



The LEWIN GROUP

Considerations for Appropriate Surplus Accumulation in the Rhode Island Health Insurance Market As It Relates to: Blue Cross Blue Shield of Rhode Island

Prepared for:

Office of the Insurance Commissioner

August 11, 2006

STATE OF RHODE ISLAND
OFFICE OF THE HEALTH INSURANCE COMMISSIONER

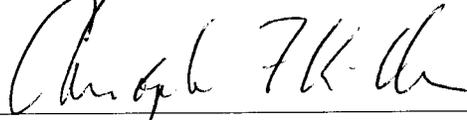
COMMISSIONER'S ORDER

The attached targeted Report of Examination as of December 31, 2005, of the surplus adequacy of BLUE CROSS AND BLUE SHIELD OF RHODE ISLAND, was recently completed by duly qualified examiners, pursuant to the provisions of the Rhode Island General Laws.

Due consideration has been given to the comments of the examiners regarding the surplus adequacy of the Company, as reflected in the report.

It is therefore ORDERED that said Report be, and it is hereby, adopted and filed and made an official record of this Office as of this date.

OFFICE OF THE HEALTH INSURANCE COMMISSIONER



Christopher F. Koller
Health Insurance Commissioner

ORDER #: **OHIC-2006-01**

DATED: July 25, 2006

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I. INTRODUCTION

The Office of the Health Insurance Commissioner (OHIC) commissioned The Lewin Group (Lewin) to assess the surplus levels of Rhode Island’s three health plans pursuant to requirements of the Rhode Island Health Care Reform Act of 2004.¹ The legislature asked OHIC to provide recommendations for what appropriate insurance surplus reserve levels might be for health insurers in Rhode Island. The broader purpose of the legislation is to improve the state of health care delivery in Rhode Island by making health insurance more affordable and available to the public. In recent years, health plan surplus levels have come under intense scrutiny as a result of continued increases in health insurance premiums and profits. Further, public officials and community advocates in a number of states have begun to question whether plans are accumulating surplus levels that exceed prudent protections against adversity. Of paramount concern is access to affordable health care for all Rhode Island residents, with special focus on the uninsured, small business owners, and individual policyholders. Prior to the passage of the Rhode Island Health Care Reform Act, stakeholders proposed that BCBSRI should give up some portion of its surplus to help make health coverage more affordable. Stakeholders wanted to ensure that BCBSRI, as a non-profit entity, is dedicated to providing affordable health care to the public. The impetus behind the Reform Act was based on legislative findings which found, among other things, that “... the power of health care insurers ... has become great enough to create a competitive imbalance, reducing levels of competition and threatening the availability of high quality, cost-effective health care....”² Thus, the legislation directs the Rhode Island Insurance Commissioner to focus on four key areas: guarding the financial solvency of health plans, promoting consumer protection, encouraging the fair treatment of providers, and helping plans improve access, quality and the efficiency of health service delivery.³

Lewin conducted this study to assess whether Blue Cross Blue Shield of Rhode Island (BCBSRI), United HealthCare of New England (UHCNE) and Neighborhood Health Plan of Rhode Island (NHP) have surplus levels within appropriate ranges, given the special circumstances of the individual plans and the Rhode Island market. This report is the companion piece to two other reports, *Considerations for Appropriate Surplus Accumulation in the Rhode Island Health Insurance Market As It Relates to: United HealthCare of New England* and *Considerations for Appropriate Surplus Accumulation in the Rhode Island Health Insurance Market As It Relates to: Neighborhood Health Plan*.

¹ R.I. Gen. Laws. §§ 42-14.5-1 *et. al.*

² R.I. Gen. Laws. §§ 42-14.5-1.1.

³ R.I. Gen. Laws. §§ 42-14.5-1.2.

A. Background

The Rhode Island health insurance market is a small, heavily regulated, highly concentrated market creating an environment for insurers that may be of greater risk relative to other states.

The major categories of risk addressed by surplus are underwriting risk, portfolio risk, business risk, and the risk of catastrophic events. For each of these risks, each health plan studied faces special challenges engendered by its situation beyond those risks common to all companies offering health insurance in the United States and to regional health plans. In order to categorize and better understand the different sources of risk for each health plan studied, it is useful to view these insurance risks along a continuum, ranging from the risks faced by any insurer in the United States to risks facing a specific health plan. The four layers of this continuum are described below:

- **Risks for all insurers:** There are risks inherent in providing insurance common to all plans offering coverage in the United States. Insurers face both general business risks and risks of underwriting.

Business and underwriting risks include:

- Medical price inflation;
 - New technologies;
 - Pricing accuracy;
 - Changing utilization patterns;
 - Presence and power of competitors;
 - Capital adequacy, which is different for non-profits versus for-profits;
 - Growth strategies, measured through membership and revenue;
 - Regulatory mandates and price controls;
 - Administrative expense management;
 - Litigation and other catastrophic events;
 - The insurer's mix of business;
 - Market concentration and density;
 - Reputation in the marketplace, and relationships with brokers and customers;
 - Provider reimbursement rates, density and comprehensiveness of provider network, degree of risk sharing with providers, and strength of the plan's relationships with providers; and
 - Reinsurance programs and whether retained risk is commensurate with capital level.
- **Risks related to operating in a single region:** Underwriting risk is the largest risk that health plans face, and regional plans are more at risk than national insurers in this regard. Regional insurance companies compete against large national insurers, which

have the ability to absorb excessive claims costs that may occur in a single region, such as a natural disaster or a localized epidemic. Furthermore, national insurers have the wherewithal to maintain and develop technological, actuarial, and financial resources due to economies of scale that are beyond the reach of a localized plan. This increases the likelihood that they will identify and adapt to emerging trends quickly. They can reduce, or even terminate, their participation in the region should market conditions deteriorate sufficiently. National plans may be able to identify centers of excellence for treatment of serious and unusual conditions with better outcomes and efficiencies, while regional plans will be more likely to be constrained to using local providers. National plans also are able to spread administrative costs across a larger base and use their larger size as leverage in contracting. Smaller regional insurers typically do not have these abilities. Finally, a localized economic downturn or catastrophic event would significantly affect a regional plan whereas a national plan could handle the risks associated with such an event.

- **Risks related to operating in Rhode Island:** Health insurers in Rhode Island face a highly regulated environment for certain market segments, including the individual and small group markets. These requirements limit plan flexibility and increase risks. Further, the establishment of the RI Health Insurance Commissioner's office creates regulatory/oversight risks for health insurers in Rhode Island. Additionally, employer based coverage is eroding in Rhode Island (compare 70% in 2000 with 62% in 2004) and those who retain coverage tend to carry higher risk.⁴
- **Plan-specific risks:** Each health insurer carries certain risks related to each insurer's provider reimbursement rates and payment, mix of business, asset investment, density of provider network, local market conditions and amount of counter party risk (ASO business).

B. Development of this Report

Lewin's task consisted of qualitative and quantitative information gathering and expert analysis on the subject of appropriate surplus levels and accumulation for BCBSRI, UHCNE and NHP. Our major activities included:

- In-depth interviews with each health plan's executives representing the financial planning and actuarial departments, government affairs, and marketing. These interviews provided information on each plan's market position relative to competitors, as well as the ways in which Rhode Island's market differs from other states. We also took into account regional and national market trends that may affect each plan.
- Primary and secondary source research on laws, regulations, and practices governing (a) the accumulation of surplus capital and (b) regulation of the Rhode Island health insurance market.

⁴ Rhode Island State Planning Grant on Access to Health Insurance, HRSA Final Report, September 2005 (citing to US Census Bureau, Current Population Survey).

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- Assessment of Rhode Island’s health insurance market with particular attention to business risks, insurance risks, and the competitive nature of the market.
 - Assessment of each plan’s financial performance and formulation of an appropriate surplus range.

To assess the sufficiency of each plan’s surplus levels, Lewin conducted a series of analyses in early 2006 in which we applied existing models for assessing health plan solvency. For BCBSRI and NHP, we performed a detailed analysis of each plan’s financial experience and compared current surplus levels with the amounts necessary to withstand a potential sustained downturn in the underwriting cycle. This analysis allows us to recommend an appropriate range for amounts of surplus for these two plans. For UHCNE, we determined that developing a target surplus range was not feasible without a thorough review of all financial relationships between the parent company, United Health Group, Inc., and its affiliates. Such an extensive undertaking would require resources far beyond those available for this review and a much longer time period to accomplish. Instead, we developed a target range for a hypothetical for-profit insurer domiciled in Rhode Island with *some* of the characteristics of UHCNE. Although this hypothetical case study does not provide an appropriate range for UHCNE, per se, it does provide context for the impact of key characteristics (most notably, the for-profit status) of UHCNE on an appropriate surplus range as compared to those developed for BCBSRI and NHP.

C. Report Organization

After providing some background information on measuring surplus, the main body of this report is divided into two sections. First we discuss the insurance market in Rhode Island, including both the regulatory and competitive environments. We then analyze each plan’s need for surplus in light of the risks posed by these environmental factors.

II. SURPLUS AND RELATED MEASURES

Reserves and surplus are important and distinct terms that are sometimes mistakenly used interchangeably. Risk-based capital, or RBC, is a measure adopted by the National Association of Insurance Commissioners for use in assessing reserve adequacy. To ensure clarity in the discussion and analysis provided in this report, the terms are defined below.

A. Reserves and Surplus

Claims reserve, often shortened to “**reserves**,” is a term for the estimate of the amount of money that a health care insurer needs in order to pay health care providers for services that members have used but for which claims have yet to be submitted and/or processed and paid, to make retroactive cost adjustments to providers, and to build specific case reserves for high-cost medical cases or for legal costs for cases with unpaid claims. On an insurer’s balance sheet, claims reserves have both asset and liability characteristics. There is an asset (typically cash or other highly liquid funds) in place to cover a liability, that being the foreseeable debt owed to health care providers who are currently caring for plan members. The reserves an insurer holds

do not represent disposable funds because there is an asset with a directly offsetting liability. **Premium reserves** include premium deficiency reserves and gross premium valuation reserves. Both are intended to offset predictable premium losses for specific products. **Operating reserves** includes ordinary operating reserves for specific, known liabilities (e.g., taxes, payables, etc.). This report does not assess reserves.

Reinsurance or stop loss coverage is secondary insurance purchased by the insurer to offset potential, extreme losses related to medical claims.

Surplus, or unallocated reserves, in contrast, represents an insurer's retained earnings or funds on hand for which there is no corresponding liability on the company's balance sheet and which is intended to sustain the insurer through adverse business conditions or to support investment needs. In other contexts, surplus, also referred to as "surplus capital," would be interchangeable with such terms as "retained earnings," which is typically used in non-profit organizations such as hospitals, or "net worth," which is common in for-profit companies.

How is surplus measured?

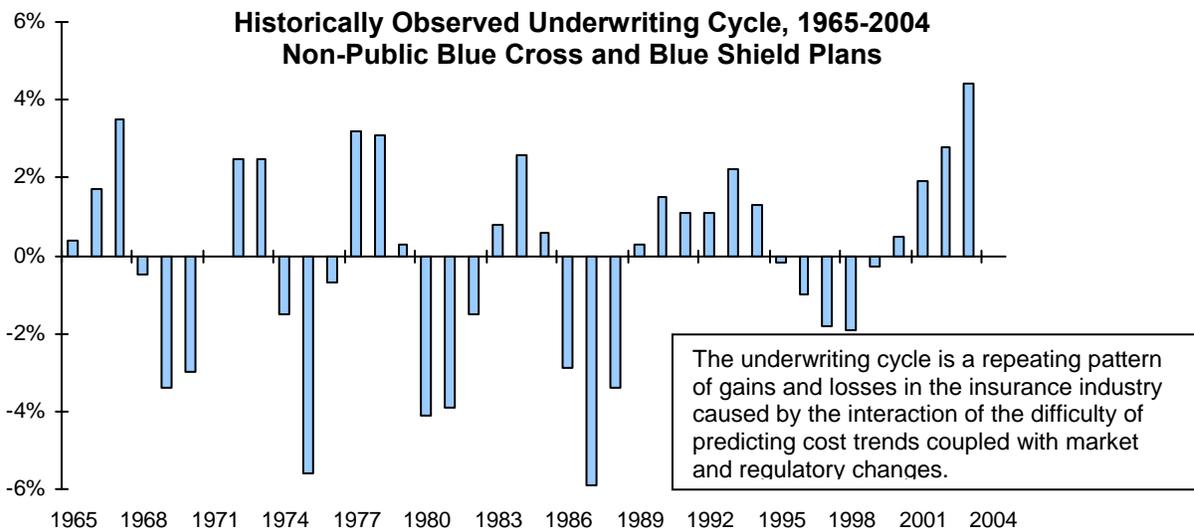
Surplus may be measured in several ways, including months of premium, risk-based capital (RBC) ratio, and surplus as a percent of revenue (SAPOR). SAPOR measures capital and surplus ("surplus") as a percentage of insured premium revenue net of reinsurance ("total revenues"). SAPOR is easily converted to a RBC level, which is described below, and which is a widely accepted method of measuring surplus adequacy.

This study primarily uses SAPOR in its review of historic surplus levels and target surplus ranges. While RBC is a commonly accepted measure of surplus, it is not amenable to modeling. Since successive annual changes in SAPOR are independent and normally distributed (unlike changes in RBC levels), using SAPOR enables us to extend our analysis from single-year losses to the multi-year losses that can occur during the course of an underwriting cycle. Once the modeling is done, the results are translated back into an estimate of equivalent RBC.

Why is surplus needed?

Surplus provides the underpinnings to allow plans to withstand sustained periods of adverse financial results. Surplus is intended to serve as a cushion against adverse circumstances, reduce financial risk and serve as a capital resource. Adverse circumstances include unplanned medical expenses, declining enrollment, inadequate premiums to cover medical expenses, adverse selection risks, financial exposure associated with new mandates and regulatory controls and investment risks. For instance, plans are generally not able to immediately respond to adverse conditions due to pricing or cost management inflexibility. This is especially the case since most plans provide a 12-month rate guarantee. Further, plans may also have limited pricing flexibility due to regulatory limits. Finally, surplus also allows companies to make needed investments in infrastructure and technology to serve their customers more efficiently and effectively. Thus, surplus is intended to ensure the plan's solvency and ability to meet long-term contractual obligations.

An example of how underwriting cycles drive surplus demand is shown in the graph below. Health plans must target surplus levels which will sustain financial performance during naturally occurring downturns in underwriting cycles.



Source: Phyllis A. Doran, FSA, Robert H. Dobson, FSA, and Ronald G. Harris, FSA, "Financial Management of Health Insurance: Forecasting, Monitoring and Analyzing Health Plan Experience," Milliman USA Research Report, December 2001 and based on statutory filings as compiled by Goldman Sachs as of early 2005.

Surplus is often a subject of public policy debate. While inadequate surplus can result in contracted benefits not being paid and a company's insolvency, policymakers or insurers may pursue alternative uses of surplus for purposes such as providing additional benefits for enrollees, additional payments to providers, lower premiums for consumers and capital investments. In an era of increased concern over the price of health care and the conduct of health insurers, surplus levels are subject to much discussion by insurance regulators and state legislatures across the country. Determining appropriate surplus levels is somewhat subjective, however, requiring not only financial analysis but also judgment and experience, given the complexity of measuring the risk of loss facing an insurer and the unique business characteristics facing each insurer.

What factors drive demand for surplus?

Various business factors drive higher requirements for surplus to provide a financial cushion against potential unanticipated risks as shown in the chart below. For instance, non-profit plans are often confused as charities that should not hold any surplus. However, these plans may need higher surplus to offset specific operating constraints. This is because non-profit plans have less ready access to capital since their primary source of capital is retained earnings. Access to, and costs of, borrowed funds are heavily dependent on financial performance and stability.

In contrast, for-profit insurers tend to retain surplus at lower levels than non-profit plans. Generally, for-profit health insurers, especially the larger publicly traded firms, find less advantage in having big surpluses. First, these insurers must demonstrate to investors the

highest possible return on equity. By converting surpluses to other uses – such as buying back shares – they lower the denominator in the return-on-equity formula and raise the result.

Second, for-profit insurers have access to external equity capital and can sell shares in order to raise cash, while non-profit insurers do not have this option, requiring them to retain sufficient capital for contingencies along a long time horizon.⁵ Further, for-profit insurers are typically structured as holding companies; the entities holding state insurance licenses are wholly owned subsidiaries, and those subsidiaries usually pass their profits up the line quickly. This action creates the appearance of low surplus held by the entity that files reports with state regulators. However, it is important to note that both for-profit and non-profit health plans have the ability to borrow funds as needed and must comply with the Rhode Island-adopted NAIC surplus minimum levels.

The following chart provides the various business factors that drive higher requirements for surplus and those business factors that drive lower requirements for surplus.

	
<ul style="list-style-type: none"> • Contracting <ul style="list-style-type: none"> ➢ Risk-sharing with providers ➢ Capitation and risk pools • Reinsurance contracts where risk is ceded to another entity • For-profits – access to capital through stock offerings • Large Plan <ul style="list-style-type: none"> ➢ Larger population to spread cost/risk, impacted less by enrollment fluctuations ➢ Lower proportion of admin expenses fixed ➢ Economies of scale and cost efficiencies for certain admin functions • Participate in less risky markets • National plan - <ul style="list-style-type: none"> ➢ Technological, actuarial and financial economies of scale ➢ Can absorb excessive claims costs from a single region natural disaster ➢ Can spread admin costs across a larger (wider) base ➢ May be able to use its larger size as leverage in contracting • Management of care <ul style="list-style-type: none"> ➢ High cost case management ➢ DM, CM programs • Market Intelligence 	<ul style="list-style-type: none"> • FFS reimbursement • No reinsurance contracts ceding risk to another entity • Non-profits – only source of capital is retained earnings • Small Plan <ul style="list-style-type: none"> ➢ Smaller population to spread cost/risk and more heavily impacted by enrollment fluctuations ➢ Higher proportion of admin expenses fixed • Participate in riskier markets <ul style="list-style-type: none"> ➢ Participate more heavily in the individual and small group markets in which they may be subject to adverse selection ➢ Higher proportion of business in indemnity or less managed products ➢ Government markets (Medicare, Medicaid, where premium rates are established earlier and in some cases, set by others) • Regional plan - focused in a single geographic region so the plan cannot spread risk across multiple markets • No Care Management Programs • Market Uncertainties

⁵ Sherlock Company, Report to Pennsylvania Insurance Commissioner, Responses to Commentors, October 6, 2004.

<ul style="list-style-type: none"> ➤ Longevity of the plan ➤ Penetration of the market • Historical provider 	<ul style="list-style-type: none"> ➤ New product introduction (Medicare Part D) ➤ Expansion into a new region ➤ Entry of a new competitor
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What happens if a plan does not hold enough surplus?

