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# Considerations for Surplus Determination under ACA

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In March 2010, the Patient Protection and Affordable Care Act (ACA) was passed into law which introduced significant changes into the health insurance marketplace, including:

- The individual and employer mandates
- The federal premium and cost-sharing subsidies
- The potential expansion of Medicaid
- The “3R’s”—risk adjustment, reinsurance and risk corridors
- Minimum loss ratio (MLR) requirements.

The changes brought on by the ACA increase the difficulty for companies to assess and understand the profitability of a product and hence the impact to surplus. The ACA also plays havoc with accounting procedures that have to accrue for the 3R’s and possibly medical loss ratio rebates. How should a company or regulator evaluate the surplus and risk-based capital (RBC) level with unknown values to be determined after the end of the policy year? This article discusses the variability caused by the ACA, and considerations in addressing the issues. The focus will be on the commercial plans, although Medicare, Medicaid and ancillary products contribute to the overall surplus needs. The ultimate approach to modeling surplus and surplus needs is company specific.

## Measuring Surplus

Companies need surplus for many reasons, including support for the companies’ loss reserves, protection from adverse cash flow shocks, and funding future capital investments (e.g., administrative sys-

tems, buildings) and growth. The primary method currently used in the United States to measure surplus is RBC.

RBC was developed in the 1990s as an early warning metric of financial distress and provides regulatory authority to governing bodies. The calculation is designed to provide varying levels of authoritative action depending on the ratio of the total adjusted capital (TAC) and the authorized control level (ACL). The state is then notified of the result as part of the annual financial statement filing process. Once the state is notified, the governing regulatory body may determine the process to help rectify the financial condition of the organization.

There are five separate actionable outcomes (see Table 1). For a health care insurer that is between 200 percent and 300 percent, an additional test is performed to compare the plan’s recent RBC trends. The additional test compares the ratio of the insurer’s underwriting deductions to revenue and 105 percent. Failure of the trend test triggers a Company Action Level event.

The challenge is that once a health care insurer experiences financial distress, a downward spiral may ensue. For example, here are a number of decisions that ultimately make recovery more challenging:

- Forgo basic operation items (e.g., software updates, new computer hardware, salary increases).
- Delay improvements that would reduce long-term costs because the short-term investment is too costly (e.g., automation of a process).
- Replacement cost associated with the loss of critical employees (e.g., knowledge loss and difficult to hire replacement).

As a health care insurer deals with insolvency, the organization is forced to make difficult decisions in order to manage its cash flows. For example, a health care insurer may have to decide the priority of vendors to pay. Note that the state does not directly take control until well below 100 percent. The difficult decisions probably occur earlier than that, say at 200 percent, when the state only requires a business plan.

**Table 1: Risk-Based Capital Authoritative Action Outcomes**

RBC Ratio ( = TAC/ACL )	Outcome
>200%; No Action Level	No action is required.
150% to 200%; Company Action Level	The health care insurer is required to submit a business plan to improve financial strength.
100% to 150%; Regulatory Action Level	The health care insurer is required to submit a business plan to improve financial strength. Also, the regulator is authorized to perform a review of practices.
70% to 100%; Authorized Control Level	The regulator is authorized to take actionable steps to improve the financial strength of the health care insurer.
<70%; Mandatory Control Level	The regulator is required to take actionable steps to control the health care insurer.

Once the situation is dire and risk of insolvency is material, the state will appoint a receiver. The receiver is responsible for the operational running of the insurer. The receiver's duties may include, but are not limited to the following:

- Develop an operational shut-down plan.
- Sell members and/or assets to another health care insurer.
- Examine corporate holdings for previously unidentified assets.
- Prioritize providers and vendors for payment adjudication.
- Determine the payment amount for each provider and vendor.
- Draw on state funding to support care transitions for affected members.

The financial strength of a state's health care insurers is essential for market, member and financial stability. As a result of this, states strive to maintain a strong financial health care market to prevent insurer insolvency.

## State Considerations to Limit Surplus

The RBC calculation provides a point-in-time estimate that is intended to offer an early warning of financial distress to regulators. Therefore, minimum levels have been established to provide regulators with actionable outcomes in the event that authorized control of the insurer is needed.

