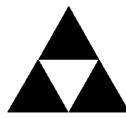

AMERICAN ACADEMY of ACTUARIES

MEMORANDUM

To: Elise Liebers, Chair
NAIC RBC Task Force

From: Donna Novak, Chair
Academy Joint RBC Task Force

Date: December 3, 1998

Re: Preliminary Recommendations on the Development of a Health Liquidity Test

The American Academy of Actuaries is the public policy organization for actuaries of all specialties within the United States. In addition to setting qualification standards and standards of actuarial practice, a major purpose of the Academy is to act as the public information organization for the profession. The Academy is nonpartisan and assists the public policy process through the presentation of clear actuarial analysis. The Academy regularly prepares testimony for Congress, provides information to federal elected officials, regulators and congressional staff, comments on proposed federal regulations, and works closely with state officials on issues related to insurance. The Academy also develops and upholds actuarial standards of conduct, qualification, and practice, and the Code of Professional Conduct for all actuaries practicing in the United States.

This report was prepared by the Academy's Health Liquidity Work Group.

The following report presents our preliminary recommendations for a liquidity test to accompany the current Managed Care Organization Risk-Based Capital (MCORBC) formula. We are presenting it to the NAIC Risk-Based Capital Task Force for their input and comments, before continuing further with more detailed development of the test. The American Academy of Actuaries restricts its comments to actuarial issues, and therefore this report does not intend to make policy recommendations. Rather than make recommendations, we have noted where policy decisions are needed and at times have identified some possible alternatives.

Background

During the early stages of this project, the NAIC decided that it was not appropriate to change the factors of the risk-based capital (RBC) formula to "protect" against a liquidity risk. The NAIC agreed that a liquidity test needs to be a separate test and not part of RBC, but should be included in the same framework. An organization can pass RBC yet fail the liquidity test. The possible regulatory actions in the case of a company failing liquidity can be similar with respect to companies failing RBC.

1100 Seventeenth Street NW Seventh Floor Washington, DC 20036 Telephone 202 223 8196 Facsimile 202 872 1948

It was also agreed that due to the potential negative effect of public reaction to the identification of a company as having a liquidity problem, there should be a minimum negative stigma attached to the liquidity test and that confidentiality will be critical. With that in mind, the Academy proposed a two-tier test. The first test would be a modified quick ratio or safe harbor ratio, while the second test would be a more extensive test if the safe harbor ratio were failed. This safe harbor ratio would be set at a high enough level so that no company would be stigmatized by not having passed the initial test. The second tier test would involve a series of cash flow tests.

Relationship of Liquidity Test to Risk-Based Capital

The liquidity test is intended to be in addition to the MCORBC test. Companies would be required to pass each test separately. The purpose of the liquidity test is to give the regulator early warning of potential cash flow-related financial distress.

The liquidity test would consist of two tiers: a safe harbor and a cash flow test, which will be described in depth below. Failing to pass the safe harbor test is not intended to identify problem companies, only companies that require further analysis. Even the failure to pass the second cash flow test, does not indicate a problem, but only the potential existence of a problem if one of the stressors were to occur. These tests are intended to provide early warning, but not necessarily to indicate a liquidity problem.

Considering that this second test is intended to identify companies that need further review and not to indicate a confirmed financial problem, it would appear appropriate a company that fails the test be put into a status equal to the company action level[1] under RBC[2]. If a company did not pass the liquidity test it would fall into the company action level of RBC even if its RBC level was above the company action level RBC. The responsibilities of the company and of the regulator would be the same as the responsibilities under the current MCORBC Model Law for a RBC at the company action level. This would require that the company submit a financial plan to the regulator for approval. If the company submits a financial plan that the regulator does not approve, then the regulator can take the action that he or she deems appropriate (e.g., move the company into the regulatory action level for RBC).

