matters in Relation to the IAIS Capital Standards	Specifically, the IAIS Insurance Capital Standard (ICS) for internationally active insurance groups
8	IFRS S2 Climate-Related Disclosures	Adopted November 2025, the newest ISAP

6.3.1. Nature and authority

ISAPs are model standards of actuarial practice and, as such, are not directly binding on individual actuaries. The IAA does not require Full Member Associations to adopt standards of practice at all; its membership criteria ask only that an association that *does* adopt them follow a sound adoption process of public exposure and comment.

6.3.2. Regional model standards

The IAA's ISAPs are not the only model standards; some regional actuarial bodies issue their own. The Actuarial Association of Europe (AAE) promulgates model European Standards of Actuarial Practice (ESAPs)—among them ESAP 1 (General Actuarial Practice), ESAP 2 (the Solvency II actuarial function report), and ESAP 3 (the Solvency II Own Risk and Solvency Assessment process). Like the ISAPs, the ESAPs are model standards rather than binding requirements: The AAE encourages its member associations to maintain standards substantially consistent with them, to the extent appropriate for actuaries in their jurisdiction. ESAP 1 parallels ISAP 1 on general actuarial practice, while the others add detail specific to the European regulatory context, particularly Solvency II.

6.3.3. When no jurisdiction-specific standards apply

As with qualification requirements, some actuarial work has no connection to a jurisdiction with its own standards of practice, leaving no binding technical standards in force. ISAPs can serve as a useful reference in such settings, but they are voluntary guidance, not enforceable requirements. The actuary falls back on the general competence obligations of the applicable code of conduct and must exercise professional judgment in determining how to perform the work to the standard expected of a qualified actuary. An actuary may also explicitly state compliance with one or more ISAPs in their work product, whether of their own volition or because the client requires it. The applicable code of conduct requires the actuary to act honestly, so claiming compliance without delivering it is a violation of the code, judged against the ISAP(s) the actuary invoked.[10]

6.4. Actuarial Standards of Practice in the United States

The United States provides a well-developed example of how the common concepts discussed in Section 6.2 are implemented in a specific jurisdiction. The US system of

[10] Under the Code of Professional Conduct adopted by the US-based actuarial organizations, the operative provision is Precept 1 (act honestly), not Precept 3, which reaches only standards applicable in the jurisdictions where the actuary renders services.

Actuarial Standards of Practice, promulgated by the Actuarial Standards Board (ASB), is one of the most comprehensive standards frameworks in the world. Understanding its structure and content illustrates how a national standards framework translates universal principles into detailed, enforceable guidance. Because ASOPs are periodically revised and new standards are adopted, readers should consult the current text of the ASOPs themselves, available on the ASB website, for the official and authoritative guidance.

ASOPs are binding on all actuaries who are subject to a code of professional conduct that requires the following of US standards when practicing in the United States. As discussed in Section 2.3, members of the five US-based actuarial organizations have agreed to abide by the Code of Professional Conduct as a condition of membership, and Precept 3 of the Code requires compliance with applicable ASOPs. Members of foreign associations whose codes incorporate the standards of the jurisdiction in which the work is performed (e.g., the Institute and Faculty of Actuaries) are likewise bound by ASOPs when practicing in the United States.

6.4.1. Role of the Actuarial Standards Board

The Actuarial Standards Board is the body responsible for promulgating the Actuarial Standards of Practice in the United States. Established in 1988, the ASB is an autonomous board that is administratively supported by the American Academy of Actuaries but responsible to all of the US-based organizations representing actuaries. The ASB consists of nine members serving staggered three-year terms, appointed by a selection committee comprising the presidents and presidents-elect of the Academy, the Casualty Actuarial Society, and the Society of Actuaries. Members are drawn from across the actuarial profession to represent different practice areas and perspectives.

The ASB's mission is to establish standards of appropriate actuarial practice in the United States. ASOPs describe the procedures actuaries should follow when performing actuarial work and the disclosure requirements for communicating results.

The standard-setting process

The ASB follows a careful process in developing ASOPs:

1. **Identification of need.** The ASB or its operating committees identify topics requiring guidance, whether for a new standard or a revision to an existing one. This may arise from new practice developments, regulatory changes, identified inconsistencies in practice, or requests from practitioners or regulators. The

ASB also reviews and updates existing standards as practice evolves, keeping the body of ASOPs relevant and appropriate. Outside organizations and individuals may also submit proposals for new or revised standards to the ASB.

2. **Task force formation.** A task force of volunteer actuaries with relevant expertise is formed to draft the standard. Task forces typically include practitioners from the relevant practice area who understand the practical implications of the guidance being developed.
3. **Drafting.** The task force develops a draft standard. This process may take considerable time, particularly for complex topics.
4. **Exposure for comment.** The draft is released as an exposure draft for public comment, after review by the general counsel to confirm procedural compliance and consistency with applicable law. The ASB must approve the exposure draft by at least six affirmative votes. Comment periods normally last 60 to 90 days, during which any interested party may submit comments.
5. **Comment review and revision.** The task force and ASB review all comments received, revise the draft as appropriate, and summarize the comments received and their consideration by the task force. Significant changes may prompt additional exposure drafts, and this cycle may repeat multiple times for complex or controversial standards.
6. **Adoption.** After a further review by the general counsel, the ASB votes to adopt the final standard, again requiring at least six affirmative votes from the nine-member board. The standard includes an effective date, typically several months after adoption to allow actuaries time to familiarize themselves with the new requirements.

This deliberative process ensures that ASOPs reflect carefully considered professional judgment and have been subject to review by the actuarial community. The exposure draft process is particularly important, as it allows practitioners to identify practical concerns and unintended consequences before a standard becomes binding.

Operating committees

The ASB is supported by operating committees that focus on specific practice areas: the Casualty Committee, the Enterprise Risk Management Committee, the Health Committee, the Life Committee, the Pension Committee, and the General Committee (for standards that apply to more than one practice area). These committees identify topics for potential standards within their practice areas, oversee the work of task forces, and make recommendations to the ASB.

6.4.2. Structure of an ASOP

With the exception of ASOP No. 1 (which serves as the introductory standard explaining how ASOPs work), ASOPs follow a consistent structure. Familiarity with that structure aids in navigating and applying the standards.

- **Transmittal memorandum.** Each ASOP begins with a transmittal memorandum from the ASB that provides background on the standard, explains the development process, summarizes significant comments received during exposure and how they were addressed, and notes any changes from previous versions. Although not part of the binding standard itself, the transmittal memorandum provides useful context for understanding the standard's purpose and evolution.
- **Section 1: Purpose, Scope, Cross References, and Effective Date.** This section defines what the ASOP covers and when it applies. This section also lists related ASOPs and other relevant documents.
- **Section 2: Definitions.** This section defines key terms used in the ASOP. The definitions are specific to the ASOP and may differ from common usage or definitions in other contexts (including in other ASOPs).
- **Section 3: Analysis of Issues and Recommended Practices.** This is the core of the ASOP, providing the substantive guidance on how actuaries should approach the work covered by the standard. This section typically describes considerations, procedures, and approaches that actuaries should follow. The guidance uses specific language ("must," "should," "should consider," and "may") that indicates the level of obligation, as explained in Table 6.3.
- **Section 4: Communications and Disclosures.** This section specifies what actuaries should communicate or disclose in connection with the work covered by the ASOP. Communication requirements are an important component of most ASOPs, ensuring that users of actuarial work receive appropriate information about the work performed.
- **Appendices.** Some ASOPs include appendices providing background information, examples, or other supplementary material. Appendices are typically nonbinding and are provided for educational purposes.

ASOP No. 1 establishes a set of language conventions that all other ASOPs follow to indicate different levels of obligation, an implementation of the graduated compliance structure discussed in Section 6.2.8. Table 6.3 summarizes the four terms and the disclosure consequences of departing from each.

Table 6.3. The language of ASOPs.

Term	Meaning	Consequence of deviation
Must	The ASB does not anticipate a reasonable alternative to the indicated course of action	Departure is a deviation; *must disclose* under ASOP No. 41
Should	Normally the appropriate practice; departure permitted when following would be inappropriate or impracticable	Departure is a deviation; *must disclose* under ASOP No. 41
Should consider	Actuary is expected to give the matter appropriate thought; action is discretionary	Deciding not to act *after* consideration is *not a deviation* and requires no disclosure; failing to consider the matter at all *is* a deviation and *must be disclosed*
May	A course of action that would be reasonable and appropriate in many circumstances	Choosing a different approach is *not a deviation*; no disclosure required

6.4.3. General ASOPs

ASOPs are organized into six practice-area categories: general, casualty, enterprise risk management (ERM), health, life, and pension (some ASOPs are cross-listed in multiple categories). ASOPs are regularly revised, and new ASOPs are adopted as practice evolves; the following discussion reflects the standards in effect as of June 2026.

The general ASOPs apply broadly across actuarial practice areas, addressing topics relevant to all or most actuaries regardless of specialty. They represent the US implementation of the common concepts discussed in Section 6.2.

ASOP No. 1: Introductory Actuarial Standard of Practice

ASOP No. 1 serves as the gateway to the entire ASOP framework. It addresses materiality (Section 6.2.2) and professional judgment (Section 6.2.3) in the US context, and it establishes the language conventions and deviation rules that give concrete form to the compliance and deviations framework discussed in Section 6.2.8. ASOP No. 1 also reinforces the principles-based character of the ASOP system, making clear that ASOPs are not a substitute for professional judgment and are not designed to prescribe every step in an actuarial assignment. It further formalizes the bridge between ethics and technique (Section 6.1) by explaining how the Code of Professional Conduct makes ASOP compliance a code obligation.

ASOP No. 23: Data Quality

ASOP No. 23 is the US implementation of the data quality concepts discussed in Section 6.2.4. It translates the common principles of data selection, review, reliance, and disclosure of limitations into specific guidance for US actuarial practice. Because data is fundamental to virtually all actuarial analysis, ASOP No. 23 is among the most broadly applicable standards.

ASOP No. 41: Actuarial Communications

ASOP No. 41 is the US implementation of the communication and disclosure principles discussed in Section 6.2.6 and the documentation concepts in Section 6.2.7. It specifies the form and content of actuarial communications, including when a formal actuarial report is appropriate, what elements such reports should contain, how to handle oral communications, and what disclosures are required regarding assumptions, limitations, reliance on others, and deviations from ASOPs. ASOP No. 41 also encourages actuaries to consider retaining supporting documentation not included in reports, though it stops short of mandating specific retention requirements. Note that ASOP No. 41 establishes *general* communication and disclosure requirements; as described in Section 6.4.2, most other ASOPs also contain their own Section 4 (Communications and Disclosures) with topic-specific requirements that apply in addition to ASOP No. 41 when those ASOPs are applicable.

ASOP No. 56: Modeling

ASOP No. 56 applies the assumptions and methodology concepts from Section 6.2.5 to the specific context of actuarial models. It addresses model governance, selection, input, output evaluation, model risk, and documentation, bringing together several common concepts (data quality, assumptions, documentation, and communication) in a single standard focused on how actuaries work with models. Its applicability is far broader than many actuaries initially realize.

What counts as a "model"?

ASOP No. 56 defines a *model* as "a simplified representation of relationships among real-world variables, entities, or events using statistical, financial, economic, mathematical, non-quantitative, or scientific concepts and equations." This definition is intentionally broad. A complex stochastic simulation is clearly a model, but many routine actuarial analyses (such as rate indications or spread-

sheets that project losses using historical development factors) likely also fall within this definition.

The practical implication. If your actuarial work uses any systematic process to transform data into results, you are likely using a model, and ASOP No. 56 likely applies. Modeling standards are not limited to sophisticated or computationally intensive analyses.

As with all ASOPs, the extent of analysis and documentation called for by ASOP No. 56 is proportionate to the complexity and significance of the model. A simple loss development projection does not require the same level of model governance as a dynamic financial analysis, but both warrant attention to fitness for purpose, reasonableness of output, and appropriate documentation.

Other general ASOPs

In addition to the standards just discussed, several other ASOPs are classified as general and apply across practice areas:

- **ASOP No. 12: Risk Classification (for All Practice Areas).** Addresses risk classification systems, such as those used in insurance, pension, and other financial or personal security systems
- **ASOP No. 17: Expert Testimony by Actuaries.** Addresses the actuary's responsibilities when providing expert testimony in legal or regulatory proceedings
- **ASOP No. 21: Responding to or Assisting Auditors or Examiners in Connection with Financial Audits, Financial Reviews, and Financial Examinations.** Provides guidance when actuaries assist with financial audits, reviews, or examinations
- **ASOP No. 25: Credibility Procedures.** Addresses the selection and use of credibility procedures that blend subject experience with relevant experience; particularly relevant in ratemaking and experience rating
- **ASOP No. 32: Social Insurance.** Addresses actuarial work involving social insurance programs such as Social Security and Medicare
- **ASOP No. 38: Catastrophe Modeling (for All Practice Areas).** Provides guidance on the use of catastrophe models in actuarial work, including model selection, input, output evaluation, and uncertainty

6.4.4. Practice-area ASOPs

Beyond the general ASOPs, each practice area has its own set of standards addressing the specific types of work performed by actuaries in that area. The following sections briefly describe the ASOPs in each practice-area category. ASOPs that span multiple practice areas are grouped here in a separate cross-practice category.

Casualty

Casualty ASOPs address property and casualty insurance topics including reserving, ratemaking, trending, and the treatment of catastrophe losses:

- **ASOP No. 13:** Trending Procedures in Property/Casualty Insurance
- **ASOP No. 20:** Analysis of Property/Casualty Cash Flows, Including Discounting
- **ASOP No. 29:** Expense Provisions for Prospective Property/Casualty Risk Transfer and Risk Retention
- **ASOP No. 30:** Treatment of Profit and Contingency Provisions and the Cost of Capital in Property/Casualty Insurance Ratemaking
- **ASOP No. 36:** Statements of Actuarial Opinion Regarding Property/Casualty Loss, Loss Adjustment Expense, or Other Reserves
- **ASOP No. 39:** Treatment of Catastrophe Losses in Property/Casualty Insurance Ratemaking
- **ASOP No. 43:** Property/Casualty Unpaid Claim Estimates
- **ASOP No. 53:** Estimating Future Costs for Prospective Property/Casualty Risk Transfer and Risk Retention

Of particular importance are ASOP No. 43, the standard most central to the work of reserving actuaries, and ASOP No. 53, the standard most central to the work of ratemaking actuaries. Also, ASOP No. 36 governs Statements of Actuarial Opinion (SAOs) on property/casualty reserves only when the SAO is prepared to comply with applicable law or regulation, most prominently the National Association of Insurance Commissioners (NAIC) Annual Statement opinion, or when the actuary states that the SAO is issued in accordance with ASOP No. 36.

