MONTANA COMMISSIONER OF SECURITIES AND INSURANCE

ACTUARIAL REPORT
on
MONTANA STATE FUND RESERVES AND RATES
AS OF JULY 1, 2011

MAY 18, 2012

FINANCIAL RISK ANALYSTS

FINANCIAL RISK ANALYSTS, LLC
Actuaries • Insurance Consultants

May 18, 2012 **Sent Via Email**

Ms. Monica J. Lindeen
Commissioner of Securities and Insurance
State Auditor's Office
840 Helena Avenue
Helena, Montana 59601

Re: Montana State Fund Actuarial Report for Montana CSI

Dear Commissioner Lindeen,

Enclosed please find a copy of our actuarial report on the Montana State Fund. The report has been prepared for the use of the Montana Commissioner of Securities and Insurance in compliance with the CSI's required annual review of the financial and compliance legislative audit and rate review of the Montana State Fund.

Our review encompassed MSF reports prepared by their actuaries, Towers Watson and the Legislative Audit Division's actuarial report prepared by their actuaries, Casualty Actuarial Consultants, Inc., along with additional information regarding the MSF that was provided by CSI personnel. Our analysis and conclusions are attached in the following report. The report highlights our assumptions and findings as well as the limitations of this study. We recommend that the report be reviewed in its entirety.

We appreciate the opportunity to provide service to the Montana CSI. We will be pleased to discuss our work and findings as you desire, and are available to answer any questions you may have.

Sincerely,

Robert W. Van Epps

Robert W. Van Epps, FCAS, MAAA
Managing Principal

Daniel A. Reppert

Daniel A. Reppert, FCAS, MAAA
Principal

enclosure

c: Adam Schafer
Mari Kindberg

706 Northeast Drive, Suite 4
Davidson, NC 28036
(704) 895-9765 Fax (866) 831-3389

P.O. Box 3173
Vernon, CT 06066
(860) 645-9899 Fax (866) 831-3389

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PURPOSE AND SCOPE OF REVIEW

Background:

Financial Risk Analysts ("FRA") has been engaged by the Montana Commissioner of Securities and Insurance ("CSI") to perform certain actuarial procedures described below in conjunction with CSI's required annual review of the financial and compliance legislative audit and rate review of the Montana State Fund ("MSF" or "Fund").

MSF is a competitive state fund providing workers compensation insurance for employers in Montana. MSF competes with private insurance companies and also provides a market to employers who are not able to otherwise secure coverage. MSF is segregated and evaluated as two separate entities. The Old Fund is comprised of all accident periods ending June 30, 1990 or prior. The New Fund is comprised of all accident periods occurring July 1, 1990 and subsequent. MSF currently writes almost two-thirds of the workers compensation market in the state.

Sections 39-71-2362 of the Montana Code Annotated ("MCA") authorizes and requires the legislative auditor to annually review rates established by MSF board of directors to determine if the rates are excessive, inadequate, or unfairly discriminatory. The Legislative Audit Division ("LAD") is required to report the findings of its examination and rate review to the governor, the legislature, and the board of directors of MSF.

Section 39-71-2361 MCA, as amended by the legislature in 2011, requires the legislative auditor to annually conduct or have conducted a financial and compliance audit of MSF, including its operations relating to claims for injuries resulting from accidents that occurred before July 1, 1990. The audit must include evaluations of the claims reservation process, the amounts reserved, and the current report of the Fund's actuary. The LAD is required to provide the results of the financial and compliance audit for operations related to claims for injuries resulting from accidents on or after July 1, 1990 and the rate review as provided in Section 39-71-2362 to the insurance commissioner. The insurance commissioner is required to review the financial and compliance audit and rate review and report any concerns or recommendations based on the review to the governor, the legislative audit committee, and the economic affairs interim committee.

Required Reviews at Mid-year 2011:

MSF engaged Towers Watson ("TW") to: 1) estimate unpaid loss and loss adjustment expenses as of June 30, 2011; 2) analyze of the overall manual rate level change for policies effective between July 1, 2011 and June 30, 2012; 3) assist MSF in selecting loss cost multipliers ("LCMs") for policies effective between July 1, 2011 and June 30, 2012; and 4) review and adjust the proposed rating tier structure of MSF.

