

# Capital requirements for health insurers

David Hayes, FSA, MAAA  
Rachel Killian, FSA, MAAA  
Shyam Kolli, FSA, MAAA



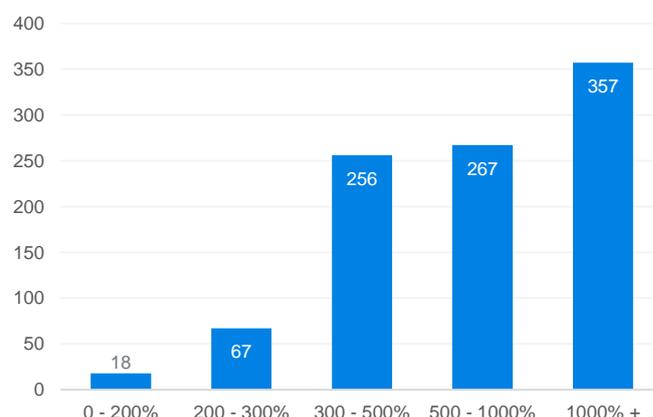
Capital and surplus requirements for a health insurer can change over time based on many internal and external factors. Regulators generally focus on the solvency of health insurers to ensure they meet obligations to consumers.

However, a health insurer with capital levels that are significantly above the regulatory minimum may also get a lot of attention from regulators and other stakeholders. A health plan's target capital requirements are generally significantly higher than the regulatory minimums. This paper focuses on considerations for health plans when determining capital requirements.

Health insurers in the United States often grapple with the question of whether the surplus they currently hold is adequate, too high, or too low. Most U.S. states require certain static capital requirements, based on the lines of business for initial licensure as a health insurance company. Once a company is licensed, state regulators monitor surplus and take different regulatory actions if an insurer's surplus falls below certain thresholds established by the state. The standard measure used in the insurance industry to identify weakly capitalized companies is the Risk-Based Capital (RBC) ratio.<sup>1</sup> However, the current regulations do not place a ceiling on, nor do they have a prescribed formula to determine, a maximum level an insurer can have for the RBC ratio or surplus amounts. For-profit health insurers generally do not have much incentive to hold large surpluses, as they have to show return on equity to their shareholders. The concept of regulatory scrutiny over big surplus in practice would generally only apply to not-for-profit health insurance companies.

Health insurance companies in the United States are required to file annual financial statements in accordance with statutory accounting principles focusing on solvency. These financial statements are often referred to by color based on the industry. Health insurers typically file the financial statement in a form called the "orange blank"; although they may file a "blue blank" if a material portion of the business includes life insurance products. Figure 1 shows the distribution of 2018 RBC ratios of all the companies in the United States filing an orange blank.

FIGURE 1: 2018 RBC DISTRIBUTION OF HEALTH INSURERS<sup>2</sup>



The vast majority of companies have surplus levels well above the regulatory minimums. However, there is a potential for any given company's RBC ratio to decline rapidly based on external market and regulatory forces and internal operations. The percentage of companies with an RBC ratio below 200% is generally a small percentage of all the companies filing the orange blank.

## RBC vs. surplus

As shown in Figure 2, surplus represents the difference between assets and liabilities. An RBC ratio of 200% is the minimum surplus level needed for a health insurer to avoid regulatory action. In states that adopted the National Association of Insurance Commissioners (NAIC) RBC model act,<sup>3</sup> an RBC ratio below 200% provides state regulators the authority to take various actions, depending on the surplus level. However, a health insurer may also come under regulatory scrutiny if the surplus level is higher than 200% but a high likelihood of insolvency exists in the near future. The Blue Cross Blue Shield (BCBS) Association requires its member organizations to maintain surplus levels above an RBC ratio of 375% to avoid triggering active monitoring of the company, by the Association.

<sup>1</sup> NAIC (May 23, 2019). Risk-Based Capital. Retrieved February 23, 2020, from [https://content.naic.org/cjpr\\_topics/topic\\_risk\\_based\\_capital.htm](https://content.naic.org/cjpr_topics/topic_risk_based_capital.htm).