Life

Life ASOPs address life insurance reserves, pricing, illustrations, asset adequacy analysis, and related topics:

- **ASOP No. 2:** Nonguaranteed Elements for Life Insurance and Annuity Products
- **ASOP No. 15:** Dividends for Individual Participating Life Insurance, Annuities, and Disability Insurance
- **ASOP No. 24:** NAIC Life Insurance Illustrations Model Regulation
- **ASOP No. 33:** Actuarial Responsibilities with Respect to Closed Blocks in Mutual Life Insurance Company Conversions
- **ASOP No. 37:** Allocation of Policyholder Consideration in Mutual Life Insurance Company Demutualizations
- **ASOP No. 40:** Compliance with the NAIC Valuation of Life Insurance Policies Model Regulation with Respect to X Factors
- **ASOP No. 48:** Life Settlements Mortality
- **ASOP No. 52:** Principle-Based Reserves for Life Products under the NAIC Valuation Manual
- **ASOP No. 54:** Pricing of Life Insurance and Annuity Products

Health

Health ASOPs address health insurance rate filings, incurred claims, long-term care, risk adjustment, and government health programs:

- **ASOP No. 3:** Continuing Care Retirement Communities and At Home Programs
- **ASOP No. 5:** Incurred Health and Disability Claims
- **ASOP No. 8:** Regulatory Filings for Health Benefits, Accident and Health Insurance, and Entities Providing Health Benefits
- **ASOP No. 18:** Long-Term Care
- **ASOP No. 26:** Compliance with Statutory and Regulatory Requirements for the Actuarial Certification of Small Employer Health Benefit Plans
- **ASOP No. 28:** Statements of Actuarial Opinion Regarding Health Insurance Assets and Liabilities
- **ASOP No. 42:** Health and Disability Actuarial Assets and Liabilities Other Than Liabilities for Incurred Claims
- **ASOP No. 45:** The Use of Health Status Based Risk Adjustment Methodologies
- **ASOP No. 49:** Medicaid Managed Care Capitation Rate Development and Certification
- **ASOP No. 50:** Determining Minimum Value and Actuarial Value under the Affordable Care Act

Pension

Pension ASOPs address pension valuations, actuarial assumptions, asset valuation, and risk disclosure:

- **ASOP No. 4:** Measuring Pension Obligations and Determining Pension Plan Costs or Contributions
- **ASOP No. 27:** Selection of Assumptions for Measuring Pension Obligations
- **ASOP No. 34:** Actuarial Practice Concerning Retirement Plan Benefits in Domestic Relations Actions
- **ASOP No. 44:** Selection and Use of Asset Valuation Methods for Pension Valuations
- **ASOP No. 51:** Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions

Enterprise risk management

ERM ASOPs address capital adequacy assessment and enterprise risk management:

- **ASOP No. 55:** Capital Adequacy Assessment
- **ASOP No. 58:** Enterprise Risk Management

Cross-practice ASOPs

Several ASOPs apply to work that spans multiple practice areas:

- **ASOP No. 6:** Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Program Periodic Costs or Actuarially Determined Contributions (Pension/Health)
- **ASOP No. 7:** Life or Health Cash Flow Analysis (Life/Health)
- **ASOP No. 10:** U.S. GAAP for Long-Duration Life, Annuity, and Health Products (Life/Health)
- **ASOP No. 11:** Treatment of Reinsurance or Similar Risk Transfer Programs Involving Life Insurance, Annuities, or Health Benefit Plans in Financial Reports (Life/Health)
- **ASOP No. 19:** Appraisals of Casualty, Health, and Life Insurance Businesses (Life/Health/Casualty)

- **ASOP No. 22:** Statements of Actuarial Opinion Based on Asset Adequacy Analysis for Life Insurance, Annuity, or Health Insurance Reserves and Other Liabilities (Life/Health)
- **ASOP No. 57:** Statements of Actuarial Opinion Not Based on an Asset Adequacy Analysis for Life Insurance, Annuity, or Health Insurance Reserves and Related Actuarial Items (Life/Health)

The ASOPs applicable to a particular practice area depend on the nature of the work. The Academy has historically developed tools (e.g., Applicability Guidelines) to help actuaries identify which ASOPs might be relevant to their particular assignment, though those tools are not binding, and the actuary is ultimately responsible for understanding which ASOPs are applicable to their work.

Key takeaways

- Standards of practice bridge the gap between ethical principles (codes of conduct) and technical work, translating broad obligations into **binding guidance** for specific types of actuarial assignments.
- Standards of practice are **principles-based**, not prescriptive.
- **Actuarial judgment** should be informed, reasonable, and supportable. It develops through education, experience, and mentorship, and it is exercised independently even under pressure.
- Standards frameworks worldwide use **graduated language** to distinguish mandatory requirements, recommended practices (deviation permitted with disclosure), considerations (thought required, action discretionary), and permissible alternatives. The key principle: Deviations are subject to **disclosure** so users can assess the implications.
- The **IAA's ISAPs** are **model standards** (not binding on individual actuaries) that associations can adopt or adapt when developing their own.
- In the United States, the **ASB** promulgates ASOPs through a deliberative process with public exposure and comment.
- Standards are periodically revised, and new standards are adopted. Actuaries have a professional responsibility to **stay current** with the standards applicable to their work.

Common mistakes to avoid

- **Deviating without disclosure.** Even when deviation from a recommended practice is justified, failing to disclose the deviation and the reasons for it violates professional standards. The disclosure requirement is the profession's central mechanism for balancing flexibility with accountability.
- **Applying materiality mechanically.** Materiality is context-dependent and user-centered: There is no universal percentage threshold. An item immaterial by one measure may be highly material by another (e.g., a small dollar amount that triggers a regulatory action level). Actuaries who apply a fixed rule of thumb risk both overdisclosing and, more dangerously, underdisclosing.
- **Ignoring scope provisions.** Every standard specifies the types of work it covers. Actuaries sometimes assume a standard applies (or does not apply) without carefully reading the scope to determine applicability.
- **Inadequate documentation of judgment.** Recording *what* was done without explaining *why* leaves work vulnerable to misinterpretation and makes peer review or regulatory examination difficult. Sufficient documentation captures the reasoning behind key choices, not just the results.
- **Underestimating the reach of modeling standards.** Standards governing models, such as ASOP No. 56 in the United States, often define "model" more broadly than many actuaries expect. Even routine analyses such as loss development projections or rate indications may qualify. Modeling standards are not limited to complex or computationally intensive work.
- **Assuming national standards are sufficient for international work.** When actuarial work is intended for use in another jurisdiction, the standards applicable in that jurisdiction govern. Different jurisdictions may impose different requirements on the same type of work.

Resources

- Actuarial Standards Board (ASB, US): *Actuarial Standards of Practice* (ASOPs)
- International Actuarial Association (IAA): *International Standards of Actuarial Practice* (ISAPs)
- Financial Reporting Council (FRC, UK): *Technical Actuarial Standards* (TASs)
- Institute and Faculty of Actuaries (IFoA): *Actuarial Profession Standards* (APSs)

- Actuarial Association of Europe (AAE): *European Standards of Actuarial Practice* (ESAPs)
- Canadian Institute of Actuaries (CIA): *Standards of Practice*
- Lloyd's *Actuarial Function Guidance*: www.lloyds.com

Discussion questions

1. Two equally qualified actuaries analyze the same data and reach different reserve estimates, both within a reasonable range. How do standards of practice accommodate this outcome? At what point would a difference between two actuaries' conclusions raise professional concerns?
2. Standards frameworks use graduated language to distinguish levels of obligation (e.g., mandatory requirements versus recommended practices versus considerations). Why do you think the profession adopted a graduated structure rather than making all guidance either mandatory or advisory?
3. A client asks you to perform an analysis more quickly than usual, and you realize you cannot complete all the steps that applicable standards say you "should" perform. What are your options? How does the framework for deviations and disclosure help you navigate this situation?
4. You are reviewing work performed by another actuary and notice what appears to be a deviation from a recommended practice with no disclosure. What are your professional obligations? How might your response differ depending on the jurisdiction and applicable code of conduct?
5. How should an actuary handle a situation where a standard of practice and a regulatory requirement appear to conflict? Does it matter whether the conflict involves a mandatory provision or a recommended practice?
6. Does leaving materiality entirely to professional judgment, rather than fixing numerical thresholds, strengthen or weaken the reliability of actuarial work? What would be gained, and lost, by adopting fixed thresholds?
7. What are the advantages and risks of a profession writing the technical standards by which its own members are judged? Would standards set by an external body serve the public better, and what might the profession lose under that arrangement?

7. Discipline and Enforcement

A profession's commitment to ethical conduct and professional standards has substance only if those standards are enforced. Discipline, the fourth pillar, provides that enforcement. The International Actuarial Association (IAA) requires every Full Member Association to have a formal disciplinary process in place for investigating alleged misconduct and disciplining members who violate professional standards or rules of conduct.

This chapter begins by examining the principles that underlie disciplinary systems across the actuarial profession worldwide. It then turns to the substantive and procedural elements those systems share, before surveying how specific jurisdictions organize discipline and examining the US system in detail as an illustrative example. The chapter concludes with case studies and common themes in disciplinary actions that offer practical lessons for actuaries everywhere.

7.1. Common principles of discipline and enforcement

Regardless of jurisdiction, actuarial disciplinary systems are built on a set of shared principles:

- **Public protection as the primary purpose.** The overriding objective of any disciplinary system is protecting the public. Actuarial work affects insurance consumers, pension beneficiaries, financial system stability, and public policy. When an actuary performs substandard work or acts unethically, the consequences can be severe and far-reaching. Disciplinary systems exist first and foremost to identify and address such failures, ensuring that actuaries who cannot or will not meet professional standards are prevented from causing further harm.
- **Maintaining the profession's reputation.** The actuarial profession's value to society depends on trust: trust that actuaries are competent, ethical, and accountable. Effective discipline demonstrates to regulators, employers, clients, and the public that the actuarial credential carries real meaning and that the

profession takes its responsibilities seriously. This reputation function is especially important for professions such as actuarial science that rely significantly on self-regulation (discussed in Chapter 3), because without effective enforcement, the case for self-regulation collapses.

- **Deterrence.** Disciplinary systems deter potential violations by demonstrating that misconduct has consequences. The publication of public disciplinary actions (typically the more serious sanctions such as public reprimand, suspension, or expulsion) serves an educational function as well, helping actuaries understand what types of conduct are unacceptable and what outcomes result from violations. Deterrence works not only through the direct consequences of discipline but also through the profession's collective awareness that standards and ethical requirements are enforced.
- **Due process for the accused.** Every credible disciplinary system incorporates procedural protections for actuaries who are subject to investigation or discipline. These protections, sometimes called "natural justice" in Commonwealth legal traditions, are essential to the system's legitimacy. The specific procedural safeguards vary by jurisdiction, but the core elements are generally consistent:
  - **Notice.** The accused must be informed of the specific allegations against them with sufficient detail to prepare a defense.
  - **Opportunity to respond.** The accused must have a meaningful opportunity to present their side of the story, submit evidence, and challenge the evidence against them.
  - **Impartial decision-makers.** Those who decide whether a violation occurred and what sanction to impose must be free from conflicts of interest and bias.
  - **Proportionate consequences.** Sanctions must be proportionate to the severity of the violation, as discussed further next.
  - **Right of appeal.** The accused must have the ability to seek review of adverse decisions by a body separate from the original decision-makers.
- **Proportionality of sanctions.** Disciplinary systems worldwide employ a graduated range of sanctions, from informal counseling for minor or unintentional violations to permanent expulsion for the most serious misconduct. This proportionality principle is meant to ensure that the consequences match the gravity of the offense. It also allows the disciplinary system to serve a rehabilitative function: helping actuaries who make honest mistakes improve their practice rather than treating every violation as grounds for the most severe punishment.

- **Balancing confidentiality and transparency.** Disciplinary systems must navigate a tension between two legitimate interests. Confidentiality protects the accused from reputational harm based on unproven allegations and encourages participation in the process. Transparency serves the public interest by making disciplinary outcomes known, enabling employers and regulators to make informed decisions, and reinforcing the deterrent effect of discipline. Most jurisdictions resolve this tension by keeping investigations confidential and making the more serious disciplinary outcomes (such as public reprimand, suspension, or expulsion) public, while less severe outcomes (such as private reprimand or counseling) and dismissals without action generally remain confidential. The precise balance varies by jurisdiction.
- **The guidance function.** Many actuarial organizations also make available a proactive advisory resource that offers guidance to actuaries who face uncertain situations before problems arise. This preventive function recognizes that most actuaries want to do the right thing and that many potential violations can be avoided through timely professional guidance. The guidance function complements the enforcement function: Together, they form a system that both helps actuaries comply with standards and codes of conduct and holds them accountable when they do not.

7.2. The disciplinary process: Common elements and structure

The starting point for actuarial discipline is self-regulation: The profession establishes its own disciplinary bodies, writes its own rules of procedure, and makes its own decisions about whether violations have occurred and what sanctions to impose. With a few exceptions, government agencies generally have only background authority and do not routinely participate in the discipline process.

7.2.1. Substantive common ground

Types of matters addressed

Codes of conduct typically require actuaries to follow applicable standards of practice, to only do work for which they are qualified, and to meet other professional requirements. Most misconduct is therefore a violation of the code of conduct, often along with the specific requirement involved. Here are some common examples:

- Ethical breaches such as dishonesty, failing to disclose conflicts of interest, or failing to protect confidential information
- Substandard technical work that falls short of applicable standards of practice

- Undertaking work beyond one's qualifications or competence
- Failure to meet continuing education or attestation obligations (where these are a formal requirement)
- Conduct that brings the profession into disrepute

Who may file complaints

Complaints may generally be filed by a broad range of parties, not just other actuaries. Regulators, employers, clients, members of the public, and the professional organization itself may all initiate the process. Many systems also accept anonymous complaints, recognizing that some complainants, particularly employees or subordinates, may fear retaliation if identified.

Graduated sanctions

The sanctions available are broadly consistent across jurisdictions, even though terminology and availability vary. As Figure 7.1 shows, they range from outcomes that carry a finding but leave practice unaffected to those that restrict, suspend, or permanently end an actuary's ability to practice.

Relationship to legal proceedings

Professional discipline is distinct from legal liability, though the same conduct can carry consequences in more than one forum: A flawed valuation might draw both

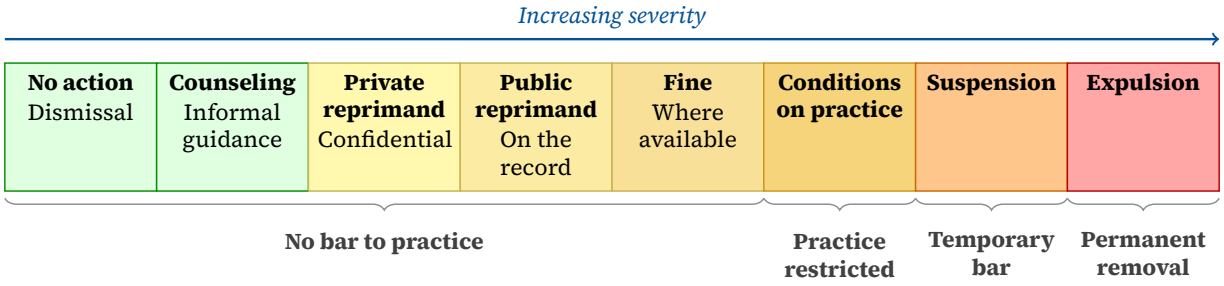


Figure 7.1. The range of disciplinary outcomes, arranged by their effect on an actuary's ability to practice. A complaint may be dismissed with no action or resolved informally through counseling. Sanctions, such as a public reprimand or a fine, that follow a formal finding carry reputational or monetary consequences but leave the actuary free to practice, whereas conditions on practice (such as required peer review or limits on the work undertaken), suspension, and expulsion progressively restrict, suspend, or permanently end the ability to practice. Terminology and availability vary by jurisdiction; fines, for example, may be imposed in the United Kingdom but not by the US-based organizations.

professional discipline and a malpractice claim, while serious wrongdoing such as fraud can also bring criminal charges. The professional and legal tracks run independently but often intersect. A court judgment or regulatory action may trigger or inform a disciplinary inquiry. A disciplinary body may also defer its own proceedings while related litigation is pending, both to avoid prejudicing that process and because its outcome may bear on the disciplinary analysis. Civil litigation is itself a significant accountability channel, most prominently in the United States, where the Code of Professional Conduct and Actuarial Standards of Practice are routinely cited as the benchmark standard of care in malpractice and errors-and-omissions claims.