The LAD engaged Casualty Actuarial Consultants, Inc. ("CACI") to examine the aforementioned Towers Watson July 1, 2011-2012 rate analysis and June 30, 2011 reserve analysis prepared for the Fund.

The CSI engaged FRA to assist in its review of the 2011 MSF reports regarding reserves and rates as required by Section 39-71-2361 MCA.

FRA Scope:

The scope of work agreed upon by FRA and CSI is:

1) Review the TW and CAIC reserve reports
    a. Provide overall comments regarding methodologies, assumptions and conclusions
    b. Provide specific comments and opinions where we find differences in the conclusions between the two reports
    c. Segregate comments by Old Fund/New Fund as appropriate

2) Review the TW rate report and any findings in the CAIC reserve or other CAIC report regarding rates
    a. Provide overall comments regarding methods, assumptions and indicated rates/rate changes

   i. Focus on development of rates by class code or other more detailed levels as opposed to overall rate indication
   ii. Focus on tiered rating method developed by TW for MSF
   iii. Upon request - review rating steps and comment on how this compares with commercial carriers

b. Provide specific comments and opinions where we find differences between TW and CAIC findings

This report was prepared for the use of the Montana Commissioner of Securities and Insurance in evaluating MSF reserves and rates as of 2011 and may not be appropriate for any other purpose.

We, Robert Van Epps and Daniel Reppert, are Principals for Financial Risk Analysts, LLC. We are each a Member of the American Academy of Actuaries and a Fellow of the Casualty Actuarial Society. We meet the qualification standards of the American Academy of Actuaries to issue this report.

CONDITIONS AND LIMITATIONS

GENERAL

Throughout this report and its exhibits the term "loss" is used to refer to losses inclusive of allocated loss adjustment expense (ALAE). Allocated loss adjustment expense provides for all expenses associated with the handling and settling of claims that can be directly attributable to a particular claim. Such expenses typically include independent medical exams, rehabilitation expenses, legal fees, investigatory expenses, expert witness fees, etc. Unallocated loss adjustment expenses, or ULAE, are expenses associated with the handling and settling of claims that cannot be specifically assigned to a particular claim. Such expenses are generally in the nature of overhead expenses.

DATA

We used data and other information provided to us by responsible staff from the CSI. This information consists of various actuarial reports prepared by TW and CACI and other information regarding the operations and results of MSF. The specific reports we received are the following:

1) TW report for MSF dated September 6, 2011 regarding Old Fund loss reserves as of June 30, 2011;

2) TW report for MSF dated September 6, 2011 regarding New Fund loss reserves as of June 30, 2011;

3) TW report for MSF dated September 6, 2011 encompassing the Appendix to the above reports;

4) TW report for MSF dated May 5, 2011 regarding their Rate Level Analysis for the fiscal year incepting July 1, 2011 (including appendix);

5) TW report for MSF dated May 5, 2011 regarding their Loss Cost Multiplier analysis for the fiscal year incepting July 1, 2011;

6) TW report for MSF dated December 27, 2011 regarding their proposed multivariate model and tier structure rating validation for the MSF;

7) CACI report for LAD dated January 31, 2012 regarding MSF rates and reserves as of June 30, 2011; and

8) TW letter dated January 30, 2012 providing a response to the CACI report.

Although the data supplied have been reviewed for purposes of reasonability we have not independently audited or verified this information and we assume it to be accurate and complete. The results of our analysis will be contingent upon the reliability of the information supplied to us and such reliability is the responsibility of CSI, MSF, TW, and CACI. Should any party become aware of any significant discrepancies in the data reported to us we should be notified of such discrepancies and this report will be amended, if necessary.

