Ohio Bureau of Workers' Compensation Comprehensive Study

Financial Provisions: SIEGF

Assessment Process: Self-Insurance

Report 1.3

Deloitte Consulting LLP
Group 1
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Contents

Executive Summary

Introduction

Currently, payments to claimants of insolvent self-insureds are provided for by the BWC through two mandatory funds:

- The Surplus Fund for claims occurring prior to 1987, and:
- The Self-Insured Employers' Guaranty Fund (SIEGF) for claims occurring in 1987 and subsequent.

In addition, there are optional funds related to the portion of the surplus fund that is used for disallowed claims, rehabilitation and handicap reimbursements for all self-insuring employers who have not made an election to opt out of that respective program. There are also two other mandatory funds that self-insured entities are assessed for, the Safety and Hygiene Fund and the Administrative Cost Fund. These funds were outside the scope of our review.

For the period covered by the Surplus Fund, self-insureds were required to post a security in the form of a surety bond to cover their outstanding liabilities in the event of an insolvency. To the extent these securities are not sufficient to fund the pre-1987 liabilities of insolvent self-insureds, those claims would be paid out of the Surplus Fund and recouped from the solvent self-insureds in the following years.

Losses for insolvent self-insureds occurring in 1987 and subsequent are funded by the SIEGF. Except for the few instances where a letter of credit may have been required from the insolvent entity, all losses are completely funded through the SIEGF.

Our high level findings and recommendations are presented below. The text and exhibits in the body of this report provide the details and rationale for our recommendations.

Conclusions

Findings

- The current funding of the SIEGF poses issues impacting financial strength and stability of the Ohio workers' compensation system, its effectiveness and efficiency, and the Ohio economy in general. These are summarized below:
  - The SIEGF is currently funded on a "pay as you go" basis through assessments on the active self-insureds based on prior SIEGF calendar year payments. Under this methodology, the assessments have large fluctuations from year to year and do not recognize future liabilities to SIEGF.
  - Insolvency of a large self-insured may result in a current increase in the financial burden on remaining self-insured employers which would continue on for many years until the last claimant is paid. It can effectively result in the "last company standing" footing the bill.
  - SIEGF has unlimited loss potential.
  - No difference in assessment rates based on the creditworthiness or financial strength of the self-insured employer other than the high-risk assessment (HRA), which is not calculated based on actual differences in cost.
  - Quality of data collected to date by BWC does not easily facilitate the quantification of true self-insurance exposure to risk.

Recommendations

- Our recommendations are as follows:
  - Consider a pre-assessment methodology to help improve the ability of SIEGF to address the cost of future bankruptcies and mitigate the additional financial burden that the insolvency of a large self-insured entity would pose to the remaining self-insured employers.
  - Change the self-insurance assessment process to allow for the proactive identification of industries or characteristics of employers that might pose a particularly high risk of future exposure to the SIEGF.
  - Change the self-insurance assessment process to temper potential volatility in future assessments.
  - Enhance quality and quantity of data collected from self-insured employers to facilitate measurement of self-insurance exposure.
  - Collect more detailed data from all self-insured employers on an ongoing basis in electronic format and/or required actuarial reports.
- Considering the recommendations, we recommend that the runoff of the liabilities for the existing insolvent self-insureds continue to be assessed under the current procedures and that the cost to the SIEGF of future bankruptcies should be mitigated by the enhanced collateral alternative described in this report. This alternative contemplates that every higher risk self-insured employer would be required to collateralize their actuarially estimated self-insured liabilities with a letter of credit (LOC), while the group of lower risk self-insured employers would only fund for the expected losses arising from the bankruptcy of self-insureds from their group in the upcoming year. Options for BWC to reinsure or securitize the risk to SIEGF for higher layers for the low risk entities should also be considered.

The Deloitte Consulting team appreciates the time and effort dedicated by BWC constituents over the course of this project to help us understand the self-insurance assessment process.

The Situation

Task Background

RFP Task Reference	RFP Task Description	Task Category
Section 5.1.2 #11, page 13	Review and make written recommendations with regard to assessments for self-insured employers for the surplus fund and for the Self-Insuring Employers' Guaranty Fund. This review would include an analysis on the loss history used for the calculation, the paid compensation basis, the projected payout, and the methodology used to calculate the assessment rates.	**SIEGF**
Section 5.1.2 #19.2, page 14	Evaluate the selection criteria used for self-insured employers. The analysis will include suggestions for the financial evaluation performed upon application and the use of guarantees and securities to protect the Self-Insured Guaranty Fund (SIEGF)	**SIEGF**
Section 5.1.2 #20, page 14	Evaluate the SIEGF sufficiency requirements and recommend criteria to be used for determining the methodology for the Administrator to establish self-insured employers' contributions to the SIEGF pursuant to Ohio Revised Code 4123.351. This analysis would include analysis of the BWC's historical funding of the SIEGF and recommendations for funding the SIEGF particularly whether the fund should be pre-assessment or post assessment.	**SIEGF**

As part of the BWC Comprehensive Study, the following report comprises Deloitte Consulting's deliverable of Section 5.1.2 Task #'s11, 19.2 and 20 of the BWC's Request for Proposal (RFP).