However, the RBC calculation does not offer an opinion regarding the maximum surplus level. Given that each health care insurer faces its own unique set of risks, a maximum surplus level is a difficult value to regulate. Despite this, some states have enacted, or are considering legislation to establish, a maximum surplus level. The following discuss the approach of two states:

### COMMONWEALTH OF PENNSYLVANIA

In February 2005, the commonwealth was concerned with the level of surplus retained by a couple of large health care insurers. In response to the concern, the commonwealth's Department of Insurance issued a determination and order stating a sufficient



range of surplus for the four not-for-profit Blue Cross companies:

- Highmark Blue Cross & Blue Shield
- Independence Blue Cross
- Blue Cross of Northeastern Pennsylvania
- Capital Blue Cross of Harrisburg.

For Highmark Blue Cross & Blue Shield and Independence Blue Cross, the established RBC limit was 550 to 750 percent. For the other two carriers—Blue Cross of Northeastern Pennsylvania and Capital Blue Cross of Harrisburg—the established RBC limit was 750 to 950 percent. The varying limits of surplus are attributed to each health care insurer's size (that is, smaller carriers are subject to greater risk of volatility, and therefore need higher surplus limits).

### STATE OF MICHIGAN

Similar to the commonwealth of Pennsylvania, the state of Michigan enacted a limit on the state's largest carrier by market share, Blue Cross and Blue Shield of Michigan (BCBSMI). As part of the agreement with the state, BCBSMI cannot file financial statements with RBC levels greater than 1,000 percent for two consecutive years. If BCBSMI does not



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Smaller plans entering the individual market for the first time have the additional risk of highly uncertain enrollment and significant mispricing risk in the early years.

**Table 2: Risk-Based Capital Review by Parent Organization**

Risk-Based Capital Ratio <sup>1</sup>	Member Months (in Millions) for All Lines of Business							Total
	Under 1.0	1.0 - 2.5	2.5 - 5.0	5.0 - 10.0	10.0 - 20.0	20.0 - 30.0	30.0+	
0% to 250%	10%	7%	0%	5%	0%	0%	0%	4%
250% to 400%	24%	33%	19%	16%	7%	18%	0%	19%
400% to 600%	33%	26%	38%	21%	27%	18%	54%	31%
600% +	33%	33%	43%	58%	67%	64%	46%	46%
<b>Average RBC</b>	<b>573%</b>	<b>523%</b>	<b>541%</b>	<b>697%</b>	<b>776%</b>	<b>709%</b>	<b>641%</b>	<b>668%</b>

<sup>1</sup>The data in Table 2 reflects 2012 NAIC financial reports.

meet the criteria, the insurer must submit to the governing body a plan to draw down the surplus below the 1,000 percent RBC threshold. The spending down of surplus to meet the imposed criteria potentially destabilizes the marketplace and increases the risk of financial insolvency for both the health care insurers being asked to draw down their surplus and other health care insurers having to compete against the resulting reduced premium.

### Risk-Based Capital Considerations by Organization Size and Structure

Each insurer has a different surplus risk exposure and tolerance. As discussed in the previous section, the ratio of a health care insurer’s TAC and the ACL is an early warning metric that may trigger regulatory action. The formula to calculate both the TAC and ACL is complicated and complex, with the RBC ratio varying by enrollment level (see Table 2).

As Table 2 illustrates, health care insurers with smaller enrollment numbers tend to have lower RBC levels. These insurers are more susceptible to the risk of prolonged adverse financial results.

Complicating matters is the introduction of the health benefit exchanges (HBEs) and the “churn” in the individual market caused by health-care-reform-related issues such as the expected enrollment of the uninsured and states eliminating their high-risk pools. A previous report commissioned by the Society of Actuaries in 2013 indicates that there are about 386,000 members currently enrolled in high-risk pools nationally, with allowed costs estimated

at an average of \$1,614 per member per month (PMPM) in 2014. This cost is nearly four times the expected cost of \$405 PMPM for this population included in the same report. If the expected enrollment in the individual exchanges produces a risk of even a fraction of this level, the losses experienced by some plans could be dramatic.

Adding to this complexity were the challenges faced in the rollout of the HBEs and the introduction of “transitional policies” (e.g., ‘grandmothered plans’) possibly creating lower than expected exchange enrollment for some issuers. This lower than expected enrollment, along with relatively fewer than expected younger members (not in itself a worrisome situation but an indicator of the attraction of healthy members to the HBEs), creates additional pricing risks for plans competing in that market. This lower than expected early enrollment, along with relatively fewer than expected younger members (not in itself a worrisome situation but an indicator of the attraction of healthy members to the HBEs), creates additional pricing risks for plans competing in that market. Later enrollment will allow for less time to gauge the risk of the population, and may prolong losses in 2015 and later that could have been corrected had more enrollment materialized in January 2014. Smaller plans entering the individual market for the first time have the additional risk of highly uncertain enrollment and significant mispricing risk in the early years. Because the federal subsidies favor the lowest-cost plan in a market, small plans may be surprised by the number of enrollees they obtain. Even without a significant pricing miss, some small plans may find surplus impaired simply by the volume of business they enroll compared to their current membership.