Distinct from regulatory eligibility

Professional discipline is also separate from the "fit and proper" powers that regulators in many jurisdictions exercise over individuals who hold specific regulated roles, such as the Australian Prudential Regulation Authority's (APRA's) authority over Appointed Actuaries in Australia or national supervisors' authority over actuarial function holders under Solvency II. In Australia, for example, at APRA's application, the Federal Court of Australia can disqualify a person from holding appointment as an Appointed Actuary for failing to meet regulatory requirements.

7.2.2. Procedural framework

Most disciplinary procedures share the same general stages:

1. **Complaint or identification.** The process begins when a potential violation comes to the attention of the disciplinary body. Most matters arrive as a complaint from one of the parties described earlier, but a matter can also originate through self-reporting by the actuary, information that reaches the organization through other channels (such as media reports or regulatory actions), or the organization's own monitoring activities.
2. **Initial screening.** Most systems include a preliminary screening step to determine whether the complaint is sufficiently complete (that is, whether enough information has been provided to evaluate the allegations) and whether it raises a matter within the disciplinary body's jurisdiction that could, if substantiated, constitute a violation of applicable standards or rules of conduct. Complaints that clearly fall outside the body's authority or that do not allege conduct amounting to a professional violation may be dismissed at this stage. This screening function prevents the expenditure of significant resources on matters that cannot result in discipline and protects actuaries from the burden of responding to meritless complaints.

3. **Investigation.** If the initial screening indicates that the complaint warrants further examination, the subject actuary is typically notified and a formal investigation begins. Complaints dismissed at the screening stage generally do not result in notification, sparing actuaries unnecessary concern over matters that were never going to proceed. Who conducts the investigation varies: Some systems designate a primary investigator who may be a member of the disciplinary body or an outside appointee, while others use independent disciplinary panels that include lay (nonactuary) participants to bring an outside perspective and reinforce public accountability. The investigation typically involves gathering evidence from the complainant, the subject, and third parties; reviewing actuarial work product and documentation; and analyzing whether the evidence supports a finding that applicable standards or rules of conduct were violated. Throughout the investigation, due process protections are observed.
4. **Adjudication.** Following the investigation, a decision-making body determines whether it believes a violation occurred and, if so, what sanction or sanctions are appropriate. Some systems separate investigation from final adjudication, assigning those functions to distinct bodies.
5. **Appeal.** On appeal, the reviewing body may revisit the findings of fact, the application of standards, the procedural fairness of the proceeding, and the proportionality of the sanction imposed.
6. **Publication.** Following final resolution, the outcome is handled in accordance with the jurisdiction's transparency policies. Where an action is made public, it typically remains published indefinitely or for an extended period.

Figure 7.2 illustrates this general process, showing how a complaint progresses from initial filing through screening, investigation, and resolution.

7.3. The global landscape of actuarial discipline

Although the common principles and procedural elements described above are shared across jurisdictions, the institutional arrangements for enforcing actuarial professional requirements vary considerably around the world. The differences reflect broader national traditions regarding professional regulation, the relationship between professions and government, and the structure of actuarial organizations in each country. They tend to converge in one respect, though: An association's disciplinary reach generally follows its members' conduct wherever in the world it occurs.

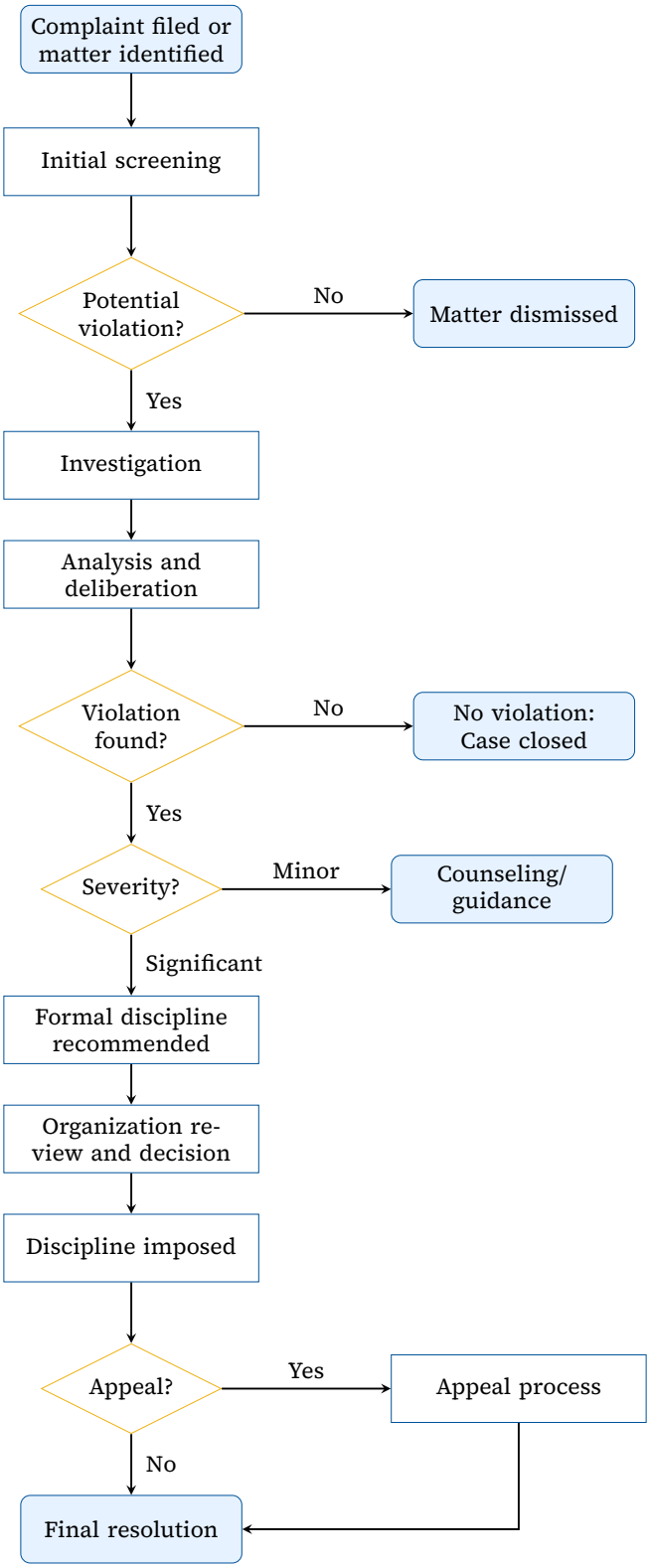


Figure 7.2. Overview of the actuarial disciplinary process.

7.3.1. United States

The US system is distinctive for its multi-organization structure. Because the actuarial profession in the United States comprises five organizations, each with its own membership and governance, the profession established the Actuarial Board for Counseling and Discipline (ABCD) as a centralized body for investigating complaints involving the Code of Professional Conduct. The ABCD investigates and makes recommendations, but each credentialing organization—the Casualty Actuarial Society (CAS), the Society of Actuaries (SOA), the American Academy of Actuaries (AAA), the Conference of Consulting Actuaries (CCA), and the American Society of Enrolled Actuaries (ASEA)—retains the authority to impose discipline on its own members. A cross-border discipline agreement with the Canadian and Mexican actuarial organizations coordinates cases involving actuaries who practice across North American borders. Sections 7.4 and 7.5 examine the US system in detail.

7.3.2. United Kingdom

The Institute and Faculty of Actuaries (IFoA) operates its own Disciplinary Scheme, overseen by a lay-chaired Disciplinary Committee, and the panels and tribunals that decide cases include nonactuaries to reinforce objectivity. Complaints may be brought by anyone, and the scheme provides for investigation, adjudication by independent panels, and a range of sanctions up to suspension and expulsion (including fines, which the US-based organizations do not impose). The IFoA also operates a confidential Professional and Regulatory Support Helpdesk where members worldwide can seek guidance. Separately, the Financial Reporting Council (FRC), a government body, has independent authority under its own Actuarial Scheme to investigate actuaries whose work raises significant public interest concerns, alongside (not replacing) the IFoA's processes. In practice the IFoA handles most member conduct matters, while the FRC addresses those of broader public interest.

7.3.3. Canada

The Canadian Institute of Actuaries (CIA) operates a disciplinary process through its Professional Conduct Board, which can investigate complaints, conduct hearings, and impose sanctions. The CIA's system handles matters involving violations of the CIA's Rules of Professional Conduct, Standards of Practice, and other professional requirements. The CIA publishes full written tribunal decisions, with reasoning, for contested cases, while cases resolved through accepted sanctions produce shorter notice-format publications; it also issues periodic discipline reports that summarize recent

activity for educational purposes. The CIA participates in the North American cross-border discipline agreement detailed in Section 7.4.1, facilitating coordination where actuaries practice across borders.

7.3.4. Australia

The Actuaries Institute (the national professional body for actuaries in Australia) operates an independent Disciplinary Scheme to oversee complaints and professional conduct matters. Complaints may be made by any party, including the Institute itself. The Scheme provides for the investigation of complaints, the conduct of hearings, and the imposition of sanctions where misconduct is established, reflecting the standards expected of members. It comprises three independent bodies (a Conduct Committee, a Disciplinary Tribunal, and an Appeal Board), each including actuaries and lay and legally qualified members. In matters proceeding to determination, a written report sets out the information relied upon, the analysis and reasons, the findings and orders, and the material proposed for publication; decisions may be published on a named or anonymized basis, with the form determined in regard to the circumstances of the case and the impact on the parties.

7.4. The US system: The ABCD

With the common principles, the disciplinary process, and the global landscape as context, this section and the next examine the US disciplinary system in detail as an illustrative example of how these principles are implemented in practice.

7.4.1. Structure and jurisdiction

The ABCD was created in 1991 and began operating on January 1, 1992, under the auspices of the AAA while maintaining independence in carrying out its functions. The ABCD consists of nine members appointed by a selection committee, with representation across practice areas: three from pension, two from life, two from property and casualty, and two from health. From among these nine, one serves as chairperson and two as vice chairpersons.

The ABCD's jurisdiction extends to members of all five US-based actuarial organizations, regardless of where they practice or where their work is performed. A CAS member working entirely outside the United States remains subject to the ABCD's jurisdiction by virtue of that membership.

The one significant exception involves Canada and Mexico, and it relocates only the *investigation*, not the disciplinary decision. Through a cross-border discipline agreement with the CIA and the Mexico-based actuarial organizations (Colegio Nacional de Actuarios (CONAC), Asociación Mexicana de Actuarios (AMA), and Asociación Mexicana de Actuarios Consultores (AMAC)), the investigation is conducted by the disciplinary body of the jurisdiction where the actuarial services are ultimately directed, regardless of which organization the actuary belongs to. The CIA handles investigations of work directed to Canadian purposes, the ABCD handles investigations of work directed to US purposes, and the CONAC Honor Board handles investigations of work directed to Mexican purposes. The investigating body may recommend that public disciplinary action be considered but does not recommend specific penalties. Each credentialing organization then retains sole authority to determine any penalty imposed on its own members.

7.4.2. Request for guidance

One of the ABCD's important functions is providing confidential guidance to actuaries who have questions about the application of professional standards and the Code of Professional Conduct to specific situations. This guidance function, an embodiment of the preventive principle discussed in Section 7.1, helps actuaries navigate difficult situations before problems arise.

How it works

An actuary or actuarial student seeking guidance can contact the ABCD office by email or phone. Depending on the nature of the question, the response may come from ABCD staff (for more straightforward questions that do not require actuarial expertise), from an individual ABCD member with relevant expertise, or from the full Board. In many cases, the requester is paired with an individual ABCD member for a direct conversation about the situation, with the member serving as a professionalism resource: listening to the issue, discussing how the Code of Professional Conduct and applicable standards apply, and offering practical perspective. Requesters may also ask for the full Board's formal position on a question, though the Board may decline to provide one. Requests for guidance are treated confidentially: The ABCD makes a reasonable effort to keep the requester's identity and the specifics of the situation confidential, though efforts to protect anonymity may limit the ABCD's ability to respond fully.

Nature of the guidance

ABCD guidance is advisory: It helps inform the actuary's decision but does not constitute a binding ruling that protects the actuary from future discipline. A response from ABCD staff or an individual ABCD member does not represent the views of the entire Board unless the members vote to approve it.

Scope and limitations

The ABCD provides guidance on the proper interpretation of the Code of Professional Conduct and applicable standards. It does not provide legal, business, or technical actuarial advice.

7.4.3. Complaints and investigations

The ABCD's complaint and investigation process generally follows the procedural framework described in Section 7.2.2. This section highlights aspects that are specific to the ABCD.

Filing a complaint

Complaints are submitted in writing to the ABCD. The complaint should identify the complainant, identify the subject actuary, describe the conduct at issue, identify the professional standards allegedly violated, and provide any supporting documentation. Anonymous submissions are treated as general information rather than formal complaints, though the ABCD may still act on the information if it suggests a material violation. Complaints need not be filed by actuaries or use technical language; the ABCD can investigate any complaint that appears to raise legitimate concerns. The ABCD may also initiate a complaint on its own where information from public sources, regulatory actions, or other channels suggests a possible material violation but no third party has filed a complaint.

Screening and investigation

The ABCD's staff counsel first screens the complaint for completeness and validity before forwarding it to the subject actuary for a response. Thereafter, the complaint and response are provided to the chairperson and the two vice chairpersons, who decide by majority vote whether to dismiss, counsel, mediate, or investigate. If the matter proceeds to investigation, the chairperson appoints a primary investigator with

relevant subject matter expertise. The subject actuary may object to the originally assigned investigator for good cause, including bias or professional competition, in which case a different investigator may be assigned. The investigator prepares an investigative report containing relevant facts, interview summaries, Code citations, and analysis. Notably, the report does not offer opinions or conclusions as to whether a material violation occurred. The report is provided to the subject actuary, who has 30 days to respond. The ABCD then reviews both the investigative report and the subject's response. If it appears to the ABCD that a possible material violation occurred, it conducts a fact-finding hearing, attended by the investigator, the subject actuary (who may be accompanied by counsel), and any witnesses, before reaching its final determination.