<sup>2</sup> NAIC (June 10, 2019). Aggregated Health Risk-Based Capital Data. Retrieved February 23, 2020, from [https://www.naic.org/documents/research\\_stats\\_rbc\\_results\\_health.pdf](https://www.naic.org/documents/research_stats_rbc_results_health.pdf).

<sup>3</sup> See the RBC for insurers model act at <https://www.naic.org/store/free/MDL-312.pdf>.

FIGURE 2: ASSETS, LIABILITIES, AND SURPLUS



The RBC ratio for health insurance companies is calculated by dividing the surplus by a factor-based index called the authorized control level (ACL). ACL is calculated using information from an insurance company's balance sheet and income statement that is input into a formula prescribed by the NAIC.

Using the RBC ratio to measure an insurer's financial strength has certain limitations, which insurers need to consider when determining target capital needs. RBC is a point-in-time estimate and is not forward-looking. RBC also does not measure the liquidity risk. As an example, a company may have a receivable that is recorded as an asset but the receivable is not expected to be paid for another six months. In this scenario, the company may look appropriately capitalized from a solvency perspective; however, it may not actually have enough cash to pay claims and conduct day-to-day operations.

## Need for surplus

Health insurance companies need surplus to meet policyholder obligations when certain contingent events happen. Health insurers face many different types of risks, most notably underwriting risk. This is the risk assumed where claims and expenses come in higher than the assumptions made by the health insurer when developing premiums for its products. The health insurer's surplus can be accessed to fund the obligations to policyholders when such unforeseen circumstances happen.

Although providing protection for policyholders is the primary purpose for maintaining surplus, there are other important uses of surplus. A health insurer may need surplus to fund new initiatives like:

- Developing new products
- Investing in new technology
- Care management
- Wellness Initiatives
- Compliance with new regulatory requirements

## SURPLUS VS. RESERVES

The terms "reserves" and "surplus" are sometimes used interchangeably; however, these two terms actually refer to different things. Surplus, as mentioned in the introduction, is the difference between assets and liabilities, and therefore is the excess of what is required to meet the company's liabilities. Reserves, on the other hand, are liabilities, and a company must have assets to cover those liabilities. Any additional assets beyond what is required to cover those liabilities represent the surplus. A health insurer offering major medical products may have many different types of reserves. However, incurred but not reported (IBNR)—or the unpaid claims for an obligation that has already been incurred—is often the most significant liability.

## ASOP 55<sup>4</sup>

The Actuarial Standards Board (ASB) sets standards for actuaries practicing in the United States through the development and promulgation of appropriate actuarial standards of practice (ASOPs). These ASOPs provide procedures an actuary should follow when performing certain types of analysis as well as items an actuary should disclose when communicating these results.

ASOP 55 addresses capital adequacy assessment and is relevant for actuaries performing capital adequacy analysis for insurers. ASOP 55 became effective on November 1, 2019, and all actuaries performing capital and surplus analysis should review and familiarize themselves with it. Although this paper discusses capital requirements in the context of health insurers only, ASOP 55 is applicable to insurers in other insurance sectors, such as life insurers, property and casualty insurers, risk retention groups, and captives.

Starting in 2012, many U.S. states have adopted state-specific own risk and solvency assessment (ORSA) processes and require insurers to conduct formal assessments of capital adequacy as part of their enterprise risk management (ERM) programs. Prior to ASOP 55, there was no guidance in terms of how these formal assessments of capital adequacy needed to be conducted and hence these studies varied significantly from insurer to insurer. With the adoption of ASOP 55, there are certain minimum items that actuaries must consider when performing these studies.

Apart from complying with ASOP 55 and other regulatory requirements, insurers may want to perform capital adequacy and target surplus analyses from strategic and risk management perspectives.

<sup>4</sup> ASB. ASB adopts ASOP No. 55. News release. Retrieved February 23, 2020, from <http://www.actuarialstandardsboard.org/asp-adopts-asop-no-55/>.