Information concerning the results (pass/fail status) of the liquidity test would be included on the MCORBC diskette. The liquidity information included on the MCORBC diskette would indicate:

- that the company passed the safe harbor, or
- that the company passed the safe harbor only after making the allowable adjustments described below, or

---

[1]The company action level of RBC is triggered when a company's RBC ratio is in the .75 to 1.00 range. Under the RBC for Health Organizations Model Act, a triggering of this event requires a managed care organizations to submit a corrective action plan to the insurance commissioner. Other RBC action levels are also specified in the RBC for Health Organizations Model Act.

[2]Although the action level has not been decided and the Academy believes that the NAIC should make this policy decision on the appropriate action level, it is assumed that failing the liquidity test would be a Company Action Level event in the rest of the report.

- that the company did not pass the safe harbor, but passed the cash flow test and indication of the actuarial certification verifying that the tests were passed, or
- that the company did not pass the cash flow test.

All information used to pass the test will be available to the regulator upon request, but will be kept strictly confidential, as has been the practice with RBC data reported to the NAIC.

Structure of Liquidity Test

The proposed liquidity test would be structured in two tiers.

! A safe harbor test, which would be measured at a point in time, and
! A cash flow test, which would be forward looking.

A company eligible for and passing the safe harbor test would not be required to perform the cash flow test.

The safe harbor test is available to all companies that have been in existence for three years or more. If a company has been in business for less than three years, it will not have sufficiently stable data to perform the safe harbor test[3]. Further analysis needs to be done concerning the definition of an appropriate liquidity test for young companies (see next steps). One possibility is for all of these companies to always perform the cash flow tests. Another possibility would be that an alternative safe harbor test be developed that would adjust for the lack of mature data and have a higher threshold to meet.

A company that cannot pass the safe harbor test would have to perform the cash flow test. It would also be required to document the results of each cash flow test and provide this documentation to the commissioner upon request.

I. Safe Harbor Test

The safe harbor test is not intended to identify problem companies. It is intended to identify companies that need to perform a more comprehensive analysis of their future liquidity.
The safe harbor test consists of two steps. The first step is the calculation of a ratio of short term financial data and the second step is the recalculation of the ratio after making some adjustments to the financials. The safe harbor test is passed if either a company's first step or second step safe harbor ratio is higher than the specified threshold ratio.

The work group was unable to perform a calibration of an appropriate threshold due to lack of complete data. The calibration of the threshold ratio should be done after the testing process is completed (see Testing).

---

[3]Consideration should be given to also requiring the cash flow test for rapidly growing or shrinking companies.

If a company passes the safe harbor test, the MCORBC diskette would indicate both that the safe harbor test was passed and if it was passed on the first step or only after the adjustments allowed in the second step on its MCORBC diskette. If the company does not pass the safe harbor test, that status would be indicated on the MCORBC diskette and the company would be required to submit financial plans to the commissioner as required by the company action level of RBC.

IA. Safe Harbor Test - First Step

The first step safe harbor ratio is a ratio of current assets to current liabilities with specified adjustments to each.

Reductions based on years to maturity are made to the market value of bonds. We recommend that these percentage reductions be determined based on historical fluctuations in bond values for each class and time to maturity. For purposes of this test, assets readily convertible into cash are counted in current assets, and liabilities payable within one year are counted in current liabilities. The specific items to be included in the liquidity ratio are documented in Appendix A.

IB. Safe Harbor Test - Second Step

If a company's first step safe harbor ratio is below the threshold, a company may make specified pre-defined additions to the current assets used in the first step safe harbor ratio. The second step safe harbor ratio is calculated by including these additions as current assets. These additions are allowed based on the belief that an important source of liquidity for health care corporations is access to capital markets. The mechanisms available that demonstrate the willingness of capital markets to provide credit are in the form of committed lines of credit and letters of credit.

Unlike short term assets, access to the market for financing is difficult to quantify in a short-term ratio. Due to this difficulty the NAIC will have to decide the type of adjustments that are appropriate and which adjustments can be made without prior approval of the commissioner and which adjustments would have to be approved by the commissioner. The commissioner could then verify that the entity providing the financial backing was itself financially sound and that the regulated company or the commissioner would have access to the funds when needed. Also, the NAIC will probably want to limit the amount of increase in assets allowed by these adjustments.

