

The Role of the Actuary in Self-Insurance

Self-Insurance Task Force



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SPONSOR

Society of Actuaries Health Section

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The Role of the Actuary in Self-Insurance

Self-Insurance Task Force

This monograph presents the work of the Self-Insurance Task Force, which was formed in early 2017 to carry out a strategic initiative identified by the Society of Actuaries' Health Section Council. The task force's goal was to explain the many ways in which actuaries are or could be involved in the self-insured employer health plan marketplace today and in the future.

Section 1: Acknowledgments

We dedicate this monograph to the memory of Carlton Harker, FSA, MAAA, 1927–2017, a self-insurance pioneer and coauthor of *Self-Funding of Health Care Benefits*.¹

We are grateful to the Society of Actuaries and the Health Section's Strategic Initiatives Committee (SIC) for their support and funding of this effort. We are also very appreciative of Joe L. Wurzburger, FSA, MAAA, and Ladelia Berger of the Society of Actuaries for their administration of the project. The SIC provided the initial impetus for this subject's selection as a topic of special interest and provided valuable feedback and dialogue throughout the course of the project. The Health Section and SIC's involvement in this process from the beginning included the following individuals:

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Finally, each of the members participating and contributing in varying degrees on this task force are to be thanked for their time and effort. We are grateful for the collaborative and helpful spirit exhibited by all the members throughout this productive effort.

Section 2: Background and Scope

2.1 Motivation for Report

Millions of people today are covered by self-insured plans. To cite a few descriptive statistics:

- The Henry J. Kaiser Family Foundation estimates that employer-sponsored health benefit plans cover half of the nonelderly population, about 151 million people, and that about 60 percent of covered workers are enrolled in partially or completely self-funded plans.²
- The Employee Benefits Research Institute reports that more than 40 percent of firms offering health benefit plans in 2016 offered at least one plan that was self-insured, approaching 80 percent for large establishments. Nearly 60 percent of all workers enrolled in employer plans were in a self-insured plan.³
- Deloitte’s Advanced Analytical Consulting Group reports that, of plans filing a Form 5500 for 2014, 41 percent were self-insured and 7 percent were “mixed funded.”⁴ Of the 70.8 million participants covered by the 51,643 plans in the study, 46 percent of participants were covered by a self-insured plan and another 36 percent were covered by a mixed-funded plan.⁵

It is challenging to reconcile these analyses. In addition to the different measurements, the analyses define similar terms differently and different terms similarly. Nevertheless, tens of millions of people—probably a majority of persons covered by employee benefit plans—are covered by health plans that their employers self-insure. Despite the depth and breadth of the self-insurance marketplace, it receives comparatively little attention from the media, general public, government and even health actuaries.

In addition, self-insured health plans provide an excellent testing ground for innovative plan designs and claims management tools because of the limited regulatory environment within which such plans operate. Working with plan sponsors, actuaries can conduct limited experiments without locking in pricing and terms before costs and benefits are clearly understood.

Recognizing the importance of self-insurance to the employer-based health insurance system, the SOA’s Health Section launched a strategic initiative called The Role of the Actuary in Self-Insurance and formed the Self-Insurance Task Force (SITF) in early 2017. The overarching objective of the SITF is to provide education and information on the role of actuaries in the self-insurance marketplace both as advisers to self-insured employers and as developers of tools self-insured employers use to manage the risks they assume. This monograph is the culmination of the SITF’s efforts. The SITF believes that this monograph may enhance the basic education of aspiring health actuaries and may be suitable as educational material for nonactuarial audiences.

2.2 Scope

Self-insurance of employee health benefits began in earnest with the passage of the Employee Retirement Income Security Act of 1974 (ERISA). As explained in section 4.1, self-insurance of a plan subject to ERISA has a special place within the employee benefits marketplace because such plans are largely exempt from state insurance department regulations and control. Although the actuarial roles in respect to self-insured plans is similar whether or not the plan is subject to ERISA, the scope of this monograph, except where explicitly noted, is on ERISA-qualified self-insured employer health plans covering employees and dependents of a single (or affiliated ownership) employer.

Stop-loss insurance (SLI) is a general term that is used in the context of many types of exposures. Within this monograph, SLI is always associated with an underlying self-insured employer health plan.

Because a self-insured health plan is a true risk-taking entity, most actuarial issues relating to evaluating risk—estimating expected claims and costs under different plan scenarios, using and evaluating the various

tools available to manage this risk—apply. In short, most of the actuarial functions within any health insurance organization are applicable to self-insured plans. There are, however, important differences between health insurers and self-insured health benefit plans, and that is why there are many challenges and opportunities for the health actuary involved in self-insurance.

The health actuary may function as a:

- Consultant advising self-insured clients on benefit program design, costs and stop-loss selection;
- Stop-loss pricing actuary or underwriter of stop-loss insurance (SLI);
- State regulator evaluating stop-loss policies and rates filed with a state insurance department;
- Self-insurance product developer designing risk-management products for the self-insurance industry;
- Adviser to stop-loss renewal underwriters;
- Valuation actuary estimating reserves for either the employer or the stop-loss carrier; or
- Reinsurance actuary reviewing a program that includes a book of stop-loss business.

This monograph was prepared with all of these potential actuarial roles in mind.

Section 3: Terminology

By Jeremy T. Benson, FSA, FCAS, MAAA; Dustin D. Tindall, FSA, MAAA; and David Wilson, FSA, FCIA, MAAA

The Glossary contains key terms and definitions pertaining to self-insurance and stop loss. It is intended to assist people who are unfamiliar with self-insurance and stop-loss insurance. The definitions reflect how the terms are used and understood by many in the actuarial community.

3.1 Need for Clarity

Many concepts in self-insurance have different names that refer to the same thing. Conversely, sometimes the same term may have multiple meanings. Even the terms *self-funding* and *self-insurance* (and all their variants) are a point of occasional confusion. Are they different? Are they the same?

Choosing which term to use in practice, therefore, can be difficult. For example, the term *deductible* may refer to the self-insured plan deductible, the specific stop-loss deductible being used to protect the plan or an aggregate stop-loss attachment point. Generic use of the word *deductible* without a qualifier or emphasis on the proper context may lead to a misunderstanding. Similarly, what may be called a deductible within a discussion of stop loss may also be referred to as a retention or attachment point; but the word *retention* may also mean a portion of the premium retained for expenses and profit, or refer to “how much business was retained” in a renewal period.

Because of this, we have taken great care in defining our terms. The following list is a sample of terms that have alternate names. The terms used in this paper are listed first and bolded. Alternative terms are listed in parenthesis.

- **ACA** (PPACA, Obamacare, Affordable Care Act)
- **Advanced funding** (simultaneous reimbursement, specific accommodation, specific advance)
- **Aggregate attachment point** (aggregate deductible, aggregate retention)
- **Contract basis** (claims basis, liability basis)
- **Self-insurance** (self-funded)
- **Specific stop loss** (individual stop loss)
- **Deductible** (attachment point, retention)
- **Stop-loss insurance** (employer stop loss, medical stop loss)

It is not wrong to use the equivalent terms, but the actuary must be clear about what is meant by the terms being used, and we have chosen these terms for consistency in this paper. Refer to the Glossary for more terms and definitions.

Section 4: Employee Benefit Plan

By Hobson D. Carroll, FSA, MAAA; Mehb A. Khoja, FSA, MAAA; Shaun L. Peterson, FSA, MAAA; Joseph P. Slater, FSA, MAAA; and Dustin D. Tindall, FSA, MAAA

Whether benefits are **fully insured** or self-insured, the employee benefit plan determines which benefits are and are not covered and how the costs and risks of those benefits are managed. If a plan is fully insured, the insurer, subject to federal and state regulation, determines what benefits are covered and how the related costs and risks are managed. In a self-insured plan, the employer can take control of the benefit plan design, selecting, subject to federal regulation only, which benefits to cover and how their related costs and risks will be managed.

In this section, we discuss how employee benefits are regulated, provide an overview of how self-insured plans operate, identify opportunities for the employee benefits' actuary or consultant to provide assistance and describe cost and risk mitigation and transfer strategies. This section is written from the perspective of the **plan sponsor** and/or the consultant advising the plan sponsor.

4.1 Regulation of Employee Benefit Plans

4.1.1 Early Regulations

The regulation of employee health benefit plans has evolved over time. Many such regulations arose from attempts to regulate other parts of the employer/employee arrangements or the economy in general. In fact, the prevalence and growth of employee health benefit plans in the latter half of the 20th century is largely the result of the federal government's enactment of wage and price controls during World War II. The Stabilization Act of 1942 limited the wage increases that could be offered by firms but permitted the adoption of employee insurance plans that were not subject to the wage and price controls.⁶ As a result, many employers began offering employer-sponsored health coverage during the war.

The Taft-Hartley Act of 1947, also known as the Labor Management Relations Act, and subsequent court cases (e.g., *W.W. Cross & Co. v. National Labor Relations Board*) recognized health insurance as a condition of employment and, therefore, a subject for collective bargaining.⁷

Since then, the federal tax code has been designed to favor employee benefit plans. The 1954 **Internal Revenue Code (IRC)** exempted employer tax-deductible contributions to the health insurance plans of their employees from those employees' taxable income.⁸ This exemption encouraged employees and their employers to shift compensation toward untaxed health insurance and away from taxable income. Some 60 years later, the Congressional Budget Office estimated that the federal tax subsidy for employer-sponsored health plans amounted to \$248 billion in 2013.⁹

The result of these laws and regulations was a substantial increase in the number of group (i.e., employer-sponsored) health plans. In 2016, almost 160 million Americans, close to half the population, received health insurance coverage through an employee benefit plan.¹⁰

Until very recently, the states have been the primary regulators of health insurance companies and markets. The McCarran-Ferguson Act of 1945 established that states could regulate and tax insurance companies without the limitations posed by the U.S. Constitution's Commerce Clause, which makes the regulation of interstate commerce the responsibility of the federal government.¹¹ However, the McCarran-Ferguson Act reserved a federal regulatory role "to the extent that such business is not regulated by state law."¹² To avoid federal regulation of insurance in the absence of adequate state regulation, the states established the National Association of Insurance Commissioners (NAIC) shortly after the passage of the McCarran-Ferguson Act. The NAIC prepares model acts for adoption by the states to limit a federal regulatory role and to encourage regulatory consistency among the states.¹³

4.1.2 Employee Retirement Income Security Act of 1974

The **Employee Retirement Income Security Act of 1974 (ERISA)** is a federal tax and labor law that establishes minimum standards for pension and health benefit plans in private industry. ERISA was enacted to protect the interests of employee benefit plan participants and their beneficiaries by establishing plan financial reporting requirements, establishing standards of conduct for plan fiduciaries and making available appropriate remedies and access to the federal courts. ERISA applies to private-sector employee health plans but does not apply to employee health plans established by government agencies or churches and church-affiliated employers.

ERISA contains several provisions that affect employee benefit health plans. The first is the reporting and disclosure requirements for employee health plan sponsors. Under these requirements, an ERISA plan must periodically provide its participants and beneficiaries with a **summary plan description (SPD)** along with an updated SPD or a summary of material modifications to the SPD. The plan must also provide participants an annual summary report. In addition, plans with more than 100 participants generally must file an annual return (Form 5500) with the Internal Revenue Service (IRS).

Another ERISA provision affecting employee benefit health plans outlines rules for **plan fiduciaries**. ERISA defines a plan fiduciary as anyone who exercises discretion or control over a group plan.¹⁴ Both fully and self-insured group plans will have one or more fiduciaries; however, self-insured plan sponsors tend to retain greater fiduciary responsibility, since they tend to assume more administrative control over the plan.¹⁵ ERISA requires that every plan have a plan sponsor and a "named fiduciary."¹⁶ Insurers and **third-party administrators (TPAs)** may become fiduciaries to a group health plan to the extent that they make discretionary decisions for the plan.¹⁷ Additionally, ERISA requires fiduciaries to discharge their duties "solely in the interest of" participants and beneficiaries and for "the exclusive purpose" of paying benefits and defraying "reasonable" administrative expenses.¹⁸ Furthermore, an ERISA fiduciary must use the care, skill and prudence of a "prudent man" in a "like capacity" when exercising discretion or control over a group plan. A fiduciary's responsibilities do not end with himself or herself. In fact, a fiduciary must also enforce ERISA's standards of conduct for fiduciaries on other plan fiduciaries or face personal liability for a breach of fiduciary standards by cofiduciaries.¹⁹

The ERISA administration and enforcement provision requires that every employee health plan establish a claims review procedure. Additionally, ERISA limits recoveries from challenges to employee health plans to payment for the actual cost incurred for the benefits in dispute.

ERISA's most significant impact on the financing of health plans arises from its preemption, deemer and savings clauses. ERISA's **preemption clause** voids all state laws to the extent such laws relate to "employer-sponsored health plans."²⁰ The ERISA **savings clause** provides an exception to ERISA's preemption provisions that allows states to regulate "the business of insurance." As a result, the savings clause allows states to regulate health insurers and, indirectly, fully insured health plans through the insurance contracts they have with health insurers.²¹ The savings clause also allows states to regulate stop-loss insurance, which generally has a small, even more indirect implication to a self-insured health plan in that states generally govern the minimum specific stop-loss deductible and the minimum aggregate attachment point available.

ERISA's **deemer clause** prohibits states from deeming self-insured plans as being in the business of insurance. As a result, self-insured employer-sponsored health plans are not regulated as insurance companies by states.²² Due to ERISA's preemption, savings and deemer clauses, self-insured employer-sponsored health plans are not directly subject to any state insurance premium taxes and most other forms of assessment that states may allocate against insurance companies and state coverage mandates.²³

ERISA also applies nondiscrimination rules to self-insured welfare plans. For example, ERISA defines a self-insured health plan as nondiscriminatory only if:

1. the plan doesn't favor "highly compensated employees" (HCEs) in terms of eligibility to participate in the plan and
2. the benefits provided by the plan do not discriminate in favor of HCEs.²⁴

The first rule is defined as the eligibility standard and the second the benefits standard for self-insured health plans under ERISA. If a self-insured health plan fails either of these two rules, all or part of the benefits HCEs received from the plan are subject to federal income tax withholding.²⁵ However, these amounts can be excluded from an HCE's wages subject to the Social Security, Medicare and Federal Unemployment taxes.²⁶ For self-insured health plans, HCEs are defined as one of the following:

1. one of the five highest-paid officers,
2. a shareholder who owns more than 10 percent of the value of the stock of the employer or
3. an employee who ranks among the top 25 percent of highest-paid employees.²⁷

Under the nondiscriminatory eligibility standard for ERISA self-insured health plans, a plan must benefit:

1. 70 percent of all employees or
2. 80 percent of all employees who are eligible to benefit if 70 percent or more are eligible to benefit.²⁸

For the testing of the eligibility standard, employers may exclude the following classes of employee:²⁹

- Employees who have not completed three years of service;
- Employees under the age of 25;
- Part-time (working less than 25 hours a week) or seasonal (less than seven months per year) employees;
- Employees covered by a collective bargaining agreement;
- Employees who are nonresident aliens with no income from U.S. sources.

Under the nondiscriminatory benefits standard for ERISA self-insured health plans, the benefits available to HCEs must also be available to non-HCEs.³⁰

Other ERISA welfare plans, such as group-term life insurance, dependent care and educational assistance plans and cafeteria plans, are subject to different nondiscrimination rules, although there are often similarities across benefit types.³¹

4.1.3 Post-ERISA Regulations

Several federal laws have had a significant impact on the regulation of employee health plans since the passage of ERISA.

In 1983, Congress enacted the Erlenborn-Burton Amendment of ERISA due to concerns over the insolvencies of multiple employer welfare associations (MEWAs) and Congress's wish to remove barriers to state regulatory actions. The amendment saved state regulation over MEWAs from ERISA's preemption and deemer provisions. ERISA is now clear that a MEWA is subject to state insurance regulation.

The **Consolidated Omnibus Reconciliation Act (COBRA) of 1985** amends ERISA, the IRC and the Public Health Service Act (PHSA) to allow health plan participants and beneficiaries the option to continue coverage they might otherwise lose as long as the loss of coverage is due to at least one of a specified list of qualifying events.³² COBRA's continuing coverage provisions apply to employers with 20 or more employees, including private employers and local and state government employees' health plans, but do not apply to

church and church-affiliated health plans and the Federal Employee Health Benefit Plan (FEHBP). However, the FEHBP has similar coverage continuation provisions.³³ COBRA mandates that participants who continue coverage must be treated identically to otherwise similar active plan participants. As a result, plan modifications must be uniform for active and COBRA participants.

COBRA caps premiums for members with continuing coverage at 102 percent of applicable premium for active participants and at 150 percent in the event of disability extension. COBRA defines qualifying events that mandate continuing coverage as

1. a death of a covered employee,
2. a termination or reduction in hours for a covered employee,
3. a divorce or legal separation of a covered employee from his or her spouse,
4. a dependent child ceasing to be dependent under the terms of the plan, or
5. in respect to a retired employee only, a reorganization or bankruptcy by the employer.³⁴

Under COBRA, continued coverage extends from the date of the qualifying event by 18 to 36 months. COBRA coverage may be lost by a terminating event such as failure to pay premiums or the start of coverage under another plan.³⁵

The [Health Insurance Portability and Accountability Act \(HIPAA\)](#) is an amendment to the Internal Revenue Code Act of 1986. It was passed in 1996. The purpose of HIPAA is to improve the portability and continuity of health insurance coverage in the group and individual markets, to combat waste, fraud and abuse in health insurance and health care delivery, to promote the use of medical savings accounts, to improve access to long-term care services and coverage, to simplify the administration of health insurance and more.³⁶

HIPAA has five sections, referred to as titles. Title I of HIPAA requires group health plans to cover members with preexisting conditions, while also limiting the restrictions that the plans can place on benefits for members with preexisting conditions.³⁷ Title I also requires that the amount of time a member is subject to an exclusion for preexisting conditions be reduced by the length of creditable coverage the enrollee has prior to enrollment.³⁸ Creditable coverage under HIPAA is defined as nearly all health insurance coverages continuously maintained (i.e., no break in coverage greater than or equal to 63 days).³⁹

Title II of HIPAA prescribes a set of policies and procedures to maintain privacy and the security of individually identifiable health information. It also creates several programs to combat fraud and abuse in the health care system.^{40,41,42} Title II also outlines the five so-called administrative simplification rules. These rules are:

- The Privacy Rule, which regulates the use and disclosure of protected health information (PHI) by “covered entities” (e.g., health plans, health insurers, health care providers) and “business associates” (e.g., TPAs, attorneys, consultants).^{43,44}
- The Transactions and Code Sets Rule, which requires the use of specific procedure and diagnosis codes in all standard transactions of the exchange of electronic health information.^{45,46}
- The Security Rule, which creates standards to protect individuals’ electronic protected health information (ePHI) that is held or transferred in electronic form. The Security Rule requires appropriate administrative, physical and technical safeguards to ensure the confidentiality, integrity and security of ePHI.⁴⁷
- The Unique Identifiers Rule created three unique identifiers to simplify health care administration for covered entities:⁴⁸
 - Standard Unique Employer Identifier (EIN),
 - National Provider Identifier (NPI), and
 - National Health Plan Identifier (NHPI).

- The Enforcement Rule, which creates provisions for investigations, civil penalties and procedures for hearings related to violations of the administrative simplification rules.⁴⁹

Title III of HIPAA standardizes the amount that may be saved per individual in a pretax medical savings account.⁵⁰ Title IV further defines health insurance reform, including provisions for individuals with preexisting conditions and those seeking continued coverage.⁵¹ Title V includes provisions on company-owned life insurance and the treatment of those who lose their U.S. citizenship for income tax purposes.⁵²

The Newborns' and Mothers' Health Protection Act (NMHPA) of 1996 mandates that health insurers and group health plans not restrict benefits for mothers or newborns for a hospital stay in connection with childbirth to less than 48 hours following a vaginal delivery or 96 hours following a delivery by cesarean section.⁵³ The NMHPA applies to all fully insured and self-insured group health plans. Large, self-insured non-federal governmental employer plans may opt out.⁵⁴

The Women's Health and Cancer Rights Act (WHCRA) of 1998 mandates that health insurers and group health plans provide coverage for surgeries and reconstructive services associated with covered mastectomies.⁵⁵ WHCRA applies to individual (nongroup) plans and fully and self-insured group health plans. Large, self-insured non-federal governmental employer plans may opt out.⁵⁶

The Mental Health Parity and Addiction Equity Act of 2008 (MHPAEA) amended ERISA to mandate that health insurers and group health plans not impose cost sharing parameters, lifetime and annual limits, and visit/unit limits on mental health and substance abuse benefits that are less favorable than any such limits imposed on medical/surgical benefits.⁵⁷ The act applies to fully and self-insured large-group (i.e., greater than 50 employees) health plans. Large, self-insured non-federal governmental employer plans are allowed to opt out of the law.⁵⁸

The Health Information Technology for Economic and Clinical Health Act (HITECH) was passed in 2009. It sets standards and provides incentives for the expansion of the meaningful use of electronic health records (EHR) by health care providers.⁵⁹ HITECH requires covered entities subject to HIPAA to report data breaches that impact 500 or more individuals to the Department of Health and Human Services (HHS), to the news media and to the people affected by the data breaches.⁶⁰ Additionally, HITECH gives individuals the right to receive PHI in electronic format from their providers when the providers have created an EHR.⁶¹

HITECH also enhances the enforcement of HIPAA by establishing mandatory penalties for “willful neglect,” extends HIPAA’s criminal and civil penalties to business associates and requires HHS to complete periodic audits of covered entities and business associates.⁶²

4.1.4 The Affordable Care Act of 2010 (ACA)

The [ACA](#) amends the PHSA, ERISA and the IRC.⁶³ The ACA contains several provisions related to employer-sponsored health plans:⁶⁴

- Mandates employers to provide health coverage, creating two kinds of financial penalties for those employers that fail to provide coverage meeting minimum value and affordability thresholds;
- Taxes health insurers, medical device manufacturers and pharmaceutical manufacturers;
- Establishes a 40 percent excise tax on the “high-cost” portion of employer-sponsored health plans, also known as the Cadillac tax;
- Establishes health plan coverage minimums, including a comprehensive set of mandatory services (i.e., **essential health benefits, or EHBs**), health plan actuarial value minimum of 60 percent (i.e., minimum value);
- Limits annual member cost sharing for in-network services (i.e., maximum out of pocket, or MOOP);
- Mandates dependent coverage for children up to age 26;

- Prohibits lifetime and annual limits on the dollar value of coverage for EHBs;
- Limits any waiting periods for coverage to no more than 90 days;
- Prohibits preexisting-condition exclusions;
- Requires plans to use standard disclosure tools, such as the Summary of Benefits and Coverage and Uniform Glossary;
- Limits rescissions to situations that constitute fraud or intentional misrepresentation of material fact;
- Provides value limits to wellness programs and strengthens guidance to avoid discrimination by health condition;
- Eliminates cost sharing for preventive services;
- Requires emergency service access without the need for prior authorization and with equal cost sharing between network and non-network providers;
- Adds notice and disclosure requirements for appeals processes, requires plans to contract with at least three accredited review organizations who must be assigned cases in a rotating, impartial way, and requires external review to be incorporated into appeals for self-insured and insured employer plans;
- Expands MHPAEA application to individual and small-group plans (those with 50 or fewer employees);
- Requires guaranteed issue and guarantee renewability of individual, small-group and large-group insured plans, providing the requirement that all large-group employers are eligible for a quote without regard to an insurer's minimum participation and minimum contribution requirements, and all small-group employers can access insured plans between Nov. 15 and Dec. 15 without meeting an insurer's minimum participation and minimum contribution requirements;
- Extends ERISA's non-discrimination (HCEs/income) rules to large-group and small-group fully insured plans (IRS guidance and enforcement still ending);⁶⁵
- Allows rating variations based only on age (limited to 3-to-1 ratio), premium rating area, family composition and tobacco use (limited to 1.5-to-1 ratio); and
- Enacts medical loss ratio maximums (85 percent for large-group insurance risk pools and 80 percent for small-group and individual market insurance risk pools).

Certain provisions of the ACA do not apply to self-insured group health plans, such as the medical loss ratio maximums, the restrictions on rating variations, coverage mandates for EHBs and the annual fee on health insurers. The ACA also ended the ability of non-federal, self-insured governmental plans to opt out of several ERISA/PHSA requirements, including the limitations on preexisting-condition exclusion periods, the requirements for special enrollment periods and prohibitions against discriminating against individual participants and beneficiaries based on health status.⁶⁶

4.1.5 Regulation of Non-ERISA Plans

As stated in section 4.1.2, ERISA does not apply to employee health plans established by government agencies or by churches and church-affiliated employers. Employee health plans established by government agencies are regulated by the government under which they were established. For example, the FEHBP is administered by the Office of Personnel Management and subject to federal law.⁶⁷

Non-ERISA fully insured health plans for employees of churches and church-affiliated groups are subject to state insurance regulations through their insurance contracts.⁶⁸ Non-ERISA self-insured church and church-affiliated health plans are not subject to state insurance law but instead are regulated by the Centers for Medicare and Medicaid Services (CMS).⁶⁹

Non-ERISA church and church-affiliated employee health plans are subject to several amendments to ERISA, including HIPAA, the Newborns' and Mothers' Health Protection Act, Michelle's Law (requiring extension of coverage for certain student dependents in cases of injury or illness) and the Mental Health Parity and Addiction Equity Act.⁷⁰ Non-ERISA church and church-affiliated employee health plans are not subject to the Women's Health and Cancer Rights Act or COBRA's continuing coverage provisions.⁷¹

The ACA increased regulations of non-ERISA plans to a significant degree. As a result, non-ERISA health plans that do not have grandfathered plan status must provide coverage, notices, appeals rights and reports to the federal government, similar to ERISA plans.⁷²

4.1.6 Stop-Loss Insurance Regulations

Stop-Loss Insurance (SLI) is used to protect self-insured health plans from the impact of large losses. As mentioned in the section on ERISA, state regulators do not have authority over self-insured employer-sponsored health plans, but have authority over SLI.

Some states, however, attempted to regulate self-insured plans more directly via the SLI regulation. In the fall of 1994, for example, the Maryland Insurance Administration disapproved the sale of stop-loss policies issued to three Maryland employers because those policies did not conform to Maryland law, which had deemed a plan as fully insured if a certain degree of risk was not transferred.^{73,74} The three employers and their stop-loss insurer, American Medical Security (AMS), filed suit seeking a declaratory judgment that the Maryland Insurance Administration regulations were not enforceable and seeking an injunction against their enforcement. The federal Fourth Circuit Court of Appeals sided with the employers and AMS because they found that, while states have authority over SLI thresholds allowed for sale, the Maryland regulation cannot deem the employer plan as subject to state regulation, and therefore cannot mandate benefits and cannot assess state premium taxes. The court found that this particular provision, which is still common in states' regulation of SLI, violates the deemer clause of ERISA.⁷⁵ Essentially, while states can regulate SLI, it is up to federal regulators to determine whether an employer plan itself violates the federal requirement for sufficient risk to be retained by the plan in order to maintain its status as self-insured. In subsequent findings, federal regulators have been unwilling to state risk transfer parameters for such determinations.

4.2 Key Differences Between Fully Insured and Self-Insured Plans

Except as noted, the laws and regulations described in the preceding sections apply to employee benefit plans regardless of how they are financed, that is, whether they are fully insured or self-insured.

When a plan sponsor chooses to finance its employee benefit plan with a fully insured contract, it transfers certain plan-related risks to the insurer:

- Financial risks, for example, the risk that actual claims deviate unfavorably from expected claims;
- Operational risks, such as the risk that the administrative operations of the plan fail or cost more than expected;
- Litigation risks, such as the risk that a plan participant sues the plan for failure to pay legitimate claims; and
- Fiduciary risks, such as the risk that plan assets, including employee contributions, are squandered.

It should be noted that, to the extent the plan sponsor is involved in the plan—for example, by providing enrollment data to the fully insured carrier—the plan sponsor remains exposed to some plan risks. . Further, the plan sponsor remains the primary fiduciary and must consider the insurer's financial strength, cost, claims payment timing and practices, governance and internal controls, compliance record and reputation, expertise, reporting ability, appeals process, complaints record, provider network breadth, etc. when selecting an insurer, negotiating contract terms and deciding to continue using an insurer. As mentioned earlier, a fiduciary can be made responsible for the actions of other plan fiduciaries and could face personal liability for a breach of fiduciary standards by cofiduciaries.

By fully insuring, the plan sponsor cedes much of the plan's day-to-day decision-making authority to the insurer. Insurers offer products and services to the plan sponsor in bundled packages that include administrative and claims management services, **provider networks**, pharmacy benefits and more. Usually

the insurer offers a selection of covered services and plan designs within constraints and at varying price points, enabling the plan sponsor to choose a plan design that fits its budget.

The contractual agreement between the plan and the insurer is represented by a group insurance policy. In addition, the insurer issues insurance certificates to the group's employees; thus, members have a contractual relationship through their certificates with the insurer.

Most plan sponsors who consider **self-insurance** do so, at least in part, to realize potential cost savings. These savings arise from state premium tax savings, elimination of state-mandated benefits, avoidance of the **health insurer fee** and removal of insurer expenses and risk charges that are included in fully insured coverages. In addition, many plan sponsors hope to realize savings in claims costs. There is a trade-off, though. The self-insuring plan sponsor takes the risk that actual claims experience and related expenses will be higher than fully insured costs.

When a plan sponsor chooses to self-insure, it assumes all the risks of the plan, including, as noted, the financial, operational, litigation and fiduciary risks. Because it has assumed the plan's risks, the plan sponsor also assumes decision-making authority, such as:

- How benefits are administered;
- What benefits to offer;
- Which, if any, provider network to utilize; and
- Which pharmacy benefit program to offer.

By self-insuring, the plan sponsor is, in effect, able to unbundle the services that the insurer bundles in a fully insured package. Self-insured plan sponsors often work with an employee benefits consultant to understand and manage the risks they face and make the decisions needed to operate their plans successfully.

The contractual agreement between the plan sponsor and its plan's members is represented by the **plan document**, typically summarized in the SPD. The plan sponsor typically enters into contracts with subcontractors, such as TPAs, networks and pharmacy benefit managers, in order to deliver plan benefits to its members. Plan sponsors may also establish a trust into which plan assets are deposited. Through these subcontracts and other agreements, plan sponsors may be able to mitigate and/or transfer some of the plan to parties with more expertise and experience than themselves.

4.3 Advising Plan Sponsors Whether or Not to Self-Insure

Employers who elect to self-insure seek the flexibility and potential lower costs of a self-insured plan. Before deciding to self-insure, employers should understand the advantages and disadvantages of entering into a self-insured arrangement.

4.3.1 Advantages of Self-Insurance

As noted, self-insurance comes with potential cost savings, including lower premium taxes, elimination of state-mandated benefits, avoidance of the health insurer fee and removal of fully insured expenses and risk charges. Further, a self-insured employer can capture favorable claims experience, whereas an employer with fully insured coverage must pay the agreed-upon monthly premium regardless of its actual experience. Of course, if actual experience and the expenses of administering and managing the self-insured plan exceed monthly premiums, then the self-insured employer bears the higher costs.

Another advantage of self-insurance is plan design flexibility. Because state departments of insurance do not regulate self-insured plans, employers have greater ability to design benefit plans that meet their needs as opposed to picking from among the plans that fully insured carriers offer. For example, a self-

insured plan sponsor seeking to attract younger employees can add benefits especially valued by young families; a self-insured plan sponsor with an older employee population can add benefits that help their employees adopt or maintain healthy lifestyles. A fully insured carrier, by contrast, must file contracts with the state regulators and, as such, may offer a more limited set of plan options.

Another reason employers self-insure is the opportunity to immediately reap the benefits of wellness or disease management programs that may reduce costs and curb medical inflation. While these programs come with fees, the savings are 100 percent owned by the self-insured employer. Employers who fully insure pass the savings on to the fully insured carrier. Note that savings realized by the fully insured carrier could result in reduced renewal premium increases to the employer, so the fully insured employer may, in time, realize the cost savings that arise from wellness and care management programs.