## Exhibit 1

<i>Income Statement</i>			<i>Balance Sheet</i>		
	Per Member Per Month (PMPM)	Annual Dollars (in 000s)		Year 0	Year 1
Premium Revenue	\$ 400	\$ 480,000	Assets (all in Cash and Class 01 Bonds)	\$ 100,000	\$ 138,400
Claims Expense	320	384,000	Liability and Shareholder Equity (SE)		
Administrative Expense	48	57,600	Liabilities (all claims unpaid)	\$ -	\$ 48,000
			Common Stock	100,000	90,400
Net Income	\$ 32	\$ 38,400	Total Liability and SE	\$ 100,000	\$ 138,400
			Surplus as % of ACL		5.030

## Exhibit 2

<i>Income Statement</i>				<i>Balance Sheet</i>			
	Annual Dollar Amounts (in 000s)				Annual Dollar Amounts (in 000s)		
	100,000	50,000	200,000		100,000	50,000	200,000
Enrollment				Assets (all in Cash and Class 01 Bonds)	\$ 138,400	\$ 119,200	\$ 176,800
Premium Revenue	\$ 480,000	\$ 240,000	\$ 960,000	Liability and Shareholder Equity (SE)			
Claims Expense	384,000	192,000	768,000	Liabilities (all claims unpaid)	\$ 48,000	\$ 24,000	\$ 96,000
Administrative Expense	57,600	28,800	115,200	Common Stock	90,400	95,200	80,800
Net Income	\$ 38,400	\$ 19,200	\$ 76,800	Total Liability and SE	\$ 138,400	\$ 119,200	\$ 176,800
				Surplus as % of ACL	5.030	8.461	2.421

Those plans that are positioned as the lowest price in any given market may also have mispriced the anticipated risk mix, which would exacerbate this problem.

In addition to size, organization structures can affect the level of surplus required as well as the availability of capital. Not-for-profit plans have more limited sources of capital than for-profit plans that are able to access the equity markets. Not-for-profit plans can only generate surplus through operating margins and investment income or by borrowing. The ACA included funding for a number of new CO-OP plans that are funded by start-up and surplus loans provided by the federal government. As start-up plans, CO-OPs face operational risks of enrolling insufficient membership volumes to cover fixed costs, as well as considerable underwriting risks for the newly insured populations that are likely to enroll.

## Simple RBC Model

With this understanding of RBC, let's consider the following example. Say we have a health insurance organization that operates exclusively in the individual and small group markets. Now say that this organization assumes enrollment in Year 1 of 100,000 and projects the following financials (see Exhibit 1). For simplicity, it's assumed the impact of health care reform items such as the 3R's and other impacts of the ACA (for example, MLRs and rebates) are implicitly included in the results shown. This projection results in a ratio of TAC to ACL (RBC ratio) of 5.03 for Year 1—a fairly reasonable value.

Now let's take a look at where differences may occur. First let's examine enrollment. Exhibit 2 above summarizes the financials, including the RBC ratio, assuming the actual enrollment is either half or double the expected enrollment.

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**Exhibit 3**

<i>Income Statement</i>				<i>Balance Sheet</i>			
	Annual Dollar Amounts (in 000s)				Annual Dollar Amounts (in 000s)		
	Baseline	+10%	-10%		Baseline	+10%	-10%
Enrollment				Assets (all in Cash and Class 01 Bonds)	\$ 138,400	\$ 180,640	\$ 96,160
Premium Revenue	\$ 480,000	\$ 528,000	\$ 432,000	Liability and Shareholder Equity (SE)			
Claims Expense	384,000	384,000	384,000	Liabilities (all claims unpaid)	\$ 48,000	\$ 48,000	\$ 48,000
Administrative Expense	57,600	63,360	51,840	Common Stock	90,400	132,640	48,160
Net Income	\$ 38,400	\$ 80,640	\$ (3,840)	Total Liability and SE	\$ 138,400	\$ 180,640	\$ 96,160
				Surplus as % of ACL	5.030	6.816	2.837