UNCERTAINTY

Actuarial projections, by their nature, are estimates of future contingent events that cannot be known with certainty. The ultimate liability of MSF for its retained losses will be subject to events that have yet to occur such as the size of future Workers Compensation awards, medical cost inflation, judicial interpretations as to liability, as well as the propensity for claimants to bring suit. No assumptions have been made in this report as to any extraordinary changes in the legal, social, or judicial environment that might affect future losses.

While we believe the results presented in this report are reasonable and reflect the use of accepted actuarial principles and standards of practice it is possible that actual future loss results of MSF will differ, perhaps materially, from those projected herein. Nothing in this report should be construed as a warranty or guarantee as to the adequacy of the liability estimates contained herein.

FINDINGS AND RECOMMENDATIONS

FRA completed the scope of the review through analysis of the reserve, rate review and other related reports and reserve opinions of Towers Watson and CACI and additional data and correspondence provided by responsible staff of CSI.

Our findings are summarized below in line with the scope items listed above.

Reserve Estimate Methodologies:

1) The methodologies used by Towers Watson to estimate loss and LAE reserves are reasonable. TW projected losses to an ultimate basis using several methodologies, including paid loss development, paid Bornhuetter-Ferguson, incurred Berquist-Sherman, and paid frequency/severity.

   In applying its methodologies, losses are unlimited with respect to reinsurance. TW also provides separate analysis of anticipated reinsurance recoverables as discussed below.

   TW estimates reserve needs on an undiscounted basis, consistent with the way MSF management sets its reserves. For informational purposes, TW also provides to MSF reserve estimates on a discounted basis using yields that range from 1% to 4%.

   In their reports, TW identifies factors that create materially more uncertainty than is usual for analysis of this nature. These include significant changes in statutory benefits, volume and mix of business, MSF operations, case reserving, and the economic environment. Additional details regarding the specific nature of changes in each area are described in the TW reports.

   In our opinion, the measures taken by TW to adjust their selections, methods and approaches to respond to the identified issues are individually and collectively reasonable. These measures included:

   - Incurred loss development methods were not used. Incurred methods are generally the most heavily relied upon of all actuarial methods. Incurred methods use changes in historical incurred losses between various valuation points to provide a basis for estimating future changes. Incurred methods can be used to provide reasonable estimates of ultimate losses if reporting patterns and reserving practices have remained reasonably stable over time. TW assessed that reporting patterns and reserving practices had not been consistent and therefore chose not to apply incurred methods.

As identified in the TW report, the actuarial literature provides a technique called Berquist-Sherman which can enable the actuary to adjust for inconsistencies in historical reporting patterns and reserving practices. While TW applied this methodology in the case of MSF, they concluded that its results were too unstable to provide much value and therefore accorded it little weight in their selections.

CACI concluded that the lack of reliable results from the incurred loss methods significantly impedes the actuarial estimation process, adding to the degree of uncertainty in determining reserves for MSF. We agree with CACI that this is a very material limitation.

- Different paid loss development factors were selected for different years due to the expected large impacts of several large benefit law changes in Montana over the period being reviewed.
- In applying their paid loss development methods, TW determined that indemnity claim payments and closure rates were speeding up due to reduced temporary total disability dispositions and increased lump sum payments. TW accelerated selected indemnity development patterns by 0.5 months to reflect these faster closure rates. For medical claims in 1990/1991 and subsequent, TW accelerated payment patterns by 0.50% to judgmentally reflect improvements in MSF claim operations.

In summary, we believe that the methodologies used by TW are reasonable and consistent with actuarial principles and standards of practice.

2) CACI's approach to estimating loss and loss adjustment liabilities differs from TW in that CACI applies its paid methodologies without the specific adjustments made by TW for known environmental and MSF operational changes. Instead, CACI relies heavily on the most recent 5-7 diagonals in the loss development triangles. In doing so, they assume that recent years' claims will pay out similarly to the patterns of the most recent 5-7 years.

   We believe that the methodologies used by CACI are also reasonable and consistent with actuarial principles and standards of practice.