4.3.2 Disadvantages of Self-Insurance

While cost savings are a key reason employers opt to self-insure, several disadvantages need to be weighed when determining the best approach to funding the employee benefits offered by any specific employer. Although savings are expected, self-insured plan sponsors accept the unpredictability, both in amount and in the timing, of self-insured claims. While the actuary or employee benefits consultant will project claims to determine the expected monthly premium equivalent rates supporting the employer's budget for employee benefits, costs and utilization of health care are not fully predictable. Actual claims may deviate widely from expectations, especially for smaller employers. A favorable variance generates a surplus for the employer, but an unfavorable variance can stress an employer's cash flow. When actual experience is worse than projected, the employer may pay more than it would have paid had it been fully insured. Since self-insured plan sponsors accept the risk of the health plan, they must be prepared for the monthly volatility of claim payments. That volatility can be managed by transferring some of the plan's exposure to high frequency or severity of claims. Risk-management tools that facilitate such transfer are discussed in more detail later in the report.

The self-insured plan sponsor assumes, of course, the plan's financial risks; it is also exposed to other risks such as fiduciary, legal and reputational risks.

- As a plan fiduciary, the employer must assure that plan assets are well managed and used for the legitimate purposes of the plan. Even though, under their agreement with the plan, some administrators accept responsibility to be a claim fiduciary, such an agreement does not, for example, relieve the employer of the burden of providing accurate eligibility information. If an administrator relies on inaccurate information and, therefore, pays claims for the benefit of an ineligible person, the employer incurs the costs of the ineligible claims, and it has breached its fiduciary duty to the plan because plan assets were not used for the plan's purposes.
- When members appeal coverage denials, it is ultimately up to the employer to decide whether to uphold the denial. Of course, employers will want to ensure that the process for considering appeals is unquestionably fair to plan participants. Nevertheless, they remain exposed to litigation and potential reputational risks should a decision to uphold a denial be challenged in court and/or in the court of public opinion.

Another risk to which self-insured plan sponsors are exposed is the administrator's operational risk. The administrator adjudicates claims presented by the plan's members and providers. Claimants and providers count on the administrator to make payment for services accurately and promptly. While fully insured plans also face these risks, the self-insured plan sponsor may not be contractually indemnified because, as noted, the self-insured plan sponsor is ultimately responsible for the administrator's coverage decisions.

Generally, fully insured arrangements are easier for employers to understand and budget. The fixed nature of the premium allows for a pure transfer of risk at a known expense. Smaller or more risk-averse

employers, such as those with limited capital, will typically fully insure their medical expenses while larger employers who can accept more claim volatility often choose to self-insure.

When smaller or more risk-averse employers self-insure, they will likely choose to implement appropriate risk-management tactics, including the purchase of SLI. In the context of this monograph, SLI is an insurance policy that protects the plan (but not the plan beneficiaries) from volatility in costs. Brokers and consultants who place stop loss need to advise their clients on the exposures assumed by the plan and the extent to which SLI protects the plan from those exposures. SLI is explained from the plan sponsors' perspective in section 4.6.5.3 and from the stop-loss insurers' perspective in section 5.

Employers have many reasons to choose to self-insure and, similarly, many reasons to choose to fully insure. In most cases, a key reason an employer self-insures is cost savings. In contrast, employers that choose to fully insure are most interested in stable monthly insurance premiums as opposed to the volatility of self-insurance.

4.4 Your Client Decided to Self-Insure. Now What?

4.4.1 Selecting a TPA

When an employer decides to self-insure its medical expenses, it assumes all of the financial and legal aspects of the group benefits plan. A TPA can assist with the many needs of the self-insured employer, such as claims adjudication (including member eligibility verification), claim payment services, communication with employees/members and preparation of SPDs.

There are two types of TPAs. The first type is the administrative department of a group medical insurance company. Typically the company is leveraging its fully insured medical administrative platform to deliver its services, including, perhaps, network, medical management and SLI services, to a wider potential market. The second type is an independent company that specializes in self-insurance administration. Such companies sell their administrative services and coordinate with other vendors to deliver the other services needed by self-insured plans. In this monograph, both types will be referred to as TPAs.

Selecting a TPA can be a difficult decision for an employer and one with which a consultant or broker typically assists. TPAs usually charge employers based on the number of employees. Differences among TPAs can be seen in the price and breadth of services offered as well as the qualitative differences among their service models. Key factors in selecting a TPA, and potential roles for actuaries, are outlined here.

Quantitative

- **Administrative fees.** Fees vary significantly among TPAs. Among the reasons for the variances is that some have proprietary networks and medical management services, while others fully outsource those activities, billing separately for them. Actuaries and other financial advisers can help employers understand the sources and amounts of the “fixed costs” of their plan, including the TPA’s fees, as well as advise the employer on which services may or may not be needed and/or could be purchased more efficiently from a third-party provider.
- **Networks—access.** Many plans, whether fully or self-insured, are designed around provider networks. Network access fees often vary based on the comprehensiveness of the network, with larger networks (i.e., those with more access to health care practitioners) generally costing more than smaller networks. Actuaries can help plan sponsors evaluate how well any particular network matches up with their members based on the members’ residences, enabling the plan sponsor to consider the potential cost-benefit trade-offs of larger versus smaller networks.

- Networks—discounts. Networks also negotiate pricing with hospitals, doctors, pharmacies and other health care facilities. Several payment or reimbursement methods are used when paying for services rendered in-network, such as percent discounts on fee-for-service charges, a Medicare reference price (e.g., 150 percent of the Medicare allowed charge), case rates, pay for performance, bundled payments and more. Actuaries often interpret the various payment methods in order to facilitate comparison of the expected cost savings across networks.

Qualitative

- Technology and data services. Self-insured plan sponsors will have access to their data (utilization and costs of services). As such, TPAs can differentiate their services by offering more robust reporting capabilities. Employee benefit consultants, including actuaries, can add value by helping employers mine their data in order to develop and apply insights into their members' behaviors. For example, consultants help to determine the benefit differentials between in- and out-of-network services that are needed to drive more members to use in-network services.
- Plan design flexibility. TPAs vary widely in terms of their abilities to give plan sponsors control over their plans' design. Employee benefits consultants can help plan sponsors evaluate a TPA's answers to the following questions:
 - How flexible are the processes and systems of the TPA to allow for customization?
 - What degree of customization do you desire for the plan?
 - How well does the TPA work to understand the specific needs of your employee population?
 - How prepared is the TPA to help employers achieve their employee benefits strategy?
 - How easily can quality data be extracted from the TPA to allow for benefit design evaluation?

Actuaries can assist in valuing the effects on plan utilization and costs resulting from customized benefit designs. Actuaries can also help structure plans to drive intended behaviors and specific health outcomes. A qualified TPA should be able to provide quality data for actuarial analysis to understand these utilization changes.

- Member services. With many members consuming health care benefits daily, member services are a key differentiator for TPAs. Member advocacy services, wellness tools and resources, care management programs such as pregnancy support, and access to lifestyle programs such as tobacco cessation and weight loss/management are important ways to encourage and keep members engaged in their health. The member services that TPAs offer vary. Many have in-house programs, while others allow plan sponsors to “plug-and-play” third-party solutions. These services are becoming more important for self-insured employers as they are investments in their members' health and may mitigate future health care costs as well as sick leave and retirement program costs in the long term. Actuaries can help evaluate programs and ensure performance aligns with initial guarantees.

The TPA or an outside vendor is also charged with helping members navigate their benefit plan, which helps members manage costs and ensures plan assets are used wisely. For example, the TPA should steer members with non-emergency sicknesses to their primary care providers instead of using the emergency room at a hospital where costs would be significantly higher for both the members and the employer or to seek care at a facility within their network.

- Medical management. TPAs may have nurses or other clinicians on staff who assist members with appropriateness of care. For example, a provider may insist that a member needs surgery to alleviate pain; however, the TPA's nurse may review the member's medical history and determine that therapy or other manipulative procedures may be a better first option that might both

alleviate the member's pain and save the self-insured plan from excessive expenses. TPAs may offer medical management services in addition to administrative services, or the TPA may coordinate with a third-party vendor that specializes in these services.

- Compliance. Keeping an employee benefit plan compliant is a never-ending task. Here are some questions to consider if the plan sponsor intends to transfer responsibility for compliance to its TPA:
 - How informed is the TPA about current regulations?
 - How well does the TPA work to keep the plan in compliance in light of changing regulation?
 - Is the TPA properly licensed? If not, does the plan sponsor need third-party validation to ensure the TPA is administering the plan accurately?

Actuaries can assist in helping plan sponsors understand the financial impact of implementing changes due to regulations, ensuring compliance with ACA reporting, minimum value and other requirements and ensuring contribution strategies are in compliance.

The Self-Insurance Institute of America (SIIA) has created and published a guideline TPA questionnaire to help in evaluating TPAs as business partners.⁷⁶ Many of the questions are appropriate for plan sponsors to consider and include the following:

- Reliability of the TPA. For example, how long has the TPA been in business? What is the ownership structure? How transparent are the reporting and data flow?
- Administration capabilities. Has technology amongst systems been compared? Are there any limitations, such as data transfer limits or data security, that differentiate TPAs? System descriptions? Technical specifications? System volume limits?
- Affiliations and partnerships. Does the TPA partner with A-rated stop-loss carriers? Are their preferred arrangements with case management vendors and [PPO](#) networks?
- Management and audit of claims. Is the TPA able to reprice claims based on network pricing? Are they able to audit large claims to ensure all charges are accurate and free from duplicates? Do they use cost savings initiatives such as precertification and utilization review? Networks used in repricing claims? Bill audit services? Fee negotiation? Precertification, utilization review, and so on?
- Liability protection. Does the TPA purchase an adequate level of errors and omissions (E&O), Fidelity Bond and other liability coverages? Have claims been made against any of these coverages? and limits? Other liability coverage?
- Compliance and legal. Is that TPA's staff qualified to provide legal guidance? Is an ERISA attorney on staff, or are legal matters outsourced to other professional services firms? Staff qualifications? Licensure?

Other elements to consider when selecting a TPA include:

- The clarity of the administrative services agreement;
- Whether performance guarantees are included; and
- Requirements to supply management reporting and analytics to the plan sponsor, the intermediary, stop-loss carriers and any vendors that are used.

In the end, the evaluation of the TPA falls on the plan sponsor and employer. However, actuaries can assist in quantifying the potential risks and trade-offs among TPAs. For example, actuaries may offer these services:

- Evaluating adequate liability limits in E&O and professional liability policies;
- Evaluating the trade-offs in quality of managed care services, such as network contract differences; audit, subrogation and coordination of benefits (COB) benchmarking; and use of specialty networks;
- Ensuring projected claim volumes are in line with TPA capabilities;
- Researching the reputation of the TPA in the market and with requested references; and
- Evaluating and comparing administrative fees and network access fees across TPAs.

4.4.2 Determining How and How Much to Pay Providers

The plan sponsor must also decide how best to define “allowed” charges. Most plan sponsors do this implicitly today by selecting provider network(s). In-network allowed charges are defined as what the network contract pays, and out-of-network allowed charges are often defined as “usual, customary and reasonable” or just “usual and customary.” Another approach, called [reference-based pricing](#), is emerging today. In this approach, the plan allows the lesser of billed or a scheduled amount where the scheduled amount is determined by reference to a well-defined standard. Both of these approaches as well as some specialty options are described in more detail in the next section.

4.4.2.1 Conventional Network Contracts

A self-insured plan sponsor is responsible for the evaluation of cost, access and final selection of a network, if any, to manage health care spend. This decision is made easier by using a network with which the TPA is already partnered, but plan sponsors who are actively involved in managing plan expenditures have more flexibility to select specific networks.

Not all network discounts are equal. Because the plan sponsor is responsible for the ultimate cost, it is important for employee benefits consultants and actuaries to have a general sense of how network contracts vary so that they can help the plan sponsor manage the financial risks associated with different networks.

One common option is a discounted fee-for-service contract, in which an agreed discount is applied to the provider’s regular fee schedule. The plan sponsor’s financial risk is similar to conventional fee-for-service costs but at a discounted cost level.

Physician charges based on Medicare’s allowable rates set reimbursements on a well-understood fee schedule. The plan sponsor’s financial risk is related mostly to influencing the utilization of medical services in order to control costs.

Capitated physician contracts pay physicians a monthly fee per member per month for a predefined set of services, which means the plan sponsor’s financial risk is transferred to a large degree to the physician group. The actuary needs to understand the division of financial responsibility for goods and services within the contract as well as any expected renegotiation of the fees. Goods and services outside the fee arrangement can be costly and, if left unmanaged, can introduce unexpected costs to the plan.

Physician charges based on independently constructed contracts pay a flat fee for a given set of expenses. One example would be a \$10,000 flat fee for child delivery that includes all well mother, prenatal services and postpartum follow-up, including well baby checkups, vaccinations and certain mild complications and may even include the facility charges. However, some charges, such as emergency cesarean section or significant extended hospital stays with premature infants, may not be included. Actuarial analysis can be applied to measure the risks transferred to the physician group and/or retained by the plan.

Global capitation is available in some markets. In this arrangement, the employer pays either a hospital system or a combined hospital system and medical group a fixed per employee per month fee in exchange for providing all of the medical care associated with the group. Almost all care management is turned over to the provider in these arrangements; thus, the plan sponsor’s financial exposure is largely transferred to

the provider. These agreements can be modified to include gain-sharing arrangements, allowing the employer to participate in the experience.

Facility charges can be the most complicated to deal with. Not only may discounts be misleading but fee structures, ranging from discounted fee for service and per diems to Medicare diagnosis related groups (DRGs) and episode-based fees, vary from service to service, and in the case of discounted fee for service, the charge masters from which discounts are taken may vary significantly.

Employee benefits consultants should be aware that many facility contracts contain outlier provisions to manage high dollar costs. Outlier provisions are contractual provisions that change the nature of the payment required based on the amount of billed charges. Common forms of outliers have different effects on the plan. For example, an outlier provision may:

1. Increase or decrease the discount above a certain predefined billed charges threshold;
2. Reduce the discount for all charges if the charges are above a certain predefined billed charges threshold (e.g., outlier provision that reverts to first dollar charges); or
3. Be based on the coded acuity of the episode of treatment.

If the plan sponsor purchases SLI, much of the financial risk presented by outlier provisions is transferred to the stop-loss carrier.

4.4.2.2 Reference-Based Pricing, No Network Contract

An alternative to determining allowed charges based on a network contract is to establish a schedule of allowed charges according to a reference-based maximum allowable charge or reference-based pricing (RBP; sometimes reference-based payment) structure, where the reference might be a percentage of a well-defined standard such as the Medicare allowable amount, a percentage of billed charges or perhaps a factor applied to a defined cost figure (e.g., the actual invoice cost of a device implant or a hospital's CMS-defined "cost" basis).

These arrangements are relatively new at this writing and a relatively small percentage of self-insured plan designs use these methods. However, recent large broker/consultant surveys indicate significant interest in using at least some aspects of RBP in plan design.^{77,78} Most of the current developmental and creative work relating to reference-based strategies appears to be happening in the self-insured market.

This approach presents a different set of risks to the plan. For reimbursements based on a reference-based approach, a few things are worth noting:

- No network. There is generally no network with a reference-based pricing model. The providers of care have not entered into an agreement to provide services at an agreed fee, so fee negotiations are conducted at the time of reimbursement. Sometimes, only a portion of the charges is reimbursed using the reference-based approach. For example, the plan might reimburse out-of-network charges at reference-based amounts instead of the more common usual and customary approach. Other plans may reimburse hospital charges at reference-based prices and reimburse professional fees and pharmaceuticals using other approaches.
- Balance billing. The plan participant may be subject to balance billing if the provider refuses to accept the reference-based fee as payment in full. Consequently, RBP strategies may indirectly encourage plan beneficiaries to become better health care consumers. Some states may have the authority to regulate providers on this front, which could offer some protection to plan participants in the future. A thorough understanding of the combination of regulations and reimbursement methods is needed before settling on a reference-based strategy.

- Reimbursement negotiation. To protect participants, plans often intervene to negotiate reimbursements on behalf of patients, hopefully limiting financial hardship.
- Provision for contested claims. A plan sponsor concerned about the impact of contested claims should consider establishing protections to support the legal defense of contested claims.

RBP plans create a significant role for actuaries in estimating and/or projecting the expected potential cost savings as compared to prior claims experience that may reflect, for example, a PPO network contract schedule. These plans may also affect the frequency, high case claims lag and severity of large claims and, therefore, anticipated SLI premium rates and probability of being settled in time to fall under the SLI contract basis, which is explained in section 5.3.1.2. The actuary consulting with the self-insured employer plan, TPA, or consultant can assist in demonstrating the cost savings to the plan that may result from implementing a reference-based strategy and in explaining the risks to plan participants as they lose the balance billing protections of a PPO network. Actuaries can also assist with designing supplemental benefits and services to help mitigate those potential risks. Some of those services may include assistance with the legal defense of participants who have been balance billed. Finally, actuaries can assist the plan with establishing contingent liabilities relating to the costs of those legal defenses.

Time will tell whether such arrangements lose their impact as the market matures. If these plans become more common, and both providers and plan sponsors become accustomed to the intricacies of managing claims under these types of arrangement, the long-term cost impact may be diluted.

4.4.2.3 Specialty Networks

To complement the network-based or reference-based pricing plan, specialty networks can be added to manage certain diseases or conditions. For example, transplant networks or dialysis networks constructed to provide deeper discounts at “centers of excellence” in exchange for higher volume have become commonplace in self-insured plans. Actuaries can assist in evaluating the impact of such networks on expected costs.

4.4.2.4 Fully Insured Carve-Outs and Specialty Networks

Fully insured **carve-outs** may be available for conditions like transplants, though some states will not permit them to be offered. Most states require that a fully insured transplant carve-out product be structured as an indemnity product. The fully insured carve-out indemnity benefit covers the costs associated with a treatment, procedure or condition in exchange for a flat per employee per month fee. This can be a helpful tool to manage the high cost of transplants. Dissecting covered versus noncovered services in this arrangement can be challenging. It is particularly important to review carve-out coverage documents alongside SLI policies to insure any gaps are identified, understood and coverage adjusted to close the gap, if needed. Actuaries can help value these programs and ensure the coverage is understood and the impact on expected costs are accounted for.

4.4.3 Selecting a Third-Party Pharmacy Benefit Manager

Carving out the management of pharmacy benefits has become common. A pharmacy benefit manager (PBM) can help manage drug spend for the plan but comes with some trade-offs.

- The PBM may manage cost and to some degree utilization in the drug spend of the plan, but it only manages drugs filled at a pharmacy. Drugs billed and administered by or within a facility will not be managed by the PBM. Actuaries can help ensure the specific services being managed are accounted for in the expected claim spend.
- Splitting the management of health care delivery among multiple administrators (in this case, a medical TPA and a PBM) may come at the cost of understanding the full treatment plan for an individual participant and, therefore, hinder coordination of care management.

- Financial arrangements need to be understood. Pharmacy reimbursement is layered with complex funds flow, cost trade-offs, rebates and incentives to drive utilization toward certain drugs. A self-insured plan sponsor will need significant consultation from pharmacy experts to understand the full impact of their pharmaceutical spend. Actuaries can help employers better understand the costs and cash flows.

Carving out a PBM may limit the plan sponsor's options elsewhere. For example, SLI offered by some larger integrated carriers may not cover retail pharmacy managed by a PBM. Additionally, the employer may be responsible for combining the data from the TPA and PBM when providing data to other vendors like stop-loss carriers.

4.5 Self-Insured Cash Flow

Having discussed the services performed by the various vendors with which the self-insured plan might contract, actuaries need to understand how funds actually flow between the employer, the TPA, the network, the PBM and the health care practitioners who provide services to members. We begin with a discussion of the "lag" between the dates a claim is incurred and when it is paid. Then we provide an example illustrating hypothetical cash-flow timing.

4.5.1 Lag Between Incurred and Paid Claims

The lag between the dates claims are incurred and paid is well covered in the literature.⁷⁹ Here we highlight two of the causes of variability in lag: the type of claim and its complexity.

- Type of claim. Lag for medical and retail pharmacy claims differ significantly. Retail pharmacy claims are, for the most part, auto-adjudicated at the point of sale. This means that, when a member seeks a prescription at the pharmacy, the pharmacy determines the plan design and collects the appropriate copay or coinsurance at the point of sale. The pharmacy relays the utilization information "in real time" to the PBM who, in turn, invoices the client at its negotiated ingredient cost less the copay or coinsurance. As such, pharmacy claims have very little lag and do not require significant effort when reserving for outstanding liability.
- Complexity of claim. Though more complex than retail pharmacy claims, many medical claims are also auto-adjudicated, though not generally at the point of sale. More complex medical claims—for example, surgeries—may require additional steps such as claim reviews and network repricing to ensure the appropriate amount of expense is invoiced to the employer. Complex surgeries could take many months (six to eighteen, for example) to be paid from the time of incurral. This lag in high-cost services creates a budgeting issue for employers and the actuaries that support them. Many employers will purchase SLI to protect against high-cost claims, and depending on the stop-loss policy's **contract basis**, the lag between incurred and paid claims may cause a claim not to be covered by the stop-loss policy.

Additional lag concerns involve infrequent changes in technology and coding. For example, it is important for an actuary to pay special attention to claims lag when a TPA is changing claims systems or adopting new claims coding systems.

4.5.2 Flow of Funds

Typically, invoicing of claims is handled on a daily (large employers) or weekly (small to medium employers) basis. It is common for the employer to establish a trust or bank account with the TPA so that funds can be withdrawn as needed. Many TPAs specify a minimum account balance in order to assure that funds are sufficient when claims are due. This level of funds can be strained if the employer's experience is worse than expected (either in the short term or due to one or more members having catastrophic claims).

Therefore, the TPA, with the employer's permission, will watch the employer's bank account and will request a "cash call" in order to ensure funds are adequate.

For a variety of reasons, including the size and complexity of the claim, the lag in payment to providers can vary from a few days to several months. In addition, depending on the member's responsibility, the provider may need to chase the member for his or her portion of expenses, which could also take several months.

4.6 Self-Insured Plan Management

4.6.1 Managing Costs Through Plan Design

Compared to fully insured plans, self-insured employers have more plan design flexibility and can avoid having to cover state-mandated benefits. If plan design is defined as a list of covered services together with associated member cost sharing, the self-insured employer can tailor the list and the cost-sharing provisions to fit their needs.

The ACA's minimum value requirements present a defined limit to the plan design creativity of the self-insured employer. TPA capabilities in administering benefits and adjudicating claims may also limit plan design creativity, though an employer can always shop for a new TPA.

If the plan design is not carefully considered and well grounded, unintended consequences can arise. Actuarial expertise can help enable the attainment of stated goals. One useful reference paper for goal setting and a discussion in more detail is "A Model Self-Funded Plan" by the SIIA.⁸⁰ A summary of key points from that paper will prove beneficial:

- Ensure the consumer is financially involved in all decisions relating to his or her care to the extent that the consumer can exercise control over his or her consumption of services.
- Incorporate inflation adjustments automatically.
- Take advantage of negotiated price concessions from providers.
- Be simple in concept and communication.
- Do not micromanage specific areas of utilization.

Like fully insured plans, self-insured employers may choose to design their plans around a type or theme. For example:

- Consumer-directed health plans (CDHP). In these plans, beneficiaries pay out of pocket up to a relatively high deductible for all services excluding preventive care. The concept behind CDHPs is to shift first dollar costs to plan beneficiaries in the hopes that they will be incented to become better consumers and users of care in the system. An integral part of such plans is information that enables members to review the appropriateness of treatment options, the efficiency of potential providers, answer general health questions and adopt healthy lifestyles.

A special type of CDHP is the high-deductible health plan (HDHP). For calendar year 2018, the IRS defines HDHPs as health plans with an annual deductible that is at least \$1,350 for individual coverage or \$2,700 for family coverage, and the annual out-of-pocket expenses (deductibles, copayments and other amounts, but not premiums) do not exceed \$6,650 for individual coverage or \$13,300 for family coverage.⁸¹ They can be paired with health savings accounts (HSA) that can be used by covered members to save for future care-related expenses.

- Value-based care. This system includes benefits designed with special cost-sharing provisions for services deemed value-added. The cost sharing may be a lower copay or coinsurance relative to other

benefits or may be free of member cost sharing. Typically, plans built for value-based care are designed around conditions where the value-added services are those clinically identified to help manage or treat chronic conditions. The general idea is to make it easier for members to afford the care needed to manage or treat their conditions and, in turn, reduce expensive and avoidable costs when the conditions are not managed over the longer term.

- PPO networks. With these plans, participants can choose from a broad panel of doctors and hospitals. Providers within the network, called "preferred providers," charge contracted rates with no balance billing to the plan beneficiary. Compared to services delivered out-of-network, plan beneficiaries pay lower cost sharing.

Tiered networks. In-network providers are classified into different benefit tiers based on contracting in this system. The goal is to steer utilization to providers with which the network has more favorable contract terms. As an example, if a member goes to facility A, which is in the inner and most favorable tier, for a knee surgery, they might pay a \$500 copay; but if they go to facility B, which is in the outer and less favorable tier, they might pay a \$750 deductible and 20 percent coinsurance after that deductible. Tiered networks can save both the member and the employer money, while simultaneously not prevent access to a wider network of facilities.

Health care systems themselves often design their employee benefit plans around a tiered network. The tiered network design is used to encourage employees to use the plan sponsor's health care system. In this design, health care systems often choose not to bill charges to their plans for delivery of services to their plan beneficiaries (that is, employees of the health care system and their family members) because the plan sponsor bears the cost regardless of whether or not the plan pays the health care system. In this sense, the health care system offers a 100 percent discount to its employee benefit plan if its plan's beneficiaries seek care from the health care system that employs them (or their family member). Claims incurred by the health care system's plan beneficiaries at a hospital that is part of the health care system are often referred to as "hospital domestic" claims.

- Narrow networks. In one final option, a provider network offers access only to a limited number of providers in return for more favorable contracting. Like tiered networks, the goal is to drive utilization to certain providers. However, a narrow network is different in that there is not an in-network benefit outside the limited set of providers. Thus, there is no separate benefit to distinguish between the tiers.

Within these themes, the self-insured employer retains opportunities to customize and to act quickly in response to changes in member behavior or external conditions. They do not have to wait for an insurer to develop or adjust a value-based care or narrow-network plan. They can create these themselves, which is a growing trend in the market.

4.6.2 Managing Costs Through Medical Management

Medical management using clinical resources is another cost-management strategy available to self-funded plan sponsors. Typical approaches include preauthorization or precertification of hospital stays, chronic disease management and pharmaceutical reviews. Highlighted in the following pages are a few key considerations for the self-insured plan sponsor because they are, by necessity, more involved in evaluating and implementing such programs. This is because they directly incur the expenses of delivering the programs and realize the medical cost savings of the programs' successes.

Plan sponsors have three general areas to consider when evaluating medical management approaches:

- Finding the participants who can be most effectively impacted;
- Managing participation and compliance via incentives; and

- Ensuring the quality of resources applicable to the specific conditions, procedures or therapies being managed.

First, there are many approaches to finding participants in need of management. They range from clinical staff reviewing medical records and claim files to predictive modeling based on population health statistics. Actuaries can assist in maximizing the efficacy of these approaches. For example, a combination of predictive models to identify high-risk claimants could be used to reduce the volume of individuals whose files are reviewed by clinical staff.

Second, incentives need to be provided to ensure effective management. Benefit plan design incentives are discussed elsewhere, but other incentives may exist. Employers may, for example, contribute additional dollars to employees' HSA accounts or vary contribution strategies based on compliance with tobacco cessation programs. Some well baby programs might provide the parent a gift certificate to infant clothing stores or grocery stores. Actuaries can help evaluate the success of such incentives and measure the ultimate impact on claim costs.

Third, provider quality varies significantly. Provider assessment requires evidence across a large population to substantiate the results. It can be difficult to measure the impact with or without cost-containment programs due to the difficulty creating a controlled environment. Actuaries can assist in identifying statistically significant findings that can be used to optimize results.

While all three of these components will impact the efficiency of medical management programs, all three must be integrated into the day-to-day operations of the plan. For example, some external vendors might be highly effective when they identify a high-risk claimant, but if they are too separated from the claim data, the results may not be as effective. Actuarial input is critical here given the complexity and interplay of each of these components.

4.6.3 Contribution Strategy

A contribution strategy is a plan of action to fund health care benefits for a population over a period of time. A typical contribution strategy involves a combination of employer and employee funds. It may be designed as a financial element of an overall strategy to encourage plan beneficiaries to use in-network benefits, for example, or adopt healthier lifestyles.

There is no one strategy that applies to all employers when developing a contribution strategy, as each employer's situation is likely to be different. Thus, it is important for employers, with the assistance of an actuary or benefits consultant, to analyze their current situation and needs and develop a contribution strategy around them.

Most contribution strategy concepts apply to both fully and self-insured employers. Approaches include establishing rating tiers (e.g., one, two or three tiers), contributing a fixed dollar amount or fixed percentage toward the cost, deciding whether and at what cost to cover dependents and establishing incentives. However, as with plan designs, self-insured employers are allowed more flexibility in establishing contributions. To demonstrate, we will work through a simplified example and compare fully insured and self-insured contributions.

Assume an employer wants to offer two plans, plan A and plan B, to their employees under a fully insured arrangement in which they transfer all claims risk to an insurance company. Here the cost is the fixed premium charged by the insurance company. The premiums are \$500 for plan A and \$400 for plan B per employee per month (PEPM). For its contribution strategy, the employer decides to cover 80 percent of the insurance cost with members responsible for the remaining 20 percent. Table 4.6.3.1 shows the employee and employer contributions.

Table 4.6.3.1

Employee Contribution Example—Fully Insured

Costs	Plan A	Plan B
Fully insured premium PEPM	\$500.00	\$400.00
– Employee cost PEPM	\$100.00	\$80.00
= Employer net cost PEPM	\$400.00	\$320.00

Now assume this employer wants to offer the same two plans under a self-insured arrangement. There is not one single fixed expense. Instead, there are several fixed costs, such as TPA fees and stop-loss premiums, as well as variable costs, including medical and pharmacy expenses, for the employer to consider. Assume the expected variable claims costs for plans A and B are \$400 and \$320 per employee per month (PEPM), respectively, the TPA fee is \$30 PEPM and the stop-loss premium is \$20 PEPM. In line with the fully insured example, the employer may choose to add these costs up and use the resulting “premium equivalent” as the cost basis in the contribution formula. Table 4.6.3.2 shows the effects.

Table 4.6.3.2

Employee Contribution Example—Self-insured

Costs	Plan A	Plan B
Expected variable costs PEPM	\$400.00	\$320.00
+ Fixed costs PEPM	\$50.00	\$50.00
= Premium equivalent PEPM	\$450.00	\$370.00
– Employee cost PEPM	\$90.00	\$74.00
= Employer net expected cost PEPM	\$360.00	\$296.00

However, employers are not required to do this. They have the freedom and flexibility to decide what is included in the cost basis of the contribution formula. The variable costs shown in the table reflect expected claims (i.e., the mean of the claims distribution). The employer could have chosen the claim amount at the 75th percentile of the claims distribution, thereby raising employee contributions. The employer could also have chosen not to include the TPA fee or stop-loss premium in the cost basis, thereby lowering employee contributions.

Regardless of what is included in the cost basis and at what level, the employee cost is fixed each month and the employer’s cost varies from month to month. Thus, an employer, with the assistance of an actuary or benefits consultant, will need to plan ahead in order to minimize risks to cash flow.

4.6.4 Budgeting and Reserving Considerations

4.6.4.1 Budgeting For and Projecting Claims

Budgeting for and projecting claim expenses are a core service that actuaries provide to self-insured employers. As the employer is only liable for its portion of expenses, budgeted costs are typically based on the plan’s “paid” dollars only, which is allowed costs less member cost sharing including copays, coinsurance and deductible. As discussed, once an employer’s costs are budgeted for, it typically shares the total expenses with its members in the form of employee/member contributions.