**Exhibit 4**

<i>Income Statement</i>				<i>Balance Sheet</i>			
	Annual Dollar Amounts (in 000s)				Annual Dollar Amounts (in 000s)		
	Baseline	-10%	+10		Baseline	-10%	+10
Enrollment				Assets (all in Cash and Class 01 Bonds)	\$ 138,400	\$ 176,800	\$ 100,000
Premium Revenue	\$ 480,000	\$ 480,000	\$ 480,000	Liability and Shareholder Equity (SE)			
Claims Expense	384,000	345,600	422,400	Liabilities (all claims unpaid)	\$ 48,000	\$ 43,200	\$ 52,800
Administrative Expense	57,600	57,600	57,600	Common Stock	90,400	133,600	47,200
Net Income	\$ 38,400	\$ 76,800	\$ -	Total Liability and SE	\$ 138,400	\$ 176,800	\$ 100,000
				Surplus as % of ACL	5.030	7.375	2.541

This analysis shows misestimated enrollment, up or down, could have a dramatic impact on RBC. If the enrollment is half of that expected, obviously the revenue is down. However, the RBC ratio increases to 8.461. In this context, the value of its equity has increased and the RBC level has also improved. However, the insurer is not meeting its goal of 100,000 members enrolled.

On the other hand, if the membership doubles to 200,000, then its revenue and net income increase. However, it is in a much more tenuous financial position. Its equity has decreased, resulting in a lower RBC level of 2.421.

It is important to note here that for the purpose of simplicity, administrative expenses are not broken down into fixed and variable costs. This breakdown would decrease the RBC ratio for the lower enrollment scenario.

Now let's move to premium and look at scenarios where the actual premium was +/- 10 percent off of the projected premium (with no changes to claims). Exhibit 3 summarizes these results.

The general results are not surprising—higher premium, with all else being equal, results in higher

margin and a healthier financial position. The reverse is also true—lower premium results in lower margin and a decreased RBC level.

Finally, let's vary the claims, again using the +/- 10 percent, and assuming no change in enrollment or premium. The results are summarized in Exhibit 4.

The results again are not surprising. However, it's interesting to focus on the "negative" scenarios in each of these situations, which result in an organization that is very close to being "impaired."

Now, let's consider the impact of the ACA in a little more detail. The purpose of the 3R's is to reduce the variability in the individual and small group markets. The reinsurance and risk corridor programs are temporary while the risk adjustment program is permanent. However, even with these programs, there is still a considerable amount of uncertainty. Causes include:

- The morbidity risk could be significantly different than expected.
- The risk transfer payment may not completely reflect the entire morbidity risk.
- The enrollment could be significantly different than originally anticipated (for example, a plan

## Exhibit 5

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5				
<b>Enrollment</b>		100,000	100,000	100,000	100,000	100,000				
<b>Income Statement</b>										
<b>PMPM</b>										
Premium Revenue	\$	400.00	\$	424.00	\$	449.44	\$	476.41	\$	504.99
Claims		320.00		339.20		359.55		381.13		403.99
Admin		48.00		50.88		53.93		57.17		60.60
Net Income	\$	32.00	\$	33.92	\$	35.96	\$	38.11	\$	40.40
<b>\$\$\$ (in 000s)</b>										
Premium Revenue	\$	480,000	\$	508,800	\$	539,328	\$	571,688	\$	605,989
Claims		384,000		407,040		431,462		457,350		484,791
Admin		57,600		61,056		64,719		68,603		72,719
Net Income	\$	38,400	\$	40,704	\$	43,146	\$	45,735	\$	48,479
<b>Balance Sheet (in 000s)</b>										
Assets		100,000		138,400		179,104		222,250		267,985
Liability and SE										
Liabilities (all claims unpaid)		-		48,000		50,880		53,933		57,169
Common Stock		100,000		90,400		128,224		168,317		210,816
Total Liability and SE		100,000		138,400		179,104		222,250		267,985
Surplus as % of ACL		5.030		3.395		2.800		2.479		2.293

that is the lowest-priced plan may be surprised by the number of enrollees, resulting in surplus strain).

- The make-up of that enrollment could also be significantly different than expected.
- Administrative expenses could be much higher than expected.
- Fixed vs. variable expenses could create strain if the enrollment is significantly different than expected.

The impact of these unknowns will not be independent. Additionally, one needs to consider the longer-term horizon past 2014.