## Considerations when performing capital adequacy studies

There is no “correct answer” or “one size fits all” with regard to the appropriate target surplus level for a given company; therefore, actuaries must consider several factors when determining the appropriate level of surplus through capital adequacy studies. Any reasonable capital adequacy assessment involves projecting surplus over a time horizon (typically five or more years) by running numerous simulations, as well as varying certain key variables that affect the company’s net income. The target surplus is generally the level at which the probability of a company going insolvent over the selected time horizon is less than the threshold the company’s management feels comfortable with. Some of the significant considerations when performing capital adequacy assessments are described in this section.

FIGURE 3: CONSIDERATIONS WHEN DETERMINING TARGET SURPLUS



## Risk appetite

Risk appetite for a health insurer is usually categorized in one of three ways:

- Risk-taker: This style of insurer welcomes the challenge of risky situations and may be aggressive when it comes to managing risk in anticipation of a higher return.
- Risk-neutral: As expected, this style is more indifferent and balanced toward risk.
- Risk-averse: This style is usually more conservative when it comes to managing risk even if it means lower returns.

It is important to consider management’s view on surplus. Does management take an aggressive stance on required surplus (i.e., hold only the minimum required) or does it wish to be somewhat conservative? A carrier that is risk-averse may choose to reduce its risk by purchasing reinsurance coverage. The advantage here is the insurer pays known monthly premiums in exchange for catastrophic claim protection. However, insurers that take this approach are passing on some profits to the reinsurer if there are no catastrophic claims. A carrier may also consider issuing catastrophe bonds through an investment bank and transfer risk to capital markets, potentially reducing the need to maintain a higher surplus.<sup>5</sup>

Another factor that comes into play with a company’s risk appetite is whether the company is a publicly traded for-profit insurer or a privately held not-for-profit insurer. In either case, there is usually a directive from a higher authority such as a board of directors or shareholders.

## Market environment.

The market in which the company competes also drives the level of surplus required. In 2014, for example, fundamental changes occurred in the individual and small group healthcare markets because of the passage of the Patient Protection and Affordable Care Act (ACA). The changes resulted in much uncertainty in these markets; therefore, many companies chose to hold more surplus at the onset of these changes.

Some of the market factors to consider are:

- Competition: If more competition exists and pricing must be aggressive in order to gain and retain business in the market, then more capital could be needed to offset potential losses.
- Stability: Markets that are more stable (i.e., few changes from year to year), usually put less strain on capital, so there are not as many capital needs. Stability can be affected by many different factors, such as regulation.

<sup>5</sup> S&P Global Ratings Research (January 7, 2020). Vitality Re XI Ltd. (Class A and Class B notes). Retrieved February 28, 2020, from [https://www.spglobal.com/\\_assets/documents/ratings/research/11289171.pdf](https://www.spglobal.com/_assets/documents/ratings/research/11289171.pdf).

## Provider arrangement

For health insurance companies, the most significant expenses and liabilities are usually associated with claim costs. Most health insurance companies pay providers (e.g., hospitals and physicians) in such a way that the company retains the risk of claim cost exceeding expectations. The current trend in the marketplace is to pass some of this risk to the providers through updated provider arrangements such as capitation, shared savings arrangements, performance guarantees, or value-based contracting.

Whatever contracting method is used, the health insurance company must understand the risk inherent in its provider contracts and how they affect required surplus. Another consideration when transferring risk to the provider is the financial health of the provider. If risk is transferred to the provider, but the provider cannot meet those financial obligations, then the health insurance company will ultimately be responsible and thus it must have capital to cover those potential losses.

## Access to capital

An important consideration for capital adequacy is whether the company has access to capital when needed. The premium an insurance company collects is intended to cover the expected claim costs, expenses, and profit. However, if adverse events happen, then an insurer may need to tap into the capital to fund any obligations.

Sources of capital for a health insurer vary depending on the type of insurer (for-profit vs. not-for-profit).

Publicly traded for-profit insurers have access to the capital markets; typically, a publicly traded health insurer has a market capitalization much greater than its statutory surplus. Not-for-profit insurers, on the other hand, do not usually have access to capital markets, and so surplus must be increased over time through normal business operations. The surplus for most not-for-profit health insurers comes largely from accumulated underwriting and investment gains. This means that a reduction in surplus can only be replenished through future successful operations over a period of time.