Many stakeholders are affected when a plan becomes insolvent. For instance, consumers may have to pay for services out-of-pocket, may experience interruption or reduced access of services, may need to change physicians and may experience higher premiums and less product choice given reduced market competition. Similarly, providers and medical suppliers may not get paid, may experience interruption of services and may experience insolvency. The State may suffer a loss in tax revenue, disruption in the insured process and experience an adverse impact on its economic climate. Employers may lose a stable health plan for employees and may need to cover new health plan costs despite having paid premiums for a now-insolvent plan. Finally, plan employees lose jobs and may lose retirement funds.

Three case studies provide a more detailed understanding of what happens when a plan does not hold enough surplus:

- **Blue Cross Blue Shield of West Virginia** became the first Blue Cross and Blue Shield plan to be liquidated by a State Insurance Commissioner in 1990, leaving thousands of people and numerous health care providers with millions in unpaid claims for years before outside assistance resolved the situation. The plan was not included in any state guaranty fund and did not have a safety net for subscribers.⁶
- **HIP Health Plan of New Jersey**, declared insolvent in November 1998 and liquidated in March 1999, left approximately \$120 million in unpaid claims to physicians and hospitals. As with BCBS of West Virginia, there was no state guaranty fund at that time to bail out the plan. Approximately, 190,000 were forced to look for new coverage and all state insurance carriers were required to have an open enrollment to HIP enrollees during March 1999.⁷
- **Harvard Pilgrim’s Rhode Island subsidiary** was put into receivership by Rhode Island officials in October 1999, ceased operations Dec. 31, 1999, and was liquidated in January 2000. When it ceased operations, the Rhode Island subsidiary was serving 177,000 members. Under the March 2000 agreement between Massachusetts and Rhode Island state officials, HPHC-MA agreed to supplement HPHC-RI’s assets with \$14.5 million and commit any additional funds necessary to meet HPHC-RI’s obligations. Further, HPHC-MA guaranteed payment of any deficiency in funds necessary to satisfy HPHC-RI’s member and provider obligations in full and processed HPHC-RI member and

⁶ GAO report, Blue Cross and Blue Shield Experiences of Weak Plans Underscore the Role of Effective State Oversight, April 1994; Letter from BCBSA to Leslie G. Aronovitz, US GAO (Feb. 11, 1994); “Critical Developments in the Blue Cross & Blue Shield System” Session at the Healthcare Financial Management Association Capital Conference, April 1993.

⁷ The Forums Institute, Public Oversight of Managed Health Care Coverage-Consolidation-Costs, April 1999; Linda R. Brewster, Leslie A. Jackson, Cara S. Lesser, “Insolvency and Challenges of Regulating Providers that Bear Risk” Center for Health System Change Issue Brief No. 26, February 2000.

provider claims at cost. Members were forced to seek new health plans with only two months notice with approximately 9 percent of patients uninsured at some point following Harvard Pilgrim's closure. More than one-third of patients (35 percent) reported having no choice of health plan when Harvard Pilgrim was closed. Further, more than one-third of staff model providers (38 percent) experienced a period of unemployment - among mental health providers, 56 percent.⁸

B. Risk-Based Capital (RBC)

Risk-based capital (RBC) is a measure used to establish the minimum amount of capital appropriate for a health organization to support its overall business operations during a period of adverse conditions. RBC considers the size, structure and risk profile of the insurer.

RBC was introduced as a concept by insurance industry regulators to refine the definition of surplus funds of insurers taking into account the nature of the risks that different companies face, as well as varying degrees of volatility that arise with alternative sets of risks.

RBC is an approach to determining the minimum level of capital cushion needed for protection from insolvency, based on an organization's size, structure, and retained risk. Factors in the RBC formula are applied to assets, premium, and expense items. The factors vary depending on the level of risk related to each item. The higher the risk related to the item, the higher the factor, and vice versa.⁹

The National Association of Insurance Commissioners (NAIC) set forth a standard formula for the computation of RBC, taking into account the risk characteristics of an insurer's investments and products. The RBC of any insurer is said to be unique to that insurer, because no two insurers have exactly the same mix of assets and risks. The NAIC also created a model RBC law for states to adopt for the purpose of regulating health insurers' minimum surplus levels. The RBC Model Act establishes the formula for calculating the RBC requirements. The law requires increasing regulatory oversight and intervention as an insurance company's RBC declines. The level of regulatory oversight ranges from requiring the insurance company to inform and obtain approval from the insurance commissioner of a comprehensive financial plan for increasing its RBC to mandatory regulatory intervention requiring an insurance company to be placed under regulatory control in rehabilitation or liquidation proceeding. Rhode Island is one of the many states that have adopted the NAIC's RBC Model Act.

The NAIC's RBC formula was not originally developed with health insurance in mind but was later adopted in recognition of the complicated nature of this particular insurance market. Health insurance has special characteristics that make successful competition more capital intensive than in a traditional insurance setting. Health insurance is technologically complex; carriers must maintain claims payment systems, produce frequent member communications,

⁸ Robert Wood Johnson Foundation, "Measuring the Fallout from Shutdown of a Rhode Island Health Care Organization," May 2003; Massachusetts Division of Insurance Press Release, "Governors Cellucci, Almond Announce Agreement: Harvard Pilgrim Receiverships in Both States Will Coordinate Efforts," (March 20, 2000); Office of Massachusetts Attorney General Press Releases, March 20, 2000, May 24, 2000.

⁹ Audrey Halvorson and Craig Keizur, "Risk-Based Capital Requirements for Managed Care Organizations," Milliman & Robertson, Inc. Research Report, December 1998.

keep data repositories for analysis, reporting, and audit, and attract and retain employees of sufficient talent to use the data effectively. In addition, care and disease management functions are now a routine and expected part of the services provided by health insurers. This requires clinical management expertise and continuous monitoring of best practice developments to keep up with new medical technologies. All of these activities related to health coverage have significant capital requirements, including constant upgrades and training to keep up with emerging technologies.

As health insurance is very competitive and produces small margins, full recovery from any long period of substantial downturns takes a long period of time, even for a very well-managed insurer. Surplus provides the source of capital to recover from adverse experience, as well as resources to invest in the company's business to maintain competitive service levels.

III. LAWS AND REGULATIONS RELATED TO SURPLUS

Health insurers' surplus levels are regulated through various mechanisms, including state laws, and internal plan actions. Blue Cross Blue Shield plans are also subject to oversight by the Blue Cross Blue Shield Association. This section provides an overview of Rhode Island's requirements regarding RBC ratios as well as requirements from other states in this area.

A. Rhode Island State Laws and Practices

State insurance regulators have broad discretion to regulate health insurers. The majority of the states have adopted the NAIC's Model Health Organization Risk-Based Capital Act. State laws concerning reserves and surpluses and insurance commissioners' uses of their authority aim to ensure that sufficient capital is available to health insurers in order to weather adverse events and protect consumers. Very little state regulation exists that is designed to limit the amount of reserves and surpluses that health insurers for that matter, can accumulate.

In Rhode Island, a domestic insurance company cannot begin operation until the capital stock of the company is at least equal to one million dollars (\$1,000,000) and the gross paid in and contributed surplus of the company is at least equal to two million dollars (\$2,000,000), or, if a mutual company, its net assets over all liabilities amount to not less than three million dollars (\$3,000,000), or, if a single line business company, has a combined capital and surplus of two million dollars (\$2,000,000). For domestic insurance companies which have undergone a change in control subsequent to August 1, 1995, the Insurance Commissioner may require lesser capital and surplus, but in no event less than one million dollars (\$1,000,000).¹⁰

Further, to protect against insolvency, Rhode Island HMOs must deposit securities with the general treasurer of the state of Rhode Island to be held for the benefit and protection of all the enrollees of the health maintenance organization in the following amounts described below. For an organization that is applying for initial licensure the amount is the greater of:

¹⁰ R.I. Gen. Laws. §§ 27-1-37, 27-35-1.

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- (i) Five percent (5%) of its estimated expenditures for health care services for its first year of operation; or
 - (ii) Twice its estimated average monthly uncovered expenditures for its first year of operation; or
 - (iii) One hundred thousand dollars (\$100,000).

Further, the organization must also, at the beginning of each succeeding year, unless not applicable, deposit four percent (4%) of its estimated annual uncovered expenditures for that year.¹¹

For UHCNE, which was licensed as an HMO on May 17, 1983, other rules apply. The required deposit amount instead was the larger of (i) One percent (1%) of the preceding twelve (12) months of uncovered expenditures; or (ii) One hundred thousand dollars (\$100,000), within six (6) months of May 17, 1983. Also, on the first day of the organization's first fiscal year beginning six (6) months or more after May 17, 1983, the organization was required to make an additional deposit equal to two percent (2%) of its estimated annual uncovered expenditures. In the second fiscal year, the rules stipulated that the additional deposit was equal to three percent (3%) of its estimated annual uncovered expenditures for that year, and in the third fiscal year and subsequent years, the additional deposit was equal to four percent (4%) of its estimated annual uncovered expenditures for each year. Each year's estimate, after the first year of operation, must reasonably reflect the prior year's operating experience and delivery arrangements.¹²

It is important to note, however, that the State may waive any of the above deposit requirements whenever satisfied that the organization has sufficient net worth and an adequate history of generating net income to assure its financial viability for the next year, or its performance and obligations are guaranteed by an organization with sufficient net worth and an adequate history of generating net income, or the assets of the organization or its contracts with insurers, hospital or medical service corporations, governments, or other organizations are sufficient to reasonably assure the performance of its obligations.¹³ Further, when an organization has achieved a net worth not including land, buildings, and equipment of at least one million dollars (\$1,000,000), or has achieved a net worth including plan related land, buildings, and equipment of at least five million dollars (\$5,000,000), the annual deposit requirement shall not apply. In addition, the annual deposit requirement will not apply to an organization if the total amount of the deposit of securities is equal to twelve percent (12%) of the HMO's estimated annual uncovered expenditures for the next calendar year, or the capital

¹¹ R.I. Gen. Laws. §§ 27-41-13(a),(b).

¹² R.I. Gen. Laws. § 27-41-13(c).

¹³ If the organization has a guaranteeing organization which has been in operation for at least five (5) years and has a net worth not including land, buildings, and equipment of at least one million dollars (\$1,000,000), or which has been in operation for at least ten (10) years and has a net worth including plan related land, buildings, and equipment of at least five million dollars (\$5,000,000), the annual deposit requirement shall not apply; provided, that if the guaranteeing organization is sponsoring more than the one organization, the net worth requirement shall be increased by a multiple equal to the number of organizations. This requirement to maintain a deposit in excess of the deposit required of an accident and health insurer shall not apply during any time that the guaranteeing organization maintains a net worth at least equal to the capital and surplus requirements for an accident and health insurer. R.I. Gen. Laws. §§ 27-41-13(d),(e)

and surplus requirements for the formation and admittance of an accident and health insurer in Rhode Island, whichever is less.¹⁴

B. Target Surplus Levels

The level of surplus required to provide an adequate margin of safety is a matter of judgment, and experts do not agree on a “correct” target surplus level for a health insurer. The NAIC, as one interested party, only addresses the minimums needed to ensure solvency, and further asserts that RBC is not an appropriate tool to use at higher levels of surplus. Most states, like Rhode Island, have enacted variations of the NAIC model Health Risk-Based Capital Act to regulate surplus minimums. The Act establishes clear, consistent guidelines for the calculation of RBC. As shown below, Rhode Island has adopted the NAIC trigger points for intervention based on the NAIC risk-based formula.

Exhibit 1
NAIC Trigger Points for Intervention Based on Risk-Based Capital Formula

RBC Level	Company or Regulator Response
Company Action Level (200% ACL)	Under RI law, the company must submit an RBC plan to the Insurance Commissioner. This plan includes, among other things, proposals of corrective actions it will take.
Regulatory Action Level (150% ACL)	The company must submit or resubmit a corrective plan of action to remedy the situation. After examining the company, the Insurance Commissioner will issue an order specifying the corrective actions to be taken.
Authorized Control Level (ACL)	The Insurance Commissioner is authorized to take regulatory action as may be necessary to protect the interests of the policyholders, including taking control of the company.
Mandatory Control Level (70% ACL)	The Insurance Commissioner is required to place the company under regulatory control.

Surplus represents the financial cushion that an insurer needs to safeguard against unanticipated circumstances that could cause extraordinary losses. But protecting against catastrophe is only part of the picture. Even under normal conditions, it is notoriously difficult to predict health care costs accurately, and it is especially difficult to do so consistently. Moreover, competition leads health insurers to quote premiums that provide only a narrow margin for error, so that a small under-estimation (in percentage terms) of health costs can swing the plan’s underwriting results from a modest gain to a big loss. Thus, some cushion is needed just to protect an insurer from the ordinary vagaries of the health care and health insurance markets. It is in the public’s interest to protect both plan members and the broader community from the undesirable consequences of a plan’s insolvency. Beyond protecting against adverse claims experience, insurers also require capital for competitive, service, and regulatory response purposes.

¹⁴ R.I. Gen. Laws. § 27-41-13,(e).

The target surplus ranges presented in the appendices are expressed as surplus as a percent of total net revenue (SAPOR), where revenue represents revenue net of reinsurance.

C. How Do Other States Regulate Maximum Surplus?

Given the lack of affordability of health care due to rising health care costs, there has been increasing interest in capping surplus. However, while most states have adopted the NAIC minimum surplus requirements, few states have chosen to regulate the upper bounds of surplus capital accumulation.

- **Pennsylvania** set upper limits on surplus on all four of its Blue plans (950% RBC for Blue Cross of NEPA and Capital Blue Cross; 750% for Highmark and Independence Blue Cross). Currently none of the Pennsylvania Blue plans holds excess surplus given these upper limits. If a plan did exceed the surplus upper limit, the plan would have to file a report with the Pennsylvania Insurance Commissioner justifying its current surplus level or file a plan explaining how it will divest its surplus in a manner that will benefit its policyholders.¹⁵
- **Michigan** has capped Blue Cross Blue Shield of Michigan's surplus at an RBC ratio of 1000%. If the cap is reached, BCBSM must file a plan for approval by the Commissioner to adjust its surplus to a level below the allowable maximum surplus. The Commissioner can formulate an alternate plan if it disapproves of the plan filed.
- **Hawaii** law requires that if a non-profit health plan's net worth exceeds 50% of the prior year's total health care expenditures plus operating costs, the plan must refund the money to clients.
- **New Hampshire** caps a non-profit health insurer's contingency reserve funds at 20% of annual premium incomes. However, the law is moot since the New Hampshire BCBS plan, which was the state's only non-profit plan, is now a for-profit. Prior to this conversion, the state chose not to enforce the limit.

IV. RHODE ISLAND'S REGULATORY AND MARKET ENVIRONMENT

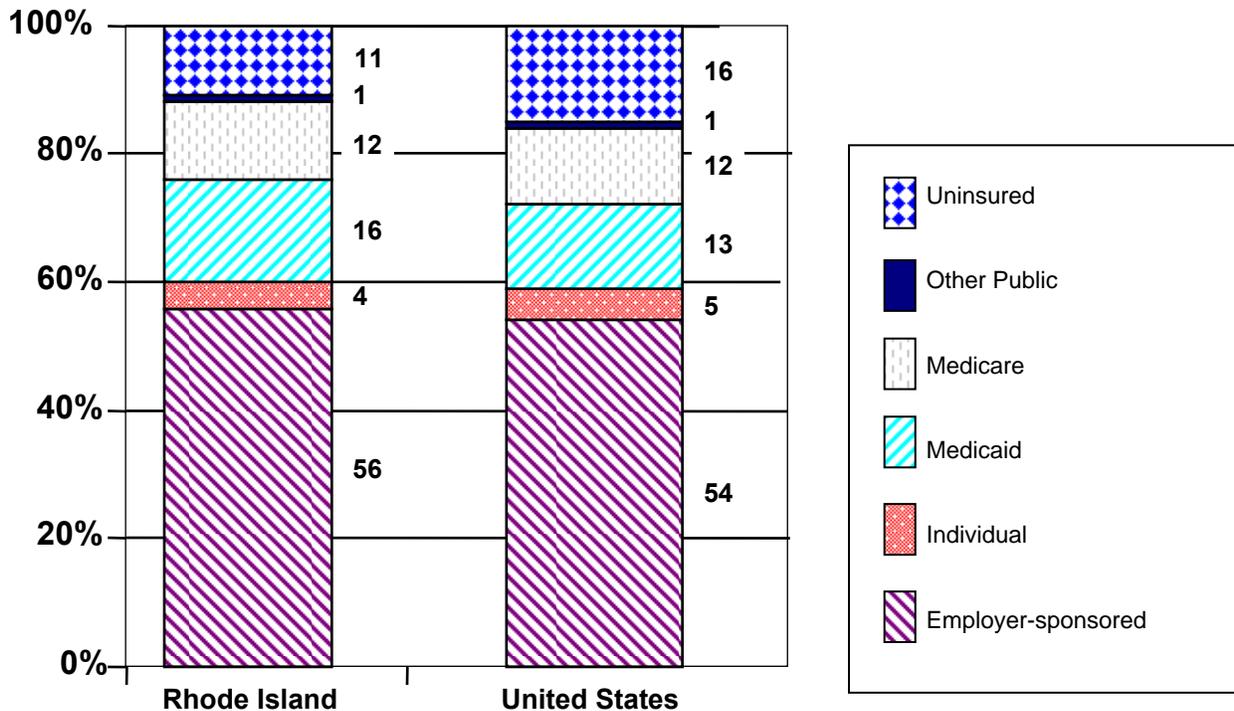
As a practical matter, assessing the sufficiency of current surplus levels depends on an understanding of Rhode Island's insurance market (both regulatory and competitive) and not simply on an actuarial assessment. This assessment of the adequacy of BCBSRI, UHCNE and NHP surplus was driven in part by an evaluation of the business and market risks that each

¹⁵ The Pennsylvania Legislative Budget and Finance Committee commissioned Lewin to conduct a study of the regulation and disposition of reserves and surpluses of the four Blue plans. Lewin found that the upper limits on surplus were reasonable. The Lewin Group, Considerations for Regulating Surplus Accumulation and Community Benefit Activities of Pennsylvania's Blue Cross and Blue Shield Plans, prepared for The Pennsylvania General Assembly Legislative Budget and Finance Committee (June 13, 2005), available at <http://www.lewin.com/NR/rdonlyres/empv7jjik2vp4b6bq5bcslqmiq6fjezjrrbkdficmnzinnvcsdjr3nlcpdukuf7vzfzpigbibip/3193.pdf>

plan faces. This section provides an overview of Rhode Island’s regulatory and market environment.