The general steps of the process used to establish self-insured rates are as follows:

- Request data from the TPAs.
- Gather data and review for reasonableness. Discuss observed data anomalies with the TPA.

- Develop initial estimates using a projection methodology with adjustments for enrollment changes, benefit changes, network/provider reimbursement changes, large claims, trend, administrative fees and SLI.

A typical projection methodology is summarized here:

- Determine how many years of historical medical and pharmacy experience to use as the base period. Based on the size of the employer, the actuary may use one or several years of experience in order to develop credible results. Generally, more weight is placed on the most recent complete claim year. Changes in administrator or network may make a particular year's claim experience less useful, so weights should be adjusted to reflect the expected future environment during which claims will be incurred.
- Make credibility adjustments as needed. Most claims experience is not fully credible. However, experience can be blended with an appropriate benchmark rate to determine an average expected rate. A broker, TPA or stop-loss carrier may be able to provide an appropriate frame of reference.
- Include a provision for dampening the effect of particularly large claims on the projection. If the employer has purchased SLI, claim payments above the stop-loss deductible can be removed from experience and the stop-loss premium added in. If the employer has not purchased stop loss, then the actuary might remove any claims that exceed 10–15 percent of expected claims and replace the actual large claims with an expected value, sometimes called a pooling charge.
- Complete the historical paid claims information to reflect a true incurred basis.
- Divide the costs of the base period by the number of members in the base period to convert the base period costs to a PMPM basis.
- If benefit changes occurred between the base period and the projection period, adjust for plan changes using a continuance table or actuarial value calculator.
- Network changes need to be accounted for. Be particularly sensitive to possible shifts in in-network and out-of-network claims as a result of changes in network and contribution strategy.
- Project the base period claim costs forward to the projection period by applying annual medical and pharmacy trend assumptions. Note that large claims tend to have a higher proportion of facility-based expenses that may require some adjustment. Additionally, changes in the underlying benefit plan may affect the applied trend rate as cost sharing shifts to the employee.
- Finally, add the projected medical and pharmacy PMPM expenses and convert to a PEPM value based on the covered member-to-employee ratio. To this amount, add fixed fees such as administration and stop loss to create one value that includes both the fixed and variable components of expenses.
- If current rates exist, compare the new rates to the current rates and determine an overall rate increase or decrease.

Actuarial analysis is a must-have in evaluating the development of expected claims. The moving pieces described earlier are a subset of the major drivers of projecting claims, and a thorough understanding of all of the contributing changes both within and external to the plan is required to limit financial surprises.

4.6.4.2 Reserving for Outstanding Liabilities

Along with budgeting, the employer would need assistance in reserving for known and unknown losses. Employee benefit consultants may refer to these outstanding liabilities as reserves, incurred but not report (IBNR), or incurred but not paid (IBNP). Each of these terms could have a different meaning for an insurance company but are often considered synonymous when working with self-insured plan sponsors. Actuaries have several [methods](#) available to them to support the self-insured employer in this regard.⁸² Most methods consist of evaluating lag patterns, historical loss ratios or historical incurred claims on a monthly basis. A simple reserve consists of projecting ultimate incurred claims and deducting those claims already paid or projected to be paid at the valuation date. The reserving methods selected may vary, in part due to the type of self-insured claim (medical, pharmacy, dental, vision, life, disability, etc.) and the amount or credibility of the data. When selecting a method or methods, actuaries should remember that much of

the theory behind these methods was constructed in the context of entities that are much larger than a single self-insured plan and, therefore, subject to less volatility than a self-insured plan might experience. This may influence the choice of reserving method.

4.6.5 Risk Mitigation and Risk Transfer

The plan sponsor of a self-insured health plan assumes the responsibility to administer, fund, account for, design benefits for and ensure compliance of the employee benefit plan in addition to assuming the financial and legal risk of the plan and decisions made in the plan's administration. These are significant risks, but they can be managed if the plan is structured properly and the appropriate support services are acquired to administer the plan. Actuarial support is a critical component of managing these risks.

4.6.5.1 Benefit Plan Design

Different benefit plan designs may introduce risks to be managed. Among them are CDHPs, which may give rise to:

- Deferred cash flow, as employee deductibles need to be satisfied prior to employer responsibility (except for routine preventive care)
- Leveraged trend due to fixed deductibles
- Compliance risk if the CDHP qualifies as an HDHP under IRS regulations

Self-insured plans may also need to consider risks arising from other areas:

- Plan designs that include both fully insured and self-insured options may present opportunities for selection due to benefit coverage, contribution cost to the employees and perceived utility of the plan options when employees choose between them. Depending on how the fully and self-insured options are structured in relation to one another, one may experience favorable selection and the other adverse selection. As has been stated elsewhere—but is important enough to repeat—fully insured plan designs have boundary conditions created by the ACA and various state regulatory restrictions. Self-insured plans have fewer constraints.
- Coverages can be tailored beyond what current regulations require for fully insured plans.

In general, benefit plan design considerations are well discussed and many resources exist to assist the health actuary in developing well-grounded solutions.⁸³ Actuaries can help self-insured plan sponsors design plans that limit risk exposures due to plan design.

4.6.5.2 Understanding the Financial Risks

Self-insuring exposes the employer to the risk that claims vary from what is expected. Over longer periods of time, variability is reduced and results are expected to be predictable on average. During shorter periods, however, results may vary significantly from the expected, which may create cash-flow challenges for the plan sponsor.

By choosing to self-insure, the plan sponsor assumes the financial risk of funding the plan well enough not only to pay ongoing claims but also to endure unforeseen variations in liability and cash flows. Careful planning and consideration of all aspects that drive volatility in the financial adequacy of the health plan is required to ensure plan solvency.

A primary mechanism for managing the financial risks of self-insuring is SLI, which transfers some of the plan's financial risk to an insurance company. While it is discussed in greater detail elsewhere, it is worth noting key aspects here:

- **Specific stop-loss insurance** protects the plan from large single medical claim events.

- **Aggregate stop-loss insurance** protects the plan sponsor from an accumulation of adverse medical events in total over the entire coverage period.

This protection is achieved by reimbursing the plan for risks assumed in a manner similar to how reinsurance protects an insurer from the risks it faces. The key here is that stop loss is not an insurance product that covers an individual. Instead, stop loss reimburses the plan for losses it has already paid.

Some important aspects of the financial risks that plan sponsors need to manage are outlined in the following pages.

Natural/Random Claim Volatility

Even with specific stop loss in place, a single catastrophic claim could represent 5 percent to 15 percent of the self-insured plan's expected claim spend. A second such claim could be devastating. SLI can help mitigate this risk.

Timing of benefit payments may still be unacceptable. SLI, if it is purchased, reimburses self-insured plans for claims they have already paid. This means the plan may have to pay a large expense and await reimbursement, which could negatively affect the plan sponsor's cash flow. Some stop-loss products have features available to address this concern.

Finally, adequate reserves are a critical component to ensuring plan solvency. Actuarial support is necessary to ensure adequate reserves.

Drivers of Cash-Flow Volatility

Understanding the expected timing of claim payments is critical to managing the liquidity of self-insured plans. Many network contracts have timely payment clauses that provide significant disincentive to late payers (e.g., loss of a contracted facility discount). The items discussed in this section can have an impact on total cost, random volatility of claims and the ultimate liability but are discussed here purely from a cash-flow perspective.

- **Nature of the claims:** Certain diagnoses develop claims at different rates. For example, chronic conditions may incur claims at high but stable rates each month. Acute conditions and accidents may occur at any time and have a significant impact on the timing of claims.
- **Hospital contracts:** As explained in section 4.4.2.1, some hospital contracts pay providers using DRGs, which is a reimbursement method in which the amount payable cannot be fully determined until discharge. Other hospital contracts pay providers on a discounted fee-for-service basis, so payments are made on a pay-as-you-go basis. Clearly, then, hospital contracts can affect cash-flow timing. Timely payment provisions in some network contracts can also drive the timing of cash flow.
- **Third-party liability:** Accident claims and claims that give rise to third-party liability may be subrogated. The plan sponsor will pay the claim and seek recoveries from the third party, which may take years to be settled.
- **Network access:** A narrower network may result in a higher occurrence of out-of-network claims, which may take longer to be presented.
- **Choice of TPA:** Internal processes and systems of TPAs vary and can have a significant impact on the timing of claims processing. Performance guarantees and service-level agreements can help mitigate concerns here.

Newly Self-Insured Plans

Cash flow of newly self-insured plans is substantially different from the cash flow of longer-term self-insured plans.

When transitioning from fully insured to self-insured plans, claims prior to the termination date of the prior fully insured plan are covered under the fully insured contract. Therefore, a lull in claim payments will arise in the first few months of the self-insured plan. Typically, claim payments will begin to emerge in the first month at a small percentage and ramp up significantly in the second, third and fourth months. Marginal increases in claims volume could be seen through the end of the first year.

During this lull in claim volume, excess contributions and cash flow can be used to build an actuarially appropriate reserve. This lull is generally adequate to build a sufficient reserve, but defining a reserve specific to a particular benefit plan requires a thorough understanding of all of the issues that drive an employer's risk appetite.

Claims in subsequent years will exhibit some seasonality depending on the benefit plan. Deductibles and maximum out-of-pocket limits can have a significant impact on cash-flow timing as most benefit plans reset the accumulations of the deductible and maximum out-of-pocket limit annually, and many plans require plan beneficiaries to pay a coinsurance between the time they exceed the deductible and when they meet the maximum out-of-pocket limit. This seasonality can cause cash flow to be better (i.e., lower claims) at the beginning of a year and worse (i.e., higher claims) as the end of a year approaches, but a handful of catastrophic events can alter the pace at which cash flow deteriorates.

Catastrophic Events

As mentioned earlier, catastrophic claims introduce significant volatility into both overall variation in liability of the plan and cash flows experienced by the plan.

The impact of catastrophic claims on an employee benefit plan is influenced by several factors:

- Purchase of aggregate and specific stop-loss insurance;
- Network contracting structures, including, for example, outlier provisions, case rates and fee for service;
- Benefit plan design including, for example, incentives to use “centers of excellence” with disease-specific network contracts;
- Precertification and preauthorization; and
- Case management and disease management to manage treatment plan compliance.

Understanding the likelihood of catastrophic events as well as their potential magnitudes is critical to effectively managing the financial risk in a self-insured plan. Although many options exist to manage the risk, actuaries can assist in ensuring employers secure adequate protection when managing the risk is not enough.

4.6.5.3 Risk Transfer Through Use of Stop-Loss Insurance

SLI is a key tool for transferring some of the financial risks assumed by a self-insured plan. There are two basic types of coverage: specific and aggregate.

Specific stop loss is used to protect the plan against catastrophic losses it may experience during the stop-loss **policy year** with respect to any one plan beneficiary. The self-insured plan, for example, might purchase specific stop loss at a \$50,000 **specific deductible**. The plan is responsible to pay all losses, and the stop-loss policy reimburses the plan for its losses in excess of \$50,000 for each individual who, in total for the policy year, exceed \$50,000 in plan benefits.

Aggregate stop loss is used to protect the plan in the event the plan's total losses during the stop-loss policy year are extremely high. The stop-loss carrier may, for example, estimate that the plan's expected claims are \$1 million and offer to cover the plan's losses in excess of \$1.25 million (i.e., 125 percent of expected claims), which is called the **aggregate attachment point**. The plan would be responsible for paying all losses, and the stop-loss policy would reimburse the plan for any losses that exceed the aggregate attachment point, subject to a minimum called the **minimum aggregate attachment point**. As illustrated in Table 4.6.5.3.1, aggregate stop loss works hand-in-hand with specific stop loss so that losses in excess of the specific stop-loss deductible do not accumulate toward the aggregate attachment point.

Table 4.6.5.3.1
Stop-Loss Reimbursement Illustration

	Plan A	Plan B	Plan C
Stop-Loss Deductibles			
(1) Specific stop-loss deductible	\$50,000	\$50,000	\$50,000
(2) Aggregate attachment factor	\$1,250	\$1,250	\$1,250
(3) Expected employee-months	3,000	3,000	3,000
(4) Expected aggregate attachment point = (2) x (3)	\$3,750,000	\$3,750,000	\$3,750,000
(5) Minimum aggregate attachment point = 95% x (4)	\$3,562,500	\$3,562,500	\$3,562,500
Actual Loss Information			
(6) Total losses	\$3,600,000	\$3,900,000	\$4,200,000
(7) Specific stop-loss reimbursements	\$60,000	\$110,000	\$240,000
(8) Eligible aggregate losses = (6) - (7)	\$3,540,000	\$3,790,000	\$3,960,000
Aggregate Stop-Loss Reimbursement			
(9) Actual employee-months	2,700	3,000	3,300
(10) Actual aggregate attachment point = max[(5), (2) x (9)]	\$3,562,500	\$3,750,000	\$4,125,000
(11) Aggregate reimbursement = max[0, (8) - (10)]	\$0	\$40,000	\$0

All three plans receive reimbursements under the specific stop loss, but only Plan B receives a reimbursement under the aggregate stop loss. Were it not for the minimum aggregate stop-loss attachment point, Plan A would have received a reimbursement under the aggregate stop loss. Plan C receives no reimbursement under the aggregate stop loss because its eligible aggregate losses after recognizing specific stop-loss reimbursements fall below the aggregate attachment point.

Stop-Loss Carrier Considerations

The SIIA has created and published a guideline stop-loss carrier questionnaire to assist plan sponsors, brokers and TPAs in understanding similarities and differences among carriers.⁸⁴ Much of the questionnaire focuses on these areas:

- Financial stability indicators, such as carrier financial ratings, years in the business and block size;
- Managing general underwriters versus direct writers and their flexibility in making claim and underwriting determinations;
- Data requirements for underwriting and claim payment;
- Contractual provisions, terms, conditions and limitations;
- Claim administration capabilities, including timeliness of claim decisions; and

- Compliance and legal issues

In the end, the evaluation of the stop-loss carrier falls on the plan sponsor/employer. Actuaries, however, can assist in quantifying the potential risk and trade-offs between carriers. Services actuaries may provide include the following:

- Evaluating adequate aggregate and specific limits under the policy;
- Evaluating the potential trade-off in policy terms, conditions and limitations; and
- Evaluating the accuracy and appropriateness of policy premiums.

Not all stop-loss carriers are the same. Employers should assess a carrier's reputation in the market as well as its financial stability. The latter is rarely an issue when it comes to the ability to pay for claims but can manifest itself in unexpected rate increases and arduous processes around claim reimbursement. Actuaries can provide guidance around the financial stability of carriers and the impact of claim denials on projected costs.

Potential Gaps in Coverage

Early in the development of SLI coverages, significant **benefit plan gaps** existed between SLI and the underlying plan document. As the market has matured, many of these gaps have been closed; however, there remain some areas where special attention should be paid.

Like most other insurance, SLI policies are contracts of adhesion. Provisions in the policy are typically not negotiated as they represent a form filed with insurance departments of the state in which the plan sponsor is situated. Careful review of the SLI policy alongside the provisions in the plan document is recommended to avoid gaps in coverage. Key areas to review include experimental and investigational definitions; clinical trial definitions; coverage of claims outside the U.S.; usual, reasonable and customary definitions; Medicare eligibility for end-stage renal disease claimants or covered retirees; coordination of benefits and subrogation provisions; coverage of other administrative fees such as legal fees or network access fees; cost containment vendor fees; and state surcharges and assessments.

Stop-loss policies are usually annually renewable, meaning that the carrier may have the right to terminate the policy at renewal with 45–90 days' written notice. For a plan sponsor with significant ongoing or known risks, this could create a gap at renewal.

Another gap may occur due to the lag between when claims are incurred, paid and reported to the stop-loss carrier due to the contract basis, which is explained more fully in section 5.3.1.2. Timing gaps may also arise due to reporting requirements, proof of loss and time limitations under the stop-loss policy.

Stop-loss policy terms with respect to known losses can also create significant gap(s). Stop-loss insurers usually require self-insured plans to provide information, a **disclosure** statement, about their covered members with known losses. Based on this information, the stop-loss carrier may offer to cover the plan but only if a higher specific deductible, called a lasered deductible, is applied to the members with known losses. To be clear, members with known losses are covered by the plan the same way as any other member, but the plan's losses due to such members are covered differently by the stop-loss policy. Of course, "known losses" are better characterized as situations with a high probability of a loss occurring. The advantage of a **laser** from the plan sponsor's perspective is that it need not pay for a "known loss" that may not occur. In addition, the plan sponsor would not incur the stop-loss carrier's expense and possibly its risk charges in respect to any known losses.

The onus is on the policyholder to properly disclose known losses. Carriers often require the disclosure of claimants who meet certain criteria, such as those who:

- Have received specified diagnoses (i.e., particular ICD-9 or ICD-10 codes),
- Have incurred claims in excess of 50 percent of the requested deductible,
- Have large pending claim amounts, or
- Are on a transplant waiting list.

Most carriers require the signature of the plan sponsor on the disclosure statement with an attestation that, to the best of their knowledge and after reasonable effort, the plan sponsor has informed the carrier of any known risks. It is currently common industry practice to require this signature only when a policy is first issued. At renewal, carriers may require a signature on a schedule of insurance or renewal application acknowledging the original disclosure requirements and that any additional known risk at renewal has been disclosed. In extremely rare instances, claims may be denied for failure to disclose the risk. Diligence and care on this front can avoid potentially costly gaps in coverage.

Most stop-loss policies are designed to minimize gaps between the underlying plan document and the SLI. With aging plan documents and/or ambiguous plan document wording, however, coverage gaps can and do arise, albeit infrequently. It is highly recommended that the plan sponsor engage an experienced consultant to avoid potential surprises.

Seeking Competitive Bids

Benchmark expected claim costs could be acquired by seeking competitive bids with several reputable carriers. Inherent in the aggregate and specific coverage quote is the **aggregate factor** the carrier quotes. Average expected costs could be estimated by combining several quotes. Variation across carriers can serve as an approximation for expected volatility. Care must be taken to recognize that aggregate factors are not an estimate of expected claims; they are an estimate of the aggregate attachment point, which is usually higher than expected claims. In addition, the plan must budget for incurred costs, and aggregate factors were estimated based on the contract basis quoted. Finally, other marketing considerations may be reflected in the aggregate factors, so they may represent the carrier's best effort to compete for the business, not the carrier's best estimate of the attachment point. Actuaries can help analyze bids and compare differences in expected claim cost projections.

4.7 Other Actuarial Support for the Self-Insured Plan

As we have seen, when an employer decides to self-insure its employee benefit plan, many elements of providing the plan that are bundled inside a fully insured carrier contract become direct responsibilities of the employer/plan sponsor. Many of these items have an actuarial component and hence, benefit consultants and actuaries advising that plan sponsor should pay special attention to those areas. Technical analysis of claims projections, budgeting, risk allocation, risk management, plan design, claims control features (networks or allowed claim charges) and generally anything that is considered proprietary by a fully insured carrier become direct realities to the self-insured plan. In this section, we look at several special topics where actuarial perspectives and input are particularly useful, or even required by regulation, that have not been addressed in much detail thus far.

4.7.1 COBRA and COBRA "Premiums"

COBRA premiums are derivable directly from fully insured premiums. The self-insured employer plan does not have the luxury of having an all-inclusive cost provided to them. It must derive them somehow from the various cost elements that have been unbundled from inside a fully insured premium. The IRC and ERISA (section 604 as modified by COBRA) describe two methods for determination of the "applicable

premium” to be paid by a COBRA participant of a self-insured health plan. The IRS code states in 26 U.S. Code § 4980B section (f)4:

- (B) **Special rule for self-insured plans**— To the extent that a plan is a self-insured plan—
- (i) **In general**—Except as provided in clause (ii), the applicable premium for any period of continuation coverage of qualified beneficiaries shall be equal to a reasonable estimate of the cost of providing coverage for such period for similarly situated beneficiaries which—
- (I) is determined on an actuarial basis, and
- (II) takes into account such factors as the Secretary [of the Treasury] may prescribe in regulations.
- (ii) **Determination on basis of past cost**— If a plan administrator elects to have this clause apply, the applicable premium for any period of continuation coverage of qualified beneficiaries shall be equal to—
- (I) the cost to the plan for similarly situated beneficiaries for the same period occurring during the preceding determination period under subparagraph (C), adjusted by
- (II) the percentage increase or decrease in the implicit price deflator of the gross national product (calculated by the Department of Commerce and published in the Survey of Current Business) for the 12-month period ending on the last day of the sixth month of such preceding determination period.
- (iii) **Clause (ii) not to apply where significant change**— A plan administrator may not elect to have clause (ii) apply in any case in which there is any significant difference between the determination period and the preceding determination period, in coverage under, or in employees covered by, the plan. The determination under the preceding sentence for any determination period shall be made at the same time as the determination under subparagraph (C).
- (C) **Determination period**— The determination of any applicable premium shall be made for a period of 12 months and shall be made before the beginning of such period.⁸⁵

Take note that neither the Department of the Treasury nor the IRS has ever issued regulations prescribing “factors to take into account” as suggested in (B)(i)(II) above.

Numerous questions abound, with the need for “actuarial basis” an important feature directly or indirectly implied from this regulatory language or logical interpretations. Many practicing actuaries have taken the position that the ideal basis for a self-insured plan COBRA premium is to develop a fully insured “premium equivalent” cost for the self-insured plan, but that introduces additional questions. In particular, how should the following elements be accounted for in estimating the fully insured premium equivalent?

- Specific and/or aggregate stop-loss costs
- The aggregate stop-loss corridor, that is, the difference between the aggregate attachment point and expected claims
- Stop-loss contract basis
- Terminal liability, or the plan’s liability for losses paid after the stop-loss contract has expired, and its related expenses
- Reserves for losses incurred but not paid

A fully insured equivalent suggests that a fully “incurred” contract basis be used.

At the very least, an actuary requested to determine appropriate COBRA base premiums for a coming determination year would need the plan’s claims data (both paid and incurred) for the review period on which the calculations are based, information on all applicable administrative and vendor costs, information relating to any stop-loss premiums, parameters and reimbursements and projected covered lives for the coming determination period. Essentially, the actuary needs to perform a projection of the total cost of the plan for the coming determination year and allocate those costs across the different types of covered lives or tiers (employee, employee plus spouse, etc.).

Note that use of the “past cost” approach is limited to situations in which there is no “significant” change in covered persons and benefits and where actual medical inflation of the plan does not exceed the applicable national index. A technical interpretation of the requirements suggests an actuarial role is required for almost all COBRA premium determinations. Nevertheless, the “past cost” approach is often used as a shortcut by plan administrators to avoid the necessity of a more stringent determination of the applicable COBRA premium.

The actuary consulting with a self-insured employer plan must be aware of the methodologies and issues related to deriving a legally defensible COBRA premium applicable to that plan’s potential COBRA beneficiaries, despite the pressure to make the chargeable premium as large as possible in order to discourage extended coverage by individuals generally believed to be higher in cost than the average plan participant.

4.7.2 Determining the ACA Minimum Value for Self-Insured Plans

The ACA introduces numerous concepts and requirements for employer health plans that involve actuarial issues, though any plans financed through fully insured carrier contracts essentially default to how those requirements are handled by the carrier and the carrier’s actuaries when actuarial issues are involved (such as actuarial value). Although the ACA releases large employer groups from certain requirements (essential health benefits, for example), large employer group plans funded through fully insured contracts ordinarily default to the ACA standards due to state mandates and filed insurance policies. However, it is another matter for self-insured plans, and the actuarial role in benefit design and the evaluation of whether the plan satisfies the minimum value (MV) requirement may be important; the flexibility of benefit design that is available to the self-insured plan sponsor must be balanced with proper actuarial evaluation of MV if the attainment of MV is a goal.

Current issues include determining how to extend the only version of the HHS MV calculator that exists—the original one released in April of 2013.⁸⁶ Since then, the only change to the guidance that has been provided occurred in late 2014 for plans with effective dates beginning January 1, 2015. It added a requirement that, to meet MV “status,” a plan would not only have to have an MV calculation of at least 60 percent but that “its benefits include substantial coverage of physician and inpatient hospital services.”⁸⁷ Since that change to the MV section of the Code of Federal Regulations, there has been no further clarification of what the word *substantial* means or whether the adjective *inpatient* applies to both “hospital” and “physician services,” or only to “hospital,” which has a direct bearing on whether or not some plans meet the minimum value requirement.

While the HHS Actuarial Value calculators have been routinely updated since 2014,⁸⁸ the HHS MV calculator has not been updated since its original release, and no update is expected anytime soon. Because, for example, the highest permitted deductible and out-of-pocket maximum would integrate differently in an updated continuance table, the actuary working with a self-insured health plan that is close to the 60 percent MV cutoff faces significant challenges.

The IRS has sent [initial ACA penalty notices](#) to some large employers with self-insured plans dating back to plan years beginning in 2014.⁸⁹ It is possible that, as these notices are investigated, other ACA requirements will be investigated simultaneously. Actuaries who have been involved with MV determinations may soon be asked to certify or actuarially defend MV evaluations. Given that the MV calculator has not been updated, the reliance on actuarial judgment and certification possibly becomes comparatively more important. Some limited guidance is available to actuaries in the relevant [practice note](#) from the American Academy of Actuaries.⁹⁰ This note was published prior to the modification by IRS/HHS that added the requirement that MV include substantial coverage of physician and inpatient hospital benefits.

4.7.3 Effect of Other ACA-Related Actuarial Issues on Self-Insured Plans

While the ACA created a new operating environment for the actuary involved in fully insured individual and small-group plans, it also generated activity for actuaries working in the large-group marketplace. The Cadillac tax, MV determination and adjustments for taxes and fees are examples of areas requiring actuarial attention. Moreover, through combinations of new federal and state regulations, the ACA rules generated new large groups and classes of employees without prior coverage. Fully insured carriers tended to offer major medical plan designs that were similar to those offered prior to the ACA. Their plan designs were still limited in flexibility by state-mandated benefits even if not restricted by EHB requirements. Hence, fully insured offers, especially given the unknown nature of the new populations of eligible employees, were often at levels those employers could not afford or were unwilling to pay. The immediate concern of the plan sponsors of these new groups was to design a strategy that would allow them to manage their ACA-related costs at the lowest possible amount. That meant seeking benefit designs that fell outside the realm of what fully insured carriers would typically be able to provide.

Because of its greater benefit design flexibility and the opportunities to allocate risk creatively between the employer plan and stop-loss carriers and to optimize benefit financing strategies in light of the ACA penalties, many of the solutions designed to address these new large groups came about through the self-insured marketplace. Therefore, in addition to the MV-related issues discussed, the ACA created other new opportunities and challenges for actuaries working in the self-insured market that were, in many cases, of a different nature than anything that had come before. These opportunities and challenges included the following:

- Enrollment and expense projections. Actuaries working with consultants and TPAs were asked to project enrollments in different plans under different contribution and relative benefit value scenarios in order to manage the net expense increase incurred by many employers either through the provision of new benefits to new classes of their employees or from penalties imposed if they choose not to provide those benefits. Because of the structure of the ACA employer mandate penalties, strategies for different scenarios needed to be considered and projected. Activities included evaluating the cost of tax penalties versus potential benefit expenses, taking into consideration factors such as contribution/participation tradeoffs, available payroll data, impact of affordability requirements and projections of plan enrollment versus exchange enrollment, including cost/benefit analysis of paying exchange penalties as an alternative to higher potential stop-loss premium.
- Minimum essential coverage (MEC) plan cost estimates. An applicable large employer might decide to offer the minimum possible expected-cost medical plan that allows them to avoid the penalty for failing to provide MEC but subjects them to a chance of incurring penalties for failing to provide minimum value and/or meeting affordability requirements. Because of federal and state requirements, ACA-compatible employer benefit plans that provide benefits at a level equal to the minimum required to meet the definition of MEC are not available as fully insured policies. There is, however, nothing to prevent them from being provided on a self-insured basis. Such plans must provide the ACA-mandated preventive care benefits with no cost sharing and without any annual or

lifetime limits to any benefits they do provide and must cover dependents to age 26. The claims cost of such a plan is the smallest a plan could incur and still meet the MEC requirements of the ACA. Actuaries can evaluate the costs and risks for these benefits against the group's risk characteristics and provider arrangements in conjunction with the employer's contribution strategy.

- Setting affordable employee contributions. If an employer wishes to avoid all ACA penalties, the employer needs to (1) offer all eligible employees a level of coverage and cost sharing that meets the MV standard, and (2) set employee contributions at a level that does not exceed what the law and regulators deem as "affordable" in relation to those employees' income. Hence, an additional, potentially significant boundary condition was established on the employee contributions to the cost of a plan that just meets the MV requirement. If a program offered to employees is fully insured, the total cost is a known, fixed quantity against which contribution levels required to meet the affordable level tests of the ACA can be compared. A self-insured plan, by comparison, faces issues like those related to determining COBRA applicable premiums but on a larger scale. It is not being determined just for potential COBRA beneficiaries—who, with the availability of the individual market exchange plans, are less likely to exercise their COBRA rights—but for all employees involved.
- Balancing benefits and employer budget. Most employers would consider spending money on something for their employees before merely paying the employer mandate penalty. Thus, the ACA penalties created a floor that employers who had not previously provided benefits could consider as a target for their employee benefit plan expense budget. The amount per employee for the penalty, even when adjusted for the difference in tax deductibility, is not normally enough to pay the cost of a fully ACA-compliant plan. However, a self-insured plan can be designed with benefits aimed at almost any cost level from the most basic MEC plan (described previously) to a major medical plan with low deductible and doctor office copays. The actuary is key to designing and costing such alternative benefit packages that reflect the target budget.

This balancing act needs to be integrated with the need for understanding how different benefits for different populations affects the underwriting risk. Following ACA implementation, new concepts and models were required to work with stop-loss carrier partners who were asked to take risk (especially specific stop-loss risk) on plans where large numbers of individuals could migrate across benefit classes. Some of the reasons for concern regarding this new population were:

- Their open enrollment choices could lead to significant adverse selection;
- Very little information was known about their health situation; or
- They were not represented in the claims experience of the group itself.

A benefit plan that does not cover inpatient hospital benefits and only covers generic drugs, for example, will change the profile of a group being considered for specific stop loss. Perhaps it will not need such protection. The actuary is critical to developing these concepts into practical tools for the consultants and TPAs who have become active in this new market and who require such tools to work with stop-loss partners. Conversely, there has also been a need for stop-loss carrier internal actuarial staff to respond to a new situation "on the ground" post-ACA.

- Defined contribution plans. Although a great deal of the activity relating to the ACA and the migration of new eligible employees to the employer's benefit plan has already occurred, there is ongoing interest in non-MV plans as options to entice greater participation in plans in general and simply as options for employers seeking to escape from the vicious circle of premium rate increases that lead to benefit reductions that, in turn, lead to lower participation in traditional major medical plans. Such interest is independent of changes to or removal of existing ACA requirements.

Many employers—especially smaller groups and those providing coverage to employees they did not cover prior to the ACA—are considering plans that provide relatively rich primary or intermediate benefits, but which limit other types of coverage in order to avoid extremely large claims and the associated higher expected costs. Such plans can only be provided via a self-insured vehicle. Hence, actuaries consulting to self-insured plans are being asked on a more frequent basis to match a set of benefits with a budget as opposed to the more traditional function of being given a plan of benefits and then asked, “What is the premium for that plan?” Actuaries may need to balance their responses to such questions with their professional responsibility to the public⁹¹ to assure their client is aware of the trade-offs of less comprehensive benefit plans with the broader health care financing needs of their employees.