3) While we believe the methodologies of both TW and CACI are reasonable and we found no material flaws in either party's work, we believe that the TW approach of applying specific parameters, adjustments and assumptions intended to reflect the known environment and business operations of MSF will generally yield more appropriate estimates, assuming that adequate data and analysis is available to make reasonable judgments regarding the magnitude of required adjustments. In this case, we believe that TW's analytics are adequate for these purposes.

   One item that merits specific comment is CACI's view that two of TW's adjustments may have overlapping effect (page 18, CACI report). The two adjustments referenced are: 1) selecting different development factors for different years, and 2) accelerating the payment patterns for both indemnity and medical losses. CACI, while not questioning the validity or appropriateness of either adjustment, expressed concern that the combined effect of the two may be decreasing the estimated incurred losses too much in the more recent periods. TW, in their January 30, 2012 letter to Lawrence Hubbard summarizing their thoughts about the CACI report, affirm their opinion that no overlap exists. They state that the former adjustment reflects environmental conditions in each period while the latter reflects improvements in MSF claim operations, irrespective of the prevailing environment.

   While the CACI concern is legitimate and merits examination, we are persuaded by the TW argument that separate adjustments are appropriate for changes in the external and internal environments. We believe that the adjustments applied by TW as of June 30, 2011 are reasonable. However, we would suggest that the actuaries responsible for MSF reserves continue be mindful of the compound effect of these two adjustments as they select parameters in future years.

Carried Loss Reserves:

The table below compares the estimates of TW and CACI to the carried reserves of MSF as of June 30, 2011:

June 30, 2011 Reserve Estimate ($ millions) Unlimited Losses, Undiscounted, Excluding LAE						
		Towers Watson Estimates			CACI	MSF
		Low	Central	High	Central Estimate	Carried Reserve
New Fund	Medical	509.7	566.4	651.3	625.1	
	Indemnity	173.3	191.5	209.7	202.5	
	Total	683.0	757.9	861.0	827.7	799.7
Old Fund	Medical	35.2	38.8	74.3	55.3	
	Indemnity	12.6	14.0	16.4	22.1	
	Total	47.9	52.7	90.7	77.7	54.9

1) MSF management chose to book reserves at $41.8 million above the TW central estimate in the New Fund and $2.2 million above the TW central estimate in the Old Fund as of June 31, 2011. The higher reserve levels account for reserve strengthening and the potential cost of court cases.

2) We understand that, over the years, MSF has consistently booked reserves based initially on the undiscounted reserve estimates from its actuary. CACI agreed that booking on an undiscounted basis is appropriate, and we concur. Reserving on an undiscounted basis implicitly provides a margin for error since future investment income would be available to offset any adverse development that may occur.

3) While applying varying approaches and methodologies that result in somewhat different results, TW and CACI each concur that the carried loss reserves for both the Old Fund

and the New Fund on the financial statements of MSF as of June 30, 2011 are reasonable based on the estimates by both TW and CACI. We also agree that MSF carried reserves are reasonable.

4) Recognizing the uncertainties associated with estimating ultimate losses, TW provides a range of estimates from Low to High together with an Actuarial Central Estimate. TW believes that there is a high likelihood that actual ultimate losses will be within their range, though acknowledging that actual results could fall outside their range. Rather than provide a range, CACI chose to provide just a Central Estimate while referencing that their Central Estimate falls between TW's Central and High Estimates. Actuarial principles allow the actuary to present results of their analysis as either a range of estimates or as simply a central estimate.

   For the New Fund, TW's low and high estimates are -10% and +13.5% below and above its central estimate, respectively. On the surface, this range appears to be much wider than might be expected for an entity as large as MSF. However, in our opinion this range is appropriate given the high degree of uncertainties in this situation. The lack of reliable incurred loss methods contributes significantly to driving such a wide range.

5) As noted by CACI and as shown in the table on the next page, the collective case reserves set by MSF's claim adjusters significantly exceed the actuarial estimated reserve needs in all years with open claims for the Old Fund and for 6 of the earliest 9 years of the New Fund. CACI recommends that MSF determine the source of these differences and reconcile them. TW describes their 2004 case reserve study and the resulting changes that have been implemented by MSF. They conclude that these changes have had the effect of increasing case reserve adequacies, though it does not appear that TW has attempted to quantify these impacts.