The main sources of health insurance coverage in Rhode Island mirror national trends. As the chart indicates below, Rhode Island’s population reflects a slightly lower proportion of uninsured individuals and slightly higher Medicaid enrollment rate than nationally.

Population Distribution by Primary Insurance Source



Source: State Data 2003-2004; U.S. data 2004; Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the Census Bureau’s March 2004 and 2005; Current Population Survey available at State Coverage Initiatives *available at* www.statecoverage.net/profiles/rhodeisland.htm.

Further, Rhode Island’s health insurance market is highly concentrated. With a population of one million, and only 380,000 commercially insured¹⁶, Rhode Island also lacks market competition with only two Rhode Island domiciled health plans participating in the commercial market and strong market dominance by BCBSRI as shown below.

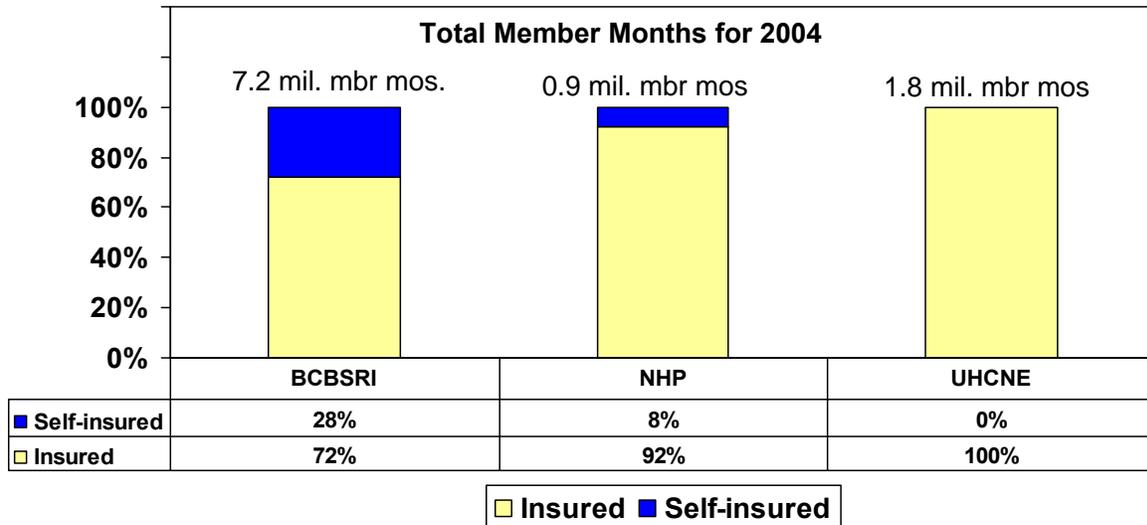
¹⁶ Rhode Island Department of Health, “Rhode Island Commercial Health Plans’ Performance Report” (December 2005).

Rhode Island Fully-insured Commercial Enrollment (Enrollment in 1,000s)

	2002	2003	2004
Plans Domiciled in RI			
BCBSRI (including BlueCHiP)	65%	64%	65%
UHCNE	15%	18%	19%
All Other Plans	20%	19%	16%
Total Commercial Enrollment	100%	100%	100%

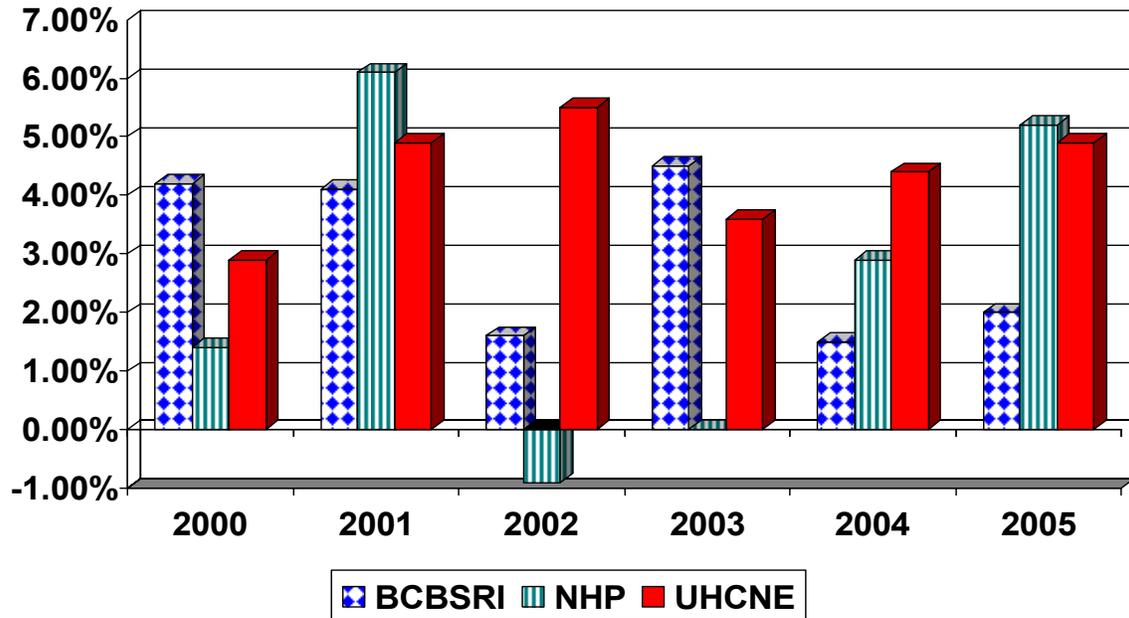
Source: Cryan, Bruce. RI Commercial Health Plans' Performance Report (2004), Rhode Island Department of Health, December 2005, p.4. Available at www.health.ri.gov.

Additionally, BCBSRI has the majority of total insured members and most self-insured business. It is important to note that United's self-insured contracts in Rhode Island and Massachusetts are written through another UHC affiliate and consequently are not reflected in UHCNE's business lines.



As shown in the chart below, Rhode Island plans have generally experienced positive net profit margins over the last six years.

Net Profit Margins, 2000 to 2005

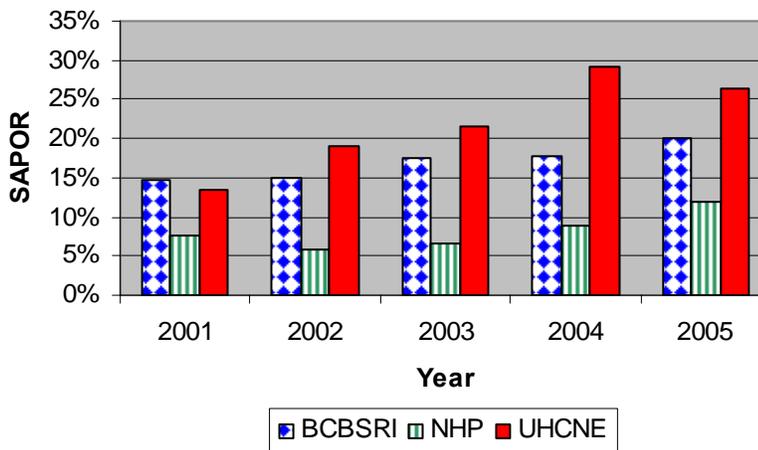


Note: BCBSRI numbers for all years include financial results of Coordinated Health Partners.

Source: Statutory filings to Rhode Island Department of Business Regulation.

Rhode Island plans' SAPOR has varied from 6 to 29 percent in recent years.

Surplus as a Percent of Revenue 2001 - 2005

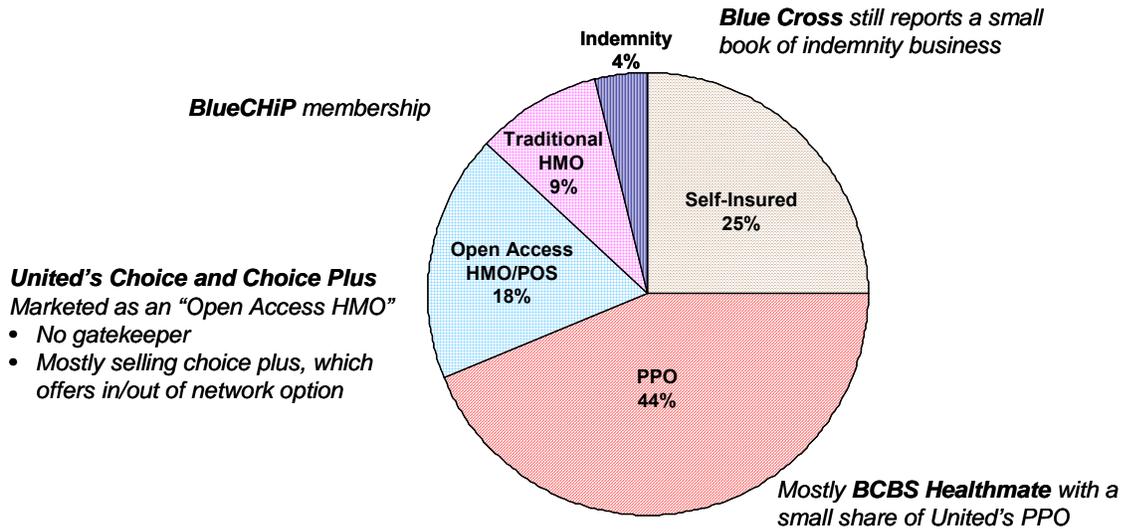


Source: Derived from statutory filings to Rhode Island Department of Business Regulation.

Note: BCBSRI SAPOR is calculated based on consolidated revenues including BlueCHIP revenues for all years.

Unlike most other New England states (with the exception of Maine), the Rhode Island health insurance market is a relatively unmanaged, PPO dominant environment. Although there are plans marketed as an HMO, the vast majority has no gatekeeper and the networks are fairly broad, covering most providers in the state.¹⁷

Rhode Island Insured Members by Plan Model

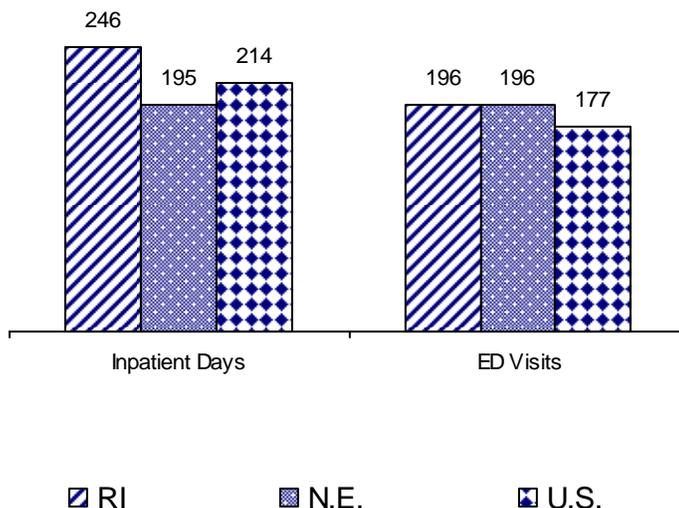


Source: Department of Human Services, Rhode Island State Planning Grant on Access to Health Insurance, HRSA Final Report, September 2005. Based on Q1 2004 financial filings from BCBS, United and NHP; does not include TPA business.

Further, Rhode Island's high hospitalization utilization rates increase volatility for carriers. For instance, Rhode Island has a higher than national average ER use and medical costs with inpatient days significantly above both New England (N.E.) and national rates (+26% and +15%, respectively). Further, Rhode Island's emergency department utilization is 10% greater than the U.S. rate.

¹⁷ Department of Human Services, Rhode Island State Planning Grant on Access to Health Insurance, HRSA Final Report, September 2005. Based on Q1 2004 financial filings from BCBS, United and NHP; does not include TPA business.

Hospital Utilization per 1,000 Members (2004)



Source: Rhode Island Commercial Health Plans Performance Report, Health Quality Performance Measurement, 2004; RI Dept. of Human Services, Rhode Island State Planning Grant on Access to Health Insurance, HRSA Final Report, September 2005.

Health insurers in Rhode Island face a highly regulated environment for certain market segments, including the individual and small group markets. These requirements limit plan flexibility and increase risks. For instance, the Rhode Island individual market requirements are broader than the federally mandated Health Insurance Portability and Accountability Act (HIPAA) requirements. Rhode Island insurers in the individual market (BCBSRI) must guarantee issue some products continuously to HIPAA-eligibles and individuals with 12-months of continuous prior coverage.¹⁸ Only fourteen other states do so as well.¹⁹ Further, the small group requirements pursuant to the Rhode Island Small Employer Health Insurance Affordability Act spread risk more broadly by bringing all insured small employers into one risk pool, and limits premium rate variability among small employers with adjusted community rating. However, this can lead to adverse selection in the small group market.²⁰ Further, the small group market size is defined as 1-50 in Rhode Island. Only 12 states in addition to Rhode

¹⁸ HIPAA requires all health insurers operating in the individual health insurance market to offer coverage to all eligible individuals and prohibits them from placing any limitations on preexisting conditions. Kaiser Family Foundation, State Health Facts, Individual Market Guarantee Issue (2005) and Lewin analysis; RI Gen. Laws s.27-18.5-3.

¹⁹ Five states including New York, require all insurers to guarantee issue all products for all individuals year-round beyond HIPAA-eligibles; WA requires this for some individuals; four other states are similar to RI and require all insurers in the individual market to guarantee issue some products continuously for some individuals; in three states including Michigan, only certain insurers must guarantee issue some products periodically for all individuals while Ohio requires all insurers to guarantee issue some products periodically for all individuals. Kaiser Family Foundation, State Health Facts, Individual Market Guarantee Issue (2005) and Lewin analysis

²⁰ Small Employer Health Insurance Affordability Act allows only four adjustment factors: age, gender, family composition, health status (4-1 rate compression) with a health status adjustment of +/-10% around the base rate. Prior to the Act, health status adjustments ranged from 40% for one carrier, 60% for the other carrier. Lautzenheiser & Associates, Report on the Effectiveness of Rhode Island General Laws ss. 27-50-1 et seq. Small Employer Health Insurance Availability Act in Promoting Rate Stability Product Availability and Coverage Affordability (2002).

Island count self-employed people as "groups of one" and permit them to buy health insurance in the small group market on a guaranteed issue basis.²¹

Medicaid and Medicare: Risks Related to Participating in Government Markets

There are both advantages and disadvantages for a health plan to participate in government markets. While these markets offer a large pool of beneficiaries and represent a disproportionately large share of total health care spending, they are also constrained by the inflexibility inherent in heavily regulated markets. Earnings from government sources are more vulnerable than those of commercial segments because the government imposes controls over premium levels and precludes a company's ability to control pricing fully or affect selection through benefit redesign. Therefore, when operating and pricing in government markets, health plans are less able to react to and meet market demands. Plans that participate heavily in government markets benefit from their large populations and revenue stream, but bear more risk from the stiff premium constraints and less flexible benefit design inherent in these programs.

Medicaid

All three Rhode Island insurers participate in RItCare, Rhode Island's Medicaid managed care program covering the Medicaid TANF population (Temporary Assistance for Needy Families). NHP has the largest enrollment at 56.5% with UHCNE at 32.8% and BCBSRI at 10.7% (Enrollment as of June 30, 2004).²² Key areas of risk for plans in the Medicaid RItCare market include:

- Insufficient capitation rates,
- Anti-selection,
- Changes in enrollment procedures, eligibility determination processes, benefits, or other changes to the structure of the program,²³
- Expansion to new populations such as SSI (currently, RItCare only covers the TANF population where risk is fairly stable and predictable albeit there are inherent hospital and pharmaceutical utilization risks), and
- Potential access barriers to NICU beds at Women and Infants Hospital, requiring plan payment for services not captured in capitation rates.

²¹ Kaiser Family Foundation, State Health Facts, Small Group Health Insurance Market Guaranteed Issue (2005); Rhode Island Association of Health Underwriters.

²² Rhode Island Department of Human Services, Annual Report on the Department of Human Services' Implementation of Programs to Address Uninsurance Among Rhode Islanders, submitted to Permanent Joint Committee on Health Care Oversight (Feb. 15, 2005).

²³ For example, the Governor's proposed Budget for FY 2007 eliminates RItCare eligibility for parents in families with incomes greater than 133% FPL (previously 185% FPL), removes RItCare benefit for all undocumented children, establishes an asset test for RItCare eligibility, and calls for a restructuring of contracts with Rite Care managed care providers Rhode Island. Department of Human Services, "FY2007 Budget Impacts: Medical Assistance."

In addition, changes to the current RItCare risk sharing agreement is a significant potential risk for each plan. The Rhode Island Department of Human Services (DHS) has entered into risk-share agreements with all three RItCare health plans. Under the risk-sharing methodology, risk is shared according to whether the plan’s actual medical loss ratio (MLR) is within agreed-upon ranges or risk corridors. Currently, each plan that participates in the risk share agreement with DHS transfers 70% of expenses in excess of 89% MLR to DHS. DHS also provides stop loss protection (90/10 reinsurance) for organ transplants.

Current Medicaid Risk-Share (Gain/Loss) Agreement Risk Corridor

	< 86% MLR	87-88.9% MLR	≥ 89% MLR
Plan Risk	50%	100%	30%
DHS Risk	50%	0%	70%

Medicare

Currently, BCBSRI participates in the Medicare managed care market. This year, NHP and BCBSRI were approved by CMS to offer the BlueCHiP for Medicare Optima SNP (Special Needs Plan) to the state's 28,000 dual eligibles jointly. Further, United offers a SNP for dual eligibles through Evercare, a subsidiary of UnitedHealth Group.²⁴

Recent changes in Medicare create new business opportunities and risks for plans participating in this market. The enactment of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) has ensured that Medicare Advantage plans will play a significant role in the future in covering people on Medicare and in providing the new drug benefit. Specifically, MMA created a comprehensive voluntary prescription drug plan for Medicare beneficiaries, known as Medicare Part D. Medicare Part D is delivered through private risk-bearing entities under contract with the Centers for Medicare & Medicaid Services (CMS). Part D coverage for beneficiaries enrolled in a prescription drug plan began on January 1, 2006. The drug benefit is offered to beneficiaries through both Part D Prescription Drug Plans (PDPs) and Medicare Advantage Prescription Drug Plans (MA-PDs). PDPs are stand-alone drug only plans for beneficiaries enrolled in Medicare. MA-PD plans are offered to MA beneficiaries in conjunction with MA plans; these MA-PD plans may serve to increase enrollment in Medicare managed care. While risk corridors help mitigate the risk, the Part D Program is completely new and most pricing could not be developed using historical information. Furthermore, both MA and PDP products will have premiums dependent on the reported risk status of the enrollees, which is dependent on the quality of coding of the providers. Thus, it will take several years for the impact of this offering to be well understood, as evidenced by the vastly differing estimates of the cost of Part D presented to Congress during the development of the MMA legislation. In addition to claims uncertainty, the timing and amounts of payments are also uncertain in government products such as Medicare, which adds to the risk of offering these products.