Standard of proof and duration

The ABCD's Rules of Procedure do not specify a formal standard of proof; this is not a criminal proceeding, so findings need only be supported by the evidence gathered during the investigation, which may take from several months to more than a year depending on the complexity of the issues and the need for expert review of technical matters.

7.4.4. Possible outcomes

Following its investigation, the ABCD reaches a conclusion and makes a recommendation regarding the appropriate disposition of the matter.

Dismissal

The ABCD may dismiss a complaint for a variety of reasons, including insufficient evidence to support a finding of violation, or because the matter turns on questions outside the ABCD's competence to resolve (such as legal determinations that fall within the jurisdiction of courts rather than a professional disciplinary body). The subject is notified of the dismissal, sometimes with guidance on the conduct at issue, and no further action is taken. The investigation remains confidential.

Counseling

In some cases, the ABCD may conclude that while technical violations occurred, they were minor or unintentional and are best addressed through counseling rather than formal discipline. Counseling may include education about the applicable standards, advice on improving practices, and follow-up to ensure the actuary understands and is complying with professional requirements.

Recommendation for discipline

When the ABCD finds that significant violations have occurred, it prepares a recommendation for discipline and forwards the recommendation to the subject's actuarial organization(s). The recommendation includes a statement of the ABCD's findings, all documents used by the ABCD, and the transcript of any hearing. The receiving organization then conducts its own review and makes the final decision on discipline.

Factors considered in recommendations

In formulating its recommendations, the ABCD weighs the severity of the violation and whether it was intentional or negligent; the harm caused to clients, employers, the public, or the profession; the actuary's prior disciplinary history and cooperation with the investigation; any mitigating circumstances; and the need to deter similar conduct by others.

7.4.5. Public statements and annual report

The ABCD publishes an *Annual Summary of Activities* that reports aggregate statistics on the year's caseload, including the number and types of inquiries and requests for guidance, dispositions by precept of the Code, and breakdowns by practice area. The report includes anonymized descriptions of the material violations alleged in inquiry cases and examples of the professionalism issues raised in guidance requests. Historical disposition data since the ABCD's inception in 1992 is also provided. Because the ABCD does not name individual subjects in the annual report (individual discipline is published by the credentialing organizations), the report serves primarily an educational and transparency function, helping actuaries understand the types of conduct that attract scrutiny and the kinds of questions their peers are asking.

7.5. CAS disciplinary procedures

This section examines how the Casualty Actuarial Society, as a credentialing organization, exercises its own disciplinary authority, focusing on what is distinctive about the CAS process rather than repeating the common procedural elements already described. Other US-based actuarial organizations (SOA, AAA, CCA, and ASEA) have their own parallel procedures.

7.5.1. Jurisdiction and the relationship to the ABCD

The CAS's central role in the disciplinary process is as the decision-maker. Under the CAS Bylaws, complaints concerning alleged violations of the Code of Professional

Conduct by CAS members "shall be referred to the national organizations responsible for profession-wide investigation, counseling and/or discipline" (that is, the ABCD, or the CIA or Mexican actuarial organizations for matters falling under the cross-border agreement). The CAS does not independently investigate complaints about its credentialed members; it relies on the ABCD to perform that function. But the ABCD's recommendation is advisory, not binding. When the ABCD's investigation results in a recommendation for discipline, the CAS makes its own independent determination: It may accept the recommendation, modify it, or reach a different conclusion. This independence ensures that the credentialing organization, which ultimately bears the reputational consequences of its members' conduct, retains final authority over its own membership decisions.

Beyond this primary process, the CAS exercises disciplinary authority over one additional group: CAS candidates. Individuals pursuing CAS credentials (but who have not yet been admitted as CAS members) are usually not members of any actuarial organization and therefore are not subject to the ABCD's jurisdiction. However, candidates are bound by the CAS Code of Professional Ethics for Candidates, and the CAS can discipline candidates for violations of that code, including suspension of examination privileges or denial of future membership. This jurisdiction ensures that even actuaries-in-training are held to professional standards, and that individuals who demonstrate serious ethical failures during the credentialing process can be prevented from obtaining the credential.

7.5.2. The CAS Discipline Committee

Disciplinary matters within the CAS are adjudicated by a standing Discipline Committee composed of Fellows.[11] When a recommendation for disciplinary action is received, whether from the ABCD or another investigatory body, the committee chairperson forms a Discipline Committee Panel from among the committee's members to hear the specific case.

Hearing and decision

The panel provides the subject actuary with advance written notice and schedules a hearing at which the subject may appear personally and with counsel or another adviser. The process is designed to ensure that the subject has a meaningful opportunity to respond before any discipline is imposed. A supermajority of the panel is required to impose public discipline (public reprimand, suspension, or expulsion), and

11 The procedural details in this section and the next reflect the CAS Bylaws as amended September 2025. Readers should consult the current CAS Bylaws and Rules of Procedure for the most up-to-date provisions.

the panel issues a written report of its findings and rationale. The decision becomes final and binding unless the subject appeals within the time allowed.

Available sanctions

The CAS employs some of the graduated range of sanctions described in Section 7.2.1: private reprimand, public reprimand, suspension, and expulsion. Suspension prohibits the member from using CAS credentials (Associate (ACAS) or Fellow (FCAS)) during the suspension period. Expulsion permanently removes the individual from CAS membership and credential use, though an expelled individual may apply for reinstatement with approval of the Board of Directors.

Annual reporting

Beyond acting on individual cases, the Discipline Committee is accountable for its work as a whole. Under the CAS's disciplinary rules of procedure, the committee issues an annual report to the Board of Directors and to the CAS membership describing its activities, including the types of cases pending, resolved, and dismissed. The report is subject to the same confidentiality requirements that govern individual proceedings, so it provides transparency into how the disciplinary function is operating without revealing the particulars of any specific matter.

7.5.3. Appeals

A subject actuary who disagrees with the Discipline Committee Panel's decision may appeal. The appeal is heard by a separate Appeals Panel drawn from the Board of Directors; notably, the subject actuary participates in the selection of the Appeals Panel members, a procedural feature designed to reinforce the fairness of the process. The appeal is based on the written record (the Appeals Panel does not hold a new hearing), and the standard for overturning the original decision is deliberately high: The Appeals Panel may reverse only if the factual findings were clearly erroneous, the procedures were not followed in a way that affected the outcome, or the discipline was clearly disproportionate to the violation. The Appeals Panel's decision is final.

7.5.4. Confidentiality, publication, and notification

CAS disciplinary proceedings are confidential while in progress. Publication occurs only after discipline is final, that is, after the appeal period has expired or any appeal has been resolved. At that point, the CAS notifies its membership of public disciplinary actions and simultaneously notifies the appropriate investigatory body (the

ABCD, or the CIA or a Mexican organization under the cross-border agreement), all other actuarial organizations of which the individual is a member, and other persons or organizations, including government entities, that should receive notice in the public interest.

One additional procedural safeguard is that a CAS member against whom a complaint is pending may not resign to avoid discipline, though the Board retains discretion to approve a resignation even in such circumstances.

7.6. Discipline and guidance in practice: Real cases and common themes

Actuarial organizations publish disciplinary actions precisely so that the profession can learn from them. This section draws on published discipline notices from the CAS and the Actuaries Institute (Australia), as well as ABCD annual reports, to illustrate the types of conduct that lead to discipline, the themes that recur across cases, and the kinds of professionalism questions that actuaries encounter in practice. Names are omitted from all cases discussed here, but the underlying notices are public record.

7.6.1. Competence and documentation failures

The most instructive disciplinary cases involve actuaries whose technical work fell below professional standards: not because they intended to do poor work, but because they failed to apply appropriate methodology, document their reasoning, or communicate their methods clearly.

In one CAS case, an actuary prepared incurred but not reported (IBNR) reserve reports for an insurance company using inappropriate methodology, failed to test estimates for reasonableness, and did not document the work sufficiently for a qualified peer to evaluate it. The reports failed to identify the data, assumptions, and methods used, and did not disclose the limitations of the analysis. The ABCD investigated and found material violations of multiple precepts of the Code of Professional Conduct, including the requirements to perform services with competence (Precept 1), to satisfy applicable standards of practice (Precept 3), and to ensure that actuarial communications are clear and appropriate to the circumstances (Precept 4). The CAS suspended the actuary from membership for two years.

This case illustrates a common pattern: Competence failures rarely involve a single dramatic error. More often, they involve a cascade of deficiencies: inappropriate methodology compounded by inadequate documentation, unclear communication, and failure to comply with applicable standards.

This pattern is not unique to any single jurisdiction. In an Australian case, a member accepted a consulting engagement characterized by contentious issues, public scrutiny, a very limited time frame, and a minimal budget. The member did not adequately define the scope of the assignment, which led to services that were difficult to complete competently under the constraints. The resulting report did not follow expected professional structure for actuarial reports, hindering readers' ability to understand the report's objectives and the validity of its findings. Critically, the report did not clearly distinguish between objective professional actuarial advice and the member's personal opinions. The tribunal found breaches of three principles of the Actuaries Institute Code of Conduct (competence and care, objectivity, and communication) and imposed a reprimand along with a requirement to consult with a peer adviser before accepting new client work for 12 months.

This case adds a dimension absent from the CAS case: The failure began at the engagement-acceptance stage, before any technical work was performed. Taking on a high-risk assignment under unrealistic constraints set the stage for everything that followed, and the sanction, mandatory peer consultation for new engagements, targeted that root cause rather than merely punishing the outcome.

The lesson across both of these cases is that the standards of practice, qualification requirements, and communication obligations described in Chapters 4–6 are not abstract aspirations; they are enforceable professional requirements, and failure to meet them has real consequences.

7.6.2. Cooperation and professional conduct failures

Some of the most severe sanctions are reserved not for technical failures but for conduct that undermines the profession's self-regulatory processes or brings the profession into disrepute.

In one case, a CAS member sent numerous inappropriate and harassing communications to ABCD members, staff of the AAA, CAS committee members and officers, and former employers. During the resulting investigation, the actuary repeatedly misrepresented their whereabouts and availability, and failed to respond promptly, truthfully, and fully to ABCD communications, itself a violation of the Code's requirement to cooperate with the profession's self-regulatory processes. The CAS Discipline Committee Panel voted unanimously to expel the actuary from membership. The Appeals Panel affirmed the decision.

In another case, an actuary pleaded guilty to a serious criminal offense. The Discipline Committee Panel determined that the actuary's actions, by their very nature,

damaged the reputation of the actuarial profession, constituting a material violation of the Code's integrity requirements. The panel voted unanimously for expulsion. The actuary did not appeal.

These cases demonstrate two important principles. First, the obligation to cooperate with the profession's disciplinary processes is itself an enforceable requirement, and failure to cooperate can draw sanctions as severe as, or more severe than, those the underlying conduct that triggered the investigation would have warranted. Second, conduct that damages the profession's reputation can lead to discipline even when it does not involve actuarial work product, because the integrity of the professional credential depends on the conduct of those who hold it.

7.6.3. Examination integrity

Examinations are central to credentialing across much of the actuarial profession: They are a primary means by which it certifies that a person has the technical knowledge required to practice. Where examinations are used, cheating undermines the value of the credential for every actuary who earned it legitimately, and actuarial organizations treat examination misconduct seriously.

In two related Australian cases, two students colluded during an online professional examination administered by the IFoA. One student provided answers to an exam question so the other could gain advantage; the second submitted those answers as their own. Both admitted to misconduct. The tribunal found that each had breached the Code of Conduct and imposed reprimands, costs contributions of A$1,000, and (for the student who submitted the copied answers) a requirement to complete 10 hours per year of professionalism training for three years. The tribunal noted that both individuals were in the early stages of their actuarial careers, acknowledged their mistakes, and should continue to pursue their actuarial education.

These cases are notable for several reasons. First, they demonstrate that professionalism obligations begin before credentialing, a principle reflected in the CAS Code of Professional Ethics for Candidates discussed in Section 5.4. Second, the sanctions were calibrated to the respondents' career stage: serious enough to signal that examination integrity is nonnegotiable, but not so severe as to end careers that had barely begun. Third, the tribunal's decision to publish the names (with redaction after three years) balanced the public interest in transparency against the recognition that early-career misconduct need not define an entire career.

7.6.4. What the data shows

The ABCD's annual reports provide a broader view of the profession's disciplinary activity. In a typical year the ABCD handles somewhere in the range of 100 to 150 cases, the vast majority of which are requests for guidance (discussed in the next section) rather than complaints. Of the smaller pool of inquiry cases (complaints or adverse information), only a fraction close in any given year, and the outcomes follow a consistent pattern: Most are dismissed, often with guidance; a few result in counseling; and a small number result in recommendations for discipline to the actuary's credentialing organization. The single most frequently alleged Code violation is Precept 1, which covers acting with integrity, performing services with competence, and upholding the reputation of the profession; the other precepts that surface most often vary from year to year.

Since its inception in 1992, the ABCD has handled several thousand cases. Of the inquiry cases resolved, the large majority were dismissed or dismissed with guidance, a modest number resulted in counseling, and only a few dozen resulted in a recommendation for public discipline. These proportions confirm that formal discipline is relatively rare: The vast majority of actuaries conduct themselves professionally throughout their careers. But they also show that the system is active and functioning: Complaints are investigated, and significant violations do result in meaningful consequences.

The types of material violations alleged in recent ABCD cases include failing to meet statutory and regulatory requirements, failing to disclose conflicts of interest, providing actuarial services without meeting continuing education requirements, certifying valuation results without requisite qualifications, issuing unclear or misleading actuarial communications, disclosing confidential information in violation of the Code, misrepresenting credentials, and failing to cooperate with ABCD investigations. This list, drawn from the ABCD's 2025 annual report, reads as a catalog of the professional obligations discussed throughout this book, reinforcing that the standards described in Chapters 4–6 are actively enforced.

7.6.5. What actuaries actually ask about: Guidance request themes

The ABCD's guidance function, discussed in Section 7.4.2, generates a rich picture of the professionalism questions that actuaries encounter in everyday practice. In a typical year, the ABCD responds to roughly a hundred requests for guidance spanning all major practice areas (health, casualty, life, and pension). The issues raised in these requests are worth examining because they reveal where practicing actuaries feel

uncertain and where the profession's standards intersect most directly with the pressures of real-world practice.

The most commonly cited precepts in guidance requests concern integrity, skill, and care (Precept 1); standards of practice (Precept 3); qualifications (Precept 2); the duty to report apparent violations (Precept 13); and actuarial communications (Precept 4). The prominence of the duty to report is notable: Many actuaries seek guidance not about their own conduct but about their obligations when they become aware of potential violations by others.

The requests cluster into a handful of recurring themes:

- **Qualification uncertainties.** Actuaries gauging whether their education and experience qualify them for a particular assignment under the US Qualification Standards, especially when moving between practice areas or requalifying after a career hiatus
- **Intersection of standards with regulatory requirements or employer directives.** For example, how to respond to a management instruction to use software or assumptions that may not comply with applicable standards, or what to do when a regulator's interpretation of the law conflicts with the actuary's professional judgment
- **Conflicts of interest.** Questions ranging from routine disclosure to genuinely difficult situations, such as serving simultaneously as a consultant and an expert witness
- **Control of work product.** When actuaries are pressured to sign filings they believe are inappropriate or when others seek to alter their reports
- **Duty to report.** Reporting apparent material violations by other actuaries, which generates significant activity, suggesting it is among the more difficult obligations actuaries face in practice

These guidance themes are valuable not because they reveal failures but because they reveal *diligence*: actuaries actively seeking to understand and comply with their professional obligations. They also provide a window into the real-world situations where professional standards are tested, situations that are far more common than the formal disciplinary cases discussed earlier in this section.