We have described two examples of sources of financial backing that could be used to show that a company had the financial backing to provide for necessary liquidity, if there was a need. We have also included what we consider necessary conditions to be included for each example to be acceptable. The NAIC may want to include additional requirements to these examples or additional possible adjustments.

If a company failed to pass the safe harbor test using its first step safe harbor ratio, it would indicate on its MCORBC diskette that the safe harbor test was passed only after adjustments. Permissible adjustments to the assets for calculating the second step safe harbor ratio include lines of credit, letters of credit, or written contractual guarantees from affiliates or parents.

A. Letters of Credit/Lines of Credit

A letter of credit may be defined generally as a letter of instruction issued by a bank (or other financial institutions) to a beneficiary (the regulated entity or the regulator) at the request of the applicant (the regulated entity). The letter of credit instructs the beneficiary as to what to present to the bank to receive payment. Committed lines of credit are individually negotiated contracted arrangements between the regulated entity and one or more depository financial institutions. Although it may be unusual for a line of credit to have the conditions necessary to ensure its availability when needed, if a company can negotiate a line of credit with these qualifications, it could be used like a letter of credit. Conditions that should be required for a letter of credit/line of credit to be used would include:

1. The letter of credit/line of credit shall commit the financial institution to provide funds on demand to the regulated entity.

2. The letter of credit/line of credit should have a term that is a minimum of 364 days when initially established. Additionally, the line of credit must contain provisions that allow for the repayment of the loan to be made over a period beyond the original one-year term. Any amount due within the next calendar year at year end is to be considered at current liability.

3. The letter of credit/line of credit shall contain a provision that prevents its expiration without at least 365 days advance written notice to the regulated entity. In addition, the regulator should consider a similar notice be provided to the insurance department before the line of credit can expire.

4. The letter of credit/line of credit must be issued by a financial institution that is rated SV01 or SV02 by the Security Valuation Office. A group (syndication) of financial institutions can issue the line of credit if each financial institution within the group has a rating of SV01 or SV02.

5. The letter of credit/line of credit shall be unconditional in that all that is required of the beneficiary is that it present the bank with a request to draw proceeds. Specifically an officer of the regulated entity (or the regulator acting for the officer) will have the ability to directly draw against the letter of credit/line of credit without any need to involve the parent or affiliate.

6. The letter of credit/line of credit shall not have a "material adverse change" or similar provision that would limit the ability to obtain funds in the event of deteriorating financial condition of the regulated entity.

7. Only the unused portion of a letter of credit/line of credit may be used to satisfy the liquidity test. That is, if the regulated entity has used $4 million of a $5 million line of credit, only $1 million may be added to current assets for the purpose of the test.

8. The letter of credit/line of credit shall be irrevocable in that it can not be canceled, amended, or terminated prior to its expiration date without consent of each party (i.e., the financial institution, the beneficiary, and the applicant).

9. The letter of credit/line of credit must be payable in U.S. dollars.

B. Written Contractual Guarantees from Affiliates or Parents

Written contractual guarantees from affiliates or parents of regulated entities may be used as an adjustment to current assets in satisfying the first-tier liquidity test. Conditions that should be considered prior to approving an affiliate or parental guarantee include:

1. The written contractual guarantee from the affiliate or parent shall be irrevocable in that it cannot be canceled, amended, or terminated prior to its expiration date without consent of each party and the approval of the regulator.

2. The written contractual guarantee from the affiliate or parent shall be unconditional in that funds will be provided in a timely manner to the regulated entity as required in order to meet current obligations within 30 days.

3. It is understood that parent's or affiliate's accounting for the guarantee will follow current accounting practices.

II. Cash Flow Tests

If a company does not pass the safe harbor test or is not eligible for the safe harbor test, then the company must perform a series of cash flow tests (defined below).