²⁴ Neighborhood will provide customer service and medical and case management. BCBSRI will handle sales and marketing, enrollment, claims, provider contracts, network management and underwriting. Ric Gross. "Special Needs Plans Rolling Out in New England" HealthLeaders-InterStudy (Winter 2006).

In sum, the nature of the risk in the Medicare market is still not yet well understood. Product restructuring under MMA, combined with expansion into new products, increases plan risks and surplus demand relative to premium dollars.

Key areas of risk to consider in the Medicare market include:

- Effective Part D marketing may result in significant shifts in enrollment patterns across plans in the Medicare market
- The Medicare Part D Program is new and most pricing could not be developed using historical information.
- June 2006 Deadline for Medicare 2007 bidding process prevents use of 2006 experience
 - The nature and outcome of competitive bidding increases uncertainty about the adequacy of supplemental premiums.
- Both MA and PDP products will have premiums dependent on the reported risk status of the enrollees, which is dependent on the quality of coding of the providers
- Budget neutrality requirement adds uncertainty to rate setting process
- Although the premiums received are adjusted for health status, there is still uncertainty about who will enroll and how successful the new offering will be given that the product is new.
- Subsequent years of premium increases may depend not only on the actual underlying cost trends, but the availability of funding.
- Introducing or expanding Medicare products means a sudden large need for surplus to back the product given the new enrollment.

VI. TARGET SURPLUS RANGES FOR THIS STUDY

While there is no consensus as to the “right” level of surplus for a health insurance company, how much surplus is needed to provide an adequate margin of safety is largely a matter of judgment rather than calculation. Insurers contend that an insurer wants to provide an adequate margin of safety so that the company can endure periods of adverse experience without triggering any form of regulatory intervention. Thus, the “right” level is plan-specific; it is not a single number that can be applied to all plans.

For this study, we developed surplus levels, expressed in terms of percentages of total net revenue or SAPOR, reflecting what we believe are prudent and conservative target ranges. The targets reflect the surplus range for each plan within which we believe the plan is sufficiently capitalized to withstand financial downturns of some significance. Each insurer sets its own surplus target level, reflecting its own assessment of the risks they face and their sensitivity to these risks; expectations regarding competitive pressures; marketing and expansion intentions;

capital investment plans; and stockholder pressures. Because this analysis is as much an art as a science, the insurers' targets may fall outside of the range we have developed. Because total revenue is net of reinsurance, any significant change in the proportion of premiums ceded to a reinsurer will impact the actual SAPOR level.

Our assessment of the risks faced by BCBSRI along with our analysis of its surplus needs is presented in Appendix A of this report. Our assessments of the risks faced by UHCNE and NHP along with our analysis of their surplus needs are presented in the companion reports to this report. The target surplus ranges presented for BCBSRI and NHP can be justified to protect against underwriting swings based on each plan's circumstances. We note that surplus levels below the lower end of the ranges do not reflect insufficient surplus.

As discussed in *Considerations for Appropriate Surplus Accumulation in the Rhode Island Health Insurance Market As It Relates to: United HealthCare of New England*, developing a target surplus range for UHCNE is not feasible without a thorough review of the financial relationships between the UHC affiliates and the parent organization. Such a review would be an enormous undertaking and would require the cooperation of the parent organization and its affiliates. However, providing target surplus ranges for BCBSRI and NHP might lead some readers to make assumptions regarding an appropriate surplus range for UHCNE. Because of the many differences in organizational structure, market participation, profit status, risk sharing and reinsurance arrangements, and other characteristics across the three plans, applying recommendations for NHP or BCBSRI to UHCNE is wholly inappropriate. To characterize how some of the characteristics of UHCNE influence the surplus level necessary to provide reasonable protection to the plan and its customers, we developed the hypothetical case study of a for-profit insurer based in Rhode Island, which is presented in *Considerations for Appropriate Surplus Accumulation in the Rhode Island Health Insurance Market As It Relates to: United HealthCare of New England*.

The discussion and recommended surplus ranges included in the appendices reflect our analysis of the external regulatory and market conditions and the internal financial, operational, and market penetration characteristics along with the competitive pressures and capital needs faced by the insurers as of the spring of 2006. Because these all influence surplus needs, both insurers' and regulators' surplus policies must recognize and accommodate significant changes in the environment that materially impact the risks faced by insurers.

Appendix A
Blue Cross Blue Shield of Rhode Island
Surplus Analysis

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BLUE CROSS BLUE SHIELD OF RHODE ISLAND

A. Background

Blue Cross Blue Shield of Rhode Island is a non-profit, hospital and medical service corporation founded in 1939 and is Rhode Island's largest locally based, nonprofit health plan. BCBSRI is an independent licensee of the Blue Cross and Blue Shield Association and is statutorily defined as a charitable corporation and an incorporated public charitable institution.²⁵ BCBSRI has a 16 member board of directors with 6 board members appointed by the State (2 by the Governor, 2 by the Speaker of the House and 2 by the Senate President). Effective January 1, 2005, BCBSRI merged with its for-profit wholly-owned HMO subsidiary, Coordinated Health Partners, to streamline operations. BlueCHiP Coordinated Health Plan, BlueCHiP for Medicare, and BlueCHiP for RiteCare continue to be offered under those product names.

B. Surplus Oversight and Key Issues

1. NAIC Model

Most states, like Rhode Island, have enacted variations of the NAIC model Health Risk-Based Capital Act to regulate surplus minimums. The Act establishes clear, consistent guidelines for the calculation of RBC. As shown below, Rhode Island has adopted the NAIC trigger points for intervention based on the NAIC risk-based formula.

NAIC Trigger Points for Intervention Based on Risk-Based Capital Formula

RBC Level	Company or Regulator Response
Company Action Level (200% ACL)	Under RI law, the company must submit an RBC plan to the Insurance Commissioner. This plan includes, among other things, proposals of corrective actions it will take.
Regulatory Action Level (150% ACL)	The company must submit or resubmit a corrective plan of action to remedy the situation. After examining the company, the Insurance Commissioner will issue an order specifying the corrective actions to be taken.
Authorized Control Level (ACL)	The Insurance Commissioner is authorized to take regulatory action as may be necessary to protect the interests of the policyholders, including taking control of the company.
Mandatory Control Level (70% ACL)	The Insurance Commissioner is required to place the company under regulatory control.

²⁵ Contrary to popular understanding, BCBSRI (as a Blue Cross Blue Shield plan) is subject to federal taxes. An amendment to the Internal Revenue Code in 1986 revoked the Blue's federal tax-exempt status, as Congress reasoned that the activities engaged in by Blue plans are fundamentally commercial rather than charitable and that tax exemption gave the plans an unfair competitive advantage over commercial competitors.

2. Oversight of Surplus by the National Blue Cross Blue Shield Association

The Blue Cross Blue Shield Association (BCBSA) licenses member plans to use the Blue Cross and Blue Shield brand names and trademarks and requires that plans meet specific standards for financial performance. As a Blue Cross Blue Shield plan, BCBSRI adheres to the BCBSA licensure requirements. BCBSA sets higher standards for RBC ratios than NAIC, for three reasons: 1) to uphold the strength of the Blue brand; 2) to avoid the potential for joint and several liability of Blue plans; and 3) to assure an early warning if a plan is in danger of becoming inadequately capitalized, so that it may intervene before regulators have to. These BCBSA standards are as follows:

- **Termination of Blues license at 200% RBC.** The Association can terminate a plan's license – and thus the plan's right to use the Blues brand – if the plan's RBC falls below the 200% level, which NAIC refers to as the Company Action Level.
- **Association Intervention triggered at 375% RBC.** After performing a statistical analysis of the historical volatility of surplus levels for Blue plans, BCBSA's actuaries determined that the benchmark for Association intervention should be an RBC ratio of 375%. If a plan's surplus falls below this level, it is subject to additional reporting requirements by the Association. According to the actuaries' analysis, this gives the Association sufficient warning before a company's surplus is likely to decline to the 200% level.

Blue Cross Blue Shield Association also requires Blue plans to either participate in a state guaranty fund, establish an alternative method to ensure payment of claims liabilities and continuation of coverage in the event of insolvency, or have 800% or greater of the Authorized Control Level RBC.²⁶ BCBSRI currently participates in an alternative mechanism: a pledged asset agreement of \$30 million in investment securities which is pledged in favor of the BCBSA to cover liabilities for claims administered by out of state BCBS subscribers incurring claims in their respective service areas.

BCBSA has not established a maximum surplus standard for Blue plans. It is at the discretion of a Blue plan's management to determine the appropriate level of capital and surplus, based on its assessment of the future needs and uses of capital in its business, taking into consideration both company and marketplace trends and future contingencies. BCBSA, like the NAIC, adheres to the position that the risk-based capital formula is applicable only for the purpose of detecting whether an insurer is approaching insolvency.

3. Blue Plan Action to Reduce Surplus

A number of Blue plans have taken measures to reduce their surpluses. After earning high profits in 2003, several Blue plans refunded millions of dollars of premiums paid by insured groups and individuals. Blue Cross Blue Shield of Rhode Island gave back a total of \$21 million to its policyholders and providers, Horizon Blue Cross Blue Shield of New Jersey refunded \$55 million, and Blue Cross Blue Shield of Tennessee slowed premium rate increases in 2003, and

²⁶ Highmark Blue Cross Blue Shield, Letter to Pennsylvania Insurance Department, November 8, 2004.

then returned \$67 million to customers at year's end.²⁷ The windfall in Tennessee was partly driven by changes to hospital contracting arrangements between the plan and a large hospital system that led to large retroactive cost savings.

Blue plans also have begun to reduce premiums. Blue Cross Blue Shield of North Carolina used some of its 2003 profits to reduce the rate of increase in premiums for 2004. Rate increases for group customers were five percentage points lower for the first quarter of 2004 than for the same period in 2003. Individual enrollees saw premium increases that were nine percentage points lower.²⁸ In early 2005, CareFirst Blue Cross Blue Shield (MD, DC, DE, and Northern VA) pledged to slow surplus growth by quoting premium rates 3 percent lower than the expected medical cost trend would suggest. It is expected that this action would trim \$60 million, or about one-third of 2004 operating income, from CareFirst's 2005 results.²⁹

4. BCBSRI Surplus History

Between 1996 and 1998, BCBSRI had a net loss of \$73.2 million. By the end of 1998, BCBSRI had an RBC ratio of 402%, and there were concerns regarding the potential loss of its ability to use of the Blue Cross and Blue Shield Association trademark.

As the chart below indicates, BCBSRI's surplus has increased since this time, as measured by its RBC ratio. To control costs to consumers, BCBSRI entered into a one-year agreement with the Governor of Rhode Island to work to manage its surplus to \$277 million. This agreement ended August 1, 2005.

Year	RBC Ratio	Surplus as % of Revenue (SAPOR)*
2005	614 %	20 %
2004	538 %	18 %
2003	548 %	18 %
2002	460 %	15 %

* All years reflect consolidated results for BCBSRI and Coordinated Health Partners (CHP). Revenues for BCBSRI and CHP are as reported on the annual statements and are net of reinsurance.

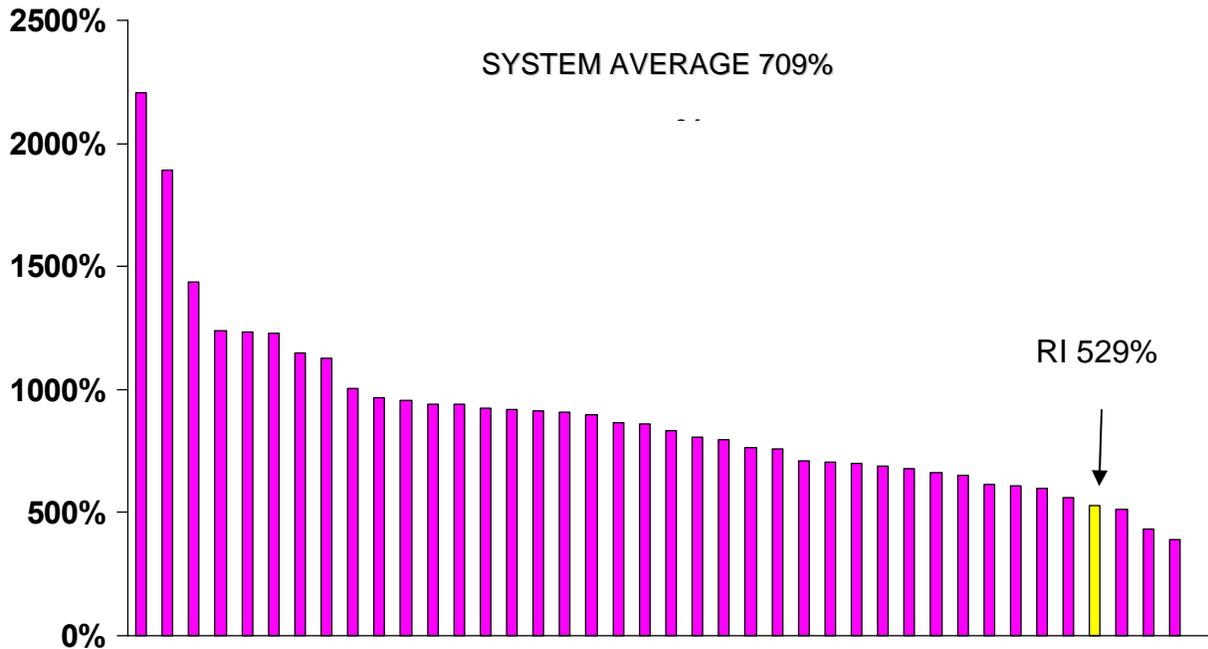
Across Blue plans, however, it is important to note that BCBSRI's RBC ratio is lower than most.

²⁷ "Some Blues' Premium Givebacks Generate Sales, Goodwill, While Others Get Criticized," The AIS Report on Blue Cross and Blue Shield Plans, February 2004.

²⁸ "Not-for-Profit Blues' Strong 2003 Financial Results Could Invite Regulatory Scrutiny," The AIS Report on Blue Cross and Blue Shield Plans, March 2004.

²⁹ "CareFirst Premium Cuts Seen as Step Toward Not-for-Profit Mission," The AIS Report on Blue Cross and Blue Shield Plans, February 2005.

Blue Plans' RBC Ratios as of June 30, 2005



Source: BCBSA as provided by BCBSRI.

C. Blue Cross Blue Shield of Rhode Island Risk Assessment

BCBSRI’s structure, characteristics and position in the market influence its surplus needs. The following chart provides the various business factors associated with BCBSRI that drive higher requirements for surplus and those business factors that drive lower requirements for surplus. For instance, mandatory Rhode Island regulatory requirements lead to inherent risks for BCBSRI. Specifically, BCBSRI is statutorily required to participate in the individual and small group markets.³⁰ In the individual market, BCBSRI must offer a 30-day open enrollment period every 12 months and serves as the insurer of last resort. In the small group market, the Rhode Island statutory small group requirements spread risk more broadly by bringing all insured small employers into one insurance risk pool, and limit premium rate variability among small employers with adjusted community rating. This could lead to adverse selection in the small group market and increased risk to BCBSRI.³¹

Further, as a “file and approve” state, Rhode Island requires BCBSRI to file its rates and seek approval from the Health Insurance Commissioner for its direct pay and Plan 65 products.

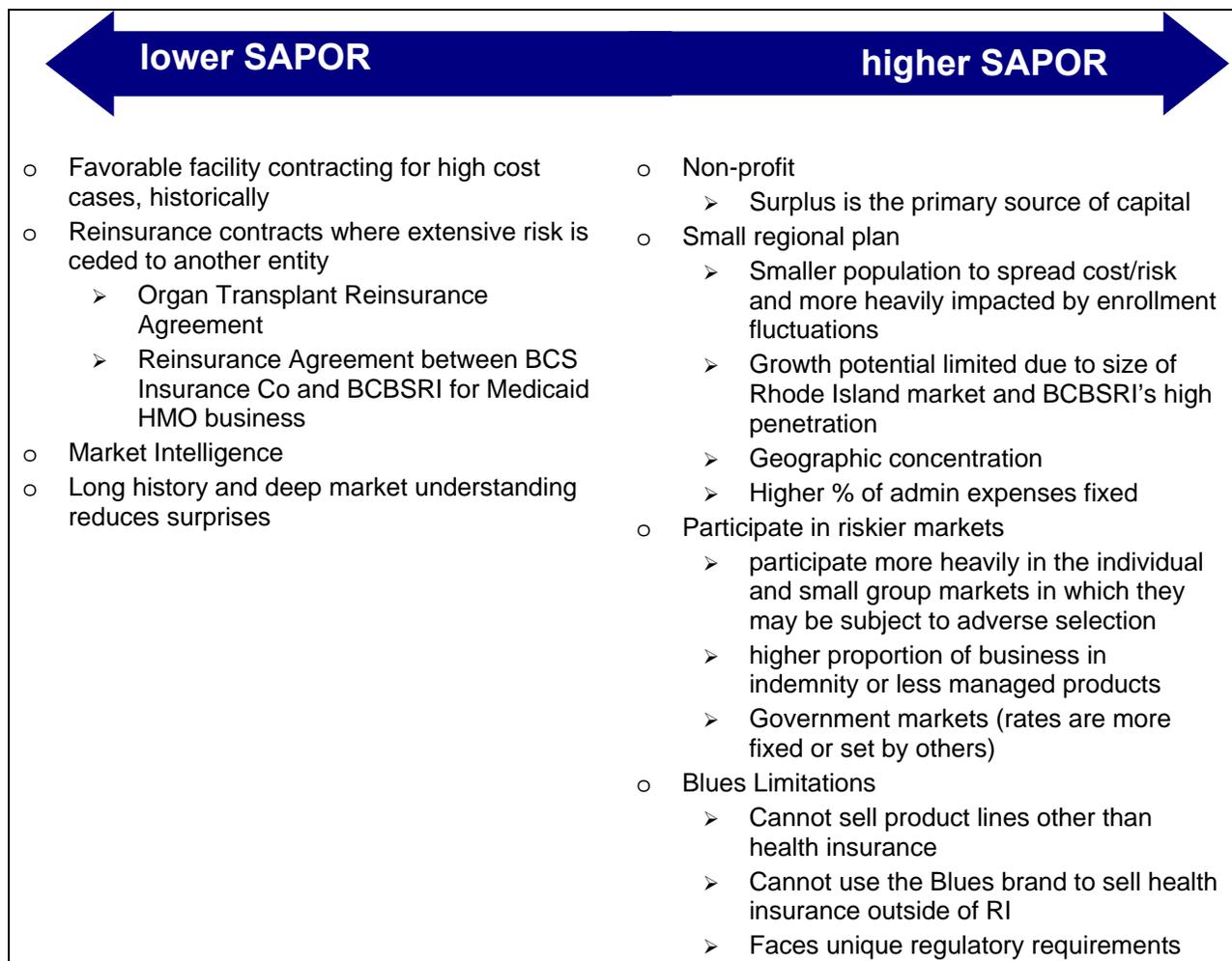
³⁰ RI Gen. Laws s. 27-19.2-10.