4.7.4 Establishment of Creditable Coverage for Retiree Prescription Drug Plans

CMS requires that employers who offer a prescription drug plan to Medicare-eligible individuals file an annual report and notify employees, disclosing whether or not each of the plans offered is creditable to Part D Medicare coverage. Coverage is considered creditable if the actuarial value of the coverage is equal to or exceeds the value of standard Medicare Part D prescription drug coverage when utilizing generally accepted actuarial principles in compliance with CMS actuarial guidelines. For fully insured plans, this process is often assisted by preestablished tables constructed and pretested by the carrier's actuaries for the plans offered by the carrier, with guidance and step-by-step instructions from the carrier and CMS on how to complete the disclosure process. For the self-insured plan employer, this requirement often necessitates the use of actuarial expertise to evaluate creditable coverage, whether directly from a consulting actuary or perhaps as a service provided through the TPA. The actuary working as a consultant or adviser to a self-insured employer, or through such vendor, needs to be aware and qualified to perform such testing if the client requires it.

Section 5: Stop-loss Insurance

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Most self-insured plan sponsors find that they need some protection against their exposure to claims volatility, so they purchase SLI. This section is written from the perspective of the stop-loss insurer and its actuaries.

5.1 Background

As discussed in section 4, employee benefit plan sponsors who choose to self-insure become fiduciaries to their employee benefit plan. As a fiduciary, plan sponsors must, among other things, manage plan assets prudently. This means they must:

- Invest plan assets wisely,
- Manage plan expenses, including claims costs, judiciously, and
- Manage their plans' exposures to risk with care.

SLI is an important tool that plan sponsors use to limit their plans' risk exposures. Self-insured employer health plans are analogous, in some ways, to smaller medical expense insurance companies. Such employers purchase reinsurance to stabilize and limit their exposure to risk. SLI is the self-insured plan's answer to that reinsurance. Indeed, SLI is often called reinsurance in today's self-insurance marketplace and in numerous occurrences within federal regulatory documents.

Before and then immediately after ERISA was passed, there were no well-defined rules or regulations governing how self-insured plans would work or what form SLI would, or should, take. SLI developed organically, by applying the lessons learned through major medical and reinsurance products and concepts that existed prior to ERISA. SLI was written through a variety of legal contracts (reinsurance contracts, master trust certificates issued to employer plans and excess and surplus lines policies), ultimately reaching what has become today's "standard" format, an admitted insurance policy covering the excess claims exposures of the employee benefit plan, not the members of the plan themselves.

The typical structure of SLI developed largely to meet the conditions of pioneering underwriting entities—particularly certain syndicates at Lloyd's of London that were instrumental in the direct and reinsurance markets for SLI in the early days after ERISA—that provided ultimate risk-taking capacity behind this new and growing line of business. That standard remains essentially the same today, but to be clear, SLI's structure arose largely out of risk considerations, not detailed legal requirements.

As explained in section 4.6.5.3, the standard is that a self-insured plan should consider a combination of two excess-of-loss-style protections. The first protection, which we will call specific stop-loss insurance (or specific insurance) in this paper, covers the plan's exposure to large losses per member. The second kind of protection, herein called aggregate stop-loss insurance (or aggregate insurance), covers the plan's exposure to unexpectedly large losses of the entire plan that are not otherwise covered by specific insurance. These protections are explained in more detail in the following pages.

5.1.1 How Does SLI Protect the Self-Insured Plan?

As described in section 4.6.4.1, self-insured plans generally consider a budget for each contract year. That budget is often estimated as the sum of the expected costs of administration, other vendor fees involved with administering and managing the program and expected benefits under the plan itself, which is where the greatest variation is likely to occur. Two primary sorts of events can ruin that budget. Either high claims on a single individual beneficiary (a severity issue) or an unexpectedly high number of claims (a frequency

issue) could utilize too much of the entire budget, causing actual claims to exceed the expected, or budgeted amount, by a significant margin.

It is logical, then, for the plan sponsor to seek protection against one or more very large individual claims, which is what specific stop loss covers. For example, a plan might seek reimbursement of underlying losses that exceed \$50,000 per member per year. (The given dollar amount is called the specific deductible.)

As illustrated in section 4.6.5.3, plan sponsors might also seek protection against the possibility of overall claims exceeding the expected budget for plan benefits by more than some amount they consider as a tolerable variation. This kind of protection is provided by aggregate stop loss, which reimburses the plan for claims not already reimbursable by another source—particularly any applicable specific stop loss—that, in total, exceed a defined amount. This is called the aggregate attachment point, which is often set at 125 percent of the stop-loss underwriter’s estimate of the expected claims budget. The aggregate attachment point is usually expressed as an annual dollar amount that is adjustable based on actual plan enrollment during the plan year (i.e., it increases if the number of employees increases, and it decreases if the number of employees decreases). This is done by converting the aggregate attachment point into a monthly factor—the aggregate factor—per defined exposure unit. The exposure unit is often measured as the number of employees, but aggregate factors based on coverage tiers such as single and family may also be used in the calculation.

Most SLI policies require a minimum aggregate attachment point that is a floor below which the aggregate attachment point may not fall for the purposes of determining if an aggregate stop-loss claim will be payable. This minimum is stated as a dollar amount in the application and/or schedule page of the policy, and is often set at 90–95 percent of the stop-loss underwriter’s estimate of the aggregate attachment point.

Minimum aggregate attachment points are one of several underwriting tools embedded in the stop-loss policy that are designed to protect the carrier against antiselection. When a group’s enrollment decreases substantially through the plan/policy year, healthier and younger lives may leave first. Plan beneficiaries who generate the bulk of the claims may remain longer, posing additional risk to the carrier if there is no minimum aggregate attachment point. Another such tool states that, if enrollment changes in one month by some stated amount, such as 15 percent, the carrier has the right to re-evaluate the rates and aggregate factors originally issued for the policy. This protects the carrier against major demographic changes that may occur if enrollment falls or rises due to, for example, the sale of a subsidiary in a low cost area or the purchase of a new subsidiary in a high cost area.

The gap between expected claims and the aggregate attachment point offered by the stop-loss carrier is called the [aggregate corridor](#). This corridor represents the plan’s maximum possible loss net of the protection derived from the aggregate stop loss being provided (where “loss” is defined in relationship to the expected claims level; only amounts exceeding what is expected can be considered a loss). In a sense, the aggregate corridor is the risk the employer or plan sponsor takes on in exchange for the cost-savings opportunity when claims come in below that expected figure. Since claims exceeding the specific deductible become the reimbursement responsibility of the carrier, the aggregate corridor is often viewed as the element putting the “insurance” in “self-insurance.” If no aggregate stop loss is in place, then the self-insured plan would have a theoretically open-ended risk exposure, though not a practical one. As the aggregate corridor increases, the chances of exceeding the aggregate attachment point tends to decrease very rapidly in a nonlinear fashion. At some point, the marginal risk approaches or even becomes zero, depending on the plan’s maximum liability per person covered and any specific stop-loss protection. Hence, the decision to purchase aggregate stop-loss insurance may be independent of the decision to purchase specific stop loss and part of the overall strategy of the self-insured plan in managing its fiscal risk.

The industry standard aggregate attachment point is 125 percent of expected claims, though there is nothing actuarially magical about that figure. In early post-ERISA days and for the size of employer group

generally considered large enough to self-insure, it was the level judged to present a low risk to the stop-loss carrier and yet provide a reasonable level of protection to the plan.

Note that employers may opt to have both specific and aggregate, though some integration of the combined risk is important, so as not to overlap protection. When they are both present, amounts of underlying plan claims covered by specific stop loss do not count toward the accumulation of plan claims that are covered by aggregate stop loss. That is, the expected claims used to calculate the aggregate attachment point exclude any claims projected to be reimbursed by the combined specific stop loss. This is often done through the use of a contract cap, called an **aggregate loss limit** per person within the aggregate stop-loss contract. The loss limit defines the maximum amount of plan claims on an individual that accumulate toward claims covered by the aggregate stop loss. When specific stop loss and aggregate stop loss are written together, the loss limit is typically set equal to the specific deductible.

This standard combination has become what might be termed the default when the expression “stop-loss insurance” is used in a general way, and it is often referred to as “spec and agg.” The forms and types of SLI that exist today are all variants of these two primary ways to protect a self-insured plan’s budget from losses incurred by exceeding the expected claims component. There are important differences among those variants. Understanding those differences and how they interplay with the risk appetites and strategies of the plan sponsor are two of the primary functions of the health actuary involved in self-insurance, whether consulting to a self-insured plan or as the actuary designing, pricing and performing financial management of the SLI line for a stop-loss carrier or other risk taker.

5.2 The Stop-loss Marketplace

The basic functions of SLI transactions are similar to those of other insurance transactions:

- A potential insured solicits advice from a financial adviser
- The financial adviser solicits bids from possible insurers
- The winning bidder issues a policy
- The insured pays premium
- The insurer pays eligible claims that are submitted by the insured
- The insurer may share the risk with a reinsurer, a transaction that is not visible to the insured

Because it involves a self-insured employee benefit plan—already a complex financial transaction—SLI transactions are inherently more complex than most insurance transactions.

For structural and historical reasons, different types of entities may be involved in executing the functions of any particular SLI transaction, and the functions themselves may be bundled or unbundled in a variety of ways. Also, many of the functions and different types of entities have a place for actuarial input or even managerial control, offering many challenging and unique opportunities to the self-insurance actuary.

This section describes the market for SLI today in terms of

- The entities that buy, sell, underwrite, administer and assume the risk of SLI, and
- The different ways in which the functions of the SLI insurance transaction may be bundled or unbundled.

5.2.1 Entities Involved in SLI Transactions

The different entities involved in the stop-loss marketplace can largely be broken into five large groups:

- Prospective insured. This entity may be the plan or may be the plan sponsor. That is, the stop-loss policy may be purchased by the plan using plan assets or by the plan sponsor, who is responsible

for funding the plan, for its own benefit.

- Financial advisers. This group includes employee benefits brokers, insurance agents or consultants or even TPAs. They may place the SLI with an insurer directly or simply bring the prospective insured to a more knowledgeable intermediary, such as a TPA or a specialized stop-loss broker.
- The plan's administrator. The plan could be:
 - Self-administered
 - Administered by an insurance company that is leveraging its fully insured administrative platform to deliver services (often called administrative services only, or **ASO**) to self-insured plans, whether or not they provide SLI
 - Administered by a TPA that may or may not solicit quotes from a stop-loss carrier
- Underwriter. An underwriter could be an:
 - ASO insurer, that is, an ASO administrator that issues policies covering its own ASO administration clients. Not all ASO administrators issue stop loss on their own administration business, but most do.
 - Direct Insurer, such as an insurance company writing SLI as a line of business without providing administrative services. Direct insurers typically market to prospective clients through financial advisers regardless of how the plan is administered. Note that some ASO insurers also market SLI that is administered by TPAs. When they do, they are acting as a direct insurer.
 - Managing general underwriter, a third-party entity that produces, underwrites, administers and manages SLI on behalf of issuing insurer or reinsurer risk takers. Though most MGUs provide all these services, the contract between an MGU and its issuing insurer or reinsurer partners may authorize the MGU to perform only some of those services. MGUs are not unique to the stop-loss industry, but they have had a significant historical role and have been comparatively more important in the stop-loss industry than in other lines. MGUs should be distinguished from the more traditional managing general agent that exists in many lines of business.

MGUs usually share in their underwriting results, which often takes the form of a profit-sharing arrangement without any downside risk other than through holdbacks of fees or loss carryforwards against future profits. These arrangements mean that MGUs can't lose more than they generate through the production of business. However, as explained in point 5, there are ways for MGUs to effectively expose risk capital by participating in the downside risk as well, in exchange for increasing their upside potential or as a condition of their partners in the arrangement.

- Risk taker. This group encompasses several parties:
 - Issuing insurer. The insurance company that issues the stop-loss policy (also called the "writing" company/carrier) could be an ASO insurer, a direct insurer or a fronting insurer. The issuing insurer may retain 100 percent of the risk or cede some portion or even all of the risk to a reinsurer.
 - Fronting insurers typically play a comparatively limited role in delivering SLI to the market other than basic policy form compliance and payment of premium taxes, taking little risk on the stop-loss insurance itself. Fronting carriers "rent their paper" for a fee and rely on other business partners, such as MGUs, reinsurers or intermediaries, to perform most of the other functions. Fronting carriers are usually involved with MGU-underwritten and -produced stop-loss business.
 - Reinsurer. Reinsurers participate in the profit-and-loss result of that risk on either a quota share or an excess basis. Historically, the stop-loss industry was driven largely by reinsurers either directly or through reinsurance pools and facilities established specifically to take risk on SLI blocks of business. Today, reinsurance remains significant, though quota share, in

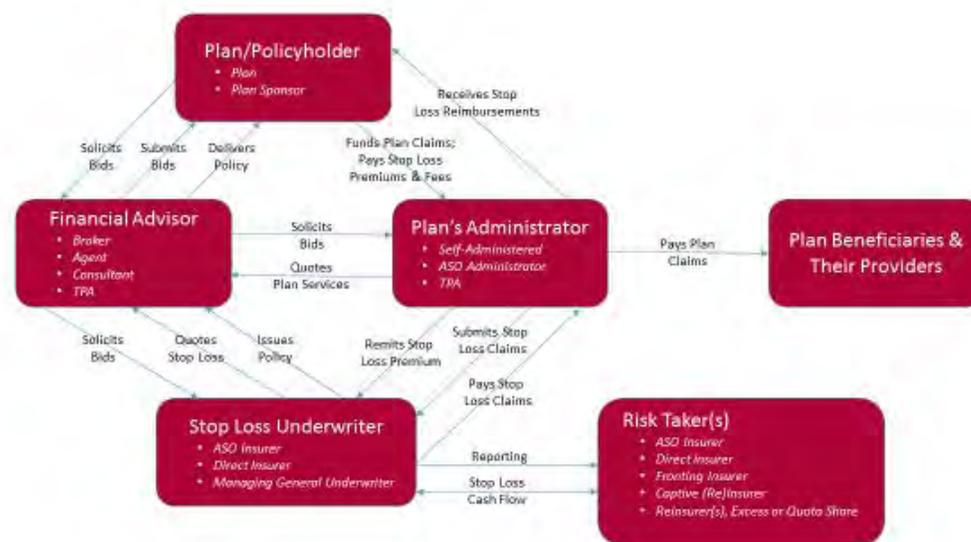
particular, plays a much smaller role than two decades ago. Excess reinsurance is often used today to cover the risk from a high limit, say \$1 million per person, up to the unlimited exposure mandated by the ACA.

- Captive reinsurer. A broker/producer, TPA, MGU, or even the self-insured employer may form a captive insurance company, called a captive reinsurer, to participate in the risk. The captive reinsurer typically participates in the risk through a quota share reinsurance treaty. Most often, the captive reinsurer’s risk is limited to a certain level on an individual claim and a certain level of total claims. This helps define the maximum amount of loss exposure the captive retains. An issuing insurer or reinsurer usually stands in front of and cedes risk to a captive reinsurer. The issuing insurer or reinsurer may accept the captive's capital as security against this loss exposure. More commonly it is specifically securitized through devices such as funds withheld or letters of credit. A group captive is a specialized version of a captive reinsurer, where the captive is mutually owned by a group of self-insured employers to pool and share in the risk of their SLI policies. The myriad details relating to captives, risk capital, administration and tax/accounting issues are beyond the focus and scope of this paper. Although there are some limited situations in which a captive insurer offers an SLI policy directly to the insured, this is not common.
- Broker/producers. In conjunction with MGUs, broker/producers may participate in the risk through alternative structures that are part of agreements with the issuing insurer. These structures include funds withheld, trust funds, or letters of credit.

Figure 5.1 illustrates who among these entities may perform the various SLI functions.

Figure 5.1

Entities Involved in SLI Transactions



Starting at the top, the plan sponsor solicits bids from a financial adviser, who in turn solicits bids from potential administrators and stop-loss underwriters. The administrators and underwriters submit bids to the financial adviser, who in turn submits the bids to the plan or plan sponsor. The winning underwriter issues a stop-loss policy, which the financial adviser delivers to the plan or plan sponsor.

Once the SLI is sold, the plan or plan sponsor sends premiums to the administrator (or sometimes to the financial adviser), who remits it on to the underwriter. Because the administrator pays the plan's claims, it submits any excess claims to the underwriter for reimbursement. The underwriter remits premiums and submits claims to the risk takers, typically on a monthly basis.

5.2.2 SLI Business Functions

As noted, all lines of insurance business perform the same basic functions. Usually an agent or broker sells the product, an insurer issues a policy, and when present, a reinsurer bears a share of the risk. With SLI, history and tradition have led to a variety of structures and partnerships involving multiple entities performing one, some, or most of these functions.

5.2.2.1 Marketing, Sales and Distribution

While the ultimate consumer is the plan or plan sponsor as the policyholder, the placement of a policy on a given plan is often the result of several layers of marketing. Usually some entity assists the prospective self-insured client with choosing the type and amount of SLI to purchase and through what insurance entity. A broker or consultant may, for example, obtain quotes from specialized stop-loss brokers, TPAs (who may have obtained quotes from MGUs, a different stop-loss broker, or a direct writer), different direct insurers or ASO insurers.

The entity that performs the underwriting on a prospect, sets the rates and issues the quote generally sits at the point farthest away from the actual plan on which the stop loss is being written, whether the underwriter is a direct insurer, an ASO insurer, or an MGU. The stop-loss broker or TPA may play the role of wholesaler, with the ultimate client's broker/agent/consultant serving as the retailer. Generally, the more layers that exist between the plan and the underwriter, the greater the amount of commissions, fees and overrides are likely to be in play in ultimately placing the business. Of course, not every case reflects every layer, but there will always need to be an original underwriting entity. The actuary for any of the ultimate risk takers in these structures must be aware of the compensation, motivations, market pressures and behaviors to which this entire process is subject before a case is underwritten, issued and processed.

5.2.2.2 Stop-loss Underwriting

The underwriting function—with its goal of either rejecting a risk or offering rates and terms—is performed by an entity involved either directly or indirectly with the risk-taking function. This is usually the direct or ASO insurers or an MGU that underwrites on behalf of an issuing insurer and its reinsurers, if any.

5.2.2.3 Stop-loss Policy Administration, Claims Administration and Reporting

While not always the case, stop-loss policy administration, claims administration and reporting tend to be done by the same party. That party tends to be the same as the one performing the underwriting function. The MGU is usually a “total solution” for carriers, essentially offering a complete outsourcing of traditional insurance company roles of underwriting and product administration. Not all MGUs perform all the functions, but most do.

5.2.2.4 Stop-loss Policy Compliance and Insurance Accounting

Fronting insurers usually cede much or all of the day-to-day functions of stop loss to an MGU. All issuers, whether ASO, direct or fronting, retain responsibility for policy filing and other regulatory reporting requirements, though they may seek outside support, which may include input from an MGU or other outside resources. They are also responsible for their accounting, both statutory and according to generally accepted accounting principles (GAAP), premium tax payments and so on. For this work, fronting insurers receive what is called the fronting or issuing fee. They will also be signatories for any outward reinsurance contracts.

5.2.2.5 Risk-Taking

In the end, SLI is a risk-taking venture in which premiums are charged and claims are paid. The ultimate guarantee of payment for those claims even if they exceed the premiums collected must be provided by some entity. In the regulatory sense, the only entity responsible for payment of stop-loss claims is the issuing insurer whose name is on the policy of insurance. However, many stop-loss programs are constructed with several risk takers behind the issuing insurer, either in the form of quota share reinsurance, excess reinsurance or both. Even programs written by large direct or ASO carriers may involve some high-level excess reinsurance. Those arrangements require original pricing of risk, negotiations over allowances, commissions for intermediaries and policy or program accounting. Actuaries are often involved in many of these levels, as well as evaluating experience of the reinsurance itself, and need to understand all the interworking elements of the underlying program and their impact on profit and risk margins.

5.3 Classification and Description of Stop-loss Coverage Types

5.3.1 What Are The Key Variables Within SLI?

Stop-loss protection of a self-insured plan starts with what the plan itself covers. As with reinsurance, SLI cannot increase the scope of the plan's benefits; however, it can protect a subset of the full scope of liability, as defined in the plan document that the self-insured plan itself covers. There are four main parameters that refine stop-loss coverage (other than the specific deductible and the aggregate attachment point):

1. The benefit types covered,
2. The contract basis (explained below) of SLI,
3. How known risk exposures are covered by SLI, and
4. The maximum liability of the SLI (i.e., "how much will it pay?")

5.3.1.1 Benefits Covered

A self-insured plan typically provides coverage for major medical expenses and prescription drug benefits. It may also provide coverage for dental, vision and other ancillary benefits. Specific stop loss may cover major medical expenses but no other benefits. Alternatively, specific stop loss may cover major medical and prescription benefits, but aggregate stop loss covers only the major medical benefits. SLI may exclude subcategories of medical claims other than prescription from coverage even if the underlying plan covers such expenses. The self-insured plan might, for example, have carved out certain types of claims, such as organ transplants, covering them via a different type of insurance or capitation arrangement entirely and, therefore, not require SLI to cover them, or the SLI may explicitly exclude certain types of services.

Many combinations are possible. The choice is largely up to the plan sponsor and its tolerance for risk. The point is that the SLI policy defines the type of underlying self-insured plan benefits that are covered.

5.3.1.2 Contract Basis

SLI is designed to protect the self-insured plan's cash flow, so the timing of claim payments is important when determining whether a claim payable by the plan is reimbursable by the stop-loss policy.

The term *contract basis* refers to how we determine the time element in the definition of claims covered by SLI. Generally, as with fully insured policies, a claim is incurred when a covered service is rendered or a covered product is purchased; that date is called the incurred date or the services rendered date. The date that a claim service or product is paid after being received and processed is called the **paid date**. (Generally, paid date means the date the plan benefit claim is paid by the plan or the TPA, but the strict definition is often spelled out in the SLI policy document.) These dates are used to define the contract basis for which protection is provided. Actuaries working in SLI or as advising consultants to plan sponsors understand that there may be limits to any lag allowed in payment time between an incurred date and the paid date of an

underlying plan claim. SLI contracts are often defined or labeled based on the time in months of incurred claims versus paid claims.

Paid contracts are intended to cover claims paid in a policy year and may limit how far back these claims could have been incurred (the **run-in** period). To illustrate, an 18/12 contract allows six months of run-in claims, in addition to claims incurred during the given 12-month policy year itself. However, it includes only those claims paid during that policy year. An 18/12 SLI contract coverage effective on January 1, 2018, would cover claims incurred during the 18 months between July 1, 2017, and December 31, 2018, but only if they are paid during calendar year 2018. Many variations on this theme are possible, such as 15/12, 18/12, 24/12, 36/12. They are interpreted similarly.

A “pure” paid contract that leaves the prior incurred period open may also be written, implying the claim will be covered simply if it is paid during the contract period. In practical terms, the claim must have been incurred while the self-insured plan has been continuously in force, so there is an implied run-in limitation, even if it is not formally defined.

Stop-loss carriers may also place a dollar limit on the total amount of run-in claims that will be covered from incurred dates prior to the effective date of the current stop-loss policy year. The dollar **run-in limit** usually applies to aggregate stop-loss insurance only and occurs most commonly if there is a change in TPA and carrier at the same time. Carrier terms differ on how and when such limits will be applied, and the dollar run-in limit may become an element of market competition.

Incurred contracts provide no coverage for underlying plan claims incurred prior to the policy year of the SLI coverage. Instead, they cover claims incurred in a policy year and then may allow the payment date to extend beyond that given 12-month incurral period. Common examples of these contract bases include 12/12, 12/15, 12/18 and 12/24. Note that, unlike a paid contract, the “12” in the expression defines the incurred dates included, not the paid dates. The 12/12 contract basis is a special case that limits coverage to claims that are both incurred and paid in the same 12-month policy period; it is often referred to as an “incurred and paid” contract. A policy that allows for an extended period beyond the initial 12 months during which an incurred claim may be paid is called a **run-out** policy. For example, a 12/15 contract issued for calendar year 2018 allows for claims incurred during 2018 to be reimbursable as long as their associated paid dates are within 2018 or the first three months of 2019.

By contrast, fully insured contracts are written on what is called a fully incurred basis, since there is usually no formal limit on when claims may be reported, processed and paid by the carrier, though there are practical limitations due to statutorily allowed reporting and claim submission requirements. It is very rare for a stop-loss contract to offer a fully incurred contract basis.

The underlying self-insured plan has liability that accrues to it when a covered plan benefit is incurred by an eligible participant during a covered time period, just as with a fully insured policy. Certain standard plan provisions relating to reasonable and exceptional reporting requirements notwithstanding, a self-insured plan is responsible for paying claims per the terms of plan coverage whenever processed and paid, just as with a major medical carrier’s fully insured obligation. As noted, however, SLI coverage typically defines the self-insured plan’s claims that are covered under its protection by limiting the time period during which both the underlying claims may be incurred and when they may be paid. The reasons for SLI using a different set of boundary conditions than the underlying coverage (that is, it does not simply match them) are several.

- The original desire of underwriters of SLI was to have a shorter “tail” than fully insured medical insurance.
- A main purpose of SLI is to provide cash-flow protection against severity and frequency risks occurring during the plan’s main budgeting period.

- There is a trade-off between cost and coverage between the different contract bases—a 12/12 specific protection might cost 80 percent of a 24/12 or a 12/15 coverage and even less compared with the longer (essentially no limit) extension of a fully insured, fully incurred type of coverage.

5.3.1.3 Known Versus Unknown Risks and Lasers

Generally, SLI is designed to protect against the occurrence of “unknown” risk contingencies. That is, the stop-loss underwriter must treat plans that have known risk exposures differently than plans with no known risk exposures. Claims projections of individuals are, of course, highly uncertain. In addition to the statistical uncertainty of the claims, the individual could die, leave the plan or respond positively to treatment. Nonetheless, additional premium is required to cover the known or expected claim amount and other SLI expenses such as commissions, internal expenses, premium taxes and risk margin. In other words, if the risk is truly known, then the stop-loss carrier is not insuring the risk at all, but merely providing an expensive financing vehicle for the employer plan. The SLI carrier may offer to neutralize the extra cost of the known contingency by not covering that portion of the risk. This may be done by a mechanism typically referred to as applying a laser, or lasering.

A laser is an exception written into the stop-loss coverage, usually via the application or schedule page of the stop-loss policy, stating that the coverage described in the stop-loss policy notwithstanding, certain coverage exceptions apply to the claims of specified individuals covered by the self-insured plan. The stop-loss coverage that provides for a specific deductible of \$50,000 per person per year may be set at, for example, \$150,000 for certain specified plan participants. There are many variations on how exceptions to the regular coverage parameters are worded or provided in the stop-loss policy document, some including contingencies of various sorts. However, it is very important to note that such coverage exceptions in the stop-loss coverage have no bearing on coverage of persons by the underlying self-insured plan. Rather, the stop-loss policy covers the self-insured plan entity in total and provides no coverage to beneficiaries of the plan itself.

There are examples where such known contingencies that might otherwise have a laser applied to them are instead simply added to the expected claims component of the specific stop-loss premium. In doing so, those additional claim amounts will generally be loaded at least for expenses to arrive at gross premium to be charged, if not the risk/profit load as well. This extra loaded premium is sometimes called a **laser load**. It may be viewed as an alternative to the separate laser deductible approach. All things being equal, the straight laser deductible approach is the less expensive option by the end of the contract period, but there may be reasons (cash flow, internal/political factors to the self-insured plan’s decision making, accounting strategies, etc.) that a laser load option is requested as an option and purchased by the plan.

In the event several known contingencies arise for the same employer group for the same prospective contract period, the stop-loss carrier may consider offering a pooling of the several laser amounts into a single figure that must be breached by the eligible claims on the stated individuals as a whole before the claims of any of the named individuals will be covered by the stop-loss carrier under the specific insurance. This is called laser pooling or a **laser pool**. Suppose an employer plan is purchasing a specific deductible for the coming year at \$100,000, and the underwriter evaluating the information and diagnoses for several claimants has determined that to neutralize the known risk, lasers are required on four individuals, as indicated in Table 5.3.1.3.1:

Table 5.3.1.3.1
Example of Laser Pooling

Individual	Proposed Laser Deductible
Person A	\$250,000
Person B	\$200,000
Person C	\$180,000

Person D	\$165,000
Total	\$795,000

As the table indicates, the employer plan has \$795,000 in total exposure of anticipated, but not guaranteed, claims for the four persons. The underwriter realizes that, while the likelihood is high that at least one of the individuals will reach their laser amount, it is far less likely that all four will. The underwriter may offer the option of combining the four into a laser pool with a total of, say, \$700,000. This protects the plan by lowering its maximum potential exposure on the known contingencies, while offering the carrier extra protection by aggregating (pooling) the risk in case one claimant were to incur claims much higher than anticipated, while the others incur claims much lower than expected. There are clear trade-offs for each party, and circumstances are always different. Evaluating those trade-offs to determine which option is best for each party provides a potential role for the stop-loss actuary on the carrier side and the consultant actuary for the plan.

For purposes of aggregate stop loss, standard industry practice is to apply the loss limit to all individuals under the plan, regardless of whether any individual's claims were subject to a laser. The amount of the laser that lies in excess of the loss limit is excluded from accumulating toward the aggregate attachment point.

As with many of the features and elements of stop-loss policies, there are variations on whatever is considered industry standard, and the stop-loss actuary needs to be aware of what the contract provisions are for the policy of interest. Note that the underwriting formula used to set aggregate attachment points may need to be adjusted for the ways in which the stop-loss carrier handles lasers.

5.3.1.4 Maximum Liability Covered by SLI

Specific stop loss may include a **maximum benefit** defined on a per person per year basis, the same as for the accumulation of the specific deductible. In the earliest days, this maximum tended to relate to the maximum benefit provided by the underlying plan of benefits and was expressed on either a per year (annual maximum) or per lifetime basis, or both, in the same way fully insured policies used to provide limits on plan and insurer liability.

With the passage of the ACA and the removal of allowed maximum dollar amounts on either an annual or lifetime basis, unlimited benefits became the standard for fully insured and self-insured benefit plans so that there were no longer any dollar limits imposed on covered persons. While stop-loss policies themselves were not restricted by the ACA directly, because they cover the plan overall and not individuals, market pressures have created an environment in which almost all specific stop-loss insurance policies at least provide an offer of unlimited liability (or, "no maximum limit") coverage per person per year. That is, it is still possible to have stop-loss policies with actual dollar limits, but it is no longer typical to find a policy with the maximum benefit for a contract year set below unlimited benefits per person per year, as was the case prior to the ACA.

Aggregate stop loss, being a coverage on the total accumulation of claims across multiple people, has traditionally been written with **maximum benefit** expressed on a per contract per year basis. Historically, the typical limit was \$1 million, with the rare "buy up" to \$2 million or more per contract year. Notably, the aggregate contract is usually protected by the loss limit, so there is a built-in per person protection in the sense that only claims up to that loss limit can accumulate toward the aggregate attachment point. Once such claim accumulations reach the attachment point, the carrier is responsible for the contract claims in excess, until it has reimbursed a maximum amount as stated by the policy's contract maximum liability.

Because of the loss limit (almost always the same as the specific deductible), there was no commensurate increase in aggregate plan liability due to implementation of the ACA, so there was not nearly as much

change in the maximum liability amounts offered by aggregate stop-loss policies. It is still very common today to see aggregate maximum liability limits per contract year of \$1 million or \$2 million, though buy-ups to \$5 million and even “unlimited” maximums may be sought or offered. Note that, if the specific deductible and the loss limit are identical, liability to the plan for claims below the specific deductible for a contract year is limited to a multiple of the loss limit based on the number of covered persons, that is, a finite amount. The market desire for an “unlimited maximum” is therefore more psychological than practical, but it provides an opportunity for stop-loss carriers and reinsurers of stop-loss carriers to charge additional premium for a small risk. That said, the additional risk premium for coverage excess of \$5 million is very small except for aggregate-only coverage, described in detail later in the paper.

5.3.2 Specific Stop-loss Variations

Carriers that apply lasers as a standard practice may also offer policyholders the opportunity to purchase protection from new lasers in renewal years, something called a **no-laser guarantee**. A carrier’s initial underwriting of a case considers existing and known contingencies, so the discussion of a no-laser guarantee applies only to renewal actions the carrier might take. Generally, persons or situations to which lasers are applied in the initial policy period may be subject to continuing laser terms on renewal even in the presence of a no-laser guarantee option being purchased, as that feature generally applies only to claim or underwriting situations that arise after the original issue date.