The series of cash flow tests consists of quarterly cash flow projections for the next two years where independent pre-defined events (stresses) are applied to a base cash flow projection. The purpose of the cash flow projections is to identify sources of funds to cover resulting outlays and,

if necessary, assets to be sold to meet cash requirements plus extra cash needs if a pre-defined event should occur.

In order for a company to pass the cash flow tests, it must demonstrate that under the base cash flow and all stress situations:

- Cash is available to pay obligations as they come due in each quarter, *and*
- MCORBC ratios remain above company action level in each quarter.

If a company passes all of the applicable cash flow tests, an actuarial certification would be indicated on the MCORBC filing diskette. The actuarial certification should state that the company performed the required cash flow tests, the company passed all of these tests, and the assumptions and methodology used to perform these tests are, in the opinion of the certifying actuary, reasonable and appropriate for the purpose, and in accordance with Actuarial Standards of Practice[4]. Assumptions should be documented and this documentation should be provided to the regulator upon request.

If a company is not able to pass all applicable cash flow tests, the company would indicate this failure in its MCORBC filing diskette, and be required to submit a remedial plan to the regulator of its domiciliary state for approval. If the regulator decides the plan is not satisfactory, then the regulator can take appropriate action as he or she might deem appropriate (e.g., move the company into the regulatory action level for RBC). The responsibilities of the company and the regulator would be the same as the responsibilities under the current MCORBC Model Law for a RBC at the company action level.

IIA. Base Cash Flow Projection

A company would perform a base cash flow projection based on expected cash flows.

IIB. Cash Flow Projection Stressors

Each stressor would be applied against the base cash flow projection. These stressors are described at a high level below, but further definition will be needed before these tests can be fully implemented.

Stress Test A - assume the loss of the largest single employer/client/member source or 10% of membership if that is higher. The test should be run until results of cash flows are stabilized but the company must assume a minimum of 3 months of current expense levels on an absolute dollar basis plus any additional downsizing expense before stabilization.

Stress Test B - assume the loss of the largest non-affiliated single medical group or provider group under a single contract. The test should be run until results of cash flows are stabilized. The company must assume that all services being provided by the medical group are now purchased on a fee-for-service basis for three months.

---

[4]A new Standard of Practice will be needed for this purpose.

Stress Test C - assume an increase in trend (claim costs per month) of 6% over the assumed trend in current financial plan. The increase is assumed to occur on March 1 with all medical costs adjusted 6% over and above the assumed trend at that date. Capitated medical costs subject to contractual limits are assumed to increase by 6% more than planned at the time of the next renewal. Premiums cannot be assumed to be increased until June (and the actuary should be able to demonstrate that the assumption used is consistent with that company's actual experience in adjusting for trend variations).

Administrative expenses not contained by contractual limitations are also assumed to increase by 6% over the assumed trend in the current financial plan on March 1. However, this additional increase in administrative expenses should be based on a flat dollar percent increase if membership is flat or increasing, but should be based on a PMPM percent increase if membership is decreasing.

Premiums cannot be assumed to increase until June. This assumption can only be used if the company can demonstrate that the assumption used is consistent with that company's actual experience in adjusting for trend variation. Otherwise, the timing of premium rate increase assumptions must be based on reasonable time periods as experienced by the company. Premium rate increase levels should be consistent with increased costs in the stress tests from claims and administrative expense trends tested.

Stress Test D - assume that the largest (based on revenue) medical facility (owned by the MCO or an affiliate and used by the MCO to deliver care to members) is unusable for three months due to some natural catastrophe and that membership's care will need to be met through other arrangements.

Stress Test E - If the company experienced an operating loss in the year, an additional stress would use last year's results affected in place of the company's expected financials affected only by contractually approved adjustments, such as increased premium arrangements or changes in contracted providers or the contracts themselves.
If a company fails to pass any cash flow test, it fails to pass the liquidity test.

Testing

Testing of the first step safe harbor ratio is designed to prove, with minimal false positives or false negatives, the following:

- The safe harbor test indicates a potential solvency problem independent of or prior to MCORBC falling into regulatory levels or the test gives a better indicator of the severity of a solvency problem for companies in RBC regulatory levels.