MSF REQUIRED RESERVES AT JUNE 30, 2011

OLD FUND

Accident Year	Case	Required IBNR	Required Total
7/1/64-65	$ -	$ -	$ -
7/1/65-66	55,000	(41,250)	13,750
7/1/66-67	-	-	-
7/1/67-68	-	-	-
7/1/68-69	-	-	-
7/1/69-70	30,000	(22,500)	7,500
7/1/70-71	168,180	(126,135)	42,045
7/1/71-72	41,794	(17,442)	24,352
7/1/72-73	29,965	(22,474)	7,491
7/1/73-74	1,907,568	(1,392,082)	515,486
7/1/74-75	1,721,439	(1,247,054)	474,385
7/1/75-76	514,723	(336,332)	178,391
7/1/76-77	4,050,578	(2,961,326)	1,089,252
7/1/77-78	1,752,446	(1,159,528)	592,918
7/1/78-79	2,840,571	(1,844,197)	996,374
7/1/79-80	4,490,995	(2,843,319)	1,647,676
7/1/80-81	5,130,567	(3,027,794)	2,102,773
7/1/81-82	5,807,279	(3,190,588)	2,616,691
7/1/82-83	11,231,933	(6,682,624)	4,549,309
7/1/83-84	14,202,769	(7,942,256)	6,260,513
7/1/84-85	9,289,446	(3,635,561)	5,653,885
7/1/85-86	12,117,657	(4,636,704)	7,480,953
7/1/86-87	17,470,807	(7,668,427)	9,802,380
7/1/87-88	17,398,779	(6,847,889)	10,550,890
7/1/88-89	10,969,630	(1,646,582)	9,323,048
7/1/89-90	17,557,454	(4,072,867)	13,484,587
TOTAL	**$ 138,779,580**	**$ (61,364,931)**	**$ 77,414,649**

NEW FUND

Accident Year	Case	Required IBNR	Required Total
7/1/90-91	$ 21,382,353	$ (6,647,905)	$ 14,734,448
7/1/91-92	17,288,233	(2,926,254)	14,361,979
7/1/92-93	29,158,983	(11,456,098)	17,702,885
7/1/93-94	18,663,507	(2,365,919)	16,297,588
7/1/94-95	12,737,457	2,472,503	15,209,960
7/1/95-96	12,911,936	1,278,223	14,190,159
7/1/96-97	12,346,002	1,143,437	13,489,439
7/1/97-98	19,721,241	(3,830,742)	15,890,499
7/1/98-99	24,562,493	(5,209,499)	19,352,994
7/1/99-00	17,091,800	1,873,893	18,965,693
7/1/00-01	22,277,363	3,362,236	25,639,599
7/1/01-02	22,573,340	5,419,173	27,992,513
7/1/02-03	34,537,999	2,606,465	37,144,464
7/1/03-04	28,423,946	12,015,359	40,439,305
7/1/04-05	30,927,721	18,016,271	48,943,992
7/1/05-06	37,821,639	22,341,026	60,162,665
7/1/06-07	34,288,932	35,321,219	69,610,151
7/1/07-08	39,167,289	37,050,329	76,217,618
7/1/08-09	37,142,254	39,128,314	76,270,568
7/1/09-10	35,657,297	47,175,646	82,832,943
7/1/10-11	43,334,946	78,893,359	122,228,305
TOTAL	**$ 552,016,731**	**$ 275,661,036**	**$ 827,677,767**

In our experience, it is highly unusual to see case reserves exceeding actuarial estimates by such material amounts so consistently over so many years. Two potential conclusions are possible. If claim examiners are reserving at an appropriate level overall, the actuarial estimates may be too low. Alternatively, if the actuarial estimates are more closely predictive of ultimate losses, it would appear that the case reserves are materially redundant in the aggregate.

We would encourage MSF to engage a study of case reserves to determine why claim adjusters are reserving at a level so far above the actuarial estimates. Depending on the results of the study, adjustments may be required to actuarial methods or to case reserving policies, practices, and systems going forward.