The primary objectives for this task were to:

- Develop an understanding of how the BWC currently provides for the payment of claims for insolvent self-insured entities.
- Compare and contrast with self-insured guaranty funds and security requirements in other states.
- Understand current self-insured issues as they apply to the BWC.
- Examine data received from the BWC from solvent self-insureds and the SIEGF.
- Identify cost and cash flow implications of various alternatives to current practice.
- Make improvement recommendations.

It should be noted that the first part of Task 19 ("19.1"), evaluating the selection criteria for self-insured employers, is not included here but is part of a separate review with Task 18.

Methodology

Completion of our SIEGF review involved the following activities:

- Key constituent interviews
- Data and documentation reviews
- Preparation of additional data requests
- Coordination with the Deloitte consultants who reviewed the acceptance process for self-insureds
- Review of other states' security requirements and funding for insolvent self-insureds
- Estimation of ultimate loss exposure for solvent and insolvent self-insureds
- Performing simulations to determine volatility of future cost alternatives
- Examining options to provide for the cost of future insolvencies
- Examining future costs and cash flows associated with potential options
- Determining recommendations and rationale

Deloitte Consulting practitioners met and interviewed members of BWC's Self-Insurance and Actuarial Departments to obtain a general background of self-insurance in the state of Ohio, and how losses for insolvent self-insured entities have been handled historically. Details related to this are provided in Appendix B.

Based on these interviews and initial documents provided to us by the BWC, an initial data request was prepared and sent to the BWC. This data request was comprehensive and included all information we felt would be needed for our review.

In addition, using information available from internet web sites and from the BWC, we compiled information on how self-insured insolvencies are handled by other states. This included a review of their security requirements and assessment methodologies. Also, follow-up interviews were held with representatives of the Ohio Self-Insurers Association (OSIA) and the BWC Legal, Actuarial and Self-Insurance Departments.

After receiving additional information in response to our data request, we examined the payout patterns and potential ultimate liabilities associated with both solvent and insolvent Ohio self-insureds. Simulations were run to estimate the potential future costs and the volatility associated with various funding alternatives, and formed the basis of our recommendations.

Primary Constituents

- **BWC Self-Insurance Department** – Responsible for managing the overall self-insurance process in Ohio
- **BWC Actuarial Department** – Responsible for collection of data and calculation of self-insured assessments
- **BWC Legal Department** – Responsible for coordination with bankruptcy administrators
- **Ohio Self-Insurers Association** – Represents self-insured employers in the state who are all ultimately affected by any recommended changes

Information and Data Gathered

Interviews

Deloitte Consulting practitioners conducted several interviews with BWC leadership and staff and representatives of the Ohio Self-Insurers Association to understand the current self-insurance situation, assessment processes, and issues as they relate to self-insured employers. The following individuals were interviewed:

- Assistant Director – Actuarial Department
- Director – Self-Insurance Department
- Supervisor – Self-Insurance Department
- Underwriter Supervisor – Actuarial Department
- Staff – Actuarial Department
- Bankruptcy Attorney – Legal Department
- President - Ohio Self-Insurers Association
- Former President - Ohio Self-Insurers Association

Information/Data Request

Deloitte Consulting was provided information at our initial meeting with the BWC and in response to subsequent data requests. We also reviewed information available on the BWC web site, as well as corresponding sites from other states. Appendix C itemizes the information we received and reviewed.

Review and Analysis

Benchmarking

Due to the unique situation in Ohio with regard to workers' compensation, true benchmarking against other states was not applicable. Besides being a monopolistic state for workers' compensation, the historical way it has provided for self-insured insolvencies is different from other states and has created a unique situation that needs to be addressed. In addition, among the individual states we reviewed, a number have been reviewing their own situation as it relates to self-insured's insolvencies and securitization. Thus it is not clear that a "best practice" actually exists in this area.

To get a sense of what other states are doing, we have examined the websites and information available for the following states: Ohio, Washington, California, Illinois, Indiana, Kentucky, Michigan, Texas, New York, North Carolina, Pennsylvania, and Nebraska. Below is the summary of our findings.