- The safe harbor test does not systematically indicate that a company has a serious problem when one does not actually exist.

- The safe harbor test does systematically indicate a problem when one may exist.

The Academy studied the first step safe harbor ratio using data from 32 Blue Cross Blue Shield Plans and 40 HMOs. We also had data on 16 HMOs with information on their financial condition and length in business. The Academy did preliminary testing using NAIC annual statement data and MCORBC data from the NAIC MCORBC testing with the results modified for recent changes in managed care factors. Our preliminary analysis shows some reportedly financially healthy companies with low safe harbor ratios. There were also some companies with high MCORBC ratios and a low safe harbor ratios. However, the latter findings may not be conclusive because there was not adequate data to determine if the condition was due to lack of liquidity or the company's decision on how the company holds its assets. More information and further analysis is warranted.

We are unable to recommend a specific threshold ratio for the safe harbor test because of the lack of data available to complete testing, specifically the lack of data on bonds by time to maturity. The work group did not have data for more than two years and had only a limited amount of information on companies other than the MCORBC survey and the liquidity ratio. It is anticipated that the missing data will be available on the 1998 annual statement blank. Finally, regulators will have the names of the companies to assist them in determining a safe harbor threshold and the usefulness of the suggested stress tests.

Issues to Consider in Calibration

It cannot be emphasized enough that the application of the safe harbor and cash flow Tests should not be considered a stigma to the health care corporation involved. The tests are intended to be calibrated at high enough of a level to give a company and regulators time to react to developing problem.

The Health Liquidity Work Group is not in the position to calibrate the tests; we believe that it is the responsibility of the regulators to calibrate the appropriate level. The safe harbor ratio needs to be calibrated high enough to handle downward trend. Although a change in a company's first step or second step safe harbor ratios from one year to the next does not necessarily suggest a problem. However, in some cases a continued downward trend could result in financial impairment. Therefore, the specific threshold ratio needs to be calibrated for sufficient time to allow regulatory intervention. The amount of testing depends on the time series available for the assessment, and time frame the regulator expects to need to resolve potential liquidity problems.

Next Steps

Once this proposal is accepted in principle there are a number of activities that will have to take place. We suggest:

- Additional industry input is needed to get varying perspectives.

- Calibration is needed. Testing should be done using 1998 annual statement information including MCORBC. Testing will verify the usefulness of a liquidity measure and will be used to calibrate the threshold ratio for the safe harbor test, which should be continually monitored.

- More study on the appropriate structure and application of a liquidity test appropriate for younger companies is needed.

- We only defined these liquidity tests at a high level in this report and therefore, cash flow tests will have to be more fully defined, including the base assumptions. Once the NAIC RBC Task Force has approved these definitions in theory, each test should be described more fully including assumptions, sources of data and documentation needed.

- Determination of actuarial standards and a time frame for their development in order to carry out stress test. The NAIC may want to recommend that an actuarial standard of practice (ASOP) be developed. Specific actuarial guidance may be needed for performing a certification with many of the assumptions defined by regulation before the liquidity test is fully implemented.   The ASOP is needed in the long range to protect the actuary who makes the certification.

The Academy stands ready to assist the NAIC in carrying out these next steps.

Appendix I

ASSETS

Table 1: Bond categories (Schedule D, Part 1A)

	Category Description	Include in Liquid Assets
1	U.S. Governments	Yes
2	All Other Governments	Yes
3	States, Territories and Possessions (Direct and Guaranteed)	Yes
4	Political Subdivisions of States, Territories and Possessions (Direct and Guaranteed)	Yes
5	Special Revenue & Special Assessment Obligations and all Non-Guaranteed Obligations of Agencies and Authorities of Governments and Their Political Subdivisions	Yes
6	Public Utilities (Unaffiliated)	Yes
7	Industrial & Miscellaneous (Unaffiliated)	Yes
8	Credit Tenant Loans	Yes
9	Parents, Subsidiaries and Affiliates	No