To prevent a no-laser guarantee from simply shifting the expected costs of known claims situations into a premium load applied to the specific coverage, many no-laser guarantee options are paired with a limit on the renewal premium rate increase the carrier may offer. This is often referred to as a **no-laser rate cap**. When pricing the no-laser guarantee, the stop-loss actuary must recognize the risks associated with both guaranteeing no new lasers and limiting future rate increases.

Finally, some companies offer no-laser guarantees as an option and others incorporate such guarantees into all proposals. In the former case, the stop-loss actuary should be aware of the potential for antiselection and the possibility that, even if the costs and risks of the option are correctly estimated, the no-laser guarantee load may be insufficient to cover the exposure if relatively few policyholders take up the option.

One particularly important option on specific insurance is commonly called **aggregating specific**. By choosing a specific deductible, underlying plan claims may be viewed as split into two components:

- Expected claims that are at or below the specific deductible, and
- Expected claims that are excess of that deductible amount.

The usual way of covering that excess risk is to purchase specific stop loss, for which a premium is determined and paid. If the expected claims in excess of the specific deductible are large enough to be considered partially credible, or if the gross premium generated is considered too high or noncompetitive, a carrier may offer to split the expected specific claims into two further components:

- An aggregate amount (the **aggregating specific deductible**) for which the self-insured plan retains the risk; and
- Expected claims exceeding the aggregating specific deductible, which the stop-loss carrier uses as the basis for determining the premium it will charge, taking into consideration the value of the aggregating amount, risk and profit margins desired and gross premium loading.

In other words, it is an aggregate stop-loss protection on claims that would otherwise be specific claims. By shifting what would have been some of the full specific premium over to a pool of risk retained by the self-insured plan, fixed costs (i.e., premiums) are reduced. The trade-off between fixed and variable costs (i.e.,

claims up to the aggregate attachment point together with specific claims up to the aggregating specific deductible) is an integral part of the decision to self-insure. Self-insurance actuaries must take questions of selection, or adverse selection, into account whenever they are working as a carrier's pricing actuary or consulting to the self-insured plan and recommending an aggregating specific deductible as an option to pursue.

Carriers in today's marketplace may use limited experience rating techniques in underwriting specific stop loss or offer experience-based refunds using a variety of methods or other risk-based participation structures within SLI. Self-insurance actuaries should be aware of this whether they are working as a consultant to a self-insured employer or as a carrier's stop-loss actuary working to offer experience-based discounts, refunds or captive management strategies.

Historically, other variations on the specific stop-loss theme have been implemented. For example, specific insurance has included common accident provisions, family deductible provisions and other features typically adopted from major medical policies. These features are rarely found in today's marketplace.

5.3.3 Aggregate Stop-loss Variations

As previously noted, the aggregate attachment point standard has typically been set at 125 percent of the stop-loss carrier's estimate of expected claims, but a variety of options have been available since early in the history of SLI. Many underwriters offer lower attachment points of 120 percent, 115 percent or even 110 percent of expected claims, depending on the size of the employer group and the predictability of the expected claims. Of course, there is generally a trade-off for receiving a lower attachment point, namely a higher premium for aggregate insurance. Generally, the increase in actuarially required aggregate premium is less than the dollar decrease in the aggregate attachment point.

Some firms also offer **aggregate-only** SLI. Aggregate-only essentially means what it says—aggregate stop-loss insurance without any associated specific protection. Actuarially, specific coverage protects the stability and predictability of the aggregate coverage and, therefore, reduces the required premium for the aggregate itself (the trade-off, of course, being that premium must be paid for the specific stop loss instead). Absent an aggregate loss limit, aggregate-only increases the likelihood that the aggregate attachment point will be breached, and therefore, the premium is materially higher. Products involving aggregate-only stop-loss coverage are typically attempting to minimize fixed costs in exchange for putting more of the burden of the overall risk onto the underlying variable cost of expected claims in total.

Heretofore, the discussion relating to aggregate stop loss (with or without associated specific) has presumed that the aggregate attachment point has been constructed at some level that exceeds 100 percent of the relevant expected claims. However, it is possible to have actuarial models that offer variations where the aggregate attachment point is below 100 percent of the relevant expected claims, sometimes as low as 50 percent. Such products are often used in the smaller employer group marketplace, and due to the characteristics of the group "expected claims" curve, offers an actuarial/statistical chance of actual claims coming in at a level below even this reduced aggregate attachment point relative to the true 100 percent expected claims level. Actuaries use names such as **retained corridor** or "inner aggregate" or "submerged aggregate" to describe such vehicles.

For all versions of aggregate-only products, it is important for the self-insurance actuary to note and manage the interplay between whatever the maximum benefit per person in the underlying plan is and the maximum coverage being provided by the SLI product in question. For example, an aggregate-only product that still defines a loss limit internally, capping the claims from one covered plan beneficiary to an amount that is less than the plan maximum is essentially leaving the self-insured plan exposed to the difference. In the presence of specific insurance at a deductible that is equal to the loss limit of the associated aggregate protection, there is generally no gap like this. For example, considering the ACA's requirement for no annual dollar limit on benefits, most self-insured plans today reflect an unlimited benefit maximum for

their plan benefits. Therefore, an SLI carrier offering an aggregate-only product will need to reflect a very high (or unlimited) loss limit per person in its contract, as well as consider how the contract maximum liability should be worded and the amount of maximum liability that needs to be reflected.

5.3.4 Optional Features of Stop-loss Products

One of the primary characteristics of any SLI product, and one dictated by the regulatory and statutory requirements surrounding the nature of the self-insured benefit plan, is that it is a reimbursement insurance product. That is, the self-insured plan has a covered claim or claims for which it is responsible and must pay as a condition-precedent in the stop-loss policy to qualify as a stop-loss claim. The stop-loss policy reimburses the plan for some of the amounts it has already paid out in qualifying losses. However, because of the nature of the potential size of specific claims and their impact on the cash flow of the self-insured employer, the SLI industry over the years has developed accommodations such as **advance funding**, specific accommodation, specific reimbursement or specific advance. This feature essentially provides, under the terms and conditions of the carrier's policy, a device to maintain the technical terms of being a reimbursement contract, while providing cash-flow relief to the self-insured plan.

Other variations exist to protect cash flow during the year underneath aggregate stop loss, often called **aggregate accommodation**. Aggregate accommodation offers the potential for aggregate stop-loss benefits to be advanced monthly. Each month, aggregate insurance benefits are calculated on a year-to-date basis. For example, if after the sixth policy month, total claims subject to aggregate insurance exceed the policy year-to-date aggregate attachment point, aggregate insurance benefits are advanced to cover the necessary current claims to be paid. That is, the total, or aggregate, cash flow is "accommodated." If the claims subject to the aggregate insurance are low the following month, the aggregate insurance policyholder may have to repay amounts previously advanced. These features may be presented as options and often require additional premium. Each carrier's policy terms and conditions handle the details of the administration and definitions involved with aggregate accommodation in their own way. It is important to note that payments advanced through this mechanism during the year are not aggregate insurance claims, but administrative advances that may, depending on the eventual development for the entire contract period, become actual stop-loss claims at the end of that contract.

5.3.5 Terminal Liability

A self-insured plan that purchases stop-loss coverage on a paid contract basis potentially puts the plan into the position of being responsible for all run-out claims no matter how large that financial responsibility might turn out to be. If the self-insured plan decides to finance its costs the following year with a fully insured policy, or if a new stop-loss carrier is unwilling to write a policy with a run-in contract basis, then the plan may have a run-out exposure it is unable to transfer.

Most stop-loss carriers offer an option called a **terminal liability option (TLO)** to provide more flexibility in protecting the plan in this situation. TLO offers the self-insured plan that purchases SLI on a paid contract basis the option to add run-out protection at the end of the policy year for which the option is purchased. The decision to purchase the option must be made at the beginning of the year, and it provides the option for the plan to exercise what amounts to an extension of coverage under the original stop-loss basis by adding, for example, three months of paid claims protection so long as those original plan claims were incurred prior to the end of the policy period.

As the price for the option, the carrier usually states within the terms of the TLO how much additional attachment point and aggregate premium (in the case of an option on aggregate stop loss), and/or how much additional specific premium is required during the optional run-out period. Different companies have variations on the terms of the TLO they offer. The stop-loss actuary needs to be aware of how and when a plan might choose to first purchase, and then exercise, an option to trigger the TLO, and must also consider

the trade-offs of the protections the carrier has in terms of the additional premium and aggregate factors versus both normal and abnormal claims run-out patterns and possible adverse selection.

5.3.6 Level Funded Products

The practice of using stop-loss products with special features to mimic the cash flow nature of fully insured products has been around since at least the early 1990s. However, since the passage of the ACA there has been substantial interest in a “package” of SLI and related features that are intended to mirror, to the extent possible, certain aspects of a traditional fully insured medical expense policy. These features include stable cash flow and the budgetable cost that results. The generic terms used in the marketplace for such products are *level funded* and *level funding*.

Many small-group fully insured carriers that also write ASO business on larger groups found level funding of great interest as an alternative to offer their smaller employer clients in response to the initial, but later waived, ACA requirement to push the upper limit for the definition of “small” group to 100 from 50. Most states were previously, and remain, at 50 lives, but there was substantial concern among larger commercial carriers regarding the impact on the pooling of their smaller tier business if the original ACA rule had gone into effect. Since claims experience and even individual medical underwriting information can be used by SLI underwriters for any size group, level funded vehicles are one way that insurers have often been able to offer small groups with good experience more competitive renewal terms than community rating would dictate for a fully insured renewal. As such, level funding is used primarily as an alternative to fully insured policies for employers below 150 employee lives (especially below 75 lives), though there are exceptions.

One of the primary goals of level funding is to deliver an invoice to the self-insured plan each month where the total contributions required for each employee coverage tier and plan option stays the same throughout the policy year, just like a fully insured policy. While one of the benefits of self-insurance is that the self-insured plan can wait until claims are adjudicated to fund claims, cash flow may be perceived as chaotic when, for example, one month’s claims spike very high due to a large loss. There has always been the desire to have the freedom of plan design and other benefits of self-insurance with the budgetable and predictable cash-flow requirement of known, fixed payments each month. Level funding is one of the self-insurance industry’s responses.

What makes level funding, well, level? The standard self-insured plan has a fixed-cost element made up of SLI premiums and administration and vendor fees, and a variable component made up of claim payments. Different ASO/TPA administrators have different procedures for how and when claim payments must be funded by the self-insured plan, but one of the primary features of self-insurance is that the claims need not be funded until they are payable, that is, after they have been presented and adjudicated. When the self-insured plan has purchased aggregate insurance, the maximum cost the plan can incur in a plan year (net of reimbursements) is the aggregate attachment point plus all the fixed costs including premiums for SLI.

Level funding, in simplest terms, requires the following:

- Some form of SLI that involves aggregate insurance (with or without specific insurance).
- Clearly defined and robust specific advance funding and/or aggregate accommodation options for the SLI coverage being provided. Here, *robust* means that, since the main point of level funding is to protect the cash-flow stability of cash requirements of the plan, the plan cannot be asked for additional money during the contract year. Therefore, shortfalls that occur must be consistently smoothed out by the advance and accommodation features present on an administrative basis that might not work out quite as smoothly in a more traditional SLI arrangement.

- A requirement that the aggregate attachment point be fully funded. This means that, each month, the self-insured plan remits all fixed costs and an allowance for claims, which is calculated as the aggregate factor multiplied by the number of exposures. In other words, the potential aggregate attachment point is accumulated whether actual claims have accrued for payment to the extent of the funding or not. The allowance for claims is deposited into a claims fund. Claims funds are often used for disbursement of self-insured plan claims, whether level funded or not. However, funds are often required when a level funded stop-loss policy is purchased.

It is important to note that a claims fund is an administrative account generally held by the claims administrator (ASO/TPA) but is a general self-insured plan asset. The claims fund is merely the holding vehicle from which required disbursements are made. Those disbursements may be claims only or claims and administrative fees. Money in this account or fund belongs to the plan or plan sponsor, not the ASO/TPA or stop-loss carrier.

- The ASO/TPA administrator uses the claims funding from the full funding requirement and the advance or accommodation options of the SLI policy to pay all the covered plan claims that come in. Therefore, no further funds are required from the self-insured plan during the policy year (possibly subject to various contract basis aspects).
- Optional, but usually present: Any balance in the claims fund after full settlement of all plan liabilities (subject to the contract basis characteristics of the SLI) may be subject to an additional “contingent” charge by the stop-loss carrier as a “deferred, residual or retro” premium, management fee, claims fee or some other defined charge. The amount of this charge may or may not vary depending on renewal of the stop-loss policy itself. There are differences in how the contingent charge may interact with the contract basis and the handling of any available TLO. How this feature is applied in practice varies significantly depending on whether the administrator is an ASO carrier also providing the SLI or is a true TPA using third-party SLI. A discussion of how one might approach setting retro premiums is included in Appendix C.

While level funding provides the self-insured plan with a “level” payment (subject to changes in enrollment) like a fully insured plan, the plan is a true self-insured plan. This is important—the employer plan is self-insured, and it is an ERISA-based employee benefit plan. The policy is a true form of SLI. It simply has additional features. Actuarial analysis of SLI written in conjunction with level funding is mostly the same as that for the actual SLI vehicle used, though it can involve additional considerations on the usual modeling approach when there is a residual charge, as that may have a material impact on how and where risk and profit margins are included in pricing the total product. The self-insurance actuary must understand the interactions of the SLI variations with the risk and profit profile of a block of such business, as well as the impact of any trade-off between standard aggregate and specific premium and the residual charge feature that may exist on a level funded product.

5.3.7 Summary of Stop-loss Coverage Types

The SLI marketplace offers a number of variations on premium rate guarantees, no-laser guarantees, multiple-year guarantees, multiyear policy terms, experience refunds, carve-outs for certain medical conditions or treatments, and other features created by a competitive marketplace. The self-insurance actuary is involved in pricing such variations, either directly or by determining the discount on standard rates to apply, and ongoing evaluation of the value of such items.

5.4 Developing Stop-loss Manuals

The starting point for most stop-loss pricing is a rating manual. Manuals are established by an insurer using one or a combination of the following approaches:

- Creating the manual through analysis of an insurer's own or acquired data;
- Purchasing or leasing the manual from a consultant; or
- Obtaining it from a supporting reinsurer.

Whether created, purchased, leased or obtained, the actuary will modify the manual based on the particular circumstances at hand.

This section covers the development and structure of manuals for three key areas:

- Specific premium rates;
- Aggregate expected claims factors (to set attachment points); and
- Aggregate premium rates.

The discussion is from the perspective of the actuary developing the manual, whether employed by the company, a consultant or a reinsurer.

5.4.1 Specific Premium Rates

The first step to developing a specific stop-loss manual is to collect the claims and underlying exposure data from which claims distributions may be derived. When gathering data, it is important to relate a particular claim—with its own specific details such as incurred date, paid date, type of claim, billed amount, accepted (eligible and covered) amount, allowed amount, cost-sharing component—to a particular exposure with its demographic and other data.

It is especially important to have exposure information on persons who do not appear in the claims data.

The claims data may be from the company's own claims or from one or more outside providers, including the following entities:

- Other insurers or reinsurers;
- Claims payers such as TPAs;
- Claims data aggregators; and
- Consulting firms.

Because large claims are infrequent, a large number of exposed lives (in the millions) and their associated claims are needed, particularly for higher specific deductibles. Should a carrier's claims data be limited, it may use its data to develop claims distributions for lower specific deductibles and then extrapolate its distribution using more generic claim distributions obtained through other sources, including those noted earlier.

These claims need to be compiled and adjusted into claims probability distributions (CPDs, sometimes called a claim continuance table), typically split into rating tiers such as employee, spouse or child. Variances among these tiers may be observed in terms of not only the absolute claims costs per exposure but also the slope of the CPD.

The compilation typically starts with annual paid claims per plan beneficiary from groups that have been covered for more than one year. Limiting the selection to groups covered for more than one year removes the effect of including policies with claims paid and incurred in the same policy year (i.e., 12/12 policies).

Adjustments to the claims amounts include several factors:

- Trending from the claims dates to the midpoint of the prospective rating period;
- Adjusting from the claimants' relative cost areas to the manual average cost area;

- Adjusting the claims to a common plan of benefits; and
- Adjusting the claims to an allowed-charge basis or a standard assumed network discount.

These adjusted claims are then assembled into CPDs by assigning each claim to a “bucket” based on the adjusted claim amount. The first bucket is for exactly \$0.00 claims. This includes plan beneficiaries who either submitted no claims or submitted claims but no benefits were payable. The range of claims amounts covered by each successive bucket increases gradually until claim frequency decreases and finer increments are not needed for claims pricing. A claims probability distribution is then created using the following simple calculations:

- Frequency is calculated as the number of claims in the bucket divided by total number of covered members; and
- Severity is calculated as the total claim dollar amount divided by the total number of claims in each bucket.

As mentioned earlier, millions of claims are needed to produce credible frequency and severity figures at high deductibles. This is especially true now that unlimited annual and lifetime maximums are required under the ACA. If there is not enough exposure data to measure costs accurately at higher deductibles, some actuaries extrapolate the discrete CPD using a continuous distribution, such as the Pareto distribution, at higher deductibles. Of course, the actuary should test that the extrapolated distribution adequately models actual high claims experience. Parameterizing continuous distributions at higher deductibles is outside the scope of this monograph.

5.4.1.1 Specific Base Claim Rates

Using CPDs, one can calculate claim costs for a specific stop-loss deductible in three steps:

- Subtract the deductible from the average claim amount in each “bucket” greater than the deductible;
- Multiply the results of step 1 by their associated frequencies; and
- Sum the results.

The result is annual claims costs for that deductible at the manual’s base effective date, average cost area, base plan of benefits and base charge level (allowed or standard assumed PPO discount). This process is repeated for each specific deductible. Appendix A illustrates these calculations in detail.

These claim costs may then be adjusted for any changes anticipated in the carrier’s underwriting approach as compared to the underwriting approach underlying the claims cost data used to develop the CPD. Considerations related to the underwriting approach may include new business, renewal business or both. Claims costs might, for example, be reduced to the extent that the carrier plans to introduce tighter lasering protocols. Conversely, claims costs may be increased if the carrier is introducing a no-laser guarantee product.

The monthly specific base claim rate table is finalized by dividing the adjusted claim costs by twelve (assuming an annual 12-month policy) and organizing by rating tier and specific deductible. This table is the foundation of the specific stop-loss rate manual and is the element of the manual updated most frequently.

5.4.1.2 Adjustments to Specific Base Claim Rates

Specific stop-loss manual rates are determined by applying adjustment factors related to group risk characteristics, underlying benefits, contract provisions and claims cost controls including provider networks, reference-based pricing plans and more.

Many of these adjustments are similar to those found in first dollar medical pricing models, and the generic derivation of these factors will not be discussed here. This section focuses on aspects of the adjustment factors that are especially notable when pricing specific stop loss.

Adjustments for Group Risk Characteristics

Base claim cost rates are adjusted based on the risk characteristics of a given employer group. Specific rate manuals typically include tables of adjustment factors to account for the following characteristics:

- Age and gender profile of the employee population,
- The geographical location of the employees,
- The industry in which the employer is engaged, and
- The effective date of the stop-loss contract (trend).

Many of these rate adjustment tables look similar to those found in a typical first dollar medical pricing manual. However, unlike medical pricing, specific stop loss entails a large deductible that must be met by the plan before the claim becomes reimbursable by the stop-loss carrier. Certain diagnoses and conditions, for example, tend to have a greater impact on stop-loss claims experience. Moreover, the mix of claims by provider type shifts to higher-cost services such as hospitalization and specialty drugs. Consequently, specific stop-loss industry adjustment factors of some industries may be different from those of first dollar medical insurance. In addition, age and gender factors tend to have different slopes because some claims, such as for maternity, have a different impact on specific stop loss than they do for first dollar coverage.

These higher deductibles also result in significant deductible **leveraging** effects. This phenomenon means that some adjustment factor tables, such as age/gender, geographic area and trend, may vary by deductible. Specific deductible leveraging effects are discussed in more detail in the following pages.

Adjustments for Underlying Benefit Plan

While the stop-loss underwriter may review many aspects of the underlying benefit plan, the principal consideration for specific manual rating purposes is the maximum limit on employee cost sharing (i.e., out-of-pocket maximum) under the plan as compared to the standard benefit plan assumed in the base-cost rates. A change in the maximum employee cost sharing will affect the level of claims required to exceed the specific deductible and the rate that needs to be charged.

Adjusting for underlying benefits is particularly important when pricing lower specific deductibles. As the specific deductible increases, the impact of employee cost-sharing decreases and the adjustments for underlying benefit plans become minimal. This is explained and illustrated in more detail in Appendix A.

Adjustments for Stop-loss Contract Provisions

The specific rate manual also needs to include tables of adjustment factors related to the certain contract provisions of the stop-loss policy being quoted. There are typically three primary provisions considered in a specific rate manual: contract basis, contract length and benefit carve-outs.

The base-cost rates assume a standard contract basis, typically paid or 12/15. If a stop-loss policy with a different contract basis is going to be quoted, the rates must be adjusted to reflect the impact on expected stop-loss claims. These adjustment factors are often estimated by assuming a certain claims payout pattern (i.e., how quickly claims incurred in a month are paid over the course of subsequent months). This payout pattern is used to model how different contract bases impact covered claims. The annual accumulation nature of the specific deductible also needs to be considered. More limited contract terms will have a greater impact on pricing for higher specific deductibles.

Related to the impact of the annual accumulation is the impact of the policy contract length. Although the majority of stop-loss policies are sold for a 12-month period, contracts of differing periods, typically between six and 18 months, are offered from time to time. In addition to the obvious difference in the exposure period, a shorter (longer) contract reduces (increases) the likelihood that claims will accumulate sufficiently to exceed the specific deductible. Therefore, the manual should include a table of adjustment factors based on contract length.

The final adjustment table(s) that need to be included in the manual account for any differences in the types of claims to be covered under the stop-loss policy versus the underlying benefit plan, often referred to as carve-outs. Two common carve-outs found in stop-loss policies are for organ transplants and prescription drugs. Base claim cost rates need to be reduced to account for any benefits carved out. Tables typically include discount factors by specific deductible level. Discount factors are often derived by building CPDs excluding the carved-out benefits and calculating new claim costs. The discount factor would then be one minus the ratio of the new claim cost rate to the base claim cost rate.

Adjustments for Claim Cost Controls

Adjustment factors for claim cost controls generally account for any aspect of the underlying plan and administrative structure that may be expected to affect claims costs beyond that assumed in the base claim rates. The most common consideration is that of the impact of provider network discounts. However, it might also consider elements such as population health management, disease management and other cost-containment programs. A more recent development is the advent of reference-based pricing structures adopted by the benefit plan that define the plan's costs based on an external benchmark such as Medicare fee schedules. Rate adjustments for this feature may replace the adjustment for provider networks.

While the evaluation of provider networks and other cost-containment approaches is beyond the scope of this paper, there are special considerations related to specific stop loss. The starting point for determining these adjustment factors is often very similar to that employed for first dollar coverage. However, as noted, the mix of claims by diagnosis and by provider type of claims in excess of high specific deductibles affects the overall discounts that will be realized in stop-loss claims as compared to first dollar claims. Other considerations for provider network evaluations include outlier provisions in hospital contracts and the relative value of contracts with tertiary care and designated centers of excellence facilities.

The calculation of the adjustment factors is similar to that of other adjustments. The average claim amounts in each bucket of the base CPD are adjusted based on the assumed discounts, which may vary by bucket. A new set of claim costs is then determined and compared to the base claim rate to determine the adjustment factors by deductible (or range of deductibles) to be applied when a particular provider network or other claim cost control is elected by a prospective stop-loss policyholder.

5.4.1.3 Deductible Leveraging

The concept of deductible leveraging is a key consideration in determining adjustment factors for key rating parameters such as trend, network discounts and geographical area. In its simplest terms, deductible leveraging is the effect at various levels of specific deductibles that a given percentage change has on pricing.

A given percentage increase or decrease in claims costs will have a greater increase or decrease in rates as the deductible increases. This is a result of the change in claim costs not only affecting the severity of claims but also the frequency of claims reaching a certain specific deductible. For example, a \$48,000 first dollar claim is not a stop-loss claim when the policyholder has elected a \$50,000 specific deductible. However, if first dollar claim costs for that claim are estimated to increase by 10 percent—whether due to trend, high-cost areas or higher age census—that first dollar claim becomes \$52,800, which generates a

\$2,800 specific claim. Thus, deductible leveraging causes the frequency of claims exceeding \$50,000 to increase.

The effects of leveraging are explained and illustrated in more detail in Appendix B.

5.4.1.4 Loads for Expenses and Profit

Once base claims costs have been adjusted for the considerations already discussed, loads need to be applied to determine the final gross manual rates. These loads need to cover both profit and risk margins as well as all expenses associated with the stop-loss policy.

Profit margins are most often expressed as a percentage of either gross premium rates or net claims costs. The rationale behind the latter approach is that the profit margin should not differ based on the level of variable expenses associated with a given policy. Profit margins for specific stop loss may increase as specific deductibles increase because stop-loss claims at higher specific deductibles tend to be more volatile. Profit margins for specific stop loss may decrease as specific stop-loss premium increases because the experience of policies with more premium should be less volatile. Expected profit margins (as a percent of premium) tend to be higher for specific stop loss than for fully insured health coverage because of higher anticipated volatility.

Expenses that need to be included in final gross rates include commissions and other producer compensation, premium taxes, administrative expenses and corporate overhead. Typically, these expenses are expressed as a percentage of gross premium. However, alternative approaches for loading administrative expenses may be considered to recognize that the anticipated administrative burden associated with different size accounts may not vary with premium.

5.4.2 Manual Aggregate Attachment Point Factors

Aggregate attachment point factors for specific groups are commonly determined solely based on that group's unique experience. Actuaries are often involved in developing the formula for projecting claims based on experience. Formulas vary from carrier to carrier but are similar to the formulas self-insured plans use to develop their budgets, a description of which appears in section 4.6.4.1.

Stop-loss carriers may also wish to employ a manual calculation of aggregate attachment point factors. Reasons for doing so include the following:

- Writing of smaller groups where group experience is not 100 percent credible;
- Benchmarking experience-derived factors;
- Providing an ability to write groups for which experience is not available; and
- Allowing determination of adjustments to experience-derived factors to account for changes in benefit plans, provider networks and so on.

The structure of an aggregate attachment point manual is very similar to that of a first dollar rate manual and so will not be described here. The manual may be derived directly from the CPD used to develop specific manual rates. Alternatively, a first dollar pricing manual may be used to establish expected aggregate claims.

Whether expected claims are derived based on experience, a manual or a blend of the two, some elements are unique to setting aggregate factors:

- Unlike first dollar manuals, the expected claims determined by the manual need to be reduced by the amount of claims expected to be covered by the specific stop loss.

- Similar to the specific stop-loss manual, expected claims must be adjusted by the stop-loss contract basis to account for the impact of differing paid and incurred periods covered under the stop-loss contract.
- The aggregate corridor being quoted needs to be added to the expected aggregate claim rates to determine the attachment point factors. This is usually done by multiplying expected aggregate claims costs by a factor such as 125 percent, which adds an aggregate corridor equal to 25 percent of expected claims costs.
- A table needs to be included to determine the allowable range of specific deductibles that can be quoted for a given group size to assure that the volatility of aggregate stop-loss claims falls within the ranges assumed in the development of aggregate premium pricing.

5.4.3 Aggregate Premium Rates

Aggregate premium rates, typically expressed as a percentage of expected first dollar claims, are developed using a Monte Carlo simulation of first dollar claims that starts with the CPD. By running enough scenarios, the Monte Carlo simulation can be used to estimate expected claims in excess of the aggregate attachment point.

The expected aggregate claims cost percentage varies by the following factors:

- The number of employees covered by the plan;
- The aggregate factor to be quoted, such as 125 percent of expected first dollar claims;
- The specific stop-loss deductible; and
- The aggregate benefit limit, for example, maximum aggregate claim of \$1 million.

The actuary needs to run the Monte Carlo model for combinations of each of these factors in order to determine complete aggregate premium rate percentage tables. In addition to this expected level of claims in excess of the aggregate attachment point, consideration may be given to further adjustments for parameter and process risk. Process risk relates to potential variations of actual claims levels relative to the expected levels as implied by the CPD. Parameter risk relates to the potential for the stop-loss underwriter to misestimate the expected claims for a given group. Parameter risk includes the risk that the trend factor used by underwriters to project claims forward to the next policy period may be low. A trend factor that is lower than actual trend affects every aggregate stop-loss policy quoted with that factor, a significant increase in exposure to aggregate claims. An example of how a Monte Carlo model may be used to set aggregate premium rates is provided in Appendix C.

To determine the aggregate premium rate to be charged, the risk percentage rate is applied to the group's expected claims, whether determined by experience rating or through a manual, to determine the aggregate risk premium to be charged for the contract period.

The total contract risk premium is then divided by the number of employees and the number of months in the coverage period to determine a PEPM risk rate. For carriers that may allow a specific deductible outside the prescribed deductible range, an additional risk load may be applied to account for the additional volatility of including larger claims. The monthly risk rates are then loaded for expenses and profit margin to arrive at the final aggregate gross premium rates to charge.

Additional loads or fees may be applied when the stop-loss carrier offers monthly aggregate accommodation.

It should be noted that for a block of stop-loss business with traditional levels of aggregate attachment point and specific deductible, aggregate premium tends to make up a limited portion of the total premium written (whether gross or net), typically 5–10 percent. Historically, however, as the loss ratio on aggregate stop loss has tended to be very low, the share of total profit made up by the aggregate portion has tended

to be higher than its share of the premium, and today it remains an important part of the whole. In addition, less traditional aggregate products (those written at lower than traditional 125 percent attachment points, or those written in conjunction with certain forms of level funded products) may be a far more significant portion of both premium and expected profit on blocks of such alternative forms of stop-loss business.

5.5 Specific Stop-loss Underwriting Considerations

The specific manual rate is essentially an estimate of expected costs loaded for expenses, risk margin and expected profit. Underwriters develop stop-loss premium proposals by applying expert judgment (often called “discretion”) to manual rates, adjusting for factors that are not explicitly accounted for in the manual rate formula.

Underwriting decisions should be managed with care because, like trend, errors in underwriting judgment are leveraged. One underwriting oversight or mistake can be very material. Typically, members that exceed stop-loss thresholds are a small fraction of the self-insured health plan population, so missing one piece of information from that small subset can have an extreme impact on results. A simple example will illustrate the point.

- Assuming no known losses, the estimated annualized premium of a specific stop-loss policy with a \$100,000 deductible is \$250,000 for the upcoming policy year.
- However, a covered spouse needs a liver transplant, which, if treated in one of the plan’s transplant centers of excellence, is estimated to cost \$500,000. The plan reports that the employee will be leaving the plan at the end of the policy year. Therefore, the plan anticipates that the liver transplant will not be covered by the plan. Based on this information, the underwriter decides to take no action based on the potential liver transplant for the upcoming policy year.
- The former employee leaves the plan as anticipated; however, he elects COBRA. Therefore, the spouse is still covered by the plan. If the transplant occurs before COBRA eligibility expires, the stop-loss policy would have an expected claim of \$400,000 (= \$500,000 expected cost less \$100,000 specific stop-loss deductible), a potentially costly underwriting error.

Therefore, the quality and skill level of the underwriting team is critical to overall success.

Underwriting judgment is influenced by many factors particularly (1) the information available at the time of underwriting, both its substance and its quality, and (2) the stop-loss policy terms. These factors are described in more detail in the next section.