## A Longer-Term View

One of the disadvantages of RBC is that it doesn't take a longer-term view. Ignoring a multiyear time horizon may mask some issues and doesn't consider variability seen year over year. As an example, let's extend the baseline example shown above and assume that enrollment remains stable at 100,000, premium and claims both increase by 6 percent a year, and administrative expenses remain at 12 percent of premium. Exhibit 5 summarizes these results.

This simple model illustrates that even with modest trends and margins, the RBC ratio will decrease over time. If this projection were extended a few years, it would show that this company would fall below the 200 percent threshold. Barring some form of capital infusion, this company would be placed under one of the authoritative action levels.

So far, the analyses presented have not taken into consideration variability of the results. So, let's add in a Monte Carlo simulation using assumptions in Table 3 on page 28. The assumptions used are meant to be reasonable, but do not reflect any market in particular. Also, note that the standard deviation decreases over time due to an underlying assumption that the market variability will decrease as the individual and small group markets mature.

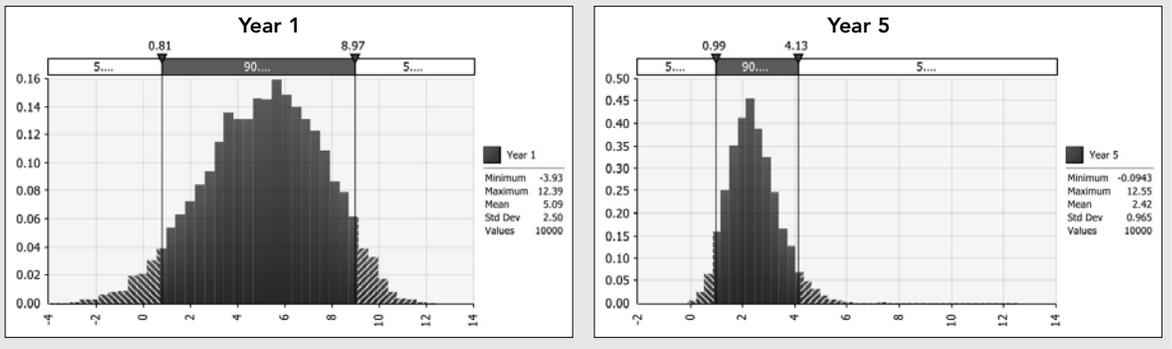
Exhibit 6 on page 28 illustrates results for Year 1 and Year 5 using the assumptions above. For Year 1, the RBC ratio will fall below 81 percent about 5 percent of the time. Examining the graph a little further shows that this company would fall below 200 percent of the RBC ratio a little over 10 percent of the time. Stated differently, 1 in 10 similarly situated carriers may be in trouble. Year 5 is worse. This

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**Table 3**

	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Enrollment</b>					
Mean	100,000		Previous Year's Value		
Standard Deviation	20,000	10,000	5,000	2,500	1,250
<b>Premium</b>					
Starting Premium (1)	400	424	based on claims		
<b>Claims</b>					
Starting Claims (2), (3), (4)	320	based on previous year's value			
Variability factor (4)					
Mean	1.00	1.00	1.00	1.00	1.00
Standard Deviation	0.10	0.05	0.03	0.01	0.01
<b>Notes</b>					
	(1) Year 2 premium is based on Year 1 plus 6% trend. Subsequent years are based on the previous year's claims plus 6% trend and an MLR of 80%				
	(2) Year 1 claims are assumed to be 80% of starting premium, plus simulation variability				
	(3) Claims subsequent to year 1 are based on the previous year's claims plus 6% plus simulation variability				
	(4) These factors represents, collectively, several unknowns including selection, the impact of health care reform, trend variability, etc. and are assumed to be normally distributed				

**Exhibit 6**



company would reach the 200 percent level almost one-third of the time.

Now let's pose a little different question—what would the surplus level need to be if we wanted the RBC ratio to be at 200 percent or below no more than 5 percent of the time over the course of the next five years? Rerunning the Monte Carlo simulation indicates that this company would need to increase its beginning RBC ratio from 503 percent to a little under 1,000 percent in order to avoid dipping below an RBC ratio of 200 percent less than 5 percent of the time.

## Concluding Comments

A healthy surplus position helps fund for future growth and capital investments, to support loss reserves, prepare for future regulatory changes (e.g., ICD-10), and possibly most importantly, protect companies and their policyholders from adverse cash flow shocks.

Because of the unknowns, including those resulting from health care reform, a company will need to understand the potential strain new market conditions may place on surplus and plan accordingly. ■