³¹ Lautzenheiser & Associates, Report on the Effectiveness of Rhode Island General Laws ss. 27-50-1 et seq. Small Employer Health Insurance Availability Act in Promoting Rate Stability Product Availability and Coverage Affordability (2002).

Most other states have moved away from “file and approve” for regulating rate changes and simply require carriers to file rate changes with the state before implementing them (“file and use”).³² Thus, BCBSRI is required to employ pricing strategies that “enhance the affordability of health care coverage”³³ through a “file and approve” rate hearing process for its direct pay and Plan 65 products. This statutory language focused on rate “affordability” potentially affects BCBSRI’s ability to obtain rate increases in the direct pay market despite actuarial soundness of proposed rates.

The following chart provides the various business factors associated with BCBSRI that drive higher requirements for surplus and those business factors that drive lower requirements for surplus.

Factors Affecting BCBSRI’s SAPOR Needs



³² National Association of Health Underwriters, Summary of Individual Health Insurance Policy Renewal Laws (2003).

³³ RI Gen. Laws s. 27-19.2-10.

D. Actuarial Analysis of Surplus Levels

As discussed above, the risks faced by BCBSRI increase BCBSRI's surplus needs. In order to quantify the amount of surplus that a regional, not-for-profit health insurance company would need to have in order to protect against future losses, maintain and upgrade technological capability, and withstand competitive pricing pressures, we analyzed the financial history for fifteen similarly sized mutual or not-for-profit members of the BCBSA.³⁴ The plans used in this analysis all had revenue of at least 262 million in 2004, and none had more than \$2,062 million in revenue.³⁵ The mean revenue of these 15 Blue Cross Blue Shield plans was \$1,078 million, which lends to their comparability to BCBSRI, which had total revenue (exclusive of CHP) in 2004 of about \$1,063 million.³⁶ In Attachment A we present tables summarizing their revenues, surplus, and Authorized Control Levels (ACL).

From this financial data, we calculated surplus as a percent of revenue (SAPOR) for 1992 through 2004, surplus as a percent of the Authorized Control Level (i.e., RBC ratio) for the years 1998 to 2004, and the year-to-year absolute changes in SAPOR and RBC ratios. Our analysis consisted of examining the size and distribution of year-to-year changes in surplus ratios. We established a data point for each company, each year, and analyzed this data as a group to see how the changes are distributed. We used the resulting distribution to make statistical inferences.

We focused on SAPOR changes rather than RBC changes because:

- The distribution of SAPOR changes is very close to a normal distribution, as shown in the Figure 1 below.
- Successive changes in SAPOR for an individual company are independent, as shown by the analysis of successive changes which shows nearly no correlation with an R-squared measure of .0091. See Figure 2 below.
- We had 13 years of SAPOR values, but only 7 of RBC.
- SAPOR and RBC are very closely related and it is possible to derive an RBC ratio from a SAPOR value with a simple calculation.
- The use of SAPOR is more instructive in answering the question of the appropriate level of excess surplus than RBC, which focuses on the types of assets and their liquidity should a short term critical need arise.

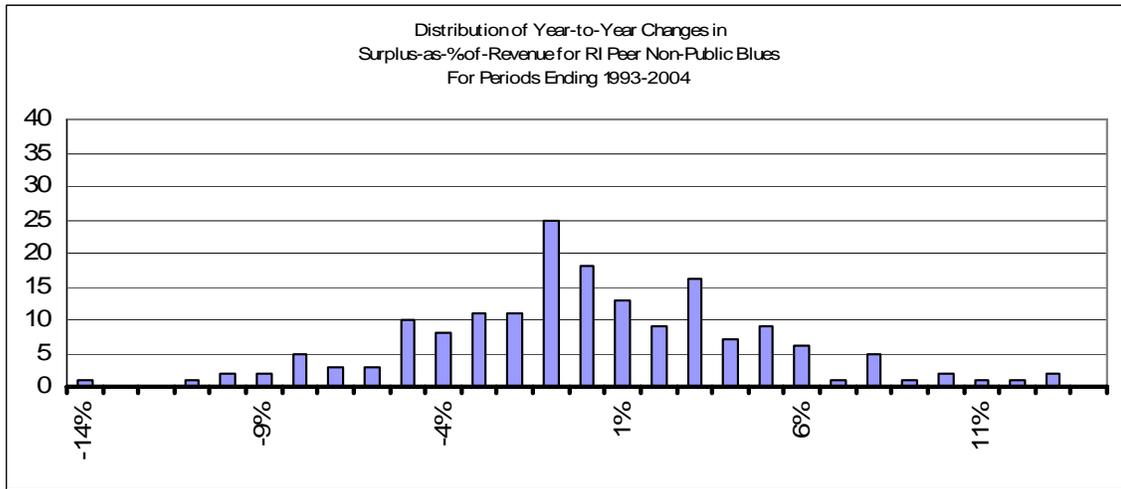
³⁴ This analysis has similarities to other recent analyses of Blue plan surplus levels: 1) Milliman assessed surplus levels for Horizon in 2005 and recommended a surplus level in the range of 545% to 1045% of RBC; 2) Milliman assessed surplus levels for Highmark BCBS in PA in 2004 and found a surplus in the range of 650% to 950% of RBC to be reasonable; and 3) Lewin assessed surplus levels of the BCBS plans in PA and found a range of 500% to 900% RBC to be reasonably prudent. The current analysis takes a similar approach to Lewin's PA analysis but tailors the comparison to plans that are more like BCBSRI.

³⁵ "Revenue" reflects total reported revenue and is net of reinsurance.

³⁶ The Lewin Blues Model was developed using data for BCBS plans from 1992 through 2004. The data are as reported on each plan's financial statements, with subsidiary premium revenue reported as assets rather than premium revenue for the parent company. For BCBSRI, this means that CHP revenue is not included in the model (consistent with the treatment of subsidiaries of the other plans). BCBSRI's 2004 revenue including CHP was \$1,608 million.

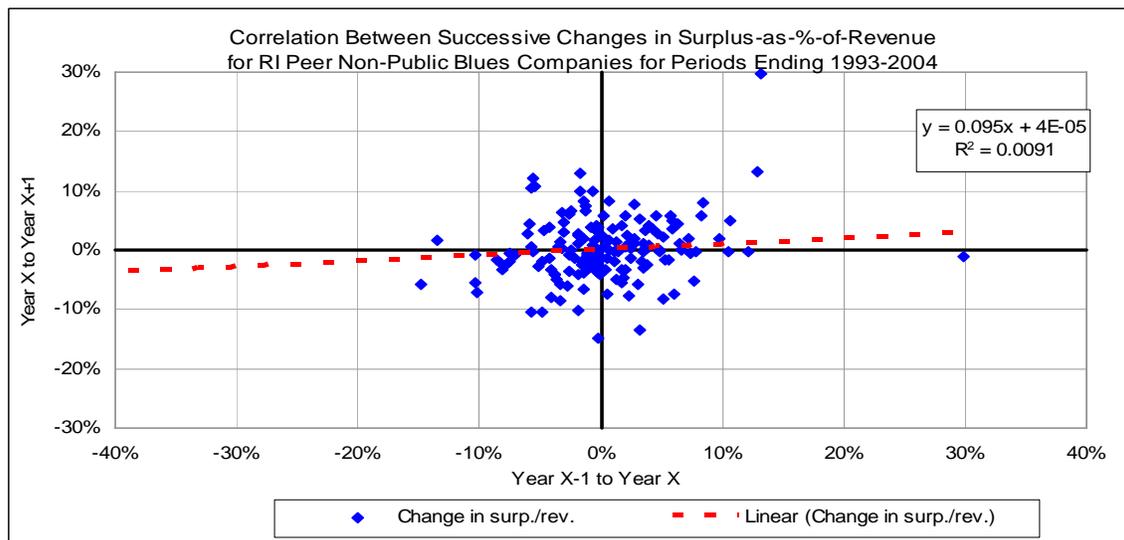
To validate the plan sample, we assessed the distribution of annual changes in surplus as a percentage of insured revenue (SAPOR) for the sample to ensure that it was close to a normal distribution.

Figure 1
Distribution of Year-to-Year Changes in SAPOR for Peer Non-Public Blues
(Data Points Reflect Annual Percent Change For Years Ending 1993-2004)



We also analyzed the correlation between successive changes in SAPOR and determined them to be statistically independent.

Figure 2
Correlation Between Successive Changes in SAPOR for Peer Non-Public Blues Companies, for Periods Ending 1993-2004



After adjusting for a slight downward trend in SAPOR changes over time, we found the average SAPOR change to be 0 percent. We calculated the standard deviation of the distribution to be 6.1 percent. Since the SAPOR changes are independent and are normally distributed, we conclude that the distribution of cumulative SAPOR changes over an N-year period is also normal, with the same mean 0 percent and standard deviation $6.1 \text{ percent} \cdot \sqrt{N}$. This enables us to calculate the probability of a specified decrease in surplus over an N-year period, using a table of standard normal probabilities. For example, to assess the probability that a company's surplus will decline from 20 percent of revenue to 6.5 percent over 2 years, we first determined that the standard deviation for this two-year period is 8.6 percent ($=6.1 \cdot \sqrt{2}$). Thus the decrease in SAPOR from 20 percent to 6.5 percent represents a change that is $(20 - 6.5)/8.6 = 1.6$ standard deviations from the mean. Reference to a table of standard normal probabilities shows that the probability of a change of this magnitude or greater is about 5.5 percent.

We considered how long a period we should look at when assessing the likelihood of a specified drop in surplus. Clearly, as we extend the horizon for our analysis further into the future, the potential variation of the cumulative change in surplus becomes greater, if we assume that the variations from year to year are independent. Yet this is a questionable assumption as we project over a larger number of years. We would expect a plan's management to take some sort of corrective action based on negative results in former years, although the success of such actions is never guaranteed. Either as a result of the change in the underwriting cycle, or because of corrective actions, we would expect that a string of down years would be followed by a string of up years. We sought to address the remaining question of how long a string of down years reasonably could be expected to last. To answer this, we looked at the cumulative changes in SAPOR over periods ranging from 2 to 10 years (all between 1993 and 2004) for all 14 peer non-public Blue Plans. For each company, we found the maximum cumulative loss that occurred during this timeframe and noted the number of years over which this loss took place. Results are shown in Figure 3 below.

Figure 3
Percentage Point Change in SAPOR From Prior Year
For Sample of Not-for-Profit BC/BS Companies Between 1993 and 2004*

Company	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Maximum Cumulative Decline in SAPOR**	
													# of Consecutive Years of Decline	% Change in SAPOR
1	3.9%	2.6%	-3.7%	-9.3%	0.2%	-0.7%	-1.9%	-2.9%	1.1%	8.6%	5.9%	5.7%	6	-17.1%
2	6.3%	1.4%	-0.2%	9.5%	8.8%	0.7%	-14.2%	-5.2%	-10.0%	-5.1%	10.7%	4.9%	4	-30.6%
3	5.0%	-1.7%	6.0%	0.7%	-2.6%	-4.0%	-1.2%	1.7%	0.1%	-2.3%	6.7%	1.0%	6	-8.1%
4	6.8%	-0.3%	11.0%	3.1%	-2.4%	-7.7%	-0.9%	-1.3%	-3.9%	4.2%	0.8%	1.7%	5	-15.3%
5	6.2%	4.2%	2.4%	-0.8%	-9.3%	-6.2%	-0.2%	-2.5%	3.5%	-5.6%	4.6%	5.7%	7	-19.8%
6	8.7%	3.5%	7.1%	6.2%	-7.3%	-1.4%	-0.6%	-2.0%	6.4%	-7.2%	-1.7%	2.5%	7	-13.7%
7	7.1%	-0.3%	14.1%	14.3%	30.8%	-0.3%	0.1%	-0.1%	10.3%	-41.3%	-1.2%	-6.5%	3	-45.8%
8	4.0%	1.7%	3.5%	-6.7%	-1.6%	-0.1%	0.4%	4.8%	4.1%	3.5%	5.3%	2.1%	3	-8.3%
9	-4.0%	1.0%	4.6%	-0.8%	3.7%	8.6%	-4.4%	-2.2%	-5.6%	3.0%	2.2%	0.5%	3	-11.8%
10	3.2%	-4.2%	13.3%	0.9%	4.7%	-1.7%	0.7%	-3.5%	-7.6%	-2.9%	6.5%	4.3%	5	-14.4%
11	2.0%	0.0%	3.2%	-3.6%	4.4%	0.6%	0.5%	-3.2%	-3.8%	-1.0%	6.7%	0.1%	3	-7.9%
12	N/A	N/A	N/A	1.3%	1.6%	0.8%	-0.5%	-0.2%	0.0%	-0.5%	4.0%	0.8%	4	-1.1%
BCBSRI	3.8%	3.8%	-0.2%	-2.7%	-3.1%	-2.4%	0.9%	6.4%	4.0%	1.2%	3.8%	0.3%	4	-8.1%
14	-4.1%	11.9%	1.0%	4.2%	-12.6%	2.5%	-2.7%	-5.2%	1.0%	-7.2%	-0.5%	0.9%	7	-22.9%
15	1.9%	-2.0%	2.5%	2.5%	0.7%	-0.3%	-0.6%	7.9%	-0.1%	1.9%	4.1%	4.1%	1	-2.0%

* The percentage point change in SAPOR is equal to $SAPOR^{(Year 1)} - SAPOR^{(Year 0)}$. For example, BCBSRI's SAPOR increased from 11.4% in 1992 to 15.2% in 1993, an increase of 3.8 percentage points.

** The maximum cumulative decline in SAPOR is examining the longest period between 1993 and 2004 during which the company experienced the greatest decline in SAPOR. The number of years associated with the decline and the compounded annual percent change in SAPOR over these years is provided for each company.

In our judgment, estimating the surplus needed to withstand a 3- to 7-year downturn is a prudent approach, based on this review.

Three plans had successive surplus declines extending over seven years. Thus we decided to apply our statistical model to periods of up to seven years in assessing the probability that specified decreases in surplus would occur.

Most plans had experienced successive surplus declines of at least three years, so we concluded that it would not be prudent to suggest levels commensurate for a shorter length than three years.

We considered two benchmarks for minimum surplus levels: BCBSA’s “Early Warning Level” of 375% of ACL (equivalent to 15.1 percent of revenue) and NAIC’s “Company Action Level” of 200% of ACL (equivalent to 8.0 percent of revenue). We considered two confidence levels: 90 percent and 95 percent. That is, we wanted to determine the level of surplus that a company should have in order to be:

- 90 percent confident that SAPOR would not fall below the Early Warning Level over time periods ranging from 3 to 7 years.
- 95 percent confident that SAPOR would not fall below the Company Action Level over time periods ranging from 3 to 7 years.

Figure 4
Surplus Levels Needed to Avoid Dropping Below Specified Benchmarks,
For Periods of 3 to 7 Years,
at Confidence Levels of 90 Percent and 95 Percent

	Number of Years in Potential Down Cycle				
	3	4	5	6	7
Standard Deviation in Cumulative Change in SAPOR	10.6%	12.2%	13.7%	15.0%	16.2%
Requirements to Stay Above BCBSA Early Warning Level with 90% Confidence					
Incremental SAPOR Requirement	13.6%	15.7%	17.5%	19.2%	20.8%
Total SAPOR	28.7%	30.8%	32.6%	34.3%	35.8%
RBC Equivalent	713%	765%	811%	853%	891%
Requirements to Stay Above NAIC Company Action Level (CAL) with 95% Confidence					
Incremental SAPOR Requirement	17.4%	20.1%	22.5%	24.7%	26.6%
Total SAPOR	25.5%	28.2%	30.6%	32.7%	34.7%
RBC Equivalent	634%	701%	760%	814%	863%

As shown in Figure 4, this analysis leads us to conclude that surplus levels for producing RBC ratios in the range of 634% to 891% can be justified from this model to protect against underwriting swings or adverse events that could jeopardize the financial well-being of a Blue plan in the BCBSRI peer-group cohort to the extent that the plans would be subject to warning or control actions on the part of BCBSA or state insurance regulators.

TARGET SURPLUS RANGE

While there is no consensus as to the “right” level of surplus for a health insurance company, how much surplus is needed to provide an adequate margin of safety is largely a matter of judgment rather than calculation. Insurers contend that they want to provide an adequate margin of safety enabling them to endure periods of adverse experience without triggering any form of regulatory intervention. Thus, the “right” level is plan-specific; it is not a single number that can be applied to all plans. The target surplus level presented here reflects what we believe is a prudent and conservative range and can be justified to protect against underwriting swings based on BCBSRI’s circumstances. We note that surplus levels below the lower end of the range do not reflect insufficient surplus.

Based solely on the model described above, surplus levels that produce SAPOR of 21% to 29%, based on surplus as a percentage of consolidated BCBSRI revenue (including CHP), can be justified to protect against underwriting swings or adverse events. This range reflects a down cycle from three to seven years in length. As of 2005, BCBSRI’s surplus level reflected a SAPOR of 20%. The model is based on historical information as reported in the annual statements (1993-2004). This provides a good starting point for the development of adequate surplus measures, but prudent concern for the long-term financial viability of a non-profit small- to mid-sized insurer requires some surplus beyond the model for all plans modeled and in particular, for Blue Cross Blue Shield of Rhode Island. First, an increased need for the provision for catastrophe is now more widely accepted in the wake of recent natural and man-made disasters and the spectre of H5N1 (Avian Flu) or SARS-type global diseases. Second, Rhode Island presents a more concentrated geographic risk than is present in the comparison plans. Third, the model has a built-in lag that does not fully account for the effects of trend on the accumulation of surplus. Finally, the State of Rhode Island, while not alone in its scrutiny and care in examining rate filings, is more rigorous than most of the states in the peer group, which hinders BCBSRI from being able to react swiftly to changes in the market.