Key takeaways

- Every IAA Full Member Association maintains a disciplinary system to **protect the public**, maintain the profession's credibility, deter misconduct, and provide due process for accused actuaries.
- Many organizations make available a proactive **guidance** resource, helping actuaries work through uncertain situations before problems arise.
- Disciplinary systems administer **graduated and proportionate sanctions**, ranging from outcomes that carry a finding but leave practice unaffected (reprimand, fine) to those that restrict, suspend, or permanently end the ability to practice.
- Professional discipline is **distinct from legal liability**: The same conduct can lead to professional discipline, a civil claim, and even criminal charges, on independent tracks that may still inform one another.
- Most jurisdictions share a broadly common **disciplinary process**: complaint or identification, initial screening, investigation, adjudication, an opportunity to appeal, and publication of the outcome where warranted.
- In the United States, the **ABCD** provides confidential guidance and investigates complaints for members of the US-based organizations, but it recommends discipline rather than imposing it; the credentialing organizations make the final decision and impose any discipline.

Common mistakes to avoid

- **Assuming only actuaries can file complaints.** Regulators, employers, clients, and members of the public can all initiate the disciplinary process, and many systems accept anonymous complaints.
- **Confusing legal proceedings with professional discipline.** They run on separate tracks: A court judgment or regulatory action does not resolve an actuary's professional obligations, and the absence of legal liability does not preclude discipline.
- **Assuming conduct abroad is beyond the profession's reach.** An organization's disciplinary authority generally follows its members wherever in the world they practice, not just within its home jurisdiction.
- **Not seeking guidance when uncertain.** Failing to use available guidance resources when facing a difficult professional situation, often out of an un-

founded fear that reaching out will invite scrutiny, deprives you of valuable help and can lead to avoidable mistakes.

Resources

- Actuarial Board for Counseling and Discipline (ABCD): abcdboard.org
- ABCD: *Annual Summary of Activities*
- Financial Reporting Council (FRC, UK): *Actuarial Scheme*
- Institute and Faculty of Actuaries (IFoA): *Disciplinary Scheme*
- Casualty Actuarial Society (CAS): Discipline Committee and *Rules of Procedure for Disciplinary Actions*
- Canadian Institute of Actuaries (CIA) Professional Conduct Board: cia-ica.ca
- Actuaries Institute (Australia): *Disciplinary Scheme*

Discussion questions

1. The United Kingdom's disciplinary system allows fines as a sanction, while the US system does not. What are the arguments for and against including monetary penalties in actuarial discipline? Would fines enhance deterrence, or would they change the nature of the disciplinary process in undesirable ways?
2. Review a published disciplinary action from any actuarial organization (such as the CAS, the IFoA, the Actuaries Institute, or the CIA). Analyze the conduct that led to discipline, the process that was followed, and the outcome. What lessons can practicing actuaries draw from the case? Are the lessons jurisdiction-specific or universal?
3. Most disciplinary systems keep investigations confidential but publish the more serious outcomes, while dismissals and lesser outcomes such as private reprimand or counseling generally stay confidential. Where would you draw the line between confidentiality and transparency? Consider whether the names of disciplined actuaries should be published, how long published actions should remain available, and how to weigh the public's interest in disclosure against the career consequences for the actuary.
4. In the US system, the ABCD investigates complaints and recommends discipline, but each credentialing organization makes the final, binding deci-

sion about its own members. What are the advantages and disadvantages of separating the investigative function from the decision to discipline? Could this structure produce inconsistent outcomes across organizations for similar conduct, and if so, how might that be addressed?

5. Disciplinary systems aim to be both proportionate and, where appropriate, rehabilitative. Some cases produce targeted sanctions, such as required peer consultation before accepting new work or mandatory professionalism training, and sanctions are sometimes calibrated to an actuary's career stage. When is a rehabilitative or targeted sanction more appropriate than a purely punitive one? What are the risks of tailoring sanctions to individual circumstances?

Part III

Beyond the Four Pillars

8. Other Professional Guidance

The chapters in Part II examined the four pillars of the professionalism framework: qualification and credentialing, codes of conduct, standards of practice, and discipline and enforcement. Together they form the mandatory framework that governs actuarial practice. Alongside that framework, the profession produces a large body of nonbinding, educational guidance that supports actuaries without carrying the same authority. Because the names for those documents vary across organizations and jurisdictions, this chapter groups them by the role each plays in an actuary's work.

The examples that follow are illustrative rather than exhaustive. The goal is to convey the broad functional categories an actuary may encounter, so that unfamiliar labels in any jurisdiction can be recognized for what they are. When in doubt, consult the issuing organization's own description of a document's authority and purpose. Table 8.1 maps the categories covered in this chapter.

Guidance, not obligation

Unlike the codes of conduct, standards of practice, and qualification requirements examined in the preceding chapters, the guidance surveyed here **does not create professional obligations**. An actuary is **not required to follow it and cannot be disciplined for declining to do so**. Its role is to *inform* professional judgment, not to constrain it. This does not relieve the actuary of the binding requirements and applicable laws that govern the work; it simply means the guidance in this chapter is not itself a source of those requirements.

8.1. Statements of principles

Some guidance exists to explain the concepts and objectives behind the work, the *what* and *why* rather than the procedures for carrying it out. The profession sets out principles of this kind both for technical practice areas and for professional conduct itself. They provide a foundation for the development of standards of practice and codes of conduct, and they also serve as a reference individual actuaries can consult directly.

Table 8.1. Nonbinding guidance, organized by function.

Category	What it provides	Examples
Statements of principles	The concepts and objectives behind the work (the *what* and *why*)	CAS Statements of Principles; IAA Professionalism Guidelines
Practice notes and practical guidance	How practitioners carry out the work (the *how*)	Academy practice notes; IAA International Actuarial Notes; Actuaries Institute Practice Guidelines
Public policy and research	Perspective for public debate, or knowledge that advances the profession (not practitioner guidance)	Academy issue briefs; *Variance*; the IAA *Risk Book*

8.1.1. The CAS Statements of Principles

The Casualty Actuarial Society (CAS) Statements of Principles were created in the late 1980s to give common property and casualty applications a conceptual foundation, before the Actuarial Standards Board in the United States had developed its current body of standards. They were the *Statement of Principles Regarding Property and Casualty Insurance Ratemaking*, the *Statement of Principles Regarding Property and Casualty Loss and Loss Adjustment Expense Reserves* (replaced in 2014 by the *Statement of Principles Regarding Property and Casualty Unpaid Claims Estimates*), and the *Statement of Principles Regarding Property and Casualty Valuations*. In 2020, the CAS Board rescinded all three, concluding that their content had been largely superseded by the Actuarial Standards of Practice adopted over the intervening three decades. The rescission of the ratemaking statement drew significant pushback from US state insurance regulators, who had long referenced its four principles in rate regulation:

1. A rate is an estimate of the expected value of future costs.
2. A rate provides for all costs associated with the transfer of risk.
3. A rate provides for the costs associated with an individual risk transfer.
4. A rate is reasonable and not excessive, inadequate, or unfairly discriminatory if it is an actuarially sound estimate of the expected value of all future costs associated with an individual risk transfer.

The Board subsequently reinstated that statement solely for US ratemaking purposes.[12] The reserves and valuation statements were not reinstated; they remain available for historical reference but are no longer intended to guide practice.

[12] The statement's first and fourth principles frame a rate as an estimate of expected value. Current binding guidance is more flexible: ASOP No. 53, adopted in 2017, directs the actuary to determine the future cost estimate's *intended measure* based on the purpose or use of the estimate, and that measure need not be the mean (expected value); it may instead be a measure such as the mean plus a risk margin.

8.1.2. The IAA Professionalism Guidelines

For professional conduct, the International Actuarial Association's (IAA's) Professionalism Committee issues Professionalism Guidelines (PGs). PG1 (*Principles of Professionalism*) defines what professionalism means for the actuary and develops it through three high-level principles: knowledge and expertise, values and behavior, and professional accountability. PG2 (*Governance of International Actuarial Work*) addresses cross-border work, where the codes and standards of more than one jurisdiction may apply, and sets out principles for deciding which requirements govern and how to weigh them when they conflict.

8.2. Practice notes and practical guidance

The largest body of nonbinding guidance helps actuaries carry out their work once the binding requirements are known: the *how*. Practice notes are the most prominent example. They supplement the actuarial literature in areas subject to evolving technology, recently adopted external requirements, or advances in actuarial science. They describe current and emerging practices, acknowledge legitimate differences of opinion, and offer perspectives on issues actuaries may encounter. The label is not universal. The Actuaries Institute in Australia, for instance, spreads the same function across three non-mandatory document types: practice guidelines, which give guidance where practice is well established and there is broad consensus on acceptable approaches; technical papers, which give guidance where acceptable approaches still vary; and information notes, which inform and build general actuarial knowledge in a practice area.

Practice notes are easiest to understand by contrast with standards of practice. Standards of practice are binding: An actuary must comply with them, and one who fails to do so can be disciplined. A practice note is not. It does not interpret a standard, does not codify generally accepted actuarial practice, and creates no obligation of its own. Instead it shows how practitioners have met the requirements in real engagements, supplying the practical specifics a standard leaves to judgment: methods, sample formats, techniques, and the situations that arise for the greatest number of actuaries in an area. Because practice notes concentrate on mainstream practice, actuaries working in narrower niches should not assume their situations will be covered. An actuary who takes a different approach from the one a practice note describes has not violated any standard, provided the work otherwise complies with the standards that apply, and the difference requires no disclosure.

8.2.1. American Academy of Actuaries practice notes

In the United States, the American Academy of Actuaries (AAA, or the Academy) is the principal producer of practice notes, issuing them across most practice areas, including property/casualty reserving, life and health valuation, pension funding, risk transfer in reinsurance, and asset adequacy analysis. They are written by practicing actuaries and offered to members as a service. Because they are revised periodically and can fall out of date as practices and standards evolve, an actuary should confirm they are consulting the current version.

A specific example of the relationship between a standard of practice and a practice note can be seen in connection with Statements of Actuarial Opinion for the National Association of Insurance Commissioners (NAIC) Property and Casualty Annual Statement. Actuarial Standard of Practice (ASOP) No. 36, *Statements of Actuarial Opinion Regarding Property/Casualty Loss, Loss Adjustment Expense, or Other Reserves*, is the binding standard. At 23 pages, it establishes what the actuary should consider when issuing a reserve opinion (types of opinion, materiality, discounting, documentation, and required disclosures) in formal "should" and "must" language. The Academy's companion practice note, *Statements of Actuarial Opinion on Property and Casualty Loss Reserves*, covers the same subject but runs to more than 300 pages, walking actuaries through the practical details: sample opinion formats, how to reconcile data to Schedule P, how to handle intercompany pooling, what to include in the actuarial report, how to address reinsurance recoverables, and answers to questions on common situations. It is updated annually to track changes in NAIC instructions.

8.2.2. International Actuarial Notes

At the international level, the IAA produces International Actuarial Notes (IANs): educational documents on current or emerging practice in an international actuarial topic. They are developed through a formal consultation process involving all IAA member associations and a due process review by the Professionalism Committee, which distinguishes them from other IAA educational materials. Where they address topics also covered by model International Standards of Actuarial Practice (ISAPs), IANs are designed to supplement, not conflict with, those standards. Current IANs address topics such as IFRS 17 insurance contracts and professional judgment. IAN 300 (Professional Judgment) is especially pertinent to the actuarial judgment discussed in Section 6.2.3: It identifies professional judgment as a core competency exercised throughout an actuary's work, to be applied honestly, objectively, and with appropriate regard for the interests of intended users.

8.2.3. Practical guidance on professionalism

Just as practice notes and IANs support technical work, the profession produces practical guidance on professionalism itself. In the United States, the Academy's Council on Professionalism publishes discussion papers on topics such as peer review, the solo actuary's practice, conflicts of interest in volunteer work, and explaining professionalism to principals. The Actuarial Board for Counseling and Discipline is another source, through its request for guidance process (Section 7.4.2) and the guidance-request examples in its annual report (Section 7.6).

8.3. Other publications: Public policy and research

Actuarial organizations publish a good deal of additional material worth recognizing, falling into two broad groups: commentary aimed at public policy audiences, and research that advances the profession's body of knowledge.

- **Public policy material.** Some associations bring an actuarial perspective to public policy through issue briefs, policy papers, and white papers on subjects such as insurance markets, retirement security, and healthcare financing. These documents are aimed at legislators, regulators, and the public rather than at instructing practitioners on how to perform their work.
- **Research and the body of knowledge.** Organizations at every level sponsor research that advances the profession's body of knowledge: papers in journals such as the CAS's *Variance* and the IAA's *ASTIN Bulletin*, the CAS Monograph Series, and references such as the IAA *Risk Book*, an evolving multichapter guide to how actuaries assess and manage risk. Over time, this type of research may inform methods and approaches that become standard practice.

Key takeaways

- Beyond the four mandatory pillars, the profession produces extensive **nonbinding, educational guidance**. None of it creates professional obligations or can, by itself, be the basis for discipline.
- **Statements of principles** explain the concepts and objectives behind the work (the *what* and *why*). They provide a foundation for the standards of practice and codes of conduct built on them, and serve as a reference individual actuaries can consult directly.
- **Practice notes and practical guidance** describe how practitioners carry out the work (the *how*) once the binding requirements are known.

- **Public policy material and research** are not practitioner guidance at all; they inform public debate or advance the profession's body of knowledge.
- **Deviating** from a practice note or IAN is not a professional violation and requires **no disclosure**, provided the work otherwise complies with applicable standards.
- All guidance should **inform professional judgment**, not replace it.

Common mistakes to avoid

- **Treating nonbinding guidance as binding.** Mistaking advisory guidance for a requirement can lead an actuary to over-constrain otherwise sound work, or to disclose a "deviation" that was never required in the first place.
- **Ignoring relevant guidance entirely.** Though not binding, resources such as practice notes represent the profession's collective wisdom. Ignoring them may produce work that misses important considerations.
- **Using outdated guidance.** Practice notes and IANs are revised regularly, some annually. Relying on a superseded version may produce work that does not reflect current requirements or expectations.