5.5.1 Underwriting Information

When gathering information to analyze stop-loss risk, certain basic data elements are needed from all submissions:

- Eligibility and enrollment information, including the location of the self-insured plan and its members’ residences;
- Underlying health benefit plan design, which might consist of the benefit schedule, the SPD or, if available, the plan document;
- Competition, which might include current rates, proposed renewal rates and name of the incumbent;
- Past stop-loss experience, including both premiums and claims;
- Claimants with high claims costs, typically any member exceeding one-half the specific stop-loss deductible; and
- Claimants with diagnoses (trigger diagnoses) and/or prognoses that indicate a high likelihood of a large claim.

We begin, however, with a discussion of data quality.

5.5.1.1 Data Quality

Data available for renewal proposals is generally of the highest quality. Such data has been extracted from the insurer's systems, and both its strengths and its shortcomings are well understood. Moreover, resources are available internally to answer questions about the data, known losses have been documented to the insurer's standards and the data has not been filtered through a third party, perhaps a broker or a TPA.

Data available for new business opportunities tends to be of lower quality. Data provided by trusted partners may overcome some of the relative weaknesses, but underwriters may still not have the same level of confidence in new business data as they have in renewal data. The first renewal of an SLI policy may be similarly affected because the current carrier is unlikely to receive an update to the experience received when the policy was originally quoted.

The lowest quality data is typically received when a new group converts from fully insured to self-insured. This conversion affects the nature of the health plan liabilities and the availability of prior history. When a fully insured group moves to self-insured, the financial liability changes from the health insurance carrier to the self-insured health plan. The fully insured carrier, not the employer, owns the data and so is often reluctant to share as much detailed information as a self-insured plan typically receives. Despite these data concerns, the plan that is converting from fully insured to self-insured may perceive that its upcoming risk profile is favorable, so there may be some overall favorable risk selection offsetting concerns about the data.

5.5.1.2 Benefit Plan Considerations

As explained in section 5.4.1.2, stop-loss rates are adjusted to recognize the underlying benefit plan. These adjustments are usually straightforward. The adjustments, however, are more complex in respect to SLI that covers self-insured plans sponsored by health care systems. The reasons are described in this section.

A self-insured plan established by a health care system often does not pay claims relating to services delivered by the plan sponsor (so-called "domestic" services) to its plan beneficiaries. Other self-insured plans sponsored by health care systems pay for domestic services but at a much lower cost than is available to other health plans or networks. In either case, they provide cost-sharing incentives for their plan's beneficiaries to use domestic services. With guidance from an actuary, the underwriter will need to estimate the amount of potential domestic claims and adjust the stop-loss rates. This adjustment will reduce the specific stop-loss rate charged.

Not all health care systems that sponsor self-insured plans follow this practice. When underwriting stop loss covering a self-insured plan sponsored by a health care system that treats domestic charges the same as any other charges, the underwriter may want to consider limiting [hospital domestic reimbursements](#) in order to minimize the stop-loss insurer's exposure to adverse selection, potential malfeasance and/or fraud.

5.5.1.3 Enrollment Data

Underwriters rely more heavily on manual rates on smaller cases, making specific risk adjustments for known conditions, than on larger-sized cases. Larger self-insured plans may have more complex risk considerations, but their specific stop loss may be partially credible. Of course, groups need to be quite large to have much credibility.

Underwriters need to consider the implications of a particular group's enrollment. For example,

- If the percentage of employees covering spouses is much higher for a given group than the underlying manual experience, the underwriter may need to adjust rates upward or downward as appropriate to reflect the risk.
- If a group is located mostly in rural areas with less access to tertiary care, the underwriter may need to assess how the potential stop-loss risk is affected.
- If there are many inactive employees, such as non-Medicare-eligible retirees, disabled lives and COBRA participants who present higher-risk characteristics than active employees and their dependents, the underwriter may exercise caution when quoting the group.
- If there is low participation in the self-insured plan, the possibility of antiselection arising from certain subpopulations increases. At higher participation (such as 90 percent to 100 percent), the risk is spread across a broader population, and there is less chance that the stop-loss carrier will be covering the risk of a less-healthy subpopulation.
- If a slice of membership is enrolled in **health maintenance organization (HMO)** plans, the underwriter may also be cautious about the potential for antiselection issues. Employees choosing HMO options may have a better risk profile than those choosing richer benefit options or more open access networks.
- When evaluating risk, changes in enrollment over time are important to analyze. Material changes during a policy period may affect the underlying risk of the stop-loss coverage. Examples of events that might drive enrollment changes are changes in the plan sponsor's contribution strategy, or external factors such as a factory closure that causes the plan to add spouses who had been covered by the factory's plan.

5.5.1.4 Competition

Underwriters must consider competitive factors in the rating. If a group has an existing stop-loss rate that is substantially above or below the manual rate, then the underwriter should seek to understand why that deviation exists. If the current rate is high, then there could be risk exposure that is known to the current carrier that is not transparent to the underwriter. If the current rate is low, there is less likelihood of acquiring this new group, so the underwriter will decide either to decline to bid or, after fully underwriting the group, to justify a bid that is competitive with the current rate.

5.5.1.5 Stop-loss Experience

Some insurers, particularly for larger plans with lower specific deductibles, use an experience rating approach to setting specific stop-loss rates, credibility adjusting with the manual as appropriate. Summary historical experience may also be useful as a reasonableness check when reviewing known loss information.

5.5.1.6 Known Loss Data

Underwriting should gather as much information as possible on high-cost claimants, potential high-cost conditions within a group and high-cost prescription medications. To gather this information, underwriters typically require the self-insured plan to prepare and sign off on a disclosure statement. A sample disclosure statement is available from the SIIA.⁹² It asks for identifying information about potential high-cost claimants including costs incurred, when those losses were incurred, diagnosis and prognosis. After reviewing this information, the underwriter may request patient case notes and seek expert medical and cost guidance from clinicians such as nurses or physicians.

If known losses are higher or lower than what would be expected for a given group, the underwriter may consider rating adjustments. In setting any rating adjustments, underwriting must apply judgment as to the probability that any given member may exceed the specific stop-loss deductible. Alternatives to loading for known losses are described in section 5.3.1.3.

5.5.2 Stop-loss Policy Terms

Based on the information available, the underwriter will develop a specific stop-loss manual rate and adjust the rate so that it better aligns with the underwriter's assessment of the underlying risk. The underwriter, however, has other tools that may help manage the carrier's specific stop-loss risk exposure. These include the following options:

- Setting the specific stop-loss deductible,
- Underwriting known losses, and
- Adding an aggregating specific stop-loss deductible.

We take a closer look at each in the discussion that follows.

5.5.2.1 Specific Deductible

Different self-insured plans have different tolerances for risk, so plans with similar underlying risk characteristics may request a wide range of specific deductibles. Underwriters should consider the motivation for requesting a low deductible. Perhaps the plan sponsor is aware of some higher-risk element. That is, perhaps the plan sponsor is selecting against the stop-loss coverage. Moreover, if the specific deductible is set unusually low, the carrier may incur higher than anticipated costs of administering specific stop-loss claims. In contrast, the specific stop-loss deductible may be set too high if there are minimal claim occurrences historically. Underwriters should be confident that self-insured plans requesting unusually high deductibles have the financial ability to take on that risk.

Deciding which specific deductibles to offer is part of the "art" of underwriting. One philosophy suggests that if the specific deductible requested is so low it generates credible specific stop-loss experience, then it is too low—in other words, the deductible offered should be where credibility is reduced to zero or a minimal amount. Others are willing to offer specific stop loss at lower deductibles as long as they can experience rate the specific stop loss. Different carriers have different ways of experience rating specific stop loss, and actuaries should be involved in any formularization of that process.

Whether a self-insured plan has requested a deductible that the underwriter perceives as too high or too low, the underwriter can attempt to steer the group toward preferred specific deductibles by loading rates at nonpreferred deductibles.

5.5.2.2 Known Loss Underwriting

As noted, underwriters usually obtain a disclosure statement at the time of underwriting. Instead of loading the specific stop-loss rates to account for known losses, the information on the disclosure statement can be used to modify the terms of the stop-loss policy. Following are considerations for how to interpret a disclosure statement and advantages and disadvantages of loading rates versus modifying the terms of the policy.

Some disclosed situations are almost certain for the upcoming policy period, such as ongoing cancer cases, members currently in the hospital, members with high-cost conditions such as hemophilia and other common conditions, whether they are chronic or acute. In these situations, subsequent events and courses of treatment can be anticipated and predicted. Other conditions and events are random and can fluctuate significantly over time. The timing of large claimants can be either cumulative, adding up over time, or one-time, immediate short-term events.

For anticipated events, there remains some uncertainty. A claimant may be expected to have \$200,000 in expenses in the following period with a 50 percent certainty or perhaps a 95 percent confidence level that a given member's claims would not exceed \$400,000. As noted, an underwriter can add the expected liability into the premium calculation and subject it to normal premium loads, such as commissions, internal expenses, premium taxes and risk margin. Alternatively, they can modify the risk margin built into the specific rates.

As described in section 5.3.1.3, another alternative is to “laser” the claims of such individuals. That is, claims of the individual are covered under the specific stop loss but only at a higher individual deductible level.

For example, assume the expected specific stop-loss claims for a given group equal \$300,000 and one member, member A, has an ongoing condition with high probability of approximately \$250,000 in claims above the specific stop-loss deductible in the upcoming period. Assume further that the stop-loss policy’s expenses and margin are 20 percent of gross premium. Table 5.5.2.2.1 compares the self-insured plan’s costs if (1) the \$250,000 in claims are loaded into the stop-loss premium to (2) the \$250,000 in claims are not covered by the stop-loss policy and instead are assumed by the self-insured plan directly.

Table 5.5.2.2.1.

Amount Payable by Self-Insured Plan, With and Without Lasering

	No Laser	With Laser
Expected specific stop-loss claims (expected amount from rate manual)	\$300,000	\$300,000
Stop-loss policy cost for member A	\$250,000	Costs covered directly by self-insured plan
Total expected specific stop-loss claims covered by SLI	\$550,000	\$300,000
Stop-loss expenses and margin	20%	20%
Specific stop-loss premium = claims / (1 – expenses and margin)	\$687,500	\$375,000
Self-insured plan direct cost for member A	\$ -	\$250,000
Total amount for self-insured plan	\$687,500	\$625,000

The advantage of the laser for the stop-loss carrier is that the known high-cost claimant is removed from the SLI pool of risk. The stop-loss carrier will not need to worry about the potential liability or the volatility of that member. The disadvantage is that the stop-loss premium and retention margin could be higher if the member is included in the SLI coverage and the stop-loss carrier will not realize the additional profit.

The advantage of the laser for the self-insured plan is that the SLI premium will be less and the plan will not be paying the stop-loss carrier’s expenses and margin on top of medical expenses that are more certain or foreseeable. The self-insured plan will pay for this high-cost member one way or another. If the member is lasered, the plan can budget the cost of claims on the individual up to a higher specific deductible and pay for it directly rather than through higher stop-loss premium. If the expected claim amount had been included with the stop-loss premium, the premium cost would be higher by virtue of the premium loads that are added to known and expected claims. In addition, from a financial risk perspective, if the person does not require the services or the expenses as predicted, the self-insured plan would be paying more through this much higher premium without any relief. This is particularly true if, for example, the person dies unexpectedly at the beginning of the plan year. The disadvantage of a laser for the self-insured plan is that the stop-loss carrier may underestimate the actual liability to be built in to the SLI, so in some cases the self-insured plan may be better off without the laser.

There is uncertainty to the estimated claims for any given known risk. There could be wide variations in outcomes, so the gain or loss for a given laser depends on who bears the risk.

Rating philosophies of carriers and underwriters vary, so approaches to lasering or including known liabilities vary. Some carriers may be more willing and able to quantify and take on this risk than others. Some carriers may typically want more claims to be covered by the stop-loss policy, and others may not want to take that type of risk.

5.5.2.3 Aggregating Specific Stop Loss

An “aggregating specific” deductible can be used in the place of lasers to transfer some of the risk to the self-insured plan and mitigate stop-loss premiums. Factors that influence the stop-loss premium reduction would be size of the employer health plan, the given specific stop-loss deductible, the expected specific stop-loss claims, and the aggregating specific corridor amount. The amount of certainty associated with each factor influences the actuarial value of the aggregating specific deductible. Measured as a percentage of the aggregating specific deductible, discounts on specific stop-loss premiums are larger for bigger self-insured plans, lower specific stop-loss deductibles and lower aggregating specific deductibles than their converses because, under these conditions, there would be less statistical fluctuation and it would be easier to trigger the specific stop-loss coverage.

For example, suppose the expected specific stop-loss claims for a given case are \$500,000 and the self-insured plan proposes retaining \$100,000 of that risk through an aggregating specific option. That would amount to 20 percent of the stop-loss liability. A very large group with a lower specific stop-loss deductible may receive almost full credit against the specific stop-loss premium for the aggregating specific deductible. A smaller group with a higher specific stop-loss deductible would get less credit for that aggregating specific deductible. If the larger group proposes a \$500,000 aggregating specific option, they would not get full credit for the aggregating specific stop-loss premium, because the stop-loss carrier is still bearing substantial risk even though the aggregating specific deductible is close to, or in some cases greater than, the expected specific stop-loss claims liability.

The benefits of an aggregating specific option for a carrier is that the stop-loss premium would be lower and more attractive to the group. The stop-loss carrier would be taking less risk because the self-insured plan is taking another layer of risk. The expected value of the aggregating specific corridor is estimated, so the ultimate outcome could be favorable or unfavorable in any given situation. The disadvantage is that there is less being covered and therefore less risk and reward opportunity, meaning lower potential profit. There is also more complexity in the stop-loss coverage and the administration of the SLI.

The benefits of an aggregating specific option for a self-insured plan would be that the stop-loss premium would be lower because they are taking additional risk. The disadvantage is that the self-insured plan is taking additional risk and there is more uncertainty to the expected liability. In addition, the premium offset may be lower than the self-insured plan ultimately pays if in some cases they do pay for the full aggregating specific amount. The plan sponsor should understand the type of additional risk it is taking.

5.6 Aggregate Stop-loss Underwriting Considerations

Underwriters must apply judgment as to the projected and expected benefit expenses as well as the volatility for a given group. For example, two populations with similar risk characteristics may have wide disparity in the expenses from year to year. Although they may average the same over time, the one with more fluctuation annually may be riskier in terms of aggregate stop-loss coverage than the other.

The “art” of projecting claims covered by the aggregate also includes being aware of the changes in underlying risk characteristics such as dependent mix, area mix, network changes, benefit changes and other variables. The actuary may be a major educator to underwriters in adjusting formulas for projecting claims.

5.7 Measuring Stop-loss Experience

5.7.1 Reserving: Specific Stop Loss

Group medical liabilities are often estimated by applying loss development methods. These methods usually involve the calculation of loss triangles that examine the development of monthly paid losses in relation to the month during which the loss was incurred.

In contrast, stop-loss completion factors are often estimated based on loss triangles that examine the development of monthly paid losses in relation to the month during which the policy was effective. The effective month is used for one of two reasons:

- The incurred date of a stop-loss claim is not well defined. Is it the day on which the plan beneficiary first incurred a claim in that stop-loss policy year, or is it the day on which the plan beneficiary's accumulated claims first exceed the specific deductible?
- There is a great deal of uncertainty to the time it takes for a plan beneficiary to accumulate enough claim costs to exceed the specific deductible.

In this approach, paid claims are any reimbursements made for a member once the individual retention level is met. This could be a single large payment (e.g., single claim submission for an extended inpatient stay) or multiple payments over multiple months (e.g., recurring drug charges that repeat monthly).

Many variables can influence the completion factors. Examples include the policy's specific deductible and contract basis and the plan's TPA:

- Specific deductible. The larger the specific deductible is, the longer it takes to accumulate enough claims to exceed the deductible. Therefore, completion patterns are generally slower when comparing policies with larger deductibles to policies with smaller deductibles.
- Contract basis. Policies with a paid or run-in contract will naturally have claims exceed the deductible sooner than policies with an incurred or run-out contract, and claims of paid and run-out contracts will complete sooner, too.
- Plan's TPA. The stop-loss carrier's relationship with the TPA can affect completion patterns, as the time it takes to notify the stop-loss carrier of a reimbursement request will affect completion patterns.

The most common method used to calculate stop-loss reserves is to select an ultimate loss ratio for a block of business. Multiplying premiums earned up through the valuation date by the ultimate loss ratio provides an estimate of incurred claims as of the valuation date. Reserves are estimated by subtracting paid claims from the estimate of incurred claims as of the valuation date.

In practice, one or more of several approaches are used to select an appropriate ultimate loss ratio. Loss development methods can be used to estimate ultimate claims. Then the ultimate loss ratio is calculated by dividing the ultimate claim estimate by estimated premium for the entire policy year. Similar to first dollar business, paid claims, once grouped by policy effective month, can be divided by the appropriate completion factor to estimate total claims for each effective month.

One drawback to the loss development method for stop-loss reserving is that in the early months of a policy it is common not to have any paid claims. Using traditional completion methods would create the need to introduce another liability, similar to a contract reserve on a level premium life insurance product, to avoid recognizing the majority of premium as profits in the early months of a policy.

One solution is to use a combination of a loss ratio method in early durations, switching to a completion method at later durations. The drawback of this approach is that the transition point can create large swings in liability estimates. Transitioning between the two methods over multiple months can help smooth results.

Another option is the Bornhuetter-Ferguson (BF) method. Commonly used in property and casualty reserving, the BF approach implicitly combines the loss ratio and development methods. The general formula is:

$$\text{Reserve} = \text{Expected Losses} \times (1 - \text{Completion Factor})$$

Under both the loss ratio method and the BF method, an *a priori* assumption of the block's performance is required. The pricing target, a block's past experience, recent rating actions and future trend estimates may all be considered in selecting the loss ratio assumption.

No matter which approach is used, if the ultimate loss ratio selection generates an expected loss for the block, consideration should be given as to whether premium deficiency reserves are appropriate.

Finally, a method is needed to evaluate the accuracy of past reserve estimates. An approach that produces reasonable results is to compare the ultimate loss ratio projections for a block at two different valuation dates. Table 5.7.1.1 presents an example evaluation of reserve estimates.

Table 5.7.1.1
Evaluation of Past Reserve Estimates

Block	Effective Date	Valuation Date	Premium	Ultimate Loss Ratio
Program ABC	7/1/2016	12/31/2016	\$100	70%
Program ABC	7/1/2016	12/31/2017	\$200	75%

The loss ratio increase from 2016 to 2017 implies the block was under-reserved by 5 percent at 12/31/2016.

5.7.2 Reserving: Aggregate Stop Loss

Due to the benefit structure, standard development methods are not usually applied to the valuation of liabilities under aggregate stop-loss policies. Two methods are often applied instead. These methods are usually averaged in some way to determine the reserve for a block.

- Policy year-to-date method. With this method, all aggregate stop-loss policies are treated, in a sense, as monthly accommodation policies. Eligible year-to-date losses under each aggregate stop-loss policy are compared to pro rata attachment points. Reserves are established for each policy on which eligible losses exceed the pro rata attachment point. The pro rata attachment point may be adjusted to reflect the fact that, due to trend, eligible losses in the first portion of a policy year may be lower than eligible losses in latter portions of the policy year. This approach is challenging for stop-loss insurers that lack the data needed to perform this calculation if the plan's TPA does not provide monthly aggregate claims reports.
- Loss ratio method. In this method, the valuation actuary selects a loss ratio with some margin for adverse deviations that is expected for the block of business. The loss ratio selected is adjusted as experience emerges.

5.7.3 Block Management

The nature of stop loss is that a majority of policies will be profitable and a very small percentage of policies will generate significant losses. Within a block, the cases that drive losses from year to year are not necessarily the same cases and, in many instances, are unlikely to be the same cases. Due to the random nature of large claims and the fact that a policy's premium may only be a fraction of the cost of a large claim in a given year, rate targets for specific stop loss are generally set at a block level.

The advantage of combining many policies is that experience may become credible enough to predict future results for larger segments of the business.

Similarly, pricing deviations (i.e., discretion) from manual rates can vary greatly from one policy to the next, but over a larger sample the sold-to-manual ratio becomes much more meaningful. Actively maintaining the rating manual and analyzing the loss ratio effect of deviating from manual rates is an important component in a block rating approach.

Many other policy characteristics can also have an impact on results. TPA, producer, network and medical management programs are several examples. Analyzing experience and sold-to-manual ratios by these policy characteristics can help the actuary identify approaches to optimizing the mix of business.

5.8 Regulatory and Compliance Functions

Actuaries typically play a large role in responding to the regulatory and compliance issues that surround SLI. Actuaries should not only be familiar with the current regulatory requirements but with developing trends so that they may be in a better position to respond to possible changes. The general regulatory environment for SLI will be discussed in greater depth in section 6. Here we will address some of the main tasks an actuary may be involved with for supporting a carrier's compliance with regulatory requirements.

5.8.1 Filings

Filing requirements for SLI range widely by state. When preparing a filing, the actuary must respond to the specific needs of each regulatory entity. This can be made more difficult by the fact that some states regulate stop loss as a life/health product while others consider it property/casualty. While no longer true today, at one time some states considered stop loss as reinsurance and not subject to typical insurance product regulations.

The first thing that needs to be established is whether the state requires any filings at all. A handful of states require no filings for SLI, essentially considering these exempt or nonregulated forms. However, the vast majority of states require some type of filing. There are two general categories of filings for SLI:

- Form filing. With form filing, the insurer must file all policy wording, including the policy, any riders or endorsements, applications and any other documents that may be combined to make up the insurance contract. Except for those states that consider stop-loss exempt, every state requires a form filing.
- Rate filing. Many states that require a form filing also require a rate filing. Both the timing and required contents of a rate filing differ from state to state. Generally, regulators will require a rate filing to accompany any new form filing. Some states will also require updated rate filings periodically, typically annually.

While the contents of the rate filing vary by state, one document common to all rate filings is the actuarial memorandum. This provides an overall description of the filing and typically includes the following elements:

- Description of coverage;
- Description of premium rates and factors;
- Anticipated loss ratio and compliance with minimum loss ratio requirements, if any; and
- Certification the filing is compliant with applicable laws and regulations and that the premium rates are sound and reasonable in relation to benefits.

In considering a description of rates and factors, some states are satisfied with a general high-level description as contained in the actuarial memorandum. Most regulators, though, require more details. This may be as limited as a filing of the table of manual base rates or as detailed as including all manual rating factors and formulas along with a sample calculation.

Beyond a filing of the manual itself, the rate filing may also include a description of any discretion granted to the underwriter to vary from those filed manual rates. This ranges from a simple indication of the maximum deviation allowed to a listing of the factors an underwriter may consider in support of any deviations. Often states allow stop-loss underwriters a great degree of discretion. At this writing, New York, Ohio, Louisiana and Washington allow only a small degree of underwriter discretion.

Although manual rates typically form the foundation of pricing for SLI, many stop-loss insurers take into consideration the experience of an individual account in determining the final price to be quoted. For those carriers, some states may also require as part of the rate filing a description of how the experience rating is calculated and the credibility assigned to experience versus manual rates.

In describing the anticipated loss ratio, the actuary will often describe the various expense categories (commissions, premium taxes and assessments and administration costs) that are assumed in the filed rates and the assumed expense load for each category. A description of how those expense elements may vary for individual accounts may also be provided. The assumed risk and profit margins are added to the expense loads to determine the anticipated gross loss ratio for the filed rates.

Some states also require the filing carrier to provide historical stop-loss experience. This data may include enrollment, premium and claims history, including any estimated reserves. The resulting loss ratios may be used by the regulator to establish past compliance with minimum loss ratios and as support for the rates included in the filing.

Following the passage of the ACA, some states tightened their rate filing requirements for small groups (as defined in each state, typically 50 or 100 employees). These changes often included more strictly defined rating structures, often aligning with the rating requirements for commercial fully insured small-group health plans. In addition, some states prohibit certain underwriting practices, such as lasering, for small groups. These new requirements place a greater burden on the actuary both in terms of additional rate structure complexity and required certifications of compliance.

The time between when forms and rates have been filed and when they may actually be used depends on the state. Not only do these approaches vary by state, they may also differ between the form filing and the rate filing. There are two primary approaches: file and use, sometimes referred to as an informational filing; and review and approve, also known as prior approval.

Under the file and use approach, the carrier may generally begin to use the forms and/or rates as soon as they are filed. In some states, the carrier is required to file some period in advance of their use, typically 30 days in advance. Although rarely used, states may reserve the right to disapprove a filing even after the carrier has implemented it.

The majority of states employ a review and approve process. Under this approach, the carrier may not begin to use new forms or rates until formal approval has been received from the regulatory authority. The review process may require one or more rounds of questions from the examiner that the carrier may need to answer to clarify or justify the filing. In some states, a deemer process is employed under which the filing is deemed to be approved if no response has been received from the regulator within a certain period of time, typically 60–90 days. As the review and approve process is more common, the actuary should consider the time required to obtain such approvals when determining the desired effective date of change.

5.8.2 Other Compliance Activities

Although filings are the principal regulatory activities with which actuaries usually become involved, other areas may also require actuarial input. These situations have become increasingly frequent following the passage of the ACA, which led regulatory authorities to place additional focus on SLI.

The first area of activity involves the education of state regulators. Compared to product areas such as commercial group insurance or individual health insurance, SLI is a relatively niche product. Insurance department examiners and their supervisors rarely have much exposure to the SLI market and may not have developed a firm understanding of both the stop-loss market and the product itself.

It is not unusual for an examiner to confuse SLI with health insurance and to attempt to apply health product regulatory requirements to stop loss. Beyond confusing the two products, many regulators are interested in the interaction between the fully insured market on the one hand and the self-insured market supported by SLI on the other. Of particular interest are the potential impacts on the risk pool depending on how demand for self-insured products affects demand for fully insured products.

The actuary is uniquely positioned to assist in educating regulators on these issues. The first opportunity to provide such education is through the filing process described above. In responding to examiner questions, the actuary has an opportunity to provide greater clarity regarding the operation of a stop-loss policy, underwriting practices and standard market practices.

Occasionally actuaries have opportunities for more direct and specific discussions with regulators. These often arise when changes occur in the SLI market itself or in the context of the broader health insurance industry. These discussions may take place either through regulator meetings with specific companies or with industry association representatives. Among these opportunities is the American Academy of Actuaries Stop Loss Risk Based Capital Working Group. Formed in the late 1990s, the working group initiated data calls, analyzed data and recommended stop-loss risk-based capital factors to the NAIC. Actuaries should avail themselves of such opportunities to lend not only their unique technical expertise but also their general knowledge of risk transfer mechanisms and related market impacts.

A related activity to regulator education is responding to special data calls or reports that may be sought by regulatory authorities. These requests are typically intended to provide greater insight into the workings of a market. It also allows the regulator to monitor and react to particular areas of concern. Again, these activities have increased following the ACA. The actuary has two roles to play in these situations. First is to gather the proper data and compile the information being requested. Second is to provide guidance and suggestions to regulators if the design of the requests suggests the possibility of misinterpretation or that misleading or erroneous information will be provided.

The regulation of SLI cannot be separated from the broader regulatory environment surrounding self-insured health plans and in relation to the regulation of fully insured medical products. These issues will be explored in section 6.

Section 6: Regulation

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Regulation affects the roles actuaries play in helping plan sponsors manage their self-insured health plans. Presented here are some highlights, including a few examples from section 4:

- Actuaries quantify total expected costs for the employer offering a health plan. From a regulatory perspective, this is important when determining COBRA premiums, which by federal law are limited to 102 percent of the expected premium of the plan, though in certain circumstances can be as high as 150 percent. Note that COBRA places limits on the “premium” paid by the COBRA-eligible plan beneficiary. The self-insured plan, of course, does not pay a premium; it funds its actual costs. See section 4.7.1 for a further discussion of how the plan’s funding rate may be translated into the premium rate payable by a COBRA beneficiary.
- Actuaries often assist in establishing the major design elements of the health plan, including but not limited to setting plan design cost-sharing parameters (including deductible, MOOP, copays, coinsurance, incentives and value-based differences from the standard design) that not only align with the employer’s financial constraints but also determine whether the plan satisfies the following requirements:
 - Minimum value and minimum essential coverage thresholds of the ACA’s shared responsibility penalties, which are applicable separately to employers and individuals (see sections 4.7.2 and 4.7.3 for a further discussion)
 - The Mental Health Parity and Addiction Equity Act, which has very complex numeric testing of all plan parameters
 - Certain federal laws and the tax code, such as overall MOOP restrictions, IRC tax requirements for health savings account-compatible plan design, wellness design constraints, nondiscrimination by age and ERISA’s nondiscrimination (income-based) requirements
 - Pharmacy cost sharing that meets creditable coverage determinations, which are used by CMS to implement Medicare Part D late-enrollment penalties
- In the case of retiree health plans, employers who offer their retirees a subsidized health plan option need actuaries because the future costs of these plans generally must be fully accounted for in advance of retirement—that is, during the working lifetime of employees. Subsidization can be direct, such as through an explicit dollar or percent share of the premium cost, but is also often indirect, through risk and cost pooling with the actively working employee population. The employer’s auditor will require an actuarial opinion of these liabilities.

In the next few sections we will dig deeper into certain regulations the actuary should be aware of.

6.1 Self-Insured Plans and Regulatory Intersections: Federal

Few of the federal requirements outlined above require federal reporting or interactions with regulators. Compliance with federal law is presumed to occur until proved otherwise. In contrast with most states’ health insurance regulators, who generally approve policy form language and rates in advance, federal regulators tend to focus on investigating complaints of noncompliance. Several disclosures, however, are required by federal regulators or the IRS either in advance or soon after a plan year ends. Common examples are highlighted here:

- Employers must annually file tax returns, providing key data on overall tax exemptions for welfare benefit plans. Employers must also file reports to demonstrate whether the employer-shared responsibility penalty would apply to them (for example, if minimum essential coverage was not

provided to employees for an employer with more than 50 employees). Other penalties may be applicable when specific employees access federal tax credits and cost-sharing subsidies via the individual market exchange (IRS Forms 1094-C and 1095-C). Most employers must pay fees to the Patient Centered Outcomes Research Institute (IRS Form 720), which funds academic research. Actuaries generally do not work directly on these types of employer reports, but the implications of these fees are incorporated into actuarial work products, and actuarial work products are often needed for these reports.

- Most self-insured employers are required to file a Form 5500 for each benefit plan annually. This form allows the IRS and the Department of Labor (DOL) to know a great degree of detail about the plan and its operations for the preceding plan year. These filings are determined from the perspective of the plan as its own separate entity as opposed to that of the employer. Actuarial information included on the Form 5500 filing includes reserve (liability) estimates. Form 5500 also includes information on the company contacts, assets, liabilities, cash flows, plan design and covered benefits and participant counts, as well as stop-loss insurer(s) and service providers employed to assist the plan.
- Retiree health care plans file a form annually with the IRS to justify tax exemptions.
- The Securities Exchange Commission requires that publicly traded employers disclose financial and plan information on benefits within the company's annual report.
- COBRA notices are continually sent out to terminating employees and dependents and are generally based on actuarial estimates of expected costs.
- Employers are required to file an online annual report with CMS stating whether or not each of their pharmacy coverage options is considered creditable coverage ("creditable" plans provide at least as much actuarial value as the Part D standard cost-sharing parameters). Employers are also required to send creditable coverage notices to every participant before each plan year.
- Self-insured employers of more than 20 employees are required to identify their covered employees by Social Security number to CMS each year. By matching Social Security numbers to Medicare enrollment, CMS can determine whether the employer is the primary or secondary payer. The IRS will levy withholdings on employers if CMS believes it accidentally paid as a primary payer instead of secondary. Actuaries are not often involved in this process.
- If an employer offers its Medicare-eligible retirees a drug plan that is not a Medicare Part D plan, the employer is eligible to collect a Retiree Drug Subsidy (RDS), which provides the employer with a subsidy that is almost as high as the federal subsidy available via Medicare Part D. The employer subsidy is based on actual Medicare-eligible claims incurred. An actuary must attest to the employer's eligibility for RDS in advance of each year.