Table 2: Bond Maturity Distribution (Schedule D, Part 1A-Section 1)

Maturity	Include in Liquid Assets	Asset Value Basis
1 Year or Less	Yes	Statement
Over 1 Year Through 5 Years	No	Market
Over 5 Years Through 10 Years	No	Market
Over 10 Years Through 20 Years	No	Market
Over 20 Years	No	Market

Table 3: Bond Quality (Schedule D, Part 1A, Section 1)

Class	Category Description	Include in Liquid Assets
1	Highest Quality	Yes
2	High Quality	Yes
3	Medium Quality	Yes
4	Low Quality	No
5	Lower Quality	No
6	In or Near Default	No

Notes: Value of bonds shown in Asset Page of Annual Statement is based on "Statement Value". which is the amortized or market value of the bond as prescribed by the Securities Valuation Office of the NAIC.

Statement Value is available from the Annual Statement for bonds split according to the criteria in Tables 1, 2, and 3. Market Value is available only in Schedule D, Part 1, which lists all bonds owned.

Table 4: Assets Other Than Bonds

Asset	Include in Liquid Assets	Annual Statement Asset Value Basis
Preferred stocks	Yes	Statement value
Common stocks	Yes	Market value*
Mortgage loans on real estate	Partial	Amount unpaid
Real estate	No	Book value less encumbrances
Collateral loans	No	Outstanding principal balance
Cash	Yes	Depository balance
Other invested assets	No	Statement value
Receivable for securities	Yes	Amount received within 15 days
Aggregate write-ins for invested assets	Perhaps	Statement value
Uncollected premiums	Yes	Amounts unpaid for less than 90 days
Amounts receivable relating to uninsured accident and health policies	Yes	Amount receivable
Funds held by or deposited with reinsured companies	No	Funds held

Table 4: Assets Other Than Bonds (Continued)

Reinsurance ceded: Amounts recoverable from reinsurers	Yes	Amount recoverable on paid losses
Reinsurance ceded: Commissions and expense allowances due	No	Amount due
Reinsurance ceded: Experience rating and other refunds due from reinsurers	No	Amount due
Federal income tax recoverable and interest thereon	No	Accrued recoverable amount
Guaranty funds receivable or on deposit	No	Amounts receivable or on deposit
Electronic data processing equipment	No	Depreciated value
Interest and other investment income due and accrued	Yes	Amount due and accrued
Receivable from parent, subsidiaries and affiliates	No	Amount receivable
Other assets nonadmitted (Exhibit 1)	No	Statement value
Aggregate write-ins for other than invested assets**	No	Statement value

* Except to be reduced by codification as the concentration of assets are affiliated.
As seen in tables, restricted assets should not be included as an asset for the safe harbor test. (In text of report).
**Includes inventory (medical obligations/medical assets) as an asset — statutory accounting rules apply.

Table 5: Liabilities[5]

Liability	Short-Term Liability Requiring Cash
Claims unpaid	Yes
Provision for deferred maternity benefits	Yes
Unpaid claims adjustment expenses	Yes
Unearned premiums	Yes
Unearned investment income	Yes
Taxes, licenses and fees due or accrued (excluding Federal income taxes)	Yes
Federal income taxes (excluding deferred taxes)	Yes
Other expenses due or accrued	Yes
Premium deposits made by applicants rejected or not as yet accepted as members or subscribers	Yes
Borrowed money and interest thereon	Yes
Amounts withheld or retained for account of others	Yes
Liability for amounts held under uninsured accident and health plans	Yes
Funds held by corporation under reinsurance treaties	Yes
Reinsurance in unauthorized companies	Yes
Funds held under reinsurance treaties with unauthorized reinsurers	Yes
Payable for securities	Yes
Aggregate write-ins for other liabilities	Yes
Statutory reserve	No
Surplus notes	No**
Aggregate write-ins for reserves and other funds	Yes
Unassigned funds	No

** Amounts approved by the commissioner for payment are included.

[5]For liabilities greater than one year, there needs to be an reduction in the level of liabilities included to determine current liabilities.