Resources

- American Academy of Actuaries (AAA): *Practice Notes*
- AAA Council on Professionalism: *Discussion Papers*
- International Actuarial Association (IAA): *International Actuarial Notes* (IANs)
- IAA: *Professionalism Guideline 1: Principles of Professionalism* (2017)
- IAA: *Professionalism Guideline 2: Governance of International Actuarial Work* (2020)
- IAA: *Risk Book*
- IAA: *ASTIN Bulletin: The Journal of the IAA*
- Casualty Actuarial Society (CAS): *Statement of Principles Regarding Property and Casualty Insurance Ratemaking* (1988, reinstated 2021)
- CAS: *Variance* (journal)

Discussion questions

1. Everything in this chapter is formally nonbinding, yet state regulators relied on the CAS ratemaking principles, and the Academy's reserve practice note closely tracks NAIC instructions. How can guidance that creates no professional obligation still end up shaping how an actuary does the work?
2. Practice notes concentrate on the situations faced by the greatest number of actuaries, so an actuary working in a narrow specialty may find no practice note that fits. How should the absence of a relevant practice note change the way that actuary approaches the work, and what resources might help?
3. ASOP No. 36 runs 23 pages while its companion practice note exceeds 300. Why might the profession deliberately keep that volume of practical detail out of the binding standard, and what would be lost if it were folded in?
4. An actuary comes across a promising new method in an actuarial journal that is not yet reflected in any standard or practice note. The chapter notes that research of this kind may, over time, inform methods that become standard practice. How should the actuary weigh whether to use it now?

9. Emerging Issues in Actuarial Professionalism

The actuarial profession operates in a dynamic environment. New technologies, evolving regulatory requirements, emerging risks, and changing societal expectations continually present new challenges and opportunities for actuaries worldwide. This chapter examines several emerging issues that have implications for actuarial professionalism, considering how existing professional standards apply and where new guidance may be needed.

9.1. Large language models and AI agents

Few technologies have entered actuarial work as quickly as generative artificial intelligence (AI). Large language models (LLMs) and AI agents are already being used to draft analyses, write and review code, and summarize documents, and their capabilities are advancing faster than professional guidance can keep up. This section examines how such tools differ from the models that standards of practice were built around, the categories of risk they introduce, and the guidance beginning to take shape.

9.1.1. A different governance challenge

AI tools represent a qualitatively different challenge from the modeling techniques that existing standards of practice were designed to govern. Standards of practice worldwide assume a governance paradigm in which the actuary selects the model, chooses the inputs, and evaluates the outputs. LLM-based tools challenge that paradigm in fundamental ways:

- **Methodology selection can shift to the tool.** When an actuary gives an LLM-based tool a broad instruction, such as "analyze these reserves" or "develop a pricing indication," the tool may choose which analytical approaches to apply, which data to emphasize, and how to structure its work. The actuary has not

selected the methodology in the traditional sense. Detailed, step-by-step instructions can mitigate this, but the risk increases with the breadth of the delegation.

- **Behavior is specified in prose, not code.** A traditional model's behavior is fixed by its code and parameters, which can be inspected, tested, and version-controlled. An LLM-based tool is directed through natural-language instructions, so its behavior carries none of that precision: A small change in how a request is worded can change which approach the tool takes. Careful, detailed prompting improves consistency, but the specification itself remains informal in a way that has no analogue in traditional actuarial tools.
- **The tool produces the whole work product, not just numbers.** A traditional model produces numerical outputs that the actuary then interprets, explains, and incorporates into a broader analysis. An LLM-based tool can generate the entire work product in a single step: not only the calculations but the data exploration, the narrative explanation, and the conclusions the actuary would traditionally supply. The interpretive layer that was once the actuary's own contribution becomes something to be reviewed rather than authored.
- **Reasoning is partially opaque and nondeterministic.** While black-box machine learning models have opaque internal transformations, their behavior is at least deterministic given fixed inputs. LLM-based tools may produce different outputs from identical prompts. Some tools expose chain-of-thought reasoning that provides insight into their analytical process, but such reasoning traces are not equivalent to auditable code. They may not fully reflect the model's internal computations, and they are not reproducible in the way that traditional model logic is.

Regardless of how these tools develop, the fundamental principle is clear: The actuary whose name appears on the work product bears professional responsibility for it. Using an LLM-based tool to produce actuarial work does not reduce the actuary's obligations. If anything, it increases the burden of verification, because the tool's reasoning is harder to audit than a traditional model's code.

9.1.2. Categories of risk

Meeting that heightened burden starts with understanding where these tools can fail. LLM-based tools introduce several categories of risk that have no close parallel in traditional actuarial models:

- **Verification difficulty.** Because the traditional audit trail is unavailable, verification cannot rely on inspecting an auditable code path, but that does not make

it impossible; it takes different forms depending on the task. The appropriate strategy may involve reviewing intermediate outputs, independently reproducing key calculations, testing sensitivity to changed inputs, or validating results against known benchmarks. Whatever form it takes, the verification approach generally needs to fit the specific use case, and confirming that an LLM-based tool's output "looks reasonable" is rarely enough on its own. In some contexts, no adequate verification approach may be available, in which case relying on the tool for that task can be difficult to square with applicable professional standards.

- **Automation bias.** LLM outputs are often fluent, well structured, and confident in tone, which can create a false sense of reliability. The risk of accepting plausible-sounding output without sufficient scrutiny is well documented in human factors research and is particularly acute with tools that produce polished narrative alongside their analysis.
- **Hallucination.** LLMs can generate content that is entirely fabricated but presented with the same confidence as accurate information. Because fabricated outputs are difficult to distinguish from accurate ones without independent verification, the risk remains significant even as models improve. This is particularly dangerous when an actuary uses an LLM to retrieve or summarize factual information, such as competitor rate-filing data, regulatory requirements, or historical loss statistics. The LLM may produce a detailed, plausible-looking response that cites specific numbers, dates, or filings that do not exist. Unlike a database query that returns an error when no record is found, an LLM may simply invent the answer. This risk extends to cases where LLMs are used as part of the data pipeline, for instance, converting unstructured information such as free-text claim descriptions or medical records into structured data for use in traditional modeling work flows. The resulting structured data may look like it was extracted from the source when it was actually invented by the tool.
- **Prompt injection.** When LLMs process external inputs (claim files, policyholder correspondence, third-party data feeds, or documents from counterparties), those inputs may contain text that manipulates the LLM's behavior, causing it to ignore its instructions, produce misleading outputs, or disclose information it should not. When the tool can take actions (executing code, accessing application programming interfaces (APIs), or transmitting data), prompt injection can cause it to act in ways the actuary did not authorize, such as sending proprietary data to external services. Limiting the tool's access to only the data and capabilities a task actually requires reduces the exposure; there is little reason, for example, to give an LLM access to sensitive customer data not needed for the analysis at hand. Randomized or targeted audits of outputs and

tool behavior can help monitor what remains. This category of risk has no analogue in traditional actuarial tools. An actuary using an LLM to extract structured data from external documents may not realize that the documents themselves could compromise the tool's reliability.

- **Attribution of judgment.** When an LLM-based tool produces a work product, it can be difficult to distinguish which elements reflect the actuary's professional judgment and which were generated by the tool. This blurring raises questions about how documentation and communication standards apply, particularly when the actuary's role was primarily to review and approve the tool's output rather than to direct the analysis.
- **Competence boundaries.** Traditional actuarial tools require the actuary to understand the model well enough to evaluate its outputs. LLM-based tools present a different competence challenge: Their capabilities, limitations, and failure modes are not fully understood even by a tool's developers, and they change as models are updated. An actuary who relied on an LLM's capabilities last month may find that the same tool behaves differently today. A related risk is that such tools can give actuaries a false sense of competence in unfamiliar areas. Within actuarial practice, an actuary whose expertise is in one area may use an LLM-based tool to produce work in another, and the polished quality of the output may obscure domain-specific errors that a specialist would catch. The actuary remains obligated to meet the competence requirements of codes of conduct and any applicable qualification requirements, regardless of the tools they use. These tools also enable actuaries to take on tasks outside their traditional expertise that connect to their actuarial work: upstream tasks such as building data pipelines and configuring analytical infrastructure, or downstream tasks such as deploying models into production systems or building user-facing applications. The actuary may lack the domain knowledge to recognize errors in this work. An error in an upstream task can corrupt the actuarial analysis that depends on it, while an error in a downstream task can propagate into the systems that consume the actuarial output.
- **Skill erosion.** Routine delegation of analytical tasks to AI tools risks gradually eroding the skills actuaries need to perform or evaluate that work independently. This concern is distinct from automation bias, which involves accepting a specific output uncritically. Skill erosion is the longer-term degradation of the actuary's ability to catch errors at all. Competence requirements in every jurisdiction assume the actuary maintains the skills necessary to supervise and evaluate work, and an actuary who can no longer perform an analysis without AI assistance may not be able to meaningfully verify the AI's output. This makes deliberate investment in skill maintenance and development more

important, not less. Actuaries accustomed to a set routine of performing the same analyses may find their skills eroding as AI handles more of that work. Continuing education requirements exist in many jurisdictions, and actuaries should treat them not as a compliance exercise but as a critical safeguard, actively pushing the boundaries of their capabilities, refreshing foundational skills, and staying current with evolving techniques in their areas of practice.

- **Downstream consumption by automated systems.** Actuarial work products are increasingly consumed not by human decision-makers but by automated systems (corporate AI platforms, algorithmic underwriting engines, or optimization tools) that may use the work in ways the actuary did not intend or anticipate. A reserve estimate produced with appropriate uncertainty ranges may be reduced to a point estimate by a downstream system that ignores the caveats. A pricing indication may be combined with other inputs in ways that produce outcomes the actuary would not endorse. Traditionally, misuse of actuarial work required a human to make a visible decision that the actuary could identify and push back on. When actuarial outputs feed into automated pipelines, misuse can be structural, ongoing, and invisible to the actuary. Communication standards require actuaries to describe the intended purpose of their work and the limitations on its use, but those disclosures are designed for human readers, and an automated system may not read or respect them.
- **Confidentiality and intellectual property.** Data submitted to an LLM may be stored, used for model training, or otherwise retained by the provider, depending on the terms of service. If proprietary information (such as pricing algorithms, internal models, or client data) is submitted to a tool that trains on user inputs, that submission could constitute a public disclosure, potentially waiving trade secret protection or affecting patent rights. This concern intersects with the confidentiality obligations that codes of conduct already place on actuaries, now arising in a context the profession has not traditionally faced.

LLM-based tools are not a shortcut around professional standards

The ability of an LLM-based tool to produce a complete actuarial analysis from a single prompt does not mean the actuary can reduce their professional engagement to a single review. Consider the analogy of delegating work to a junior analyst: The supervising actuary remains responsible for the quality of the work, must review it with sufficient care to identify errors, and must apply their own professional judgment to the conclusions. The same principle applies when the "junior analyst" is an LLM-based tool, except that the tool may be more confident in its errors and less likely to flag its own limitations.

Here are some key questions for actuaries using LLM-based tools:

- Could I have identified an error in this output if one existed?
- Have I verified the methodology independently, or am I relying on the tool's assertion that its approach is appropriate?
- If challenged on this work product, can I explain and defend every material judgment, or would I have to say "the AI chose that approach"?
- Have I documented my review process thoroughly enough that another actuary could understand which judgments are mine?

If the answer to any of these questions is unsatisfactory, the actuary has likely not yet fulfilled their professional obligations.

9.1.3. The actuary's governance role

The risks in the previous section describe the actuary mainly as a *user* of these tools. But the profession's more durable contribution may lie in *governing* them. Actuaries already serve as a model-governance layer in many organizations, through model validation, model risk management, enterprise risk management, the actuarial function under frameworks such as Solvency II, and standards that govern how actuaries work with models (in the United States, Actuarial Standard of Practice (ASOP) No. 56). Overseeing AI systems, including agentic ones, is a natural extension of that role rather than a departure from it, and it is likely to become a growing part of actuarial practice as these tools spread.

Autonomous agents raise the stakes for governance in a way that ordinary tool use does not. An agent that can take actions (executing code, querying systems, moving data) and chain steps together can propagate a single early error through an entire work flow, and its behavior is harder to anticipate than a traditional model's. Sound governance therefore pairs **preventative controls** (limiting what the tool can access and do) with **detective controls** (monitoring what it actually does). Several practices, drawn together in *The CAS AI Primer: Practical Guidance for Actuaries*, give this structure concrete form:

- **Codify the methodology first.** Write the analytical approach down explicitly (the rules, factor selections, escalation thresholds, and order of steps) before any tool is pointed at it. The methodology documentation is the durable asset; the tool that executes it is interchangeable. Where calculations must be exact, have the tool run them in code rather than generate them as text.

- **Validate before and during use.** Check intermediate steps, not just the final output; back-test against periods with known results before relying on the tool in production; test sensitivity to changed inputs; and pin the model version, revalidating when it changes, since provider-side updates can alter behavior without notice.
- **Limit access.** Give the tool only the data and capabilities a task requires, enforced at the infrastructure level (for example, read-only access) rather than through instructions in a prompt, and isolate tools that process external content so that a compromised tool cannot reach production systems.
- **Calibrate human oversight to risk.** Human involvement runs along a spectrum, from an agent that proposes actions for a person to approve at each step to one that acts on its own while a person observes. The appropriate point depends on the sensitivity and reversibility of the actions involved, and on guarding against the automation bias that erodes oversight even when review steps formally remain.
- **Monitor and document.** Track performance for accuracy and drift in production, define in advance the situations that require human escalation, and retain the prompts, tool calls, and outputs on the workpaper schedule alongside the rest of the analysis.

Governance of this kind is a team effort (risk, compliance, security, data, and business functions all have roles), but accountability for the actuarial work product is not divisible: It stays with the actuary who is responsible for it. The actuary is well placed to translate these controls into the language of professional standards, ensuring that validation, documentation, and disclosure meet professional expectations and not merely operational ones. In this sense, AI does not displace the actuary's professional judgment so much as relocate it, from performing each step to designing and supervising the system that does.

9.1.4. Emerging guidance

Actuaries are already using LLM-based tools to draft analyses, generate code, review documents, and produce work products, and the profession is still working through how existing standards apply to these tools. The International Actuarial Association (IAA) has published papers on artificial intelligence, and several national actuarial organizations have begun addressing the topic through research papers, webinars, and discussion groups. Notably, the Actuarial Board for Counseling and Discipline (ABCD) has reported that actuaries are already seeking guidance on the use of AI tools in actuarial calculations. Actuaries should monitor developments in this area closely, as guidance is likely to evolve rapidly.

9.2. Nontraditional roles and the boundary of actuarial services

Actuaries increasingly work in roles that do not fit the traditional mold of insurance pricing, reserving, or pension valuation. Credentialed actuaries serve as data scientists, risk managers, software developers, insurtech founders, and analytics leaders in organizations that may have no other actuaries. This trend raises a foundational professionalism question: When does work performed by a credentialed actuary constitute "actuarial services" subject to professional standards?

9.2.1. Why the boundary matters

The answer to the previous question determines which parts of the professionalism framework apply and how. Certain provisions of codes of conduct apply to credentialed actuaries regardless of whether their work constitutes actuarial services, but when work does constitute actuarial services, the full framework applies: Standards of practice, qualification requirements, and discipline processes all govern that work in addition to the code of conduct. When work falls outside the boundary, the specific requirements of standards of practice and qualification requirements may not apply. The ABCD has reported guidance requests on questions such as whether a presentation to a general audience constitutes actuarial services, illustrating that the boundary is genuinely unclear in practice.