6) The final net reserves for MSF reflect approximately $29.1m for reinsurance recoverables. This amount seems to have been selected based at least in part on TW's September 6, 2011 letter to Mr. Hubbard captioned "Anticipated Reinsurance Recoveries." We did not assess this analysis or its results.

Pricing Methodologies:

The table below compares the rate indications of TW and CACI for the period July 1, 2011 through June 30, 2012:

July 1, 2011 - 2012 Rate Indications
Expected Underwriting Profit Assuming No Change in Manual Rates
Limited Losses Including LAE

	Towers Watson Estimates			CACI Estimates		
	Low	Central	High	Low	Central	High
Undiscounted	19.9%	13.3%	6.6%	10.6%	1.3%	-2.3%
Discounted (3.25%)	28.2%	22.4%	16.7%	22.3%	17.8%	14.8%

1) We reviewed the overall rate analyses done by both TW and CACI. Both appear to have followed approaches that are consistent with actuarial principles and applicable standards of practice. On a discounted basis applying a 3.25% discount rate, TW estimates that the current rates would yield a contribution to equity of 22.4% at their central loss estimate. CACI estimates that current rates would yield a 17.8% contribution to equity on the same basis. Without making a specific recommendation, TW calculated a range of indicated premium changes of -14% to -22.4% from which they suggest the Board could make its rate decision. CACI opined that any rate change in the range of a 14% to 22% decrease would be appropriate on a discounted basis. The differences in rate estimates between TW and CACI are caused primarily by the differences in projected loss estimates for July 1, 2011 through June 30, 2012, which in turn are caused by differences in their respective historical loss estimates from the reserve analysis.

Both TW and CACI include in their calculations a 5% provision for adverse loss deviation. Given the high level of uncertainty discussed above, we believe that including this risk provision is appropriate.

Based on the TW analysis, MSF ultimately decided to implement a rate reduction of 20%.

2) In arriving at their respective pricing indications, both TW and CACI assumed that the estimated savings of 22.4% from the July 1, 2011 benefit reform changes will be fully realized. This savings estimate was calculated by the National Council on Compensation Insurance ("NCCI").

Excluding the effect of the latest law change, the range of indications would have been:

July 1, 2011 - 2012 Estimated Underwriting Profit Assuming No Change in Manual Rates Excluding Effect of July 1, 2011 Benefit Law Change Limited Losses Including LAE			
	Discounted (3.25%)		
	Low	Central	High
Towers Watson	12.9%	5.6%	-1.8%
CACI	-0.1%	-4.7%	-7.7%

In the absence of the July 2011 law reform, TW's indications would have ranged from far smaller decreases to an increase at the high end and CACI would have indicated that increases were necessary throughout their range.

While it is accepted actuarial practice to make estimates of the impact of law reform and to assume that the full effect of such reform will be realized, in this case the recent MSF rate decrease was supported solely by a relatively large reform estimate. While we find no fault with the assumptions made by TW and CACI to accept the reform estimate, we would note that any material shortfall in achieving these savings could cause MSF's revised rates to be inadequate. Offsetting this risk somewhat is the inclusion of a provision for adverse loss deviation described above.

The latest data available to NCCI is financial data for the period ending 12/31/2010. This data does not reflect any impact from the 2011 benefit reform. As a result, NCCI filed with CSI to revise class relativities only with no change in overall loss costs for the period beginning July 1, 2012. Therefore, NCCI will not reflect in its overall loss cost level any differences between the actual and expected impacts of the 2011 benefit change for another year.

3) It is our understanding that MSF derives its rates by class code by applying loss cost multipliers to pure loss rates as established by NCCI (with certain exceptions for MSF deviations and special classes). The loss cost multipliers are based on MSF's expenses and pricing program. MSF engaged TW to assist in determining appropriate loss cost multipliers for policies incepting between July 1, 2011 and June 30, 2012. In its report dated May 5, 2011, TW calculated ranges of loss cost multipliers for each rating tier based on MSF's recommended target contribution to equity of 5.5% and selected interest rate of 3.25%. CACI states that they believe this approach is appropriate, and we concur. While we did not perform a detailed analysis of the TW 2011 calculations, we reviewed the documentation in the TW report and believe their results are reasonable.