Under the minimum loss ratio (MLR) provisions of the ACA, an insurer's ability to grow surplus in any one year is significantly limited. Under current regulations, the sum of administrative expenses plus gains cannot exceed 15% of premium in commercial large group and Medicare Advantage markets, and 20% in small group and individual markets. There is no corresponding maximum on downside risk (i.e., an insurer's losses are not capped).

## Future needs for capital

Future needs for capital must be considered when measuring the adequacy of capital. These future needs can take many forms, including but not limited to:

- **Business expansion:** A company may only participate in a single line of business, such as commercial, but may wish to expand into other markets such as Medicare Advantage.
- **Geographic expansion:** A small or regional company may want to widen its geographic footprint.
- **Updating systems and technology:** Significant investment is usually required to update systems, such as claim processing, or to replace outdated technology.
- **Current and expected future performance:** If a company is in a period of sustained financial losses, additional capital may be required.
- **Cash flow timing:** Some health insurance products have regulatory provisions that result in substantial lags between when claims must be paid on behalf of a policyholder versus when the company receives funding for those claims from the government and/or other sources. This can create large temporary draws on surplus to cover these costs in the interim period.
- **Legal disputes:** Companies sometimes find themselves in legal battles that take a lot of capital and resources.

## Growth

Similar to the future needs of capital described in the prior section, the desire and planning to grow business stands on its own as a consideration for capital adequacy. Growth can take many forms, two of which are described above: business and geographic expansion. In addition to expansion, growth includes:

- **Membership growth:** Something as simple as growing membership within an existing line of business requires additional capital. Typically, in order to grow membership, pricing needs to be more aggressive or benefits need to be enhanced. In both cases, the potential for losses increases along with the demand for capital.
- **Acquisition:** Acquisition of other health insurance companies, real estate, and facilities requires additional capital.

## Other considerations

Other considerations when testing for capital adequacy include:

- Testing methodology: Many different methods are used to test capital adequacy, including financial forecasting, simulation, stress testing, and stochastic modeling, to name a few.
- Critical assumptions: Assumptions such as trends, changes in membership, expected claim costs, and administrative expenses are an important part of capital adequacy testing. It's important to understand:
  - How the assumptions are determined
  - How they are tested
  - The time period used for testing
  - Likelihoods of occurrence
  - How each assumption interacts with other assumptions

These considerations are not intended to be an exhaustive list, but rather a highlight of the more significant considerations.

Actuaries performing capital adequacy studies should refer to additional relevant ASOPs apart from ASOP 55. Some of the relevant ASOPs for capital adequacy analysis include ASOPs 23, 41, 46, and 47. ORSA reports filed in the past can generally provide some good context of risks that are considered by management as significant and they can be used as starting points for more thorough analysis.

## Caveats and limitations

The information in this paper is intended to assist actuaries and senior management at health insurance companies with considerations for determining capital requirements. Regulatory requirements along with the internal and external environments in which health insurers operate are continually evolving. The optimal amount of capital required by a health insurance company varies by organization and other circumstances in the context of the regulatory environment. This paper reflects our best understanding of the current regulations and requirements. To the extent that the rules and requirements change in the future, the considerations in this paper may no longer be valid. Additionally, this paper is only a brief summary and does not capture every item that a health insurer needs to consider when determining capital requirements. This paper may not be appropriate for other purposes, and our interpretations should not be relied on as legal interpretations. Please consult your legal counsel for legal interpretations.

The material in this report represents the opinion of the authors and is not representative of the views of Milliman. As such, Milliman is not advocating for, or endorsing, any specific views in this report related to determining capital requirements.



Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

[milliman.com](https://www.milliman.com)

### CONTACT

David Hayes  
[david.hayes@milliman.com](mailto:david.hayes@milliman.com)

Rachel Killian  
[rachel.killian@milliman.com](mailto:rachel.killian@milliman.com)

Shyam Kolli  
[shyam.kolli@milliman.com](mailto:shyam.kolli@milliman.com)