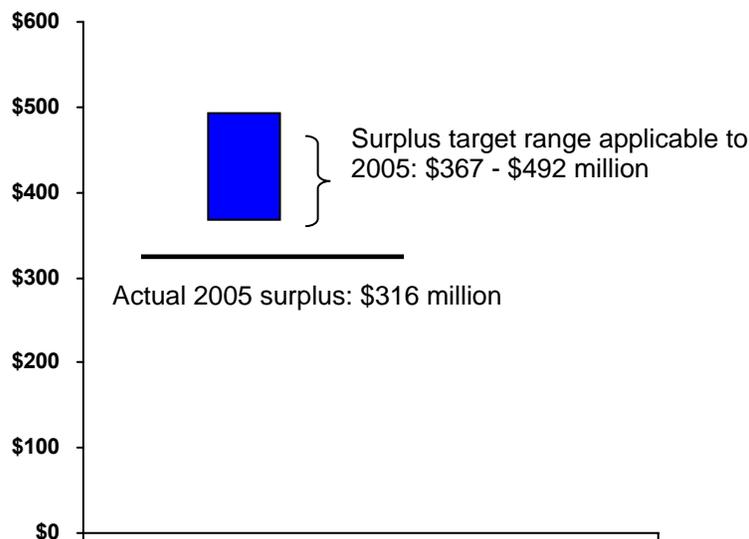
Blue Cross Blue Shield of Rhode Island has some self-funded business, as do most of the plans in the model. Current surplus held should include provision for the risks inherent in administering these plans. However, this study focused on the insured portion of the business and did not determine the extent to which BCBSRI backs self-insured plans it administers. If the plan has more self-insured business or if it offers more security than other plans in the comparative model, the plan will need to hold higher surplus than the amounts resulting from the model.

Given that the model covers historical information (when BCBSRI had CHP as a subsidiary), the target surplus range has to provide for the risk of the former CHP subsidiary. Plan revenues as reported on annual financial statements and incorporated in the model do not include the

revenues of corporate subsidiaries, yet the surplus levels reported are corporate-wide. To the extent that the plans modeled have surplus included that covers the risk in subsidiary business, the percent of revenue measured here reflects those risks.

Based on our model and the further considerations discussed above, surplus levels that produce 23 to 31% of revenue in 2005, can be justified to protect against underwriting swings or adverse events. This range accommodates down cycles from three to seven years in length based upon analysis of the business risks faced by BCBSRI and the nominal amount of premium ceded to reinsurance in 2005.³⁷ For example, should BCBSRI cede a significant amount of their insured premium risk to a reinsurer in the future, this target surplus range might be lowered. While this study makes every effort to understand the risks and contingencies facing the plans, it cannot and does not profess to replace the close scrutiny and deep understanding of those close to the plan who monitor the development and reaction to insurance risk. There may be very good reasons for the plan to be either above or below this target range.

Recommended BCBSRI Surplus Range Applied to 2005



In conclusion, BCBSRI's strengths include its strong market share (in excess of 60%), strong infrastructure to support its expanding managed care business, and its long history and brand identity which provide marketing advantage. In contrast, its weaknesses consist of its regulatory environment that limits rate/premium increases while increasing physician fee reimbursement, its pricing policies of pricing its products with small margins, and its non-profit status which means that it is not open to capital markets. Further, BCBSRI is statutorily defined as a charitable corporation and an incorporated public charitable institution, creating greater public scrutiny on its use of its surplus and surplus accumulation. Additional weaknesses include past conflicts over reimbursement levels

³⁷ BCBSRI's total premium earned in 2005 was \$1,586 million, while revenue, or premiums net of reinsurance, was \$1,582.

with providers and BCBSRI's geographic business limitations in which BCBSRI cannot use the Blues brand to sell health insurance outside of RI. Weighing these strengths and weaknesses, surplus levels of 23 to 31% of revenue can be justified to protect against underwriting swings or adverse events. It is our expectation that this range will be revisited as needed as business conditions warrant.

Attachment A

Comparison of Financial Statistics for Plan Sample of 15 BCBS Plans Including BCBSRI

Exhibit A-1
Total Annual Revenue for Plan Sample of Not-for-Profit BC/BS Companies for 1992-2004
(\$ in Millions)

Company	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1	412	443	436	460	500	509	576	668	771	910	843	892	902
2	654	659	688	694	577	599	630	694	786	915	1,063	1,104	1,139
3	398	406	423	368	372	381	413	456	484	525	574	614	635
4	324	324	368	355	373	419	454	530	552	643	606	685	746
5	389	385	379	359	390	442	438	465	545	583	762	881	937
6	1,111	1,047	1,138	1,137	1,052	1,315	1,413	1,544	1,699	1,610	1,690	1,779	1,793
7	399	428	411	417	401	365	410	441	452	371	538	597	642
8	347	396	409	416	486	461	563	598	569	627	737	859	981
9	668	711	594	613	734	741	752	1,062	1,221	1,393	1,547	1,780	1,947
10	297	301	278	364	364	368	380	354	415	525	630	729	809
11	175	186	188	203	212	221	224	219	246	286	338	363	381
12	-	-	-	885	862	838	905	1,070	1,125	1,290	1,520	1,776	2,062
BCBSRI	699	706	734	738	743	763	723	777	784	900	893	971	1,063
14	637	652	543	611	564	703	843	982	1,195	1,256	1,446	1,574	1,869
15	178	205	235	239	225	235	239	259	165	165	195	227	262

Note: Revenue is as reported on each company's annual financial statements, and does not include subsidiary revenue.

Exhibit A-2
End-of-Year Surplus for Plan Sample of Not-for-Profit BC/BS Companies for 1992-2004
(\$Millions)

Company	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1	135	163	172	164	132	136	149	161	163	202	260	327	382
2	204	247	267	268	278	341	363	301	300	258	245	373	441
3	88	110	108	116	120	113	105	111	126	137	137	188	201
4	129	152	171	204	226	244	230	263	267	286	295	339	381
5	79	102	116	119	126	102	74	77	77	102	91	146	209
6	193	273	336	417	451	468	483	518	536	611	519	515	564
7	137	177	169	230	279	366	410	441	452	409	371	405	393
8	54	77	86	103	87	76	92	99	122	160	214	295	357
9	188	172	149	182	212	242	310	391	422	403	495	608	674
10	69	79	62	129	133	152	150	142	152	153	165	238	299
11	33	39	39	49	43	55	57	57	56	54	61	90	95
12	67	78	92	52	62	74	87	97	100	116	129	222	275
BCBSRI	80	107	139	138	120	99	77	90	141	197	207	261	289
14	337	317	329	376	371	375	470	521	572	614	603	648	787
15	7	12	9	15	20	22	22	22	27	27	36	51	69

Exhibit A-3
Surplus as a Percent of Revenue (SAPOR) for 1992 - 2004

Company	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1	33%	37%	39%	36%	26%	27%	26%	24%	21%	22%	31%	37%	42%
2	31%	37%	39%	39%	48%	57%	58%	43%	38%	28%	23%	34%	39%
3	22%	27%	25%	31%	32%	30%	26%	24%	26%	26%	24%	31%	32%
4	40%	47%	46%	58%	61%	58%	51%	50%	48%	44%	49%	49%	51%
5	20%	27%	31%	33%	32%	23%	17%	17%	14%	18%	12%	17%	22%
6	17%	26%	30%	37%	43%	36%	34%	34%	32%	38%	31%	29%	31%
7	34%	41%	41%	55%	70%	100%	100%	100%	100%	110%	69%	68%	61%
8	15%	19%	21%	25%	18%	16%	16%	17%	21%	26%	29%	34%	36%
9	28%	24%	25%	30%	29%	33%	41%	37%	35%	29%	32%	34%	35%
10	23%	26%	22%	36%	36%	41%	40%	40%	37%	29%	26%	33%	37%
11	19%	21%	21%	24%	20%	25%	25%	26%	23%	19%	18%	25%	25%
12	-	-	-	6%	7%	9%	10%	9%	9%	9%	8%	13%	13%
BCBSRI	11%	15%	19%	19%	16%	13%	11%	12%	18%	22%	23%	27%	27%
14	53%	49%	61%	62%	66%	53%	56%	53%	48%	49%	42%	41%	42%
15	4%	6%	4%	6%	9%	9%	9%	9%	16%	16%	18%	22%	27%

Note: Revenue used in this calculation is as reported on the plans' annual financial statements, which does not include subsidiary revenue.

Exhibit A-4
Authorized Control Levels for Plan Sample of Not-for-Profit BC/BS Companies
for 1998-2004
(\$Millions)

Company	1998	1999	2000	2001	2002	2003	2004
1	24.9	24.5	34.0	35.6	30.1	33.8	36.1
2	22.0	26.7	42.7	38.9	48.4	48.1	40.3
3	13.5	16.3	18.0	22.0	24.3	26.7	29.0
4	27.0	25.1	26.7	24.9	14.2	17.4	19.6
5	12.6	11.0	12.7	16.9	22.7	24.2	23.9
6	18.9	26.6	33.9	43.3	50.3	55.5	61.0
7	27.6	35.7	41.4	39.0	33.6	40.2	41.6
8	13.3	16.4	17.4	17.7	19.2	23.5	25.0
9	32.4	47.0	58.0	58.7	64.9	74.4	80.0
10	13.1	16.4	24.0	23.6	25.9	32.4	35.7
11	6.0	7.0	8.9	10.9	12.5	14.2	13.6
12	28.1	32.6	39.9	42.7	50.3	58.7	70.4
BCBSRI	19.1	25.8	39.0	43.6	44.9	47.7	51.0
14	45.0	52.3	51.0	55.9	58.9	54.9	65.7
15	5.4	5.4	6.0	6.7	6.6	8.9	10.4

Appendix B
Blue Cross Blue Shield of Rhode Island:
Company Response

June 12, 2006

Christopher F. Koller
Health Insurance Commissioner
State of Rhode Island
Office of the Health Insurance Commissioner
Suite 237
233 Richmond Street
Providence, RI 02903

Dear Chris:

RE: Blue Cross & Blue Shield of Rhode Island's Response and Comments to The
Lewin Group Reserve Evaluation Report

Blue Cross & Blue Shield of Rhode Island applauds your office for undertaking a comprehensive evaluation of the appropriate levels of reserves for the three major health insurers doing business in the State of Rhode Island. This is something that has been long needed. The process represents a major improvement over the speculative debate of the recent past.

We understand that one of the first obligations of the Health Insurance Commissioner is to ensure the financial solvency of BCBSRI for the long term and, therefore, we appreciate the opportunity to respond and comment on this report. The Lewin Group has taken a fair and balanced approach in their evaluation of reserves. Differences of opinion were discussed in a frank and open manner. The professionalism shown by The Lewin Group was recognized and appreciated.

We believe that The Lewin Group's report was well prepared and incorporated many of the risks, environmental factors and unique operating aspects of BCBSRI. The attached response outlines where the report has fallen short and why we believe that the reserve ranges recommended by The Lewin Group should be higher.

Thank you for taking the time to review our concerns. I will be happy to discuss any questions or further details at your convenience,

Sincerely,



Thomas A. Boyd
Executive Vice President

TAB/llv

BLUE CROSS AND BLUE SHIELD OF RHODE ISLAND

Response to Lewin Group Report

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BLUE CROSS AND BLUE SHIELD OF RHODE ISLAND
Response to Lewin Group Report

I. Introduction and Summary of Comments

A. Background and Perspective

1. Introduction

BCBSRI appreciates having had the opportunity to provide input and to ask questions about the quantification methodology used by Lewin. This has enabled our staff and consulting actuaries to understand the methodology and data used by the Lewin Group, and to reproduce the results from the Lewin quantitative analysis involving certain historical financial experience for a selected set of BCBS Plans.

The Plan also appreciates the opportunity – then and now – to offer comments on this quantification methodology.

Overall, we are pleased with the thorough and comprehensive treatment the Lewin Group has given to the need for surplus – generally for health insurers, and specifically for BCBSRI. However, we do have concerns with certain aspects of the quantitative analysis that Lewin has prepared, and Lewin’s application of the results from this quantitative analysis in forming its conclusion as to a recommended target range for BCBSRI’s surplus. The Lewin quantitative analysis provides a useful basis for testing the reasonableness of BCBSRI’s target surplus range; however, we believe that the items about which we have concerns serve to understate the appropriate target level of surplus for the Plan. When appropriate adjustments and corrections are made, we believe this work confirms the Plan’s 25%-35% of premium target surplus range.

2. BCBSRI’s Development of an Appropriate Reserve Target Range

BCBSRI has spent a great deal of time, effort, and resources assessing and evaluating the appropriate target level for its surplus. Formal actuarial studies have included:

- Milliman White Paper Study in 2000
- Milliman White Paper Update in 2003
- Second Opinions by Towers Perrin/Reden and Anders
- Milliman Additional Evaluation in 2004

The most recent of these surplus studies (the Milliman Additional Evaluation in 2004) provides a separate actuarial analysis which recognizes specific risks and contingencies being faced by BCBSRI, in addition to an evaluation of historical experience from other BCBS Plans. The results of this actuarial analysis are then projected through a pro forma financial model to develop a surplus target for the future which is specific to BCBSRI. This complements the original White Paper Study and Update, in which the quantitative analysis focused on BCBSRI’s historical experience.

The result of these actuarial analyses is a surplus target for BCBSRI of 25%-35% of its insured premium (presented in the 2000 White Paper Study as 20%-30% when expressed as a percent of total premium, including premium equivalents for self-funded business).

These studies have been made available in the past to the Department of Business Regulation (DBR), and were provided directly to the Lewin Group in connection with its recent work for the Commissioner. The Lewin study does not make any reference to these studies, and appears not to have considered it in connection with its work.

Maintaining adequate surplus for the protection of BCBSRI's subscribers, as well as for the ongoing business viability of the Company, is one of the most critical aspects of the financial management of the Plan – for which the senior officers of BCBSRI are directly responsible and the Board of Directors is ultimately accountable. In addition, determining an adequate level of surplus for a company like BCBSRI is a complex actuarial matter. Given these two fundamental facts, the Commissioner and the DBR should give full consideration to the surplus analysis and targets developed by the Plan.

B. Summary of BCBSRI's Comments on Lewin Report

1. General Report (Sections I – VI)

Overall, the Lewin Group has presented a comprehensive, fair, and reasonable descriptive characterization of the need for surplus to be held by a health insurer. We applaud this contribution to the general understanding of the role of surplus for health insurers, and their need for an adequate level of surplus in order to provide security and maintain stability.

2. Reasonableness Testing

The Lewin analysis in Appendix A does not incorporate sensitivity testing of assumptions, or reasonableness tests and demonstrations of adequacy which are applicable specifically to BCBSRI. The basic testing we have done gives us concern that the lower end of Lewin's recommended target surplus range would not provide adequate and prudent protection against a moderate-to-severe down cycle. We believe that BCBSRI's target surplus range of 25%-35% of premium is more reasonable and prudent.

3. Appendix A (Surplus Analysis Applicable to BCBSRI)

Overall, as with the General Report (Sections I – VI), the Lewin Group has presented a fair, balanced, and reasonable descriptive characterization of the need for surplus for BCBSRI specifically. We appreciate this valuable, substantive contribution.

Appendix A of the Lewin Report recommends a target surplus range for BCBSRI of 23%-31% of revenue. This is close to, but lower than, BCBSRI's own target range. We believe that certain aspects of Lewin's quantitative analysis and its application to BCBSRI serve to understate the development of the target surplus range recommended by Lewin. Summarized below are BCBSRI's comments related to this. When appropriate adjustments and corrections are made to the quantitative analysis itself, we believe the results confirm BCBSRI's target surplus range of 25%-35% of insured premium.

Confidence Levels – The 90 and 95 percent confidence levels indicated in Appendix A for protection against surplus falling below the intervention levels of the Blue Cross and Blue Shield Association (BCBSA) can give a misimpression as to the extent of protection provided. Although the Lewin model is based directly on historical measurements of changes in surplus ratios for a set of 15 BCBS Plans, the calculated surplus targets from the model do not provide 90 or 95 percent confidence levels of surviving a down cycle of 3-7 years.

Independence Assumption – The Lewin model is a theoretical approach which assumes explicitly that the year-to-year changes in Plan surplus – when expressed as a percent of revenue (change in "SAPOR") – are independent of the corresponding changes for any of the surrounding years. The assumption that year-to-year changes in surplus ratios are

completely independent of each other is inconsistent with the cycles evident in the Lewin data set and with the cyclical patterns well recognized within the industry. The consequence of assuming independence is to understate the calculated surplus target levels.

Treatment of Consolidated Insured Premium Revenue – The direct results of the Lewin model, prior to any adjustment to recognize circumstances specific to BCBSRI, form a target surplus range of 25.5%-35.8% of revenue. Lewin then reduces this to 21%-29% (before recognizing certain risks and considerations specific to BCBSRI). There is no documentation for this reduction, only reference to RBC ratios and “consolidated revenue.” Neither of these two ranges is a correct calculation with regard to consolidated revenue and RBC ratios. An appropriate application of the Lewin model needs to recognize consolidated revenue on a basis consistent with current statutory reporting and to incorporate the applicable RBC values correctly.

Provision for Risks Specific to BCBSRI – Lewin identifies several areas of concern that warrant a target surplus range higher than is provided by its model (catastrophe risks, geographic risk, effects of trends on surplus accumulation, and the BCBSRI regulatory environment). Lewin adds 2 percentage points to the surplus targets otherwise developed to account for these areas. While we agree with the recognition of these areas of concern and the need to adjust for them, we believe that the 2 percentage point adjustment is insufficient to realistically reflect the potential impact.

Capital Needs of Self-Funded Business – Lewin acknowledges that the surplus to be held by a BCBS Plan should include provision for the risks inherent in administering self-funded employer plans, but they have not addressed it in the quantitative analysis contained in Appendix A. This produces an understatement in the resulting surplus range proposed. For BCBSRI, where self-funded business equates to about 40% of insured business, even a modest surplus level equating to 5% of self-funded premium equivalents would add 2% to the target surplus range developed by Lewin.

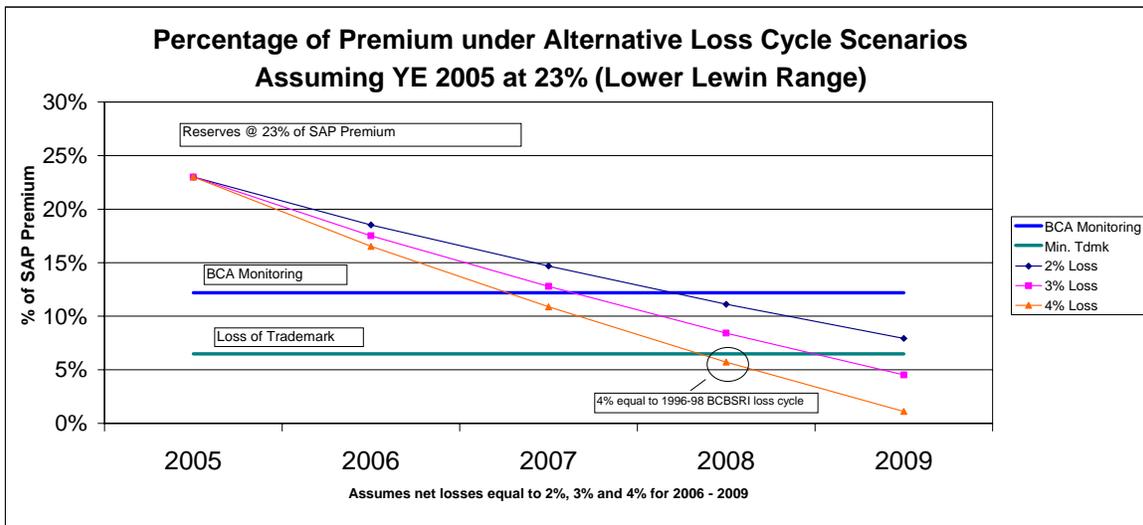
Modeling and Sensitivity Testing – Lewin relies completely on a single approach to quantify the risks and contingencies facing BCBSRI – without evaluation using alternative approaches to quantification or sensitivity testing of assumptions. This single quantitative approach is generic, static, and aggregated in nature; and it relies solely on a data set that has significant limitations with regard to the way in which it is being used.