   MSF again engaged TW to determine indicated loss cost multipliers for the 2011/12 fiscal year. We were provided copies of materials that appear to have been from a presentation made by TW to MSF describing the results of this latest review. The analysis of loss cost multipliers appear to have been done in conjunction with the latest review of rating tier variables described below. While the conclusions from the presentation appear reasonable, we did not have access to the full TW report and therefore have not been able to review it in detail.

4) We understand that MSF currently uses 5 rating tiers in its pricing program. In 2010, TW was retained by MSF to review its tier rating structure. At that time, TW found that the tier structure was reasonable and that it improved the equity of pricing (relative to not having a tier structure) and recommended several areas for further research. In its related follow-up analysis, TW identified several significant predictors of loss which were incorporated into a proposed definition for MSF's pricing structure.

The objective of MSF's tiered rating approach is to assign each client to a rate tier which best reflects the employers likelihood to incur claims. TW identified five variables that, in combination, are statistically predictive of future loss propensity.

In 2011, TW was engaged by MSF to review the loss experience predicted by the proposed tier structure against actual experience and to adjust the proposed tier structure and underlying multivariate model where appropriate. TW issued a report dated December 27, 2011 detailing their analysis. Based upon their analysis, TW proposed Tiered Rating 2.0, which included adjustments to the variables and model used for rating. In 2012, MSF approved moving forward with the new version. We understand that Tiered Rating 2.0 will be implemented for all policies effective July 1, 2012 and subsequent.

We believe that the TW tier analysis and multivariate model are sound and the results reasonable. We believe that replacing approaches that rely on subjective underwriting judgment to assign clients to rating tiers with a predictive model that can be periodically reviewed and adjusted when appropriate improves the equity of MSFs pricing model. We note that TW provided a graph (page 8 in their presentation dated 1/27/2012 titled Montana State Fund Tiered Rating 2.0) that demonstrates how the combination of rate tiers and experience rating improves the pricing equity across the five tiers.

We would raise one potential concern with respect to the interplay between the pricing tier model and schedule rating. The table on the following page shows that large schedule credits and debits were applied in a number of cases to policies effective in latest year. While not inherently problematic to apply both together, MSF management should evaluate whether their schedule rating design and its application by underwriters overlap with the use of pricing tiers. Schedule rating should only be applied based upon characteristics that are not already reflected in the variables of their tier rating model.

We reviewed the current MSF Schedule Rating Worksheet provided to us. While most of the factors listed appear to be appropriate, there are certain factors including "loss trend not reflect (sic) in experience rating" and "other elements" which have the potential to overlap with items reflected in tiered rating.