Self-Insurance Funds and Assessments

State	Individual/Group	Guaranty Funds	Assessments
Ohio	Individual	Self-Insured Employers Guaranty Fund, Safety and Hygiene Fund, Administrative Costs, and Surplus Fund	Assessments are based on calendar year payments and depend on self-insured's risk characteristics and losses.
Washington	Individual	Insolvency Fund Assessment	Assessed quarterly based on total reported claims costs.
California	Individual	California Self-Insurers' Security Fund	Assessments are prorated among members, subject to an annual maximum of 2% of the benefits a member has paid as claims in the previous calendar year.
	Individual	Alternative Security Program	Assessments are based on member's expected future liabilities and credit risks.
Illinois	Individual	Self-Insurers Security Fund, Rate Adjustment Fund, Second Injury Fund and Commission Operations Fund	The assessments shall be made on the basis of each self-insured's most recent payment into the rate adjustment fund – Not to exceed 1.2% of benefits paid in preceding calendar year.

State	Individual/Group	Guaranty Funds	Assessments
Indiana	Individual	Second Injury Fund	The assessments shall be based on the ratio that each self-insurer's payments of compensation bears to the total compensation paid by all self-insurers in the year preceding the year of assessment. Self-insurers are only responsible for the amount for all self-insured employers' portion of the assessment for the Second Injury Fund.
Kentucky	Individual	Separate guaranty funds for individual self-insured, group self-insured, and coal employer self-insured	Employers pay assessments to their applicable Guaranty Fund only.
Michigan	Individual	Self-Insured Security Fund, Second Injury Fund, Silicosis, Dust Disease and Logging Industry Compensation Fund	Assessments are based on the direct premium written in the previous year.
	Group	Group Fund	Assessment formula is not available.
Texas	Individual	Self-Insurer Guaranty Trust Fund	Assessment formula is not available.
New York	Individual	Not applicable	All self-insureds are assessed for all the costs associated with administering the self-insurance program, including security shortfalls for insolvent self-insureds.
	Group	Group Fund	Assessment formula is not available.
North Carolina	Individual	Self-Insured Security Fund	Assessments are based on member's credit rating and its pro-rata portion of the aggregate workers' compensation liabilities.

State	Individual/Group	Guaranty Funds	Assessments
Pennsylvania	Individual	WC Administration Fund, WC Supersedeas Fund, Subsequent Injury Fund and SI Guaranty Fund	The assessments are based on the ratio that each self-insurer's payments of compensation bears to the total compensation paid by all self-insurers in the year preceding the year of assessment – Not to exceed 1% of benefits paid in preceding calendar year.
	Group	Group Fund	Each member's annual assessment to the fund shall equal such member's annual payroll times the applicable rates utilized by the State Workmen's Insurance Fund minus the premium discount specified in Schedule Y as approved by the commissioner.
Nebraska	Individual	Workers Compensation Trust Fund	2 percent of workers compensation benefits paid in Nebraska during the preceding calendar year. All fund assessments are subject to a minimum of $25. When assessments reach $2,300,000, assessments cease until fund is depleted to $1,200,000, at which point assessments begin again.

Self-Insurance Security and Annual Reporting Requirements

State	Individual/Group	Security Requirements	Annual Reporting Requirements
Ohio	Individual	Security deposit may be required for certain self-insureds with a low Z-Score or in situations where the parent company does not provide guarantee of payments for a subsidiary.	Financial statement.
Washington	Individual	Minimum of $100,000 Letter of Credit or Surety Bond.	By July 1, 2008, all self-insurers must begin submitting claim information to L&I once a month using the new SIEDRS (pronounced "ciders").

State	Individual/Group	Security Requirements	Annual Reporting Requirements
California	Individual	Minimum of $220,000 security deposit for the California Self-Insurers' Security Fund program. There is no security deposit for the new Alternative Security Program (ASP) effective on July 1, 2003.	Claims paid, future liability on open claims, average number of employees and total wages for each adjusting location, a list of all open indemnity claims.
Illinois	Individual	Minimum of $200,000 security deposit.	Financial statement.
Indiana	Individual	Surety bond of at least $500,000 or two times the average of 3 year losses and total unpaid compensation liability, whichever is more.	Financial statement, loss runs.
Kentucky	Individual	The initial surety amount will be based upon the average of indemnity and medical losses during the three highest years of the preceding five years, or a minimum of $500,000.	Loss report and payroll report required.
Michigan	Individual	Minimum of $100,000 Letter of Credit or Surety Bond.	Claims in no less than 3 policy years, number of employees, payroll code, excess liability insurance term, etc.
	Group	Minimum of $1,000,000 fidelity bond and appropriate surety bond.	Bureau may require evidence that collected premium can cover all losses and expenses.
Texas	Individual	Minimum of $300,000 or 125 percent of the applicant's incurred liabilities for compensation, whichever is greater. Form of security can be a surety bond, cash, or irrevocable letter of credit.	Safety program on-site inspections, actuarial report, covered locations, etc.