Conclusion – When appropriate consideration and recognition of these concerns is made, the resulting surplus range is likely to be as high as or higher than BCBSRI’s own target range of 25%-35% of insured premium.

**BLUE CROSS AND BLUE SHIELD OF RHODE ISLAND
Response to Lewin Group Report**

II. Reasonableness Testing of Results

One very basic form of adequacy and reasonableness testing that can be done to help validate results is to test a selection of adverse scenarios against proposed surplus targets. We have done this using the lower end of the surplus target range proposed by the Lewin Group for BCBSRI. We did so by projecting surplus balances that would emerge under such scenarios, thereby enabling us to assess the adequacy and prudence of the surplus target. The chart below provides such a test, incorporating successive annual net losses of 2%, 3%, and 4%, respectively, over a 4-year down cycle.



As can be seen from this chart, a surplus target level of 23% would not truly provide adequate or prudent protection against a moderate-to-severe downturn. A target surplus level in line with BCBSRI's range of 25%-35% of insured premium, aiming toward the middle of BCBSRI's range, is needed in order to effectively provide for the security and protection of the Plan's subscribers and the ongoing viability of the company itself.

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III. Technical Appendix

A. Details Supporting Comments

Based on the documentation contained in Appendix A of the Lewin Report and various discussions with the Lewin Group and its consulting actuary, we have reproduced the quantitative analysis and modeling done by the Lewin Group and underlying the results shown in Appendix A. The detailed comments which follow reflect that understanding and ability to replicate results.

1. Summary of Lewin's Analysis and Conclusions

The primary steps in Lewin's analysis and major elements of its model are as follows:

- Select a subset of BCBS Plans for analysis.
- Collect and compile certain historical financial experience data for the subset of BCBS Plans over a defined number of years.
- Compute for each BCBS Plan in the subset SAPOR values (i.e., surplus as a percent of revenue) for selected years, as well as year-to-year changes in SAPOR for each Plan.
- Assume the year-to-year changes in SAPOR are all independent and Normally distributed, and calculate a statistical standard deviation.
- Use this calculated annual standard deviation along with the assumption that each year's surplus ratio (SAPOR) change is independent and is Normally distributed to determine theoretical expected changes in SAPOR over multi-year periods.
- Use the theoretical distributions of expected changes in SAPOR over various multi-year periods ranging from 3 to 7 years to determine the corresponding likelihoods that the multi-year change in SAPOR for a BCBS Plan will not exceed certain RBC-based threshold levels, and calculate percent of revenue surplus levels which correspond.

The results produced by Lewin are displayed in Figure 4 on page A-10 of Appendix A. Using these results, Lewin focuses on the range indicated by these multi-year periods. The SAPOR values forming the range are 25.5% and 35.8% of revenue, respectively. These represent the surplus target range that Lewin concludes should be adequate, based on its model.

The basic steps Lewin then followed in applying the model results to BCBSRI are:

- Begin with the surplus range developed from the model (25.5%-35.8% percent of revenue).
- Dilute these percentages for BCBSRI to 21%-29% (no specific documentation, but references to RBC ratios and consolidated revenue).
- Add 2 percentage points to recognize additional surplus needs for BCBSRI beyond the model results, resulting in a recommended range of 23%-31% of revenue.

2. Confidence Levels

The Lewin quantitative analysis is intended to enable the theoretical determination of a surplus target, expressed as a percent of revenue, which varies based on three basic parameters:

- The desired probability or confidence that surplus would not drop below a specified threshold within a desired number of years
- The minimum intervention threshold below which surplus is not to drop (expressed as a percent of RBC)
- The desired number of years of survival without surplus dropping below the specified threshold

Lewin uses two groupings of these three parameters to establish a target surplus range:

- **95%** probability that surplus would not drop below **200%** of RBC-ACL over a **3-year** period,
- **90%** probability that surplus will not drop below **375%** of RBC-ACL over a **7-year** period

The 3 and 7-year spans of time, under the statistical distribution assumed by Lewin in its model, are simply “periods of time” (as indicated in the bullets on page A-10 of Appendix A) and not years in a downturn or down cycle (as stated or inferred elsewhere in Appendix A). The 3 and 7-year periods could be composed of all upturn years, all downturn years, or any combination of upturn and downturn years.

Downturns alone for the 15-Plan BCBS data set generally lasted 3-7 years, based on data shown in Figure 3 on page A-9 and as discussed by Lewin on page A-10 of Appendix A. All but one of the BCBS Plans in the data set analyzed by Lewin had a downturn or down cycle during the 1992-2004 study period which lasted 3 years or longer, 10 of the 15

BCBS Plans had such a cycle lasting at least 4 years, 5 of the 15 BCBS Plans had one lasting at least 6 years, and 3 of the 15 BCBS Plans had a downturn lasting 7 years. Total periods of time to survive, based on the Lewin approach to confidence levels, would have to be long enough to encompass both downturns such as these plus upturns.

Given the definition of “time periods” in the Lewin model, a BCBS Plan would need assurance of survival over a very long period of time (well more than 3 years, and even more than 7 years) in order to have a high confidence level that surplus would not drop below the indicated RBC threshold.

A direct approach can be used to determine confidence levels for protection against downturns or down cycles using the Lewin data set: measure the downturns directly from the data set, and then find the 90th and 95th percentiles. Doing so produces target surplus values consistent with the upper end of the range from the Lewin model results contained in Figure 4 on page A-10 of Appendix A. See Technical Appendix part B which follows for documentation.

3. Independence Assumption

Central to Lewin’s model is the explicit assumption that year-to-year changes in surplus ratios for the 15 BCBS Plans over the 1993-2004 period are independent of each other (with the statistical mean value assumed by Lewin to be 0.0%, and the standard deviation calculated from the data). Lewin demonstrates statistically in Figure 2 on page A-7 of Appendix A that these year-to-year changes in surplus ratio values are not linear. Lewin does not provide, however, any demonstration that they are either (i) not cyclical, or (ii) independent.

From looking at a grid containing the annual changes in surplus ratios (changes in SAPOR) that Lewin used in its model, it can be seen that surplus ratio (SAPOR) declines, or down cycles, have tended to occur over successive annual periods; and similarly for periods of SAPOR increases, or up cycles. The chart below shows the multi-year cycles in the SAPOR data used by Lewin. Note that three of the downturns shown may be understated, as a result of either commencing prior to 1993 or continuing beyond 2004.

**Downturns in Surplus as a Percent of Revenue (SAPOR)
Cumulative Percentage Change for Entire Downturn***

Company	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1												
2			-0.2%									
3		-1.7%										
4		-0.3%										
5												
6												
7		-0.3%										
8												
9	-4.0%											
10		-4.2%										
11		0.0%										
12												
BCBSRI												
14	-4.1%											
15		-2.0%										

*Based on data in Fig. 3, Page A-9 of Appendix A of Lewin Report. Amounts shown are cumulatives for entire downturn, based on Lewin's methodology for calculating cumulative downturns: [Product over a downturn period of (1 + annual SAPOR change)] - 1.0.

Technical Appendix part B which follows contains further documentation.

Further, Lewin discusses the cyclical nature of health insurance on pages 5-6 of Section II in its General Report. Underwriting cycles are cited as an example of the drivers of the need for surplus; and historically observed cycles during the period 1965-2004 are shown in the chart at the top of page 6.

Making the assumption of year-to-year independence and a Normal distribution is a simplifying assumption for Lewin's model, but it is an oversimplification which understates the results. Lewin uses the assumption that annual changes in surplus ratios (i.e., changes in SAPOR) are independent and Normally distributed to enable a theoretical calculation of the distribution of 3-year, 4-year, etc. changes in surplus ratios. Instead of this theoretical calculation assuming independence, we can measure the multi-year changes in surplus ratios (SAPOR) directly from the data set and then use them in the Lewin model. In this way, we overcome the understatement produced by assuming year-to-year independence.

Our consulting actuaries have calculated the standard deviation value for multi-year periods directly from the Lewin data set, to serve as a demonstration. This observed standard deviation value is distinctly higher than Lewin's theoretical value for a 3-year period of time (it converges over longer time periods). See documentation in Technical Appendix part C.

Using the observed standard deviation value for a 3-year time period, rather than the theoretical one calculated by Lewin based on the independence assumption, produces a material increase in the corresponding target surplus value under the Lewin model – amounting to 2%-3% percentage points of revenue at the lower end of the range. See Technical Appendix part C for documentation.

4. Treatment of Consolidated Insured Premium Revenue

Appendix A of the Lewin Report does not indicate the basis for the nearly 20% reduction in target surplus percentages (from a range of 25.5%-35.8% in the Lewin model shown in Figure 4 on page A-10 of Appendix A, to a range of 21%-29% indicated in the text on page A-11). We confirmed verbally with Lewin's consulting actuary that this was not inadvertent. It reflects, we understand from conversations with the consulting actuary, an attempt by Lewin to deal with what they recognize are certain limitations in the data set they used. We and our consulting actuaries also recognize these limitations, but this adjustment made by Lewin to attempt a correction is not appropriate.

The principal data elements used by Lewin from its data set for the 15 selected BCBS Plans were reported revenue and reported surplus. The data set was apparently assembled from sources available to Lewin.

The surplus amounts in the data set represent surplus reported by each of the respective BCBS Plans at the end of each of the years 1992-2004. They reflect the total amount of surplus for each Plan on what is effectively a consolidated basis – meaning that parent BCBS Plan surplus accumulated from the operation of its subsidiaries and affiliates is included, along with surplus accumulated from its own operations. This is the appropriate measure of surplus for the type of analysis being done.

The appropriate revenue amounts to correspond to the “consolidated” surplus amounts should have two fundamental attributes:

- They should uniformly reflect only premium revenue for insured business, consistent with current statutory reporting requirements; and
- They should uniformly include premium revenue from subsidiaries and affiliates, as well as for the parent BCBS Plan itself.

These attributes are important so that the SAPOR ratio used in the Lewin model has “consolidated” surplus in the numerator and “consolidated” revenue in the denominator. They must both be expressed in a way that is consistent with current statutory reporting requirements for parent and subsidiary revenue and then combined, in order to be meaningful as a measure of a percent of revenue based target for surplus (which will be compared with actual surplus reported on this same basis).

The revenue amounts in the Lewin data set, however, do not uniformly have these attributes:

- Lewin states, in its note on Exhibit A-1, that the revenue in its data set does not include subsidiary revenue. This is not completely correct; for a few of the BCBS Plans in the data set, subsidiary revenue is included for some of the years in the observation period. Therefore, the data set is inconsistent in its recognition of subsidiary revenue.

- The correct approach, and the remedy for this inconsistency, should have been to include any subsidiary or affiliate insured premium revenue for BCBS Plans, including BCBSRI, and to include it for all years. The amount of subsidiary or affiliate insured premium revenue for a number of the BCBS Plans in the Lewin data set is substantial relative to the size of the respective Plan's directly written business, so this matter is material.
- Lewin does not address the fact that premium equivalents for self-funded business were reported as revenue by many of the BCBS Plans in the data set, for many of the years included in the analysis. Therefore, the data set is inappropriate and inconsistent in its inclusion of self-funded premium equivalents.
- The correct approach and the remedy for this inconsistency should have been to exclude any self-funded premium equivalent revenue for those BCBS Plans that included it as a part of reported revenue for any of the years, including BCBSRI. The amount of self-funded premium equivalents for a number of the BCBS Plans in the Lewin data set is substantial relative to the size of the Plan's insured premium revenue, so this matter is material.
- Use of the incorrect revenue (i.e., failure to fully include subsidiary premium revenue for all of the BCBS Plans and to exclude self-funded premium equivalent revenue where it is present) then causes the percentage of revenue for the two benchmark thresholds cited by Lewin on page A-10 of Appendix A to be incorrect (i.e., 200% of ACL is not equivalent to 8.1% of the correct consolidated insured premium revenue, and 375% likewise is not equivalent to 15.1%). These values are used directly in the model, as are the SAPOR values based on the incorrect revenue amounts.

While perhaps difficult to obtain, most if not all of the data necessary to correct the Lewin data set is available in either published or unpublished forms. If such data were assembled, it could be applied directly through the Lewin model, eliminating the need for an offline adjustment, particularly of the form that Lewin (incorrectly) made.

5. *Provision for Risks Specific to BCBSRI*

On page 7 of the General Report and page A-5 of Appendix A, Lewin identifies a number of factors that affect the surplus needs of BCBSRI. On page A-11 of Appendix A, Lewin identifies several additional factors affecting BCBSRI's need for surplus – including catastrophe risks, geographic risk, effect of trends on surplus accumulation, and the BCBSRI regulatory environment. We concur with Lewin's identification of these issues and the fact that they warrant additional surplus beyond the level indicated by the Lewin model.

Lewin indicates on page A-12 of Appendix A its recognition of the “further considerations discussed above . . .”, and implies the addition of 2 percentage points to the surplus target range for this purpose. No further documentation is provided.

We believe that this 2 percentage point adjustment is inadequate to provide for the additional factors cited by Lewin (catastrophic risks, geographic risk, effects of trends on surplus accumulation, and the BCBSRI regulatory environment). Catastrophic risks alone require greater provision than this.

For example, Milliman, Inc. conducted a special study for the Blue Cross and Blue Shield Association on one particular form of catastrophic risk – Avian Flu (a risk which was specifically cited by Lewin on page A-11 of Appendix A). Based on that specific risk alone, 2 percent of revenue would be insufficient to cover a pandemic of any degree of severity. See Technical Appendix part D which follows. BCBSRI also faces catastrophic risks in the form of a natural disaster such as a major hurricane or a man-made disaster such as terrorism.

There are many types of catastrophic risks faced by BCBSRI, as identified in Milliman’s studies of the surplus needs for BCBSRI. In addition, recognition of all of the other factors identified by Lewin needs to be made. When all of these are taken together, the composite provision required – as a matter of basic prudence – would entail a substantially greater add-on to the results from the Lewin model of several percentage points.

6. *Capital Needs of Self-Funded Business*

Self-funded business (termed by BCBSRI as Alternative Financing Arrangements or AFA business) has both inherent risks and operating capital needs. The risks involved are not underwriting risks of the same form as present in insured business, and the risks are not of the same magnitude as for insured business – but risks exist nonetheless. In addition, such business requires capital for infrastructure and a variety of business needs.

AFA business is a substantial segment for BCBSRI, as it is for many BCBS Plans. This has two important ramifications. First, any statistical analyses involving historical measures of surplus relative to premium need to have AFA premium equivalents removed. For BCBSRI, AFA premium equivalents were reported as part of premium revenue through 2000, under statutory reporting standards applicable at the time. The issue of removing self-funded premium equivalents was addressed above.

Second, provision needs to be made for surplus to serve as risk and operating capital for BCBSRI’s AFA business (note that BCBSRI’s AFA business contributes to these needs through specific reserve contribution factors paid by such accounts). A separate examination of AFA surplus needs was not made by Lewin, as indicated on page A-11 of Appendix A. However, some perspective as to the potential magnitude of AFA capital needs is important.

AFA premium equivalents for BCBSRI in 2005 were approximately \$639 million, in addition to \$1,586 million in insured premium – or equal to about 40% of insured premium. Even making a very modest provision in surplus of 5% of AFA premium equivalents, the surplus target for BCBSRI – expressed as a percent of reported revenue, which is the form adopted in the Lewin analysis and reflected on BCBSRI’s statutory blank – would need to be increased by 2% above the amount developed through the Lewin analysis approach in order to address AFA capital needs.

7. *Modeling and Sensitivity Testing*

The single approach used by Lewin for quantification of the risks and contingencies facing BCBSRI is the change in SAPOR values (surplus as a percent of revenue) during a limited historical period for a selected set of 15 non-profit BCBS Plans. The Lewin analysis does not examine specifically the magnitudes and underlying causes of historical loss periods experienced by BCBSRI itself. The analysis also does not attempt to identify and quantify the specific types and magnitudes of risks and contingencies faced by BCBSRI going forward.

While evaluating historical experience for other BCBS Plans in the industry is very useful, there are significant limitations and data issues regarding its applicability (some of which have already been discussed). These include the following:

- Historical year-to-year changes in observed SAPOR values themselves incorporate a wide range of different underlying elements, which tend to obscure the evaluation of risks and surplus needs for a particular Plan. The elements involved in SAPOR changes include:
 - Underwriting gains or losses
 - Investment income and capital gains or losses
 - Other net income (BlueCard, subsidiary operations, etc.)
 - Federal income taxes and related tax items (including carry forwards, deferred tax asset changes, etc.)
 - Changes in corporate and financial structure (including mergers and acquisitions, issuance of surplus notes or other financial instruments, divestiture or changes in ownership share of major subsidiaries, etc.)
 - Changes in non-admitted assets
 - Various accounting changes, adjustments, and correctionsCertain of these elements are specific or even unique to a particular BCBS Plan, period of time, and/or set of circumstances. Failure to separately and explicitly deal with these major elements of SAPOR changes may produce distortions (vs. explicit treatment of these elements, on a forward-looking basis for BCBSRI specifically).
- In addition to being composed of non-homogenous elements that tend to obscure the underlying risk measurements, there are significant limitations

and difficulties associated with the compilation of data for any particular set of BCBS Plans over a particular period of time.

- The selection of the specific BCBS Plans and period of time to be included will influence the results developed for that Plan under the Lewin quantification methodology.
- Each BCBS Plan used in such an analysis has its own circumstances and histories, which would have affected its historical experience. These include:
 - Market, competitor, and business environments
 - Regulatory environments
 - Mix of business in force
 - Corporate, financial, and reporting structures (e.g., subsidiaries)
 - Assets and investment policies
 - Windfall events

These differences serve to limit the extent of the conclusions that can be drawn from such an analysis by itself.