6.2 Actuarial Roles And Regulatory Intersections: State

State regulation has very little intersection with self-insured employer plans because of ERISA, though MEWAs and stop loss are two important exceptions. State laws that attempt to regulate ERISA-covered employee benefit plans are preempted because federal law exists to regulate self-employer plans, and these laws explicitly overrule state law. However, ERISA's savings clause empowers states to enforce all state laws that regulate the business of insurance. That said, the savings clause is limited by the deemer clause, which means that an ERISA-covered employer benefit plan cannot be deemed an insurance company or engaged in the business of insurance. A recent example of case law upholding states' inability to intrude on the operation of ERISA-covered plans is *Liberty Mutual v. Vermont* (U.S. Supreme Court, March 2016), where state requirements for employers to submit claims to states' all-payer claims databases was ruled a violation of the ERISA preemption.

6.2.1 MEWAs

As noted in section 4.1.3, MEWAs are subject to state insurance regulation. A full discussion of the regulation of MEWAs is outside the scope of this monograph. Broadly speaking, MEWA plans are regulated as follows:

- If the MEWA plan is fully insured and covered by ERISA, then it is regulated largely through the insurance policy, though some requirements, including minimum reserves, may be applied to the MEWA directly. An MEWA is not considered fully insured if it purchases SLI.
- Otherwise, states may apply virtually all insurance regulation to MEWAs up to and including the requirement that the MEWA obtain a certificate of authority as an insurer.

Some states regulate MEWAs under their general insurance statutes. Others have adopted MEWA-specific laws. A self-insured MEWA is regarded as an insurer under state insurance law unless the state has adopted an alternate MEWA licensing law. Self-insured MEWAs are illegal under state law unless they are properly licensed.

6.2.2 Stop Loss

Actuaries set up the major structural pricing methods and assumptions used to underwrite every self-insured plan. While ERISA preemption effectively exempts self-insured health plans from state health insurance laws and taxes, SLI itself is subject to state laws under ERISA's savings clause. State stop-loss laws generally set minimum thresholds for specific deductibles and aggregate stop-loss attachment points. Many states also set a minimum for the anticipated future loss ratio for SLI and subject SLI to premium taxes or assessments. Some states have laws that attempt to define whether a self-insured health plan is subject to state insurance laws due to excessive risk transfer to the insurance company. However, the ability for a state to make this determination was successfully challenged in *AMS v. Bartlett* (see section 4.1.6 for a further discussion). In that case, it was ruled that ERISA prohibits states from classifying low attachment point SLI as health insurance.

Unlike other health insurance products, for which contract language and rate filings are filed in advance for approval in most states, whether and how stop-loss products are regulated varies widely by state. Lightened regulatory requirements are due to the product generally being viewed as an agreement between two sophisticated parties. States become less confident in the presumption of employer savviness as smaller employers migrate to self-insurance strategies, and stop loss is the only avenue for state influence. Some states require no stop-loss filings but would intervene if a written complaint was received stating that a stop-loss law had been broken.

Recent SLI regulation in many states has focused on limiting excessive risk transfer so that stop-loss coverage is sold only to larger self-insured groups. The NAIC adopted the Stop Loss Insurance Model Act (#92) in 1995, revising it in 1999. The Model Act sets forth the following minimum attachment points, giving insurance commissioners the authority to adjust them for inflation:⁹³

- Specific: At least \$20,000;
- Aggregate (groups of 51 or more): At least 110 percent of expected claims;
- Aggregate (groups of 50 or fewer): At least the greatest of 120 percent of expected claims, \$4,000 times the number of group members or \$20,000.

As of January 2014, 23 states have adopted legislation similar to the NAIC's Stop Loss Insurance Model Act.⁹⁴

Appendix D reflects state regulatory limitations that existed recently but may not be up to date. The differences between the small and large employer provisions are intended to protect employees of small

employers. Self-insured plans subject employees to greater risk that claims will not be paid, even with stop-loss protection. These differences are also intended to protect small employer group insurance risk pools and premium levels in the state because small employers who perceive their employee population is healthier than average are more likely to adopt self-insurance strategies, potentially leaving the remaining risk pool with higher average costs.

The trend in stop-loss regulation has been toward implementing the model law's minimum thresholds in states where they were still absent or different, or even adding more restrictions to its sale. For example, Connecticut implemented the model law in 2014 via regulatory bulletin. There was no minimum in Oklahoma until it adopted the 110 percent aggregate minimum threshold for both large and small groups in 2016. In 2015, Florida moved their large-group aggregate minimum threshold from 120 percent to the Model Act's 110 percent and simultaneously prohibited stop-loss insurers from lasering plan beneficiaries of small employers. Colorado enacted similar lasering prohibitions in 2014, while generally adopting small-group thresholds aligned with the model law. In 2015, the District of Columbia enacted stop-loss legislation that generally prohibits its sale to small employers in nearly all circumstances. California has moved minimum thresholds up significantly.

Some states, though, have moved further away from the Model Act, allowing small employers greater access to SLI. For example, in 2017 the Minnesota legislature enacted a law that provided that small employer stop-loss limits match those of large employers and further allowed minimum claims run-out provisions that greatly favor the stop-loss insurer, increasing the risk of a gap in coverage for the self-insured employer. Utah now has no minimum attachment points for large-group aggregate stop-loss and no minimum deductible for large-group specific stop-loss insurance. In 2015, Utah's legislature passed a law that challenged the ERISA preemption itself for certain employers, allowing an 85 percent aggregate attachment point for small employers with a minimum specific stop-loss deductible of only \$10,000. Upon challenge, the DOL has favored at least one Utah employer who purchased a 90 percent aggregate stop-loss policy with \$10,000 specific stop-loss coverage, ruling that the ERISA preemption still applies to the employer. It is unlikely that the DOL is going to establish a federal (national) definition for the minimum risk transfer needed for an employer to rely on the ERISA preemption. Nevertheless, the DOL has sided in favor of lower aggregate attachment points as a percentage of expected claims when individual situations are challenged by a state. This potentially increases opportunity for actuaries as self-insurance expands to smaller groups.

The NAIC, where states jointly develop and maintain model laws for state legislatures to consider, is unlikely to revisit risk transfer thresholds such as minimum aggregate attachment points and minimum specific deductibles, at least in the near term. If the NAIC were to tackle stop loss, it is likely that topics such as lasering, contract basis and problematic contractual provisions that cause common complaints would be addressed.

Section 7: Conclusion

The role of self-insurance within the general fabric of the financing of health insurance in the United States is one of primary importance because of both the number of people covered by such plans and the total amount of expenditures involved.

The self-insured alternative to funding employee benefits through a fully insured policy was largely triggered by the passage of and practical implementation of ERISA. Self-insuring has become the most significant and flexible vehicle involved in paying for the medical expenses of the commercial, nongovernment-program population.

With health expenditures in the United States today approaching 18 percent of gross domestic product, it is inevitable that plan sponsors will seek multiple strategies to managing their health care costs. For many plan sponsors, the potential cost savings of self-insuring outweigh its attendant risks; moreover, the opportunity to experiment within a self-insured plan makes it possible to test and fine-tune plan and cost management strategies. Whether the self-insurance actuary consults with self-insured plans, advises vendors whose products are used by self-insured plans, prices or manages self-insured plan risk mitigation tools such as stop loss, or has found another role within this vast marketplace, the self-insurance market will be filled with opportunities and challenges for the health actuary for the foreseeable future.

Endnotes

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Glossary

Term	Definition
ACA	ACA usually refers to the Patient Protection and Affordable Care Act (PPACA) as it was amended by the Health Care and Education Reconciliation Act. This amendment was signed into law a few days after PPACA was enacted. PPACA is a federal law signed into law in March 2010. The law includes multiple provisions that take effect over several years, including the expansion of Medicaid eligibility, the establishment of health insurance exchanges and prohibiting health insurers from denying coverage due to preexisting conditions.
Advanced funding—specific	Advanced funding (also called simultaneous reimbursement, specific accommodation, or specific advance) occurs when the stop-loss carrier reimburses the employer group simultaneously as the employer funds a payment for a specific stop-loss claim. Advanced funding option is elected at inception of the policy.
Aggregate accommodation	Aggregate accommodation enables reimbursement for aggregate claims during the course of the policy year. It is accomplished by taking the claims to date and subtracting the policy year-to-date attachment point. As an example, a policy year-to-date attachment point may be defined as equal to the Monthly Aggregate Factor x the Number of Employee Months. The monthly aggregate factor is usually expressed per employee per month. The calculation is typically performed each month and may require the employer group to return an amount previously reimbursed to them.
Aggregate attachment point	The aggregate attachment point, also called the aggregate deductible, is the threshold for aggregate stop-loss insurance above which aggregate benefits may be reimbursable. Typically, any claims covered by specific stop loss do not accumulate toward the aggregate attachment point.
Aggregate corridor	Aggregate corridor is the difference between the aggregate attachment point and expected claims for aggregate stop loss. Aggregate corridors are usually expressed as a percentage of expected claims.
Aggregate deductible	<i>See Aggregate attachment point.</i>
Aggregate factor	Aggregate factor is the aggregate attachment point converted to a monthly factor per exposure unit, which is usually per employee.
Aggregate loss limit per person	Aggregate loss limit per person is the maximum loss per person when calculating the claims that accumulate toward the aggregate stop-loss attachment point. If the policy has specific stop loss, the aggregate loss limit per person is typically equal to the specific stop-loss deductible.
Aggregate-only	Aggregate-only coverage is stop-loss insurance where aggregate stop loss is purchased without specific stop-loss coverage.
Aggregate retention	This is the amount of claims “retained” by the plan before reaching the point where the aggregate stop-loss carrier starts reimbursement. See also <i>Aggregate attachment point</i> .
Aggregate stop loss	Aggregate stop loss is a type of stop-loss insurance that reimburses an employer group for its self-insured health care claims in total. Typically, any claims eligible under specific stop loss are not eligible for reimbursement under aggregate stop loss.

Aggregating specific	Aggregating specific is a specific stop-loss variation in which the usual premium is sorted into two components: a corridor of plan-retained claims and a premium to cover the accumulation of otherwise qualifying specific claims that exceed that corridor of retained risk. When the accumulated claims exceed that corridor, the stop-loss policy reimburses the employer group for claims exceeding that level.
ASO	An administrative services only (ASO) contract is one where insurance carriers provide administrative services to a self-insured benefit plan. It is also sometimes called an administrative services contract.
Benefit plan gaps	A benefit plan gap occurs when the stop-loss policy does not cover a benefit that the employer group's self-insured plan covers.
Carve-out	A carve-out is a benefit that is excluded from coverage by the stop-loss policy and so is "carved out." A separate coverage, whether on a stop-loss basis or on a capitation or other insured basis, may or may not apply to the carved-out benefit. Common benefits that are carved out include organ transplant and prescription drugs.
Claims basis	See <i>Contract basis</i> .
Contract basis	A contract basis defines the period for which eligible losses must be paid in relation to when they were incurred. The contract basis is typically expressed by a ratio of $x/12$, where x refers to the number of months of the incurral period, or $12/y$, where y refers to the number of months of the payment period.
Deemer clause	See <i>ERISA clauses</i> .
Disclosure	Disclosure is a process during final underwriting in which the employer group discloses all known claims that have reached a certain dollar level or have a certain diagnosis, as required by the prospective stop-loss carrier as part of the coverage binding process and policy issue. This allows the underwriter to access the potential risk of these claims. If a claim is reported without being disclosed, many stop-loss policies allow for the policy to be re-underwritten, which could result in a laser being applied or a revised rate.
Essential health benefits (EHB)	A set of 10 categories of services that health insurance plans must cover under the Affordable Care Act (ACA). These include ambulatory patient services; emergency services; hospitalization; pregnancy, maternity and newborn care; mental health and substance use disorder services; prescription drugs; rehabilitative and habilitative services and devices; laboratory services; preventive and wellness services and chronic disease management; and pediatric services, including oral and vision care. (https://www.healthcare.gov/coverage/what-marketplace-plans-cover/)
ERISA	The Employee Retirement Income Security Act of 1974 (ERISA) is a federal law that sets minimum standards for most voluntarily established pension and health plans in private industry to provide protection for individuals in these plans. ERISA does not apply to government or church plans.
ERISA clauses	The preemption clause, Section 514, makes void all state laws to the extent that they "relate to" employer-sponsored health plans. The savings clause allows states to regulate insured ERISA plans indirectly by regulating the insurance companies running these plans.

	The deemer clause exempts self-insured ERISA plans from state insurance regulation.
Fully insured	With a fully insured health plan, the company pays a premium to an insurance carrier. The premium rates are fixed for a year. Actual premium paid is based on the number of employees enrolled by rate tier in the plan each month. All of the financial risk for the benefits to plan members is transferred to the insurer, making the insurer a plan fiduciary.
Health insurer fee	Section 9010 of the ACA imposes a fee on entities in the business of providing health insurance. Self-insured employers are an excluded entity and do not have to pay the fee. The health insurer fee is generally considered an excise tax.
Health Insurance Portability and Accountability Act (HIPAA)	An act created by the U.S. Congress in 1996 that amends both ERISA and the Public Health Service Act in an effort to protect individuals covered by health insurance and to set standards for the storage and privacy of personal medical data.
HMO	See <i>Network types</i> .
Hospital domestic reimbursement	When a hospital self-insures, the stop-loss policy may have a separate reimbursement provision that governs stop-loss coverage of claims when an employee of a hospital incurs medical expenses within the hospital's system.
Incurred contract	An incurred contract covers claims incurred in a policy year and allows the payment date to extend beyond the end of the policy incurral period.
IRC	The Internal Revenue Code (IRC) refers to Title 26 of the U.S. Code.
Laser	A laser is a separate specific deductible applicable to an individual covered person that is higher than the group's general specific deductible.
Laser load	A laser load is an additional premium added to the stop-loss premium in lieu of applying a laser.
Laser pool	A laser pool refers to a specified group of people for whom an aggregating deductible must be met before a claim is reimbursed for any covered person in the group.
Level funding	Level funding refers to any marketing package that combines stop-loss coverage with various cash-flow protection features and funding requirements that achieve the accounting goal of a fixed monthly budget of benefit plan costs like that implicit in a fully insured arrangement. The underlying plan is self-insured.
Leveraging	Leveraging is a concept by which the presence of a deductible causes the impact of changes to be magnified.
Liability basis	See <i>Contract basis</i> .
Maximum benefit—aggregate	Maximum benefit—aggregate is the maximum amount that the stop-loss insurance company will reimburse the policyholder for aggregate stop loss for a given policy period.
Maximum benefit—specific	Maximum benefit—specific is the maximum amount that the stop-loss insurance company will reimburse the policyholder for any specific claimant. Since 2014, with the adoption of the Affordable Care Act, self-insured plans require that the maximum benefit for any individual be unlimited; many specific stop-loss policies have offered an unlimited benefit as a response.

Minimum aggregate attachment point	Minimum aggregate attachment point is a minimum dollar amount below which the annual aggregate attachment point may not adjust, no matter how small the monthly enrollment becomes. It is typically based on the initial month's enrollment, or some percentage of the annualized amount represented by that amount.
Network types	<p>EPO—An exclusive provider organization (EPO) is a hybrid health insurance plan in which a primary care provider is not necessary, but in which health care providers must be seen within a predetermined network. Out-of-network care is not provided, and visits may require preauthorization. Doctors are paid as a function of care provided, as opposed to an HMO. In an EPO, the payment scheme is usually fee for service, in contrast to HMOs.</p> <p>HMO—A health maintenance organization (HMO) is an organization that provides health coverage with providers under contract. An HMO differs from traditional health insurance by the contracts it has with its providers. These contracts allow for premiums to be lower, because the health providers have the advantage of having patients directed to them; but these contracts also add restrictions to the HMO's members.</p> <p>POS—A point-of-service plan (POS)—a type of managed care health insurance plan that provides different benefits depending on whether the policyholder uses in-network or out-of-network health care providers—combines the features of the two most common types of health insurance plans, the HMO and the preferred provider organization (PPO). POS plans represent only a small share of the health insurance market; most policyholders have either HMO or PPO plans.</p> <p>PPO—A preferred provider organization is a type of health insurance arrangement that allows plan participants relative freedom to choose the doctors and hospitals they want to visit. Obtaining services from doctors within the health insurance plan's network, called "preferred providers," results in lower fees for policyholders, but the premiums for PPOs are typically higher as a result.</p>
No-laser guarantee	A provision in a contract that guarantees no laser will be applied to anyone to whom a laser has not already been applied upon renewal.
No-laser rate cap	A no-laser rate cap is a policy feature in which the stop-loss carrier agrees to a cap on the next renewal rate increase and agrees not to laser anyone to whom a laser had not already been applied. There may be a charge for this policy feature.
Paid contract	A paid contract covers claims paid in a policy year and may limit how far back these claims could have been incurred (called the run-in period).
Paid date	The paid date is the date a plan benefit claim is paid by the plan. The strict definition of <i>paid date</i> is often spelled out in a stop-loss policy document.
Plan document	Plan document is a written instrument under which a plan is established and operated. In an employee benefit insurance plan, a plan document is a formal, written, legal statement listing the provisions of the insurance plan. It is the master description of benefits under which the employer's health and welfare plan is administered.

Plan fiduciary	A plan fiduciary is anyone who exercises discretion or control over a group health plan. ERISA requires that every plan have a plan sponsor and a "named fiduciary." Insurers and third-party administrators (TPAs) may become fiduciaries to a group health plan to the extent that they make discretionary decisions for the plan. Additionally, ERISA requires fiduciaries to discharge their duties "solely in the interest of" participants and beneficiaries and for "the exclusive purpose" of paying benefits and defraying "reasonable" administrative expenses. Furthermore, an ERISA fiduciary must use the care, skill and prudence of a "prudent man" in a "like capacity" when exercising discretion or control over a group plan. A fiduciary's responsibilities do not end with himself or herself. In fact, a fiduciary must also enforce ERISA's standards of conduct for fiduciaries on other plan fiduciaries or face personal liability for a breach of fiduciary standards by cofiduciaries.
Plan sponsor	A plan sponsor is a designated party, usually a company or employer, that sets up a health care or retirement plan such as a 401(k) for the benefit of the organization's employees. The responsibilities of the plan sponsor include determining membership parameters, outlining investment choices and, in some cases, providing contribution payments in the form of cash and/or stock.
Policy/underwriting year	A policy/underwriting year is the year in which the policy is written. In stop loss, data is usually aggregated by policy/underwriting year. This is in contrast to accident year, which is the year in which the claim is incurred. This is not used in stop loss because a claim is considered the cumulative amount of claims over an entire policy year. Therefore, a claim as defined by a stop-loss policy can occur over multiple accident years.
PPACA	See <i>ACA</i> .
PPO	See <i>Network types</i> .
Preemption clause (ERISA)	See <i>ERISA clauses</i> .
Provider network	A provider network is a list of the doctors, hospitals and other health care providers that a plan has contracted with to provide medical care to its members. These providers are called "network providers" or "in-network providers." A provider that has not contracted with the plan is called an "out-of-network provider." See <i>Network types</i> for the types of networks.
Reference-based pricing (RBP)	RBP is a method of defining the maximum allowed amount that relies on benchmarks such as a percentage of expenses allowed by Medicare. RBP is sometimes referred to as reference-based maximum allowable charge.
Retained corridor	A retained corridor (also called inner aggregate or submerged aggregate) occurs when the aggregate attachment point is less than expected claims.
Run-in	Run-in refers to a contract basis of the form $x/12$, where x is greater than 12 and represents the number of months in the allowed period of claims incurral. The number of months of run-in claims allowed before the effective date is equal to $x - 12$.
Run-in limit	The run-in limit is a limit on the dollar amount of losses incurred during the run-in period that is eligible for reimbursement under the stop-loss policy.
Run-out	Run-out refers to a contract basis of the form $12/y$, where y is greater than 12 and represents the number of months in the allowed period of claims payment. The number of months of run-out allowed after the expiration date is equal to $y - 12$.
Savings clause	See <i>ERISA clauses</i> .
Self-funded	See <i>Self-insurance</i> .

Self-insurance	A self-insured group health plan is one in which the employer assumes the financial risk for providing health care benefits to its employees. In practical terms, self-insured employers pay for plan expenses as they are incurred instead of paying a fixed premium to an insurance carrier, which is known as a fully insured plan.
Specific deductible	Specific deductible (specific attachment point, specific retention, individual attachment point, individual retention) is a threshold for specific stop-loss insurance where if an individual covered person's medical claims within the policy period exceed the threshold, the stop-loss insurance company will reimburse the policyholder for claims in excess of the specific deductible.
Specific stop loss	Specific stop loss (individual stop loss) is a type of stop-loss insurance that reimburses self-insured policyholders against an individual covered person's eligible plan claims that exceed a specific dollar amount (the specific deductible).
Stop-loss insurance	Stop-loss insurance (medical stop loss, employer stop loss, excess of loss, excess risk) is insurance purchased by an employer or other self-insured entity for the purposes of reimbursing the policyholder for eligible claims that arise from providing plan benefits to covered employees or dependents.
Summary plan description (SPD)	The SPD is a summary of the plan document. Providing an SPD to participants of an ERISA-qualified benefit plan is a reporting and disclosure requirement under ERISA.
Terminal liability option (TLO)	Terminal liability is the liability incurred prior to plan termination, but which is paid following that termination date and is the responsibility of the plan. TLO is an option in which the employer group may elect to add run-out stop-loss coverage upon termination of the policy. Usually this endorsement must be purchased at the inception of the policy. Note that TLO does not provide a separate stop-loss protection for the run-out claims; it modifies the contract basis of the original policy to include the extension of paid dates. The original specific deductible does not change. The aggregate attachment point increases by the additional months of aggregate factors, and the determination of whether there is a claim against the aggregate coverage depends on whether total eligible plan claims, including claims paid during the run-out period, exceed the revised aggregate attachment point.
Third-party administrator (TPA)	A TPA is someone who administers claims on behalf of a self-insured plan. Some TPAs also act in the capacity of a broker. A TPA might be an insurance carrier providing administrative services to the employer plan, but not providing traditional insurance risk protection (as in a fully insured contract). These are typically referred to as administrative services only (ASO) contracts. A TPA may be a completely independent entity that provides such administrative services without being affiliated with any insurance company. The key is that the entity performing the claims administration function is in a third-party relationship to the plan sponsor (typically an employer) and the plan beneficiaries.

Appendix A: Specific Base-cost Determination

As referenced in Section 5.4.1, a straightforward process is used to develop specific base costs (i.e., claims costs prior to adjustments, risk/profit and expense loadings) from a claims probability distribution (CPD). No matter how that CPD has been developed, variations on the timing of different factors may come into play. This appendix details the basic process of utilizing the CPD to calculate specific base costs.

The accompanying Excel workbook, titled “Workbook 1. Appendix A: Sample CPD for Specific Base-cost Calculation,” provides a sample CPD and a derivative application tab for calculating the specific base cost given a specific deductible level and a simplified underlying plan of benefits. The first tab in Workbook 1 provides a description of various elements of the content tabs and the input/output features of the calculation tab.

The CPD generally reflects “ground-up” eligible claims for the plan beneficiary and, therefore, represents the total charges allowed by the plan, whether payable by the plan or the plan beneficiary as a cost-sharing amount (i.e., copay, deductible or coinsurance). The plan beneficiary is assumed to be an average employee (i.e., an age/sex factor of 1.00) living in an average cost area (i.e., an area factor of 1.00). The CPD is estimated for the 12-month period beginning Jan. 1, 2018. It was adjusted by an assumed PPO network discount of 35 percent off billed charges. In practice, the actuary arrives at the distribution in a manner that reflects appropriate and reasonable assumptions.

Specific stop loss limits the plan’s exposure to accumulations of claims by any one plan beneficiary; therefore, specific stop loss does not consider an accumulation of ground-up claims; it considers an accumulation of the plan’s claims.

Hence, the point within the CPD at which a plan beneficiary reaches a given ground-up claim level, say, \$50,000, is not the same point at which the plan’s exposure reaches \$50,000, unless the plan pays a benefit that is 100 percent of eligible claims with no other cost-sharing elements (no copays, no deductibles, no coinsurance). Since that is rarely, if ever, the case, the CPD relating to any plan must take into consideration the underlying benefit plan’s cost-sharing provisions.

When developing specific base claims costs, actuaries often assume a standard underlying plan design (the “starting base plan”). Then they apply a benefit plan adjustment factor from the manual rating formula that adjusts the base claims costs for the differential between the starting base plan and the plan to be rated, which may vary depending on the level of the specific deductible. The standard plan is used for developing a “base” table of specific deductible costs by deductible level, and then a separately developed set of benefit plan adjustment factors is used to adjust for the relative effect of differences between the actual plan and the standard plan. For example, the starting base plan may assume an MOOP of \$4,000, and a plan to be rated has an MOOP of \$5,000. The specific rating manual would have benefit plan adjustment factors to account for the rating difference between the out-of-pocket maximums.

Underlying plan differences are more material to lower specific deductibles (under \$25,000, for example), but even major plan differences lose that materiality when the specific deductible is higher, such as \$100,000. That is, the adjustments made for differences between the actual and the starting base plans are, while real, not very significant in many situations; therefore, many manuals use simplifications when deriving these adjustments.

For the sample calculation used in Workbook 1, the starting base plan is assumed to be equivalent to a plan with a \$1,500 annual deductible, followed by 20 percent member coinsurance of the next \$15,000, for a total MOOP of \$4,500 per year. Calculations assuming this and the CPD may be used to determine the base specific cost for different specific deductibles. An example calculation is shown for a deductible level of \$10,000, but the calculation tab is interactive, and any deductible level may be utilized in the proper input cell with the resulting output also thus derived.

Starting with the CPD tab, and a given set of benefits, each ground-up “bucket” level representing a 100 percent benefit is split into components of what the beneficiary is responsible for, what the plan will be responsible for and the amount that will accrue to the specific stop loss. Essentially, those ground-up average bucket claim amounts are “adjudicated” against the cost sharing parameters, and then adjusted by the frequency column to derive the applicable bucket “values.” This is done for each bucket level; then the totals are merely summed to provide the annual and monthly costs that result for the plan and the portion that is “expected” to be covered by the stop-loss policy.

Appendix B: Leveraging

The concept of deductible leveraging will be familiar to any health actuary who has studied the components of medical trend. In the context of a fully insured plan, leveraging may add a small amount to the assumed trend rate. Its effect on specific stop-loss pricing is far more profound and pervasive. An oversimplified example illustrates why (Table B.1).

After analyzing a CPD, suppose you conclude that, in year 1, the average claim excess of a \$50,000 specific stop-loss deductible is \$100,000 and that your trend assumption from year 1 to year 2 is 7 percent. What is the leveraged trend?

Table B.1
Simplified Leveraging Illustration

	Year 1	Year 2	Trend
Expected claim excess \$50,000	\$100,000	\$107,000	7 percent
Less: specific stop-loss deductible	\$50,000	\$50,000	
Expected specific stop-loss claim	\$50,000	\$57,000	14 percent

The effect of leveraging is obviously significant.

More generally, leveraging magnifies the impact of certain variables on the costs that exceed a fixed point of reference. Two phenomena are actually occurring:

- **Severity effect:** The full amount of the claims that exceeded the specific deductible in year 1 increases by trend, but because the specific deductible does not change, the portion in excess of the specific deductible goes up by more than trend.
- **Frequency effect:** Claims that were close to but less than the specific deductible in year 1 will exceed the specific deductible in year 2. That is, the number of claims in excess of the specific deductible increases from year to year.

The net effect is that the effective trend for the claims cost above the specific deductible will be higher than first dollar trend. That is, trend has been “leveraged” at the fulcrum represented by the specific deductible. The ratio of the effective trend at a given specific deductible to first dollar trend is called the multiplier. The actual effect of leveraging is dependent on the deductible level, the CPD and the underlying makeup of the excess claims at the deductible under consideration.

Fully insured actuaries are also familiar with differentiating claims trend for, say, pharmacy claims from that of nonpharmacy medical claims. For many purposes, however, the two pieces are weighted together to create a blended total medical/pharmacy trend, and to simplify a presentation, that factor is used to trend combined experience figures or to discuss how renewal increases are derived. This same approach may also be used when discussing the effect of trend on estimated plan expenses of self-insured employers. However, when projecting large claims to which specific stop-loss insurance applies, a more refined understanding of trend and how it affects claims at different points on the claims distribution curve is important.

Each component of benefit expenses can be expected to trend at a different rate. Therefore, inpatient hospital facility, outpatient hospital facility, professional services, pharmacy and specialty pharmacy all have trend factors that may vary from the others at any point in time, sometimes by a lot. Moreover, the mix of services by these primary expense types varies as the specific deductible increases. That means the trend that applies to claims excess of any specific deductible depends on both the trend by service and the mix of services among claims excess of that deductible.

As claims increase, there is typically a shift in the mix of services toward inpatient facility expenses and away from professional charges. Outpatient hospital expenses may be a significant portion of intermediate-sized claims, but they are less important as claims increase, giving up weight to inpatient facility as well. For many larger claims, pharmacy is insignificant, but specialty pharmacy may be the main driver of other claims, such as with hemophilia. It is important for the stop-loss actuary to recognize and take it into account the interplay between trend by service and the changes in mix of service by deductible.

The concept of leveraging extends to any variable that stretches or compacts a CPD. Such variables include adjustments to the base costs assumed in the CPD, such as the effects of network discounts, geographic area, or age/sex factors. Note that, in a sense, adjustments for network and area may be viewed as arising from the same type of variable. That is, a network discount may have a similar impact to simply viewing the impact on claims of starting in a lower-cost geographic area.

Finally, errors due to the simplifications required to incorporate leveraging effects into rating manuals may be one of the reasons for selecting the risk and profit margin used in final gross premium determination.

The examples that follow illustrate some of the ways in which the effects of leveraging may be observed in practice.

B.1 Claims Probability Distribution

To begin, an illustrative CPD was created (Table B.2).

Table B.2
Example Claims Probability Distribution

Range of Billed Charges	Frequency	Severity (Per Member Per Year)						Total
		Inpatient	Outpatient	Physician	Non-Specialty Drugs	Specialty Drugs	Other	
0	0.13350	-	-	-	-	-	-	-
1 to 100	0.06716	-	15	23	13	-	2	53
101 to 500	0.23506	25	89	66	45	16	5	246
501 to 1,000	0.17085	272	145	113	87	105	10	732
1,001 to 5,000	0.13736	824	538	529	245	519	23	2,678
5,001 to 10,000	0.12472	1,902	960	856	352	656	56	4,782
10,001 to 25,000	0.04782	9,837	2,937	1,969	483	1,653	104	16,983
25,001 to 50,000	0.04220	21,345	7,634	4,524	872	3,567	203	38,145
50,001 to 100,000	0.02510	36,421	9,360	7,202	1,265	23,232	452	77,932
100,001 to 250,000	0.00928	74,532	41,576	13,610	2,959	36,323	734	169,734
250,001 to 500,000	0.00493	205,362	104,217	17,306	5,623	53,963	985	387,456
500,001 to 1,000,000	0.00167	436,352	144,165	24,532	12,634	150,692	1,445	769,820
1,000,001 and up	0.00035	870,256	252,663	30,576	36,324	435,692	4,523	1,630,034
PMPM Costs	1.00000	452.12	180.56	78.74	23.71	166.23	4.48	905.84

B.2 Leveraged Trend

For specific stop loss, as the deductible increases, the trend increases. For example, if there is a constant increase of 6 percent for every claim, this would produce the CPD shown in Table B.3.