9.2.2. Factors that complicate the question

Several developments are blurring the traditional boundaries:

- **Overlapping skill sets.** The analytical techniques actuaries use (statistical modeling, machine learning, data analysis) are now common across many professions. An actuary working as a data scientist at a technology company may be building predictive models indistinguishable from those of nonactuary colleagues, raising the question of whether the actuary's professional obligations attach to that work.
- **Employer expectations.** In nontraditional settings, employers may not understand or expect compliance with actuarial professional standards. An actuary hired as a "senior data scientist" may face tension between professional obligations and employer expectations about work flow, documentation, and review processes.
- **Public perception and credential use.** When a credentialed actuary presents analytical conclusions, whether in a business meeting, a public forum, or a

published report, recipients may give those conclusions additional weight because of the actuarial credential, even if the actuary did not intend the work as actuarial services. Using a designation, such as ACAS, FCAS, FSA, FIA, or FCIA, reinforces that impression by signaling that the work is being performed in the capacity of an actuary. That capacity, not the label itself, is the concept that generally determines whether professional obligations attach: Credential use is evidence of it, but an actuary cannot place substantively actuarial work outside the framework simply by omitting the designation.

9.2.3. Navigating the boundary

Several principles can help actuaries in nontraditional roles navigate this boundary:

- **Consider how the work will be perceived.** If a reasonable person would view the work as actuarial in nature, whether because of its subject matter or the context in which it is presented, the actuary should consider whether professional standards apply.
- **Be deliberate about credential use.** Using an actuarial designation in connection with work signals that one is acting in the capacity of an actuary and invites others to rely on the work accordingly. Actuaries should be intentional about how they present their credentials, while recognizing that doing so is not what creates their obligations; where the work is actuarial in substance, professional standards apply whether or not the designation is attached.
- **When in doubt, apply professional standards.** The consequences of unnecessarily applying professional standards (more rigorous documentation, clearer communication) are minor. The consequences of failing to apply standards when they should have applied can be significant, both for the actuary and for those who rely on the work.
- **Seek guidance.** Actuaries uncertain about whether their work constitutes actuarial services can seek guidance from the ABCD in the United States or equivalent advisory bodies in other jurisdictions.

As actuaries continue to move into nontraditional roles, the question of where the boundary of actuarial services lies will only grow in importance. It is not merely an academic question; it determines the scope of professional accountability for a growing share of the credentialed actuarial workforce.

9.3. Bias and fairness in actuarial work

Bias in actuarial work has become an active area of professionalism concern, driven by the increasing use of complex models and large datasets that can produce discrim-

inatory outcomes even without discriminatory intent. The professionalism challenge centers on how actuaries address bias in the substance of their work: the data they use, the assumptions they make, and the models they build.

This concern is most acute in the United States, where the insurance industry operates against a backdrop of historical practices, most notably the redlining[13] that systematically disadvantaged minority communities. Because actuarial models are built on historical data, the legacy of such practices can persist in model outputs long after the practices themselves have been prohibited. The combination of this history with the rapid growth of algorithmic decision-making has made bias in insurance pricing a significant regulatory and public policy issue in the United States in a way that has no direct parallel in most other jurisdictions.

The following concepts relate to how bias can enter actuarial work:

- **Disparate treatment and disproportionate impact.** The distinction between disparate treatment (intentionally using a protected characteristic in a decision) and disproportionate impact (adverse outcomes for protected groups) is central to understanding bias in actuarial work. Insurance regulation has long prohibited disparate treatment; actuaries generally cannot use race, religion, or national origin as rating variables. The harder question involves disproportionate impact: When facially neutral variables such as credit score, geographic location, or education level are correlated with protected characteristics, the resulting prices may differ systematically across groups even though no protected characteristic was directly used. Whether such disproportionate impact constitutes "unfair discrimination" is a question that actuaries, regulators, and legislators are actively working through.
- **Proxy discrimination.** Proxy discrimination occurs when a variable that is permitted as a rating factor serves as a proxy for a protected characteristic, whether intentionally or unintentionally. As models grow more complex and incorporate more variables, the potential for proxy effects increases and becomes harder to detect. A model with dozens of interacting variables may produce discriminatory patterns that no single variable would produce on its own. Challenges arise in determining to what extent a variable or set of variables must be correlated with a protected class for it to be deemed a "proxy."
- **The role of historical data.** Underlying both disproportionate impact and proxy discrimination is the challenge of historical data. Models trained on data shaped by past discriminatory practices may perpetuate those patterns even

13 *Redlining* refers to the practice, originating in the 1930s, by which banks, insurers, and government agencies systematically denied or limited financial services to residents of predominantly minority neighborhoods, often literally marking those areas in red on maps. Although federal law has prohibited the practice since the late 1960s, its effects on wealth, homeownership, and community investment persist.

when no protected characteristic appears as an input. Detecting this calls on actuaries to look beyond model inputs and examine whether outputs produce systematically different outcomes across groups.

9.3.1. Profession-led developments

The professionalism framework is adapting to address bias in actuarial work through several channels:

- **Qualification standards.** Beginning in 2023, the US Qualification Standards (USQS) require actuaries issuing Statements of Actuarial Opinion to complete at least one hour of bias-related continuing education annually, part of the broader continuing education requirements detailed in Section 4.4. The requirement specifically targets bias in the substance of actuarial work: The USQS define *bias topics* as content that "provides knowledge and perspective that assist in identifying and assessing biases that may exist in data, assumptions, algorithms, and models that impact Actuarial Services," including statistical, cognitive, and social biases.
- **Standards of practice.** The Actuarial Standards Board (ASB) is considering revisions to ASOP No. 12 (Risk Classification) to address the potential for unintended bias in actuarial work.
- **CAS research.** The Casualty Actuarial Society (CAS) has published a Research Paper Series on Bias and Insurance, providing actuaries with quantitative frameworks for measuring and mitigating discriminatory effects in pricing models.

9.3.2. Regulatory developments

Regulators are also driving attention to bias in actuarial work. In the United States, Colorado's SB 21-169 requires insurers to test their algorithms, predictive models, and external data sources for unfair discrimination against protected classes, shifting from a traditional focus on disparate treatment toward an outcomes-based approach that requires insurers to detect and mitigate disproportionate impact. Other states are considering similar legislation. These regulatory developments create direct obligations for actuaries involved in model development and validation, and they raise the stakes for understanding how models produce the outcomes they do.

9.3.3. Balancing actuarial soundness and fairness

Bias and fairness considerations create a genuine tension in actuarial work. Insurance pricing is built on risk differentiation, charging different prices to reflect differ-

ent costs. This differentiation is actuarially sound and necessary for the functioning of insurance markets; prices that do not reflect risk can lead to adverse selection and market instability. But when risk differentiation produces outcomes that correlate with protected characteristics, the question of whether and how to adjust becomes difficult.

Legal requirements always take precedence; where regulation defines what constitutes unfair discrimination, the actuary's obligation is to comply. Beyond legal compliance, the question of where permissible risk differentiation ends and unfair discrimination begins is ultimately one for society to answer through the regulatory and legislative process. The profession's role is to support that process: by developing standards of practice that give actuaries concrete guidance on testing for and disclosing potential bias, and by providing transparent analysis that helps regulators and policymakers make informed decisions.

9.4. Professional standards reference for emerging issues

Table 9.1 summarizes how the core professional principles discussed throughout this monograph apply to the emerging issues in this chapter. While the specific standards that implement these principles vary by jurisdiction, the underlying professional obligations are consistent. Such standards include ASOPs in the United States, Technical Actuarial Standards in the United Kingdom, Professional Standards in Australia, and model International Standards of Actuarial Practice (ISAPs) internationally.

Key observations from this mapping include the following:

- **Integrity and competence are foundational.** Virtually every emerging issue implicates the core requirements of integrity and competence. These prin-

Table 9.1. Mapping of emerging issues to professional principles.

Emerging issue	Core principles	Illustrative standards
LLM and AI agent use	Competence, integrity, accountability, documentation, reliance on others	ISAP 1 (General Actuarial Practice), ASOP No. 56 (Modeling), guidance still developing
Nontraditional roles	Competence, integrity, communication	Codes of conduct (definition of actuarial services), qualification standards
Bias and fairness in actuarial work	Public interest, competence, integrity, compliance with law	ASOP No. 12 (Risk Classification), jurisdiction-specific antidiscrimination requirements

ciples, present in every jurisdiction's code of conduct, are deliberately broad enough to apply to new situations.

- **Existing standards provide a foundation, with emerging guidance building on it.** Standards such as ASOP No. 56 and ISAP 1 are broad enough to govern the use of machine learning and other advanced modeling techniques. LLM-based tools raise novel considerations, such as nondeterministic outputs and partially opaque reasoning, that the profession is actively developing additional guidance to address.
- **Communication and documentation take on added importance.** LLM-based tools make it harder to distinguish the actuary's judgment from tool-generated output, and bias considerations require transparent disclosure of how models produce their outcomes. Existing communication and documentation standards apply, but the complexity of LLM-based tools raises the bar for what constitutes adequate disclosure.

Key takeaways

- The actuary who signs **LLM-assisted work** is fully responsible for it. Because such tools can select the methodology, produce an entire work product, and reason in ways that are opaque and not reproducible, relying on them **raises the burden of verification** rather than lowering it.
- **LLM-specific risks** include hallucination, prompt injection, automation bias, skill erosion, and confidentiality exposure. These **have no traditional analogue** and call for verification suited to each use case, tight limits on tool access, and clear disclosure.
- In **nontraditional roles**, the work, not the credential, is what triggers **professional obligations**: Standards of practice and qualification requirements apply whenever the work is actuarial in substance, whether or not the designation is attached, and the code of conduct binds members regardless.
- **Bias can arise without any intent to discriminate.** A model trained on historical data can produce disproportionate impact or act as a proxy for protected characteristics even when none is used as an input, so detection means examining **outcomes across protected groups**, not just model inputs.

Common mistakes to avoid

- **Trusting an LLM for factual lookups.** Asking an LLM for figures such as competitor rate filings, regulatory citations, or loss statistics and accepting

the answer invites fabricated detail, because unlike a database, an LLM can return specific numbers, dates, and sources that look authoritative but do not exist.

- **Pasting proprietary data into tools that train on user inputs.** Submitting pricing models, internal models, or client data to such a tool can count as public disclosure, waiving trade secret protection or affecting patent rights.
- **Using an LLM to work outside your own expertise.** Polished output can hide domain-specific errors a specialist would catch, whether in an unfamiliar practice area or in adjacent tasks such as building data pipelines or deploying models.
- **Relying on single-variable screening to rule out proxy discrimination.** Proxy discrimination often emerges from the interaction of many variables, so a model can produce discriminatory patterns that no single rating factor reveals on its own.

Resources

- Actuarial Standards Board (ASB, US): ASOP No. 56, *Modeling*
- ASB: ASOP No. 12, *Risk Classification*
- International Actuarial Association (IAA): ISAP 1, *General Actuarial Practice*
- Casualty Actuarial Society (CAS): *The CAS AI Primer: Practical Guidance for Actuaries*
- CAS: Research Paper Series on Bias and Insurance
- Colorado Senate Bill 21-169 (algorithmic discrimination in insurance)

Discussion questions

1. A machine learning pricing model produces more accurate predictions overall but creates larger rate differences between demographic groups than traditional methods. How should an actuary balance predictive accuracy against fairness concerns? What factors would inform your analysis?
2. Your company wants to use an LLM-based tool to turn unstructured social media data into new rating variables. What professionalism considerations and LLM-specific risks should guide your decision about whether and how to do this?

3. An actuary uses an LLM-based tool to draft an entire reserve analysis, including methodology selection, calculations, and the written report. The actuary reviews the output and finds it reasonable. Has the actuary satisfied their professional obligations? What additional steps, if any, should the actuary take?
4. An FCAS works as a "director of analytics" at a technology company, building predictive models for a product that is not insurance. She does not use her actuarial designation at work. How does the professionalism framework apply to her work? Would your answer change if she used her FCAS designation on her company biography or LinkedIn profile?

A. Considerations for Developing Markets

This appendix addresses considerations specific to developing insurance markets where the actuarial profession is still maturing. In most such markets, actuaries are already working, typically holding credentials from established credentialing organizations such as the Casualty Actuarial Society (CAS), the Society of Actuaries (SOA), or the Institute and Faculty of Actuaries (IFoA). What may be incomplete is the local professional infrastructure: credentialing, qualification requirements, professional standards, and discipline. Most of that is the profession's to build. Regulators own a narrower piece: They set the qualification requirements for the functions they oversee, choose what actuarial work to review, and decide how far to rely on the profession's own standards and discipline.

The appendix is organized accordingly: After taking stock of the local capacity and needs that shape decisions for both regulators and the profession, the first half addresses considerations for regulators establishing or reforming actuarial oversight, and the second half addresses considerations for actuaries building the professional infrastructure itself.

A.1. The starting point: Capacity and needs

The approaches that make sense for a developing market depend heavily on local circumstances. This section first surveys the capacity a jurisdiction already has (within the local actuarial workforce, the regulatory body, and the profession's organizational infrastructure), then steps back to define the two dimensions that together determine how much professional infrastructure it actually needs to build.

A.1.1. Assessing existing capacity

Local actuarial capacity

The questions here are how many actuaries the market has, what credentials they hold (FSA, FCAS, FIA, FCIA, FASSA, etc.), and whether they are sufficient to meet the

jurisdiction's needs. In small markets, the actuarial workforce may number in the dozens or fewer, and it may be concentrated among a small number of employers.

Regulatory capacity

Assessing the quality of actuarial work requires actuarial expertise within the regulatory body. Many developing-market regulators do not have actuarial staff, which limits their ability to judge the soundness of actuarial work for themselves.

Professional infrastructure

The local actuarial community may or may not have an organized professional association. Where one exists, its capacity to develop standards, administer credentialing, and conduct disciplinary proceedings depends on the size and engagement of its membership.

A.1.2. How much infrastructure a market needs

Stepping back from the specifics of capacity, two somewhat independent dimensions shape every subsequent decision. The first is the volume of actuarial work the jurisdiction must govern, set by the size of its locally regulated insurance and pension market, which changes only slowly. The second is institutional self-sufficiency (how much of its own credentialing, standards, and discipline the profession can sustain), which is what genuinely develops over time. How far a jurisdiction should travel along the second dimension depends on where it sits on the first: For a market with little locally regulated work, relying indefinitely on credentials from established organizations, standards based on the International Actuarial Association's (IAA's) model International Standards of Actuarial Practice (ISAPs), and regional cooperation is a sensible end state rather than an unfinished journey, since a full domestic apparatus is neither realistic nor necessary.

This first dimension is not the same as population, nor as the number of actuaries present. A small jurisdiction can carry a large book of locally domiciled risk and need infrastructure to match. Conversely, where actuaries based in one jurisdiction serve clients in another, that work is governed by the client's jurisdiction, so a large local workforce can coexist with little locally regulated work. Such a workforce is an asset if the jurisdiction later builds its own infrastructure, but it does not by itself enlarge what there is to govern.

A.2. Considerations for regulators

Figure A.1 summarizes the regulator's principal decisions, each taken up in turn below. The decisions are largely independent: A regulator may rely on the profession in one respect while building its own capacity in another.

Start here: which functions to oversee? Select the functions whose public interest stakes warrant actuarial requirements, such as reserve opinions, pricing review, solvency assessment, pension valuations, and financial reporting. The following grid applies to each function chosen.