- There invariably are inconsistencies in historical reported data (i) for any given BCBS Plan over time, and (ii) across different BCBS Plans. Some of these are attributable to variations among Plans and/or changes over time in statutory reporting.

- Lewin uses annual data for 15 BCBS Plans for the period 1992-2004, which is not a sufficient data set for the sort of high-level, aggregated, multi-year, inter-company risk measurements being analyzed statistically.

- Time series statistical analysis of this form generally requires a longer period of measurement than used by Lewin in order to draw actuarially sound conclusions about surplus ratio changes. This is especially true because of the cyclical nature of the observations.
- This particular period in time had certain notable characteristics (as does any relatively short period of time), including:
 - Low trends
 - Industry consolidation
 - Managed care evolution
 - Shrinking investment returns
 - Major changes in statutory reporting by many health insurers (BCBS Plans, in particular)
 - Growing prominence of subsidiary operations for many BCBS Plans

These characteristics undoubtedly affected the results reported by the 15 BCBS Plans. Other characteristics would have influenced other past time periods, and still other characteristics will affect the future. A substantially longer time period for evaluation would enable greater depth in the analysis, and greater confidence in any conclusions to be drawn.

Any single approach or methodology for quantifying risks and contingencies has its weaknesses and limitations. These weaknesses and limitations become particularly critical when only a single approach to quantifying risks is used. Such concerns become even more critical when the approach is highly aggregated, so that major parameters cannot be examined separately and crucial assumptions cannot be tested for sensitivity. See Technical Appendix part E for a brief discussion of surplus study components that BCBSRI has adopted for its surplus analyses, and that we believe should have been considered in the Lewin analysis.

B. Downturns and Confidence Levels

1. Downturn Periods and Cumulative Declines in SAPOR

Year-to-year changes in SAPOR for the 15 BCBS Plans in the Lewin data set are contained in Figure 3 on page A-9 of Appendix A of the Lewin Report. Backup detail is provided in the Exhibits contained in Attachment A to the Report. For calculating cumulative declines over multiple years, Lewin compounded the annual percent changes in SAPOR over the corresponding years of each downturn (the maximum decline for each BCBS Plan is shown in the right-most column of Figure 3).

Chart B.1, which follows, shows all of the cumulative declines in SAPOR values, by Company, for all of the downturn periods (Figure 3 only displays the SAPOR decline for the maximum downturn for each BCBS Plan in the data set). The calculations in Chart B.1 are documented in the footnotes, and are consistent with Figure 3.

Chart B.1
Cumulative Decline in SAPOR Values, by Company
Downturn Periods - Lewin Data Set ⁽¹⁾

Company	Downturn Period ⁽²⁾			Cumulative Decline in SAPOR ⁽³⁾
	Start Year	End Year	Number of Years	
1	1995	2000	6	-17.1%
2	1999	2002	4	-30.6%
2	1995	1995	1	-0.2%
3	1997	2002	6	-8.1%
3	1994	1994	1	-1.7%
4	1997	2001	5	-15.3%
4	1994	1994	1	-0.3%
5	1996	2002	7	-19.8%
6	1997	2003	7	-13.7%
7	2002	2004	3	-45.8%
7	1994	1994	1	-0.3%
7	1998	2000	3	-0.3%
8	1996	1998	3	-8.3%
9	1999	2001	3	-11.8%
9	1993	1993	1	-4.0%
9	1996	1996	1	-0.8%
10	1998	2002	5	-14.4%
10	1994	1994	1	-4.2%
11	2000	2002	3	-7.9%
11	1996	1996	1	-3.6%
11	1994	1994	1	0.0%
12	1999	2002	4	-1.1%
13	1995	1998	4	-8.1%
14	1997	2003	7	-22.9%
14	1993	1993	1	-4.1%
15	1994	1994	1	-2.0%
15	1998	1999	2	-0.9%
15	2001	2001	1	-0.1%

Notes:

- (1) Data from Figure 3 on page A-9 of Appendix A of the Lewin Report.
- (2) Downturn period, as reflected in Lewin analysis.
- (3) [Product over a downtown period of (1+ SAPOR change)]-1.0.

2. *90th and 95th Percentiles of Downturns in Lewin Data Set*

The 90th and 95th percentiles of downturns for the 15 BCBS Plans during 1992-2004 in the Lewin data set can be determined directly by creating an ordered array of all of the cumulative downturns in the data set, then identifying the 90th and 95th percentile values, respectively. This has been done in Chart B.2, using data set values from Chart B.1 (which, in turn, was based on data from Figure 3 on page A-9 of Appendix A of the Lewin Report).

The 90th percentile of downturns in the Lewin data set can be associated with a cumulative decline in SAPOR of 20.4% (interpolating linearly between the respective point values nearest to the 90th percentile of results). Similarly, the 95th percentile can be associated with a cumulative SAPOR reduction of 27.5%.

Chart B.2
Cumulative Decline in SAPOR Values and Percentiles
Downturn Periods - Lewin Data Set ⁽¹⁾

Company	Downturn Period ⁽²⁾		Number of Years	Cumulative Decline in SAPOR ⁽³⁾	Percentile of Downturns ⁽⁴⁾
	Start Year	End Year			
7	2002	2004	3	-45.8%	100.0%
2	1999	2002	4	-30.6%	96.4%
14	1997	2003	7	-22.9%	92.9%
5	1996	2002	7	-19.8%	89.3%
1	1995	2000	6	-17.1%	85.7%
4	1997	2001	5	-15.3%	82.1%
10	1998	2002	5	-14.4%	78.6%
6	1997	2003	7	-13.7%	75.0%
9	1999	2001	3	-11.8%	71.4%
8	1996	1998	3	-8.3%	67.9%
13	1995	1998	4	-8.1%	64.3%
3	1997	2002	6	-8.1%	60.7%
11	2000	2002	3	-7.9%	57.1%
10	1994	1994	1	-4.2%	53.6%
14	1993	1993	1	-4.1%	50.0%
9	1993	1993	1	-4.0%	46.4%
11	1996	1996	1	-3.6%	42.9%
15	1994	1994	1	-2.0%	39.3%
3	1994	1994	1	-1.7%	35.7%
12	1999	2002	4	-1.1%	32.1%
15	1998	1999	2	-0.9%	28.6%
9	1996	1996	1	-0.8%	25.0%
7	1994	1994	1	-0.3%	21.4%
7	1998	2000	3	-0.3%	17.9%
4	1994	1994	1	-0.3%	14.3%
2	1995	1995	1	-0.2%	10.7%
15	2001	2001	1	-0.1%	7.1%
11	1994	1994	1	0.0%	3.6%

Notes:

- (1) Data from Figure 3 on page A-9 of Appendix A of the Lewin Report, incorporated into Chart B.1.
- (2) Downturn period, as reflected in Lewin analysis.
- (3) [Product over a downturn period of (1+ SAPOR change)]-1.0.
- (4) Percentile based on 28 total downturns from the Lewin data set.

3. *Surplus Targets from Lewin Model Based on 90th and 95th Percentiles of Downturns*

The development of total SAPOR requirements in the Lewin model is shown in Figure 4 on page A-10 of Appendix A of the Lewin Report. The surplus target is calculated as the sum of two components:

- Threshold level (BCBSA Early Warning level, and NAIC Company Action Level/BCBSA Loss of Trademark level), expressed as a percent of revenue
- Provision for decline in SAPOR (termed in Figure 4 as the “incremental SAPOR requirement”)

For the threshold levels, Lewin uses 15.1% of revenue as the equivalent of the BCBSA Early Warning level (which is 375% of a BCBS Plan’s RBC-ACL), and 8.1% of revenue as the equivalent of the Company Action Level (CAL) and BCBSA Loss of Trademark level (both of which are 200% of a Plan’s RBC-ACL).

As provision for decline in SAPOR, Figure 4 uses theoretical amounts developed from the assumption that year-to-year changes in SAPOR are independent and Normally distributed. If we instead use the actual 90th and 95th percentiles of downturns observed in the Lewin data set, as shown in Chart B.2, we can calculate “Total SAPOR” in a way which provides 90% and 95% confidence, respectively, of withstanding the SAPOR change downturns experienced by the BCBS Plans in Lewin’s data set during the 1992-2004 observation period.

The results of this calculation are shown in Chart B.3. They indicate that satisfying the requirements for staying above the two thresholds, with their corresponding respective confidence levels, would require total SAPOR – i.e., a target level of surplus, expressed as a percent of revenue – of approximately 35%. This clearly demonstrates the fact that the lower end of the surplus target range developed by Lewin does not provide a high confidence level for withstanding SAPOR downturns or down cycles.

Chart B.3
Surplus Levels Needed to Avoid Dropping Below Specified Benchmarks
Based on 90th and 95th Percentile of Downturns

Target Development Component	Percent of Revenue
Requirements to Stay Above BCBSA Early Warning Level with 90% Confidence Early Warning Level ⁽¹⁾ Cumulative Decline in SAPOR (90 th Percentile) ⁽²⁾ Total SAPOR	 15.1% 20.4 35.5%
Requirements to Stay Above NAIC Company Action Level and BCBSA Loss of Trademark Level with 95% Confidence CAL/Loss of Trademark Level ⁽¹⁾ Cumulative Decline in SAPOR (95 th Percentile) ⁽²⁾ Total SAPOR	 8.1% 27.5 35.6%
⁽¹⁾ Consistent with Figure 4 on page A-10 of Appendix A of the Lewin Report. ⁽²⁾ From Chart B.2, interpolated linearly (see text).	

C. Cyclical Nature of SAPOR Changes

1. Standard Deviations for Multi-Year SAPOR Changes

Lewin indicates on page A-8 of Appendix A that the standard deviation calculated for the annual changes in SAPOR from the data set is 6.4%. We believe this is a typographical error, since 6.1% is indicated elsewhere, and we are able to reproduce 6.1% from the data set. Assuming that year-to-year changes in SAPOR are independent and Normally distributed, Lewin derives theoretical standard deviations for changes in SAPOR over multi-year periods. As discussed previously, we believe from an empirical observation of the data, coupled with knowledge of historical industry patterns, that the assumption of independence is not reasonable.

As a quantitative test of the reasonableness of this theoretical independence assumption, the standard deviations for actual SAPOR changes over multi-year periods can be calculated directly from the Lewin data set. The observed standard deviation values for 3 to 5-year time periods are shown in Chart C.1, along with the theoretical values calculated by Lewin. As can be seen, the observed standard deviation values for 3 to 5-year time periods are clearly higher than Lewin's theoretical values. For the longer time periods observed, such as 6 or 7 years and greater, we would expect the values to converge, then eventually for the theoretical Lewin values to actually be overstated compared to the observed values due to the presence of cycles.

Chart C.1
Comparison of Observed and Lewin Theoretical Standard Deviation Values
for Multi-Year Periods from BCBS Plan Data Set

Calculation Basis	Multi-Year Standard Deviation, by Number of Years		
	3	4	5
Observed from BCBS Data Set ⁽¹⁾	12.5%	14.3%	16.2%
Lewin Theoretical Calculated Value ⁽²⁾	10.6%	12.2%	13.7%
⁽¹⁾ Calculated using multi-year cumulative SAPOR change values from the data set shown in Figure 3 on page A-9 of Appendix A of the Lewin Report. ⁽²⁾ From Figure 4 on page A-10 of Appendix A.			

2. *Demonstration of Impact on Surplus Target Calculation*

The development of SAPOR requirements in the Lewin model is shown in Figure 4 on page A-10 of Appendix A of the Lewin Report, and it is further described in Technical Appendix part B.3 above.

In order to make provision for declines in SAPOR, as noted above, Figure 4 uses theoretical amounts developed from the assumption that year-to-year changes in SAPOR are independent and Normally distributed. If, as a demonstration of the impact of the cyclical nature of the actual SAPOR changes, we instead use directly the observed standard deviation for 3-year time periods in the data set, as shown in Chart C.1, we can calculate “Total SAPOR” in a way which recognizes cyclical patterns underlying the actual data set.

The results for this demonstration are shown in Chart C.2. These results can be compared with the corresponding Lewin values in Figure 4. Such a comparison indicates that correcting the independence assumption in Lewin’s model through the direct use of standard deviations calculated from the data set over multi-year periods increases the results from the Lewin model materially at the lower end of the range – for a 3-year period, the target surplus values increase by 2½-3 percentage points.

Chart C.2
Surplus Levels Needed to Avoid Dropping Below Specified Benchmarks
Based on the Observed Standard Deviation of SAPOR for 3-Year Periods

Target Development Component	Percent of Revenue
Standard Deviation for 3-Year Time Periods	12.5%
Requirements to Stay Above BCBSA Early Warning Level with 90% Confidence Early Warning Level ⁽¹⁾ Incremental SAPOR Requirements ⁽²⁾ Total SAPOR	15.1% 16.1 31.2%
Requirements to Stay Above NAIC Company Action Level and BCBSA Loss of Trademark Level with 95% Confidence CAL/Loss of Trademark Level ⁽¹⁾ Incremental SAPOR Requirement ⁽²⁾ Total SAPOR	8.1% 20.6 28.7%
⁽¹⁾ Consistent with Figure 4 on page A-10 of Appendix A of the Lewin Report. ⁽²⁾ Calculated similar to the “Incremental SAPOR Requirement” in Figure 4 on page A-10 of Appendix A, using a 3-year standard duration of 12.5%.	

D. Potential Implications for a BCBS Plan of an Avian Influenza Pandemic

Milliman, Inc. prepared a white paper for the Blue Cross and Blue Shield Association (BCBSA) entitled “Avian Influenza Pandemic – Potential Implications for Blue Cross/Blue Shield Plans,” dated March 21, 2006. The paper was intended to serve as a resource to BCBS Plans as they consider the steps they may take to assess the potential risk and capital implications of an avian influenza pandemic.

As part of the preparation of this white paper, Milliman carried out certain high-level testing. Milliman states:

“While we have not carried out detailed modeling, this high-level testing suggests that the percentage increase in a BCBS Plan’s health care costs due to an avian influenza pandemic could be substantial, and the resulting financial losses could be serious. A relatively modest pandemic of 12 to 16 weeks’ duration could produce health care cost increases of 3% or higher for the year in which it occurs – in our illustration, the ‘Less Severe Pandemic’ assumptions produce increases ranging from 3% to 6% for the year. With a severe pandemic the cost increases could be much higher – our ‘More Severe Pandemic’.”

In discussing implications for individual BCBS Plans, Milliman further observes:

“The potential for an avian influenza pandemic is one of many potential ‘extreme events’ that could be experienced by Blue Cross/Blue Shield Plans. The increases in health care costs that might result from such a pandemic cannot be anticipated in premium rates, and therefore could produce significant financial losses to be absorbed by reserves or surplus.

The NAIC has addressed minimum surplus thresholds, with a focus on avoiding insolvency, through its risk-based capital (RBC) requirements. However, an individual Plan’s management team and Board must address its target range for surplus in the context of ongoing viability as a business enterprise. That process should address the likelihood that a given surplus target will enable the Plan to endure a period of adverse financial experience and still maintain surplus levels above the minimum RBC thresholds required by regulatory and Blue Cross and Blue Shield Association standards.

While it is not reasonable or practical to make separate explicit provision for each of the extreme events to which a Plan is exposed, particularly in terms of the more severe outcome levels, it is important to consider the potential for an extreme event to occur, and to make some reasonable provision overall for the magnitude of extreme events that may occur at some point.”

Clearly, BCBSRI needs to be financially (and operationally) prepared to withstand a catastrophe such as this. We believe that Lewin has not made adequate provision in its surplus target

recommendations for the severe financial impact that this sort of catastrophe could have on the Plan, and therefore on the Rhode Island community at large.

E. Approach to Surplus Target Development

Analyzing surplus needs and developing surplus targets for a health insurer is a complex actuarial task. Non-profit BCBS Plans are no exception to this. To be meaningful, such analysis and development work needs to be focused specifically on the particular company involved – recognizing the industry of which it is a part, its own past experience, the characteristics of the company itself and the environment in which it operates, and the future outlook and circumstances likely to be faced by the company. Since any such actuarial analysis is dealing with risks, contingencies, and uncertainties, then it should necessarily embody alternative approaches to measuring the amount of risk and sensitivity testing of assumptions – all on a forward-looking basis. Even then, such an evaluation must be re-examined periodically, so as to enable adaptations to changing conditions and circumstances.

BCBSRI has committed substantial time and financial resources over the past six years to establishing a surplus target for the Company, monitoring financial results, revisiting and solidifying its surplus target range, and planning accordingly for the welfare of our subscribers and the viability of the Plan. Over this 6-year period, we have developed our actuarial evaluation techniques and processes substantially. We now incorporate four critical cornerstones in our approach to this important work:

- ***Multiple approaches to quantifying risks and contingencies*** – BCBSRI quantifies risks and contingencies using three separate, independent approaches:
 - Historical experience for BCBSRI itself
 - Historical experience for other BCBS Plans
 - Separate identification and quantification of specific risks and contingencies facing the Plan

Any one of these approaches has distinct advantages and disadvantages. Only by reconciling the results from multiple approaches can we develop confidence in our conclusions.

- ***Introduction of forward-looking assumptions*** – Although historical experience helps BCBSRI to quantify the risks and contingencies that have materialized in the past and may occur in the future, such quantification needs to be combined with forward-looking elements. Key among these are:
 - Trends
 - Enrollment changes
 - Investment changes
 - ASC and BlueCard business
 - Infrastructure needs, and business growth outlook
 - Unique statutory balance sheet items

- ***Pro forma forecast modeling of the impact of important parameters and assumptions*** – Changes in surplus for a company such as BCBSRI reflect the net impact of all of the various uncertainties and operating outcomes of the company, as reported under statutory accounting. This is true historically, as well as prospectively for the future. To understand what has occurred historically, the major elements affecting surplus need to be examined. In setting surplus targets for the future, the relevant major elements need to be modeled so as to be able to simulate their impact on surplus levels that may emerge in the future. BCBSRI relies on pro forma forecast modeling of the impact of key parameters and assumptions to evaluate the emergence of future surplus levels under alternative scenarios as to risk outcomes and projection assumptions.
- ***Sensitivity testing*** – Pro forma modeling readily enables the incorporation of assumptions explicitly, and the direct testing of the sensitivity of results to them. Since no one can foretell the future with certainty, scenario testing enables the evaluation of multiple adverse futures – and the determination of target surplus levels that will protect the Plan’s subscribers (and its own business viability) against such adverse futures.

We believe that these fundamental cornerstones are necessary parts of an actuarially sound approach to developing an appropriate surplus target range for a company such as BCBSRI. During the course of our ongoing evaluation during the past six years, we have built on these cornerstones. We expect to continue to do so going forward, and we welcome and invite the Commissioner and DBR staff to provide input to such work, and to review the results that are produced.