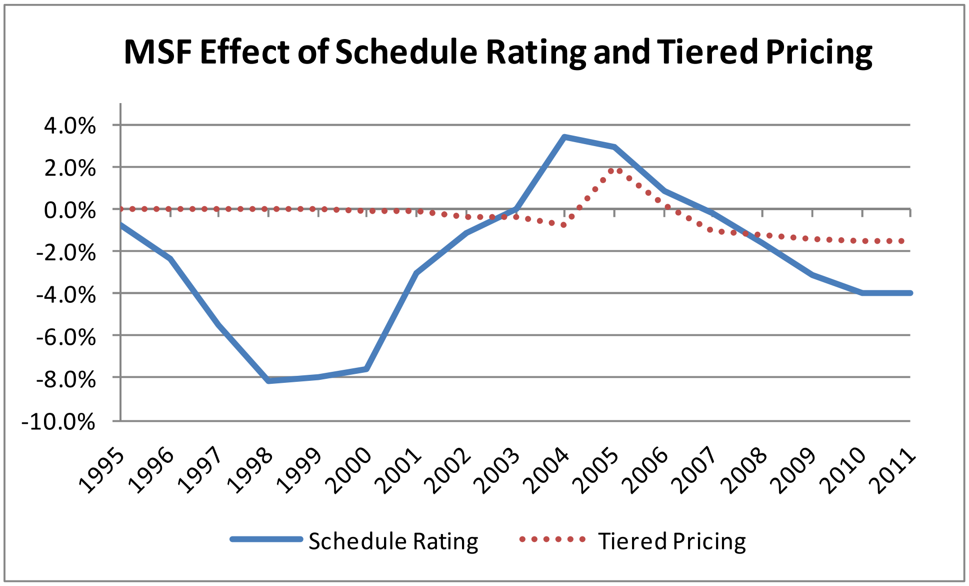
MSF Schedule Rating by Band Policies Effective 7/1/2011 through 4/30/2012			
Schedule Rating Modifier			
From	To	Accounts	% Accounts
0.6	0.7	8	0.035%
0.7	0.8	56	0.245%
0.8	0.9	178	0.779%
0.9	1.0	570	2.495%
1.0	1.0	21,794	95.383%
1.0	1.1	47	0.206%
1.1	1.1	119	0.521%
1.2	1.2	53	0.232%
1.3	1.3	15	0.066%
1.4	1.4	3	0.013%
1.5	1.5	3	0.013%
1.6	1.6	0	0.000%
1.7	1.7	2	0.009%
1.8	1.8	0	0.000%
1.9	1.9	0	0.000%
2.0	2.0	1	0.004%
		22,849	100.00%

We understand that the concentration of accounts in the table above with a modifier of 1.0 is driven by the large number of small businesses in the state that are too small to warrant schedule rating.

5) Based upon our conversations with staff at CSI, we understand that MSF has certain advantages in pricing relative to the private carriers in the market. For example, we understand that MSF does not pay premium tax. Additionally, private carriers face restrictions in terms of credits and debits that do not exist for MSF. The MSF schedule rating worksheet allows credits in individual categories as much as plus or minus 75%, with no limit on total credits or debits. While we did not have access to the schedule rating plans of the various private carriers, we understand that their plans are limited to credits or debits of 40%. The MSF loss cost multipliers for Tiered Rating 2.0 range from 0.801 to 1.977. Said another way, tiered rating allows MSF to apply rates that range from 20% below NCCI loss costs to nearly double NCCI loss costs. The combined effect

of tiered rating and schedule rating allows MSF to charge rates substantially below and above NCCI loss costs and beyond the levels available to private carriers in many cases.

The graph below shows the effects of schedule rating and pricing tiers over fiscal policy years 1995 and subsequent. While the net effects are relatively modest in most years, schedule rating impacts appear to cycle widely over time.



As a practical matter, any pricing flexibility that MSF possesses beyond what is available to private carriers could create an unlevel playing field that would make it difficult for private carriers to compete effectively. Accordingly, this could drive market share away from private carriers and toward MSF over time. Determining whether this situation is intended and whether it benefits or harms the businesses in Montana that are required to purchase workers compensation insurance would appear to be a matter to be decided by the legislature and other key policymakers in the state.

Suggested MSF Actions:

Based on our above findings, we recommend the following actions be taken with MSF:

- We would encourage MSF to engage a study of case reserves to determine why claim adjusters are reserving at a level so far above the actuarial estimates. Depending on the results of the study, adjustments may be required to actuarial methods or to case reserving policies, practices, and systems going forward.

- We would encourage MSF management to evaluate whether their schedule rating design and application overlap with their use of pricing tiers. Schedule rating should only be applied based upon characteristics that are not already reflected in the five variables of MSF tiered rating model.

DATA VALIDATION PROCEDURES

As described in the various TW reports and analyses, the data they use was provided by MSF. It should be noted that our review did not include any audit of the underlying data that fed the reports given to TW. Any audit of the data is beyond the scope of this engagement. We did review the descriptions of procedures as disclosed by TW to assess data validity. We concur with the opinion of CACI that TW procedures are consistent with relevant actuarial standards of practice.