Table B.3
Example Claims Probability Distribution, All Services Trended 6 Percent

Range of Billed Charges	Frequency	Severity (Per Member Per Year)					
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		Inpatient	Outpatient	Physician	Non-Specialty Drugs	Specialty Drugs	Other	Total
0	0.13350	-	-	-	-	-	-	-
1 to 100	0.06716	-	16	24	14	-	2	56
101 to 500	0.23506	27	94	70	48	17	5	261
501 to 1,000	0.17085	288	154	120	92	111	11	776
1,001 to 5,000	0.13736	873	570	561	260	550	24	2,839
5,001 to 10,000	0.12472	2,016	1,018	907	373	695	59	5,069
10,001 to 25,000	0.04782	10,427	3,113	2,087	512	1,752	110	18,002
25,001 to 50,000	0.04220	22,626	8,092	4,795	924	3,781	215	40,434
50,001 to 100,000	0.02510	38,606	9,922	7,634	1,341	24,626	479	82,608
100,001 to 250,000	0.00928	79,004	44,071	14,427	3,137	38,502	778	179,918
250,001 to 500,000	0.00493	217,684	110,470	18,344	5,960	57,201	1,044	410,703
500,001 to 1,000,000	0.00167	462,533	152,815	26,004	13,392	159,734	1,532	816,009
1,000,001 and up	0.00035	922,471	267,823	32,411	38,503	461,834	4,794	1,727,836
PMPM Costs	1.00000	479.25	191.39	83.47	25.13	176.20	4.74	960.19

The resulting trend for various deductibles shows the leveraging effect (Table B.4).

Table B.4
Trend Leveraging Illustration

Deductible	Base	After Trend	Leveraged Trend
-	905.84	960.19	6.0%
500	877.21	931.25	6.2%
1,000	857.51	910.93	6.2%
5,000	755.22	804.53	6.5%
10,000	700.49	749.08	6.9%
25,000	568.25	612.78	7.8%
50,000	435.92	472.40	8.4%
100,000	309.87	336.57	8.6%
250,000	169.06	187.90	11.1%
500,000	70.51	79.79	13.2%
1,000,000	18.38	21.23	15.5%

B.3 Leveraged Trend by Service

If the trend varied by service type, as in Table B.5, the first dollar trend may still be 6 percent overall, but the impact that leveraging will have on the trends will depend on the amount of claims by service type in each layer (Table B.6).

Table B.5
Example Claims Probability Distribution, Different Trends by Service

Range of Billed Charges	Frequency	Severity (Per Member Per Year)						
		Inpatient	Outpatient	Physician	Non-Specialty Drugs	Specialty Drugs	Other	Total
Trend by Service Type		4.5%	5.0%	5.0%	2.0%	12.0%	5.0%	
0	0.13350	-	-	-	-	-	-	-
1 to 100	0.06716	-	16	24	13	-	2	55
101 to 500	0.23506	26	93	69	46	18	5	258

501 to 1,000	0.17085	284	152	119	89	118	11	772
1,001 to 5,000	0.13736	861	565	555	250	581	24	2,837
5,001 to 10,000	0.12472	1,988	1,008	899	359	735	59	5,047
10,001 to 25,000	0.04782	10,280	3,084	2,067	493	1,851	109	17,884
25,001 to 50,000	0.04220	22,306	8,016	4,750	889	3,995	213	40,169
50,001 to 100,000	0.02510	38,060	9,828	7,562	1,290	26,020	475	83,235
100,001 to 250,000	0.00928	77,886	43,655	14,291	3,018	40,682	771	180,302
250,001 to 500,000	0.00493	214,603	109,428	18,171	5,735	60,439	1,034	409,411
500,001 to 1,000,000	0.00167	455,988	151,373	25,759	12,887	168,775	1,517	816,299
1,000,001 and up	0.00035	909,418	265,296	32,105	37,050	487,975	4,749	1,736,593
PMPM Costs	1.00000	472.47	189.58	82.68	24.18	186.18	4.70	959.79

Table B.6
Trend by Service Leveraging Illustration

Deductible	Base	After Trend	Leveraged Trend
-	905.84	959.79	6.0%
500	877.21	930.92	6.1%
1,000	857.51	910.65	6.2%
5,000	755.22	804.27	6.5%
10,000	700.49	749.06	6.9%
25,000	568.25	613.22	7.9%
50,000	435.92	473.78	8.7%
100,000	309.87	336.64	8.6%
250,000	169.06	187.66	11.0%
500,000	70.51	80.09	13.6%
1,000,000	18.38	21.48	16.9%

B.4 Leveraged Discounts

For specific stop loss, as the deductible increases, the discount increases. For example, if there is a constant discount of 30 percent for every claim, this would produce the CPD shown in Table B.7.

Table B.7
Example Claims Probability Distribution, All Services Discounted 30%

Range of Billed Charges	Frequency	Severity (Per Member Per Year)						Total
		Inpatient	Outpatient	Physician	Non-Specialty Drugs	Specialty Drugs	Other	
Discount		30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
0	0.13350	-	-	-	-	-	-	-
1 to 100	0.06716	-	11	16	9	-	1	37
101 to 500	0.23506	18	62	46	32	11	4	172
501 to 1,000	0.17085	190	102	79	61	74	7	512
1,001 to 5,000	0.13736	577	377	370	172	363	16	1,875
5,001 to 10,000	0.12472	1,331	672	599	246	459	39	3,347
10,001 to 25,000	0.04782	6,886	2,056	1,378	338	1,157	73	11,888
25,001 to 50,000	0.04220	14,942	5,344	3,167	610	2,497	142	26,702
50,001 to 100,000	0.02510	25,495	6,552	5,041	886	16,262	316	54,552
100,001 to 250,000	0.00928	52,172	29,103	9,527	2,071	25,426	514	118,814
250,001 to 500,000	0.00493	143,753	72,952	12,114	3,936	37,774	690	271,219

500,001 to 1,000,000	0.00167	305,446	100,916	17,172	8,844	105,484	1,012	538,874
1,000,001 and up	0.00035	609,179	176,864	21,403	25,427	304,984	3,166	1,141,024
PMPM Costs	1.00000	316.49	126.39	55.12	16.60	116.36	3.13	634.09

The resulting trend for various deductibles shows the leveraging effect (Table B.8).

Table B.8
Discount Leveraging Illustration

Deductible	Base	After Discount	Leveraged Discount
-	905.84	634.09	30.0%
500	877.21	606.99	30.8%
1,000	857.51	590.42	31.1%
5,000	755.22	512.23	32.2%
10,000	700.49	457.50	34.7%
25,000	568.25	345.57	39.2%
50,000	435.92	253.48	41.9%
100,000	309.87	176.33	43.1%
250,000	169.06	74.91	55.7%
500,000	70.51	24.11	65.8%
1,000,000	18.38	4.11	77.6%

B.5 Leveraged Discounts by Claim Amount

If the discount varied by claim size as in the CPD shown in Table B.9, the overall discount may still be 30 percent, but the leveraging may not be as strong if there are much lower discounts for larger claims (Table B.10).

Table B.9
Example Claims Probability Distribution, Discounts Vary by Claims Amounts

Range of Billed Charges	Frequency	Discount	Severity (Per Member Per Year)						Total
			Inpatient	Outpatient	Physician	Non-Specialty Drugs	Specialty Drugs	Other	
0	0.13350	40%	-	-	-	-	-	-	-
1 to 100	0.06716	40%	-	9	14	8	-	1	32
101 to 500	0.23506	40%	15	53	40	27	10	3	148
501 to 1,000	0.17085	40%	163	87	68	52	63	6	439
1,001 to 5,000	0.13736	40%	494	323	317	147	311	14	1,607
5,001 to 10,000	0.12472	40%	1,141	576	514	211	394	34	2,869
10,001 to 25,000	0.04782	36%	6,296	1,880	1,260	309	1,058	67	10,869
25,001 to 50,000	0.04220	33%	14,301	5,115	3,031	584	2,390	136	25,557
50,001 to 100,000	0.02510	30%	25,495	6,552	5,041	886	16,262	316	54,552
100,001 to 250,000	0.00928	30%	52,172	29,103	9,527	2,071	25,426	514	118,814
250,001 to 500,000	0.00493	25%	154,022	78,163	12,980	4,217	40,472	739	290,592
500,001 to 1,000,000	0.00167	25%	327,264	108,124	18,399	9,476	113,019	1,084	577,365
1,000,001 and up	0.00035	20%	696,205	202,130	24,461	29,059	348,554	3,618	1,304,027
PMPM Costs	1.00000		318.32	126.76	52.99	15.83	117.56	3.02	634.48

Table B.10
Discount by Claim Amount Leveraging Illustration

Deductible	Base	After Discount	Leveraged Discount
-	905.84	634.48	30.0%
500	877.21	608.77	30.6%
1,000	857.51	592.37	30.9%
5,000	755.22	522.22	30.9%
10,000	700.49	467.49	33.3%
25,000	568.25	359.61	36.7%
50,000	435.92	271.55	37.7%
100,000	309.87	194.40	37.3%
250,000	169.06	92.98	45.0%
500,000	70.51	34.22	51.5%
1,000,000	18.38	8.87	51.7%

Deductible leveraging has an extremely important effect on estimating stop-loss claims costs. The stop-loss actuary must assure that its effects have been properly accounted for whenever setting or adjusting stop-loss rating manuals.

Appendix C: Sample Application for Determining Aggregate Stop-loss Pure Premium

Aggregate attachment points are derived based upon the expected claims for the employee benefit plan. The starting point for determining the premiums charged for aggregate stop-loss coverage is the expected value of claims excess of the aggregate attachment point. To avoid confusion, the term “pure premium” will be used in this appendix to refer to the expected value of claims excess of the aggregate attachment point.

The derivation of the figures in this appendix starts with the assumed individual claims distribution found in Workbook 1. The group claims distributions described in this appendix are based on a single plan of benefits and a single case size. For the sake of simplicity, the group was assumed to be 150 employees with no dependents. The assumed plan of benefits included the following cost-sharing provisions:

- \$2,000 annual deductible,
- Followed by a 20 percent coinsurance on the next \$10,000 of eligible expenses,
- Making the maximum out-of-pocket expense \$4,000.

The deductible and coinsurance are assumed to apply to all eligible claims.

Monte Carlo simulations were run for the following scenarios using the Workbook 1 CPD:

- A. The group has specific stop-loss protection at \$25,000 per person per year.
- B. The group has specific stop-loss protection at \$50,000 per person per year.
- C. The group has specific stop-loss protection at \$100,000 per person per year.
- D. The group has specific stop-loss protection at \$250,000 per person per year.
- E. The group has no specific stop-loss protection (i.e., any stop loss is in the form of “aggregate only”).

It is assumed that any specific protection is provided with an “unlimited” maximum. In practice, of course, the distribution table will produce an actual finite maximum claim amount for the purposes of running the simulations.

The Monte Carlo simulation consisted of running 500,000 trials of the 150-life group for each of the 5 scenarios A–E, a total of 2,500,000 trials. In each trial, a claim from the distribution was randomly assigned to each of the 150 employees, and the plan of benefits was applied to determine the plan’s net share of ground-up claims. The specific deductible applicable to the scenario of the trial was then applied to cap the plan’s claim for that employee for that trial. For each scenario, each of the 500,000 trials produced a resulting group total that was the sum of the simulated plan claims for each employee capped by the specific deductible. In summary, each set of 500,000 trials produced a distribution of group claims reflecting the benefit of the specific stop-loss coverage for the given scenario.

The resulting distributions for each of the five scenarios (A–E) are shown on separate tabs in the accompanying Excel workbook titled “Workbook 2. Appendix C: Aggregate Distributions from Monte Carlo Modeling.” Each tab shows the modeled mean for its scenario and a numerical histogram in increments of 5 percent of the mean. Subsequent columns show estimates of the bracket and excess frequencies and pure premiums for the group. The columns farthest to the right in each tab provide the modeled pure premiums for the aggregate stop-loss coverage in total dollars, in dollars per employee per month, and as a percentage of the modeled expected total claims. The resulting aggregate stop-loss pure premiums, however expressed, are, of course, specific to the characteristics of this group, its benefit plan and the specific stop-loss scenario.

The primary use of the model is to find relative values of particular excess points. Table C.1 compares the Monte Carlo results with theoretical “manual” premiums for the specific levels based on the individual claims distribution

(the CPD) from Workbook 1. The closeness of the model results to those of Workbook 1 provides some confidence regarding the reliability of the Monte Carlo–derived distribution for the relative values.

Table C.1
Monte Carlo Versus Workbook 1 Specific Stop-loss Expected Claims Costs

Specific Level	From Monte Carlo Simulation		From Workbook 1	
	Group's Expected Claims	Group's Expected Specific Claims Costs	Expected Annual Specific Claims Costs Per Employee	Group's Expected Specific Claims Costs
\$25,000	\$530,826	\$324,926	\$2,124.76	\$318,714
\$50,000	\$648,227	\$207,525	\$1,345.40	\$201,810
\$100,000	\$746,718	\$109,034	\$755.84	\$113,376
\$250,000	\$814,692	\$41,060	\$285.27	\$42,791
none	\$855,752	\$0	\$0	\$0

Said differently, Table C.1 confirms the approximate shift in risk dollars, on an expected basis, from the plan’s aggregate exposure to the specific excess protection.

Table C.2 summarizes the aggregate stop-loss pure premiums at different attachment points. The attachment points are expressed as percentages of the modeled expected claims costs. The figures are drawn from the various tabs in Workbook 2. It is important to note the (hopefully expected) relationship between changes in either specific deductible, attachment point percentage, or both, and the resulting pure premiums. For example, as the specific deductible increases, pure premium for aggregate stop-loss increases, and as the attachment point increases, the pure premium for aggregate stop-loss decreases.

Table C.2
Model Distribution Showing Aggregate Stop-loss Pure Premium

Specific Level	Model Expected	Attachment Point as Percent Expected = >>>	Aggregate Stop-loss Pure Premiums as Percent of Plan's Expected Claims by Specific Deductible				
			105%	110%	115%	120%	125%
\$25,000	\$530,826		3.93%	2.40%	1.38%	0.74%	0.37%
\$50,000	\$648,227		5.13%	3.48%	2.27%	1.43%	0.87%
\$100,000	\$746,718		6.03%	4.32%	3.00%	2.03%	1.33%
\$250,000	\$814,692		7.98%	6.19%	4.74%	3.57%	2.65%
none	\$855,752		10.43%	8.83%	7.47%	6.34%	5.39%

As discussed in section 5.4.3 of the paper, the actual aggregate premium to be charged must include provision for risk and profit margin, premium taxes and issuing company expenses (which may or may not include external sales commission). The risk involved in writing aggregate stop loss is critically related to the appropriate determination of the expected claims costs that will be implicit in the attachment point set by the underwriter. Aggregate premium is highly leveraged in relation to how the aggregate stop-loss underwriter’s estimate of expected claims compares to the true (but unknowable) expected claims for the coming plan year of the group involved. Hence, risk margins in aggregate stop-loss premiums may need to account for variation in the quality of the information available to the underwriter and not just factors such as trend, change in demographics and changes in benefit plan or network that differ from the experience period data being used to perform the projection for the coming plan year. Aggregate stop-loss profitability as a line of business is generally tied to the accuracy in setting that projection, and not necessarily getting the aggregate premium calculation exact.

C.1 Sample Application to Residual Claims Fund Premium Charge Estimation in Level Funded Aggregate Products

The accompanying Excel workbook, “Workbook 3.Appendix C: Residual Values from Aggregate Distributions, v2” is an extension of the \$100,000 specific deductible scenario of Workbook 2. Workbook 3 is applicable to level funded products described in section 5.3.6. It has several columns added to the far right (columns N, O, P and Q) that calculate various “residual” values for the brackets of the distribution that depend on two primary parameters that have been added (found in cells M6 and M7). The first of these parameters represents the percentage of expected claims below which the employer plan will retain all residual funding dollars—the floor below which no retro charge will be made. If the floor is set at 0 percent, the retro charge will be applied against all funds remaining in the claims fund. If the floor is set at 50 percent, then the retro charge will not be applied against funds remaining in the claims fund to the extent they fall below 50 percent of expected claims. The second of these new parameters represents the level of funding (aggregate attachment point, or possibly a “ceiling” on any residual charge range) desired for the distribution being reviewed.

In the second tab of Workbook 3, a simple construction is used where the floor is set to zero, and the full funding level is set to the anticipated attachment point of 110 percent. See yellow-highlighted cells in the worksheet for the references. The pure premium at 110 percent is the indicated 4.32 percent (from Table C.2). The expected residual amount, in percentage terms (column Q) that will be available at that 110 percent level, shows as 14.32 percent. This should come as no surprise, since it is made up of the same 4.32 percent that represents the pure premium given that the plan’s claims exceed 110 percent of the plan’s expected claims plus the 10 percent of expected claims collected on all the groups for the layer between 100 percent and 110 percent of the plan’s expected claims. Hence, $4.32\% + 10\% = 14.32\%$.

What columns N through Q show that is more interesting is *where* the residual (or surplus) is coming from, bracket by bracket, and that, if the full amount of claims funding was set at the 110 percent point, roughly 70 percent of groups would have something left in their funds. That is, only 30 percent of groups would exceed the 110 percent funding and become an aggregate claim. More important, instead of charging an aggregate stop-loss premium up front as a fixed-cost component of the maximum cost to the self-insured plan, the carrier could collect a retroactive, or deferred, premium as a percentage of residual claims funding, achieving the same risk position but lowering the maximum cost illustrated up front. The 4.32 percent up front is equivalent to a 30 percent (also equal to $4.32/14.32$) residual charge. That is, a 30 percent residual charge (“grossed up” by the appropriate risk/profit margin as well as necessary expense loads) is a different way to cover the aggregate risk based on the 110 percent attachment point that does not increase the maximum cost of the marketing illustration, improving one perspective of competitiveness. Of course, it would be entirely possible to structure combinations of reduced up-front aggregate premium and smaller deferred premium percentages of residual funding.

In the third tab of Workbook 3, a floor of 50 percent is set so that only that portion of any remaining fund that represents a level in excess of 50 percent can be charged any deferred or residual charge. Also, a ceiling of remaining funds to which an applicable residual charge may be made has been set at 100 percent. Setting a cap on the point at which “chargeable” remaining funds will be counted is consistent with the view that, if a plan has actual claims that come in below 100 percent of expected claims, then the plan sponsor has realized a gain or surplus versus expectations. If full funding has taken place to a level greater than 100 percent, then the amount funded above the expected claims level is really pre-funding the aggregate corridor. Money remaining in the claims fund at the end of the year but arising from funding above 100 percent is not the same as the surplus arising if the plan’s claims are, for example, 80 percent of expected claims and, therefore, might not be considered part of the basis of any residual charge, depending on carrier policy terms.

As can be seen in the third tab, the 50 percent floor shows very little impact since the bulk (99.58 percent) of the frequency of distribution events are in excess of a 50 percent ratio to expected. This has a negligible impact on the expected bracket residual fund amounts. However, setting the ceiling on funding subject to residual charge at 100 percent is significant. The amount of expected residual at the 100 percent level in the third tab is 8.18 percent, while for the second tab, the expected residual on groups that come in up to 100 percent of expected claims but,

with residual funding measured against the 110 percent funding level, is 13.39 percent because, in this situation, all groups contribute the extra 10 percent funding of the residual. Since the frequency up to 100 percent is 51.856 percent (= 100% – 48.144% excess frequency), this produces a difference of 5.19 percent. This is essentially the difference between the 13.39 percent and the 8.18 percent adjusted for rounding and the slight loss of residual due to the 50 percent floor.

The intended purpose of including the third tab is to illustrate the way the distribution tables can be used for the design, comparison and testing of different aggregate stop-loss designs. The building blocks for the variations of level funding found in the marketplace today may be estimated by experimenting with different combinations of attachment points, floor and ceiling boundaries for residual charge features, risk margins, loads and so forth. Properly constructed distribution tables for plan total claim expectations are useful for far more than just estimating pure premiums for a conventional aggregate stop-loss product. For example, one use of the model distribution tables might be to minimize the maximum cost (i.e., all premiums plus the attachment point) for a group by varying combinations of specific deductibles, attachment points and the associated premiums, while maximizing stop-loss carrier expected profitability.

Appendix D: Summary of Stop-loss Regulation by State

This summary of stop-loss regulation by state was provided on July 17, 2017, courtesy of Adam Brackemyre and the Self-Insurance Institute of America, Inc. It does not include the effect of any “desk drawer” rules.

State	Legal Basis	Employer Size	Specific Stop-Loss Restrictions	Aggregate Stop-Loss Restrictions Small Group	Aggregate Stop-Loss Restrictions Large Group	Guaranteed Issue of Stop-Loss Policies	Prohibit Direct Payment to Covered Individuals	Disclosure Requirement	Guaranteed Renewable	Restrictions on Lasers	Other Notes
Alaska	(§ 21.42.145)	2–50 employees	Prohibits specific deductible limits below \$10,000	Prohibits aggregate coverage attachment points of less than \$4,000 per person, or 120% of expected claims or \$20,000, whichever is greater	None	No	Yes	No	No	None	
Arkansas	(§ 23-62-111)	All employers	Prohibits specific deductible limits below \$20,000	Prohibits aggregate coverage attachment points of less than \$4,000 per member, 120% of expected claims or \$20,000, whichever is greater	Prohibits aggregate coverage attachment points of lower than 110% of expected claims	No	Yes	Yes, must disclose that purchase of stop-loss insurance does not relieve employer of all risks and does not make the stop-loss carrier a fiduciary	No	None	
California	(Ins. Code § 10752-10752.8)	1–100 employees	Prohibits specific deductible	Prohibits aggregate coverage attachment	None	Yes	Yes	No	Yes	None	

			limits below \$40,000	points of less than \$5,000 per person, 120% of expected claims or \$40,000, whichever is greater							
Colorado	(§ 10-16-119)	2–50 employees	Prohibits specific deductible limits below \$20,000	Prohibits aggregate coverage attachment points of less than \$20,000 per person, or 120% of expected claims, whichever is greater	None	No	Yes	Mandates disclosures to employers on renewability, limitations on coverage and contract terms concerning claims incurred but not yet paid by end of contract term	No	Prohibited	Mandates reporting requirements on stop-loss carriers
Connecticut	(Bulletin HC-95 and PC-75) , (Bulletin HC-108 and PC-80)	All employers	Prohibits specific deductible limits below \$20,000	For employers with 50 or fewer covered employees, prohibits aggregate coverage attachment points of less than \$4,000 per person, or 120% of expected claims or \$20,000, whichever is greater	None	No	Yes	No	No	Laser cannot exceed three times specific deductible	Prohibits stop-loss policies that would leave employer with liability for benefits that are covered by group health plan (e.g., medical necessity, usual, customary and reasonable costs, annual dollar limits,

											active-at-work requirements, rescission other than fraud of misrepresentation, midterm rate increases or deemed to be health insurance provisions and inappropriate for stop loss)
District of Columbia	(D.C. Official Code § 31-4712(c)(1)(C)(i))	Small employers (as defined in the ACA)	Prohibits sale of stop-loss insurance policy to small employers; prohibits specific deductible limits below \$40,000	Prohibits sale of stop-loss insurance policy to small employers; prohibits aggregate coverage attachment points of less than \$5,000 per member, 120% of expected claims or \$20,000, whichever is greater	None		Yes	No	Yes	None	Prohibits excluding an employee or dependent from being covered under the stop-loss policy for actual or anticipated health-related factors
Delaware	(18, § 7218(e))	1–15 employees	Prohibits sale of stop-loss insurance to employers	Prohibits sale of stop-loss insurance to employers with	None	No	No	No	No	None	

			with 15 or fewer employees	15 or fewer employees							
Florida	(Florida Statutes § 627.66 997 as adopted in 2015, Florida Regulation 690-149.002 5(23)(a))	All employers	Stop-loss policy with specific deductible limit below \$20,000 will be considered a health insurance policy in Florida, and therefore subject to state regulation	Aggregate stop-loss policies below the following limits will result in the policy being considered health insurance: attachment points of less than \$2,000 per person; less than 120% of expected claims or \$20,000, whichever is greater	Aggregate stop-loss policies below the following limits will result in the policy being considered health insurance: attachment points of lower than 110% of expected claims or \$20,000, whichever is greater	No	No	No	No	None	
Kansas	(Ins Reg 40-1-49)	All employers	Prohibits specific deductible limits below \$10,000	Prohibits aggregate coverage attachment points of less than 120% of expected claims	Prohibits aggregate coverage attachment points of less than 120% of expected claims	No	Yes	No	No	None	Mandates minimum stop-loss contract term of 12/13 (covers claims incurred during plan year and paid during the plan year and 1 month after end of contract)

Louisiana	(§ 22:459, 883)	All employers	Prohibits specific deductible limits below \$10,000	Prohibits aggregate coverage attachment points of less than \$4,000 per person or 120% of expected claims	Prohibits aggregate coverage attachment points of less than \$4,000 per person or 110% of expected claims	No	No	No	No	None	Allows waiver or reduce aggregate cap limitation; mandates minimum stop-loss contract term of 12/15 (covers claims incurred during plan year and paid during the plan year and 3 months after end of contract)
Maine	(BOI Stop-Loss Filing Requirements arising from state law on excess 24 AMRSA §§ 707, 2304, 2452)	All employers	Prohibits specific deductible limits below \$20,000	Prohibits aggregate coverage attachment points of less than 120% of expected claims	No	No	No	If stop-loss coverage is not 12/18, employer must receive disclosure notices (approved by BOI) advising that the policy is issued without tail-coverage and disclose any associated risk for declining coverage	No	No	Requires 12/18 coverage to be offered to all stop-loss policies, or disclosure to employer of risks without 12/18 contract terms

Maryland	(Ins. § 15-129, amended 2015)	All policies issued before June 1, 2015 (and renewals)	Prohibits specific deductible limits below \$10,000	Prohibits aggregate coverage attachment points of less than 115% of expected claims	Prohibits aggregate coverage attachment points of less than 115% of expected claims	No	No	No	No	No	
		New policies issued on or after June 1, 2015	Prohibits specific deductible limits below \$22,500	Prohibits aggregate coverage attachment points of less than 120% of expected claims	Prohibits aggregate coverage attachment points of less than 120% of expected claims	No	No	Small employers (50 or fewer full time equivalents): mandated disclosure notice	No	Small employers (50 or fewer full time equivalents): Prohibits lasers or excluding any covered individual based on medical condition	Small employers (50 or fewer full time equivalents): not less than 12/24 contracts; and must include 12-month rate guarantees
Minnesota	(60A.235, 236)	All employers	Prohibits specific deductible limits below \$20,000	Prohibits aggregate coverage attachment points of less than 110% of expected claims	Prohibits aggregate coverage attachment points of less than 110% of expected claims	No	No	No	No	No	Requires stop-loss policies issued to small employers to have a minimum 12/15 term for specific and aggregate stop loss
Missouri	(Bulletin 07-01)	All employers	Reserves right to require actuarial analysis if stop-loss policies are issued to employers when: (1) max deductible is less than \$20,000 and/or the minimum aggregate attachment point is less than 120% of expected; or (2) if group has 50 or fewer covered employees: and attachment point is the greater of			No	No	No	No	No	

			<p>\$4,000 times the number of covered employees, 120% of expected claims, or \$20,000. Department of Insurance may also require insurer issuing stop-loss policy to provide the following: If the insurer intends to obtain reinsurance for this plan; summary of the intended market and marketing plan; and maximum and minimum risk retention levels the company will accept per contract</p>								
Nevada	(689B-350)	All employers	Prohibits specific deductible limits below \$10,000	Prohibits aggregate coverage attachment points of less than \$4,000 per person, or 120% of expected claims or \$20,000, whichever is greater	Prohibits aggregate coverage attachment points of less than \$4,000 per person, or 110% of expected claims or \$20,000, whichever is greater	No	Yes	No	No	No	
New Hampshire	(415-H:3)	All employers	Prohibits specific deductible limits below \$27,500	Prohibits aggregate coverage attachment points of less than \$5,500 per person, or 120% of expected claims or \$27,500, whichever is greater	Prohibits aggregate coverage attachment points of less than \$4,000 per person, or 110% of expected claims or \$20,000, whichever is greater	No	Yes	No	No	No	
New Jersey	(17B § 27A-17)	2–50 employees	Prohibits specific deductible limits below \$20,000	Prohibits aggregate coverage attachment points of less than 125% of expected claims	None	No	No	No	No	No	

New York	(N.Y. ISC§ 3231(h)(1))	Large employers	None	None	No	No	No	No	No	Cannot issue policy to group plan that denies or limits benefits because of a specific disease or condition (§§ 3234, 4320); clarifies that prompt payment rules apply to self-funded plans	Cannot issue policy to group plan that denies or limits benefits because of a specific disease or condition (§§ 3234, 4320); clarifies that prompt payment rules apply to self-funded plans
		Small group (1-100 employees)	Stop-loss sales are prohibited except for 51-100 employee groups who are renewed prior to 1/1/2015 (extended for three years in 03-2016, and allow one change of stop-loss carriers)								
North Carolina	(§ 58-50-130(a)(5))	25 or fewer eligible employees	Maintains state’s restriction on stop-loss insurance sales to employers with 25 or fewer employees, requiring those policies to comply with state small-group reform law								
		26–50 eligible employees	Prohibits specific deductible limits below \$20,000	Prohibits aggregate coverage attachment points of less than \$20,000 per person or 120% of expected claims, whichever is greater	n/a	No	Yes	No	No	No	
Oklahoma	(Bulletin LH 2013-03)	All employers	Prohibits specific deductible limits below \$10,000	Prohibits aggregate coverage attachment points of less than 110% of expected claims		No	Yes	Yes	No	No	Policy must be issued to, and insure, the sponsor of the plan,

										or the plan itself, not the employees, members or participants
Oregon	(§ 742.065)	All employers	Prohibits specific deductible limits below \$10,000	Prohibits aggregate coverage attachment points of less than 120% of expected claims	No	Yes	No	No	No	Prohibits stop-loss insurer from issuing policy to small employer that covers "less than fully insured employee health benefit plan"
Pennsylvania	(27 PA. Code §§ 89.471-474)	All employers	Prohibits specific deductible limits below \$10,000	Prohibits aggregate coverage attachment points of less than \$100,000	No	Yes	No	No	None	Bankruptcy of plan sponsor does not relieve stop-loss carrier from paying claims; limited to covering a single employer group health plan (no MEWA); and prohibits pooling of risk
Rhode Island	(§§ 27-8.2.1-5 link)	All employers	Prohibits specific deductible limits below \$20,000	Prohibits aggregate coverage attachment points of less than 120% of expected claims	No	Yes	No	No	No	

South Dakota	 (§ 58-18B-35)	Statute specifically prohibits regulation of stop-loss or excess insurance covering health claims of employees arising from self-funded employee health programs									
Tennessee	(DOI Bulletins 7-1-1994, 10-18-1995)	All employers	Prohibits specific deductible limits below \$10,000	Prohibits aggregate coverage attachment points of less than 120% of expected claims		No	No	No	No	No	Mandates form approval and rate submission prior to sale of all stop-loss policies
Utah	 (§ 31A-43-101 et seq.)	Small employers	Prohibits specific deductible limits below \$10,000 and prohibits aggregate-only policies	Prohibits aggregate coverage attachment points of less than 85 percent of expected claims and prohibits sale of only specific stop-loss policy	None	No	Yes	No	No	Prohibits lasers	Mandates 12/24 contract term: claims incurred during plan year and paid during plan year and 12 months after end of contract; prohibits limits on stop-loss payments below annual and lifetime limits; and requires stop-loss carrier to pay claims if small employer terminates coverage

Vermont	(Regulation H-2009-02, modified by 16-024-I)	All employers	Prohibits specific deductible limits below \$28,700	Prohibits aggregate coverage attachment points of less than \$5,700 per person or 120% of expected claims or \$28,700, whichever is greater	Prohibits aggregate coverage attachment points of less than 110% of expected claims	No	Yes	Mandates disclosures to employers on renewability, limitations on coverage and contract terms concerning claims incurred but not yet paid by end of contract term and, if available, describes terminal liability and whether it is an option	No	No	Requires state approval of rates for small-group stop-loss policies; for small employers: prohibits excluding coverage for any individual or group of individuals
Washington	Washington (RCW § 48.21.015)	All employers	Prohibits specific deductible limits below 5% of expected claims or \$100,000, whichever is less	None	None	No	Yes	No	No	No	

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