Increasing domestic regulatory capacity →

	Rely on external	Hybrid / shared	Build regulatory capacity
Qualification basis	Accept established credentials (FCAS, FSA, FIA, ...)	Established credential plus a local-knowledge exam or experience requirement	A fully domestic credential pathway (or, rarely, government licensing)
Appointment oversight	Insurer or fund appoints on criteria alone	Preapproval for highest-risk roles only	Regulator preapproves each appointee
Depth of work review	Rely on the responsible actuary; little or no review	Verify formal compliance: filed, qualified, complete	Assess the substantive soundness of the work
Review capacity	Regional or shared supervisory review	Contracted actuaries; firm peer review	In-house regulatory actuaries

Figure A.1. Regulator decisions for actuarial oversight. Above the grid sits a prior choice: which functions to bring under actuarial requirements. The grid itself arranges the recurring choices for each such function, from greater reliance on the profession and external credentials (left) toward greater domestic regulatory capacity (right). These are largely independent, and a regulator may sit at a different point on each. Position on the grid is not a measure of quality, and relying on the profession is a legitimate choice at any scale. A greater volume of locally regulated work can make building capacity of one's own worthwhile, but it does not by itself require it, and for a market with limited such work the left and middle options may be where the jurisdiction settles for good. Because that balance shifts as the market grows, these choices are worth revisiting over time.

A.2.1. Which functions require actuarial oversight?

The regulator's first substantive decision is identifying which functions have sufficient public interest implications to warrant actuarial requirements. Reserve opinions, pricing review, solvency assessment, pension valuations, and financial reporting are common candidates: functions where inadequate work could harm policyholders, pensioners, investors, or financial stability. Not every actuarial function needs to be regulated; the regulator should focus on the areas where the consequences of failure are greatest. Insurance supervisors also have an international reference point: The Insurance Core Principles of the International Association of Insurance Supervisors (IAIS), the internationally accepted standards for insurance supervision, expect insurers to maintain an actuarial function covering matters such as the adequacy of technical provisions (reserves), pricing, and capital adequacy.

A.2.2. Qualification requirements

For each regulated function, the regulator must determine what qualifications practitioners need. Insurers and pension funds appoint their own actuaries to these roles; the regulator sets the eligibility requirements.

The fundamental choice is whether to accept credentials from established credentialing organizations, require a credential of the jurisdiction's own, or use a hybrid. Accepting established credentials provides immediate access to qualified actuaries without requiring the jurisdiction to build its own credentialing system. Adding a local-knowledge component addresses the risk that actuaries credentialed elsewhere may not understand local conditions. A requirement framed as substantial experience in the local market is different: Unlike a knowledge component that an incoming actuary can satisfy by examination, local experience cannot be acquired on arrival, so it makes the size of the local workforce a binding constraint. Hong Kong illustrates the local-knowledge approach: To serve as an Appointed Actuary, one must be a Fellow of the Actuarial Society of Hong Kong, which requires first holding a Fellowship from an established credentialing organization (such as the CAS, the SOA, or the IFoA) and then passing two local examinations covering Hong Kong–specific regulation and practice.

A fully domestic credential, by contrast, one earned through a local pathway rather than layered on an established credential, gives the jurisdiction the most control but presupposes a professional body mature enough to develop and administer it; for a developing market this is a possible end state rather than a starting point. Less commonly, the state itself licenses or registers actuaries directly rather than relying on a

professional credential, which gives the government direct control but requires it to build and maintain the administrative apparatus.

The feasibility of each approach depends on the constraints identified earlier. A jurisdiction with few local actuaries and limited regulatory capacity may find that accepting established credentials is the most practical starting point. Jurisdictions choosing this path should also consider the regulatory implications of recognizing foreign credentials; see Section A.2.3.

Setting eligibility criteria is a separate decision from how individual appointments are overseen. A regulator can let an insurer or pension fund appoint any actuary who meets the criteria, or it can require its prior approval of each named appointee. Approval lets the regulator assess the specific individual, looking at matters such as disciplinary history, conflicts of interest, and recent relevant experience, rather than relying on the credential alone. The trade-off is administrative: Per-appointment approval gives the regulator more control and a clearer line of accountability, but it adds a processing burden and can slow appointments where qualified actuaries are scarce.

A recognized credential also binds its holder to the credentialing organization's code of conduct and disciplinary process, so requiring one lets the regulator lean on the profession's self-regulation rather than build that machinery itself.

A.2.3. Cross-border regulatory reach

When local actuaries are credentialed by a foreign organization, they may be subject not only to that organization's own disciplinary process (an expected consequence of membership) but also to government regulators in the credentialing organization's home jurisdiction. In the RSA Insurance Ireland case (2013), the United Kingdom's Financial Reporting Council (FRC) investigated and sanctioned Irish-based actuaries for work done entirely in Ireland, exercising jurisdiction through the FRC Actuarial Scheme because the case touched UK public interest through the UK parent company and the actuaries were IFoA members. Subsequent reforms have narrowed but not eliminated this reach. This risk varies by credential (a CAS or SOA credential, for example, carries no comparable government disciplinary reach, since those credential holders are subject to the profession's own discipline with no government regulator layered on top), but jurisdictions considering which foreign credentials to recognize should understand the full regulatory environment in which those credentials operate, not just the credentialing organization's own processes.

A.2.4. Reviewing actuarial work

Setting requirements is only half the regulator's task; it must also decide how closely to examine the work those requirements produce. The depth of review is itself a choice, and it varies widely both across functions and across jurisdictions. A regulator may subject some functions to close scrutiny while leaving others largely to the responsible actuary and the firm, and for some functions it may choose not to review the work at all. Review also presupposes a benchmark for what acceptable work looks like, which may come from recognized actuarial standards or from the regulator's own requirements, which often exist independently of any standards.

Where a regulator does choose to review work, two depths are worth distinguishing. The first is verifying formal compliance (that a required opinion was filed, that the actuary who signed it is qualified, and that the filing is complete), which can be done with limited actuarial expertise. The second is assessing the soundness of the work itself: whether the assumptions are reasonable and the methods appropriate. This second kind of review necessitates actuarial judgment that only an actuary can supply, and it is where regulators without actuarial staff are most exposed.

A regulator that chooses to review substance but cannot do so for itself has several options, which can be combined and scaled to capacity:

- **In-house actuaries.** Employing even one or two actuaries gives the regulator independent capacity to review work and to interpret the standards it relies on. This is the most direct option but competes with the private sector for local actuarial talent, which is often scarce.
- **Contracted review.** The regulator can engage external actuaries to review filings or conduct periodic independent assessments, paying for expertise it cannot justify retaining full-time.
- **Peer review at the firm.** Requiring that regulated work be peer-reviewed by a second qualified actuary places a check inside the firm before the work reaches the regulator. It does not substitute for the regulator's own ability to probe the result, but it raises the floor.
- **Shared resources.** Where several jurisdictions face the same constraint, a regional body or pooled supervisory arrangement can provide review capacity that no one regulator could sustain alone; see Section A.2.5.

The right mix depends on the volume and complexity of the work to be reviewed. A jurisdiction with a handful of regulated entities may find contracted or shared review sufficient, while a larger or more complex market will eventually need actuarial expertise of its own.

A.2.5. Regional supervisory cooperation

For smaller jurisdictions, regional cooperation may be more practical than building purely national regulatory infrastructure. Insurance regulators in some regions have established frameworks for cooperation that include provisions related to actuarial requirements. Harmonized requirements across a region can facilitate cross-border insurance operations and let regulators share supervisory expertise and administrative capacity, including the actuarial review capacity discussed in Section A.2.4.

A.2.6. Planning for evolution

The regulatory framework appropriate for a developing market today may not be appropriate in 10 or 20 years. As the local actuarial workforce grows and the profession builds organizational capacity, the balance between regulatory oversight and professional self-governance can shift. Regulators should consider not just what framework fits current circumstances but how requirements should evolve if the market grows. In markets that stay small, though, the arrangement that fits today may remain the right one indefinitely. Evolution is a possibility to plan for, not a trajectory every market follows.

A.3. Considerations for the profession

Whereas regulators determine which functions require actuarial involvement, actuaries perform a wide range of work beyond regulated roles. The profession itself is responsible for building the infrastructure that ensures all actuarial work is performed competently and ethically. This includes credentialing, codes of conduct, standards of practice, disciplinary processes, and continuing education. The IAA provides resources and frameworks that can support these efforts.

Figure A.2 summarizes the principal choices a developing profession faces in building this infrastructure.

A.3.1. IAA resources

The IAA offers several resources relevant to developing actuarial professions:

- **Full Membership criteria.** The IAA's Full Membership requirements provide a template for what a well-functioning actuarial association should include, such as appropriate education requirements, a code of conduct, and disciplinary processes. The IAA also provides guidance on establishing these elements.

Increasing domestic self-sufficiency →

	Rely on external	Hybrid / phased	Build domestic
Association structure	Chapter or affiliate of an established organization	Phased development toward independence	Independent national association
Credentialing	Rely on credentials from established organizations	Accreditation of university programs	Domestic examination system
Code and discipline	No local credential, so members follow their credentialing organizations' code and discipline	Local code with regional or shared disciplinary panels	Own code and disciplinary process
Standards of practice	Adopt ISAPs as is	Adapt ISAPs or established standards	Develop local standards
Continuing education	Rely on events and content from established organizations	Add local, usually one-day, meetings	Host own actuarial conferences

Figure A.2. Decisions for a developing actuarial profession. The central grid arranges the choices from greater reliance on established organizations (left) toward greater domestic self-sufficiency (right); as with the regulator's choices, these are largely independent and need not advance in lockstep. Building toward the right supports the self-regulatory capacity expected of an IAA Full Member, but position here is no more a measure of quality than on the regulator's grid: Relying on established credentials, ISAPs adopted as is, and regional cooperation is a legitimate choice at any scale. A larger local market can make developing infrastructure of one's own worthwhile but does not by itself require it, and a small market may reasonably keep relying on established organizations indefinitely.

Working toward Full Membership gives the local profession a concrete development road map.

- **International Standards of Actuarial Practice (ISAPs).** The IAA maintains model standards that offer ready-made guidance developed by experienced practitioners. How a local profession should use them (adopting as is or adapting to local conditions) is discussed in Section A.3.5.

- **Membership Assistance Committee.** The IAA's Membership Assistance Committee supports the development of the profession and coordinates the IAA's engagement with member and prospective associations, working through regional subcommittees for Africa, Asia, Eurasia and the Middle East, and Latin America. It gives a developing association a point of contact for guidance on strengthening its infrastructure and progressing toward Full Membership.

A.3.2. Building a professional association

Actuaries in developing markets face choices about how to organize:

- **Establishing an independent national association** provides autonomy but may struggle with limited membership and resources.
- **Operating as a chapter or affiliate of an established organization** provides support and resources but limits independence.
- **Phased development** balances these considerations: A jurisdiction can start as an affiliate and move toward greater independence if and as the profession grows.

A separate question that sometimes arises is whether to seek formal statutory recognition of the body in national legislation. Although such recognition can bring consultation rights on legislation and a more authoritative role in industry development, the costs depend heavily on how the recognizing statute is drafted and can be substantial: Government appointees on the governing council can introduce political dynamics into professional decisions, transparency and procurement rules add administrative burden, and statutory governance arrangements can be difficult to amend as the profession matures. Effective national professions exist under both private and statutorily recognized arrangements, and the case for pursuing recognition is strongest in narrow circumstances rather than as a default.

A.3.3. Credentialing and capacity building

Section A.2 discussed credentialing from the regulator's perspective: what qualifications to require for regulated functions. From the profession's perspective, the question is broader: How do you grow the local actuarial workforce over time?

In the near term, most developing markets rely on actuaries credentialed by established credentialing organizations. The profession's role is to support these actuaries with local infrastructure (continuing education, networking, and professional guidance) and to ensure that local-knowledge requirements (where they exist) are practical and well administered.

In the longer term, the profession may invest in building local credentialing capacity, whether through a domestic examination system or accreditation of university programs. These investments may take a decade or more to bear fruit and require sustained commitment from the actuarial community. New local credentialing programs, whether exam-based or built on accredited university education, often see low uptake and few qualifying candidates in their early years, as the pipeline of students, teachers, and study materials builds slowly; this is expected, not a sign of failure, and proposals that promise large numbers of locally qualified actuaries within a few years should be treated with skepticism. Supporting actuarial education at local universities (through curriculum development, guest instruction, or internship programs) can help build a pipeline of future actuaries even before a full local credentialing system is in place.

A.3.4. Codes of conduct and discipline

Section A.2 considered how a regulator might rely on professional discipline; the profession's own task is to build it. Actuaries credentialed by established organizations are already subject to those organizations' codes of conduct and disciplinary procedures. For those actuaries, this provides a baseline of professional accountability independent of any local infrastructure. Over time, however, a developing profession will want to establish its own code and disciplinary process, both to address local circumstances and to demonstrate the self-regulatory capacity expected of an IAA Full Member. In small actuarial communities, these present particular challenges:

- Conflicts of interest are pervasive: In a small community, disciplinary proceedings may involve friends, colleagues, or competitors.
- Volunteer pools for governance and disciplinary roles are limited.
- Whistleblowing is difficult when the actuary has few alternative employment options.

Regional cooperation can help: A regional body can offer a larger and more independent pool of volunteers for disciplinary roles, reducing the conflicts inherent in small-community self-regulation (see Section A.3.7).

A.3.5. Standards of practice

Newer actuarial organizations that wish to promulgate standards of practice for their jurisdiction have a choice in obtaining those standards:

- **Developing local standards** allows tailoring to local conditions but requires significant expertise and resources.

- **Adopting international standards** (such as ISAPs) provides ready-made guidance but may not address local circumstances.
- **Adapting international standards** (using ISAPs or standards from established jurisdictions as a starting point and modifying as needed) is the practical choice for most developing professions, at least initially.

A.3.6. Continuing education

Actuaries credentialed by established organizations are already subject to those organizations' continuing education requirements, so a developing profession does not need to build a continuing education regime from scratch to keep its members current. In the near term, events and materials from established organizations can carry most of the load. As the local community grows, the profession can add local offerings, often beginning with short, one-day meetings on local topics that the established organizations' content does not cover and eventually hosting its own actuarial conferences. Local sessions serve a purpose beyond content: They build the professional community and the volunteer base that credentialing, standards, and discipline all draw on.

A.3.7. Regional professional cooperation

For smaller professions, regional cooperation offers advantages over purely national approaches:

- **Regional professional bodies** can coordinate across national associations and, in some cases, pool resources for functions such as standard setting, disciplinary processes, credentialing, or continuing education, allowing smaller professions to access capabilities they could not sustain independently. The Caribbean Actuarial Association and the Actuarial Association of Europe are examples of regional bodies, though the scope of their functions differs.
- **Mutual recognition agreements** between national associations can expand the effective supply of actuaries and facilitate cross-border mobility.

Resources

- International Actuarial Association (IAA), including Full Membership criteria and Membership Assistance Committee: actuaries.org
- IAA: *International Standards of Actuarial Practice* (ISAPs)

- International Association of Insurance Supervisors (IAIS), *Insurance Core Principles*: iais.org

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