State	Individual/Group	Security Requirements	Annual Reporting Requirements
New York	Individual	Effective July 1, 2008, the minimum deposit will be increased to $858,000. Every year that the employer remains self-insured, the security deposit is reviewed for adequacy, based upon the payroll codes, CIRB rates, and the employer's reported incurred losses.	Financial statement, payroll report, statement of claims and incurred losses. The claims must be reported within 10 days after occurrence of accident.
	Group	The amount of the initial security deposit will be based upon the current payroll report of the group members broken down by classification code, and rates developed by the Compensation Insurance Rating Board (CIRB).	Financial statement, payroll report, actuarial report.
North Carolina	Individual	Security deposit is not required in the new implemented Association Aggregate Security System ("AASS") effective November 30, 2007.	Information is not available.
Pennsylvania	Individual	Amount of security is no less than the amount of the applicant's total greatest annual incurred losses during the 3 policy years prior to application plus a security constant.	Information is not available.
	Group	Certain amount of security deposit is required.	Financial statement, summary loss report, reports of outstanding liabilities showing number of claims, paid and outstanding losses.
Nebraska	Individual	Security is required for all applicants except some political subdivisions, can be surety bond or trust, minimum of $500,000 or calculated loss reserves, whichever is greater.	Financial statement, payroll report, statement of claims and incurred losses.

Analysis

Under tasks #11, #19 and #20, we were asked to review the SIEGF assessment methodology, consider guarantees or securities that would protect the SIEGF, analyze the BWC's historical funding of the SIEGF and make recommendations as to whether the funding of the SIEGF should be done on a pre-assessment versus post-assessment basis. In order to accomplish these tasks, we performed the following steps:

- Projection of Ultimate Liability and payout for 2008 and Prior Self-Insured Employer Bankruptcies
- Evaluation of several Pre-Assessment alternatives versus the "as-is" Post-Assessment methodology for 2009 and Subsequent Self-Insured Employer Bankruptcies

For both of these steps, we estimated future costs for various alternatives for the SIEGF portion of the cost. Although Surplus Fund payments were included in the data underlying this analysis, we adjusted the data to exclude it since the recoveries for the pre-1987 losses from the Surety bonds fluctuated widely and it was felt that the liabilities for these years would be far less material in the future. In addition, for simplicity, we excluded costs associated with the DWRF, MCO Fees, and disallowed claims which are currently included with the SIEGF assessment.

Finally, our projections of the future assessments under the pre-assessment alternatives described later in this section are on a discounted basis. It is assumed that funding for the next year's bankruptcies will be collected at the beginning of the year, and earn interest over time until actual claim payments are made.

Methodology

Projection of Ultimate Liability for 2008 and Prior Self-Insured Employer Bankruptcies

In order to estimate the ultimate liability for self-insured bankruptcies that occur prior to December 31, 2008, we organized the paid loss & expense data as of December 2007 for both the Surplus Fund and the SIEGF by bankruptcy year (as opposed to accident year) from 1980 to 2007. The organization of the data by bankruptcy year allowed for the creation of more stable loss development patterns and eliminated the distortions that existed in the accident year data due to the addition of new self-insured employer insolvencies.

A limitation to our analysis (whether it was performed by accident or bankruptcy year) was the fact that we only were provided with calendar year 1993 and subsequent payments. As a result, we had to estimate the pre-calendar year 1993 payments for bankruptcy years 1980 to 1992 in order to utilize the loss development history of those years to generate long-tailed loss development patterns. Please find below a description of how we estimated the cumulative payments made prior to calendar year 1993 for bankruptcy years 1980 to 1992.

Our estimations of payments prior to calendar year 1993 are based on the assumptions that the age-to-age loss development factors don't vary much over time. The loss development data from bankruptcy years 1993 and subsequent was used to calculate the age-to-age loss development factors (LDF) which we then used to estimate the pre-calendar year 1993 payments for bankruptcy years 1980 to 1992. For example, the payments made prior to calendar year 1993 for bankruptcy year 1992 are equal to the calendar year 1993 payments for bankruptcy year 1992 divided by the 12-24 age to age development factor minus 1. Using the same approach, all of the calendar year payments made prior to calendar year 1993 for bankruptcy years 1980 to 1991 can be estimated.

Using the paid loss & expense development pattern which was selected based on the bankruptcy year paid loss & expense development triangle, the paid loss & expense for each bankruptcy year (1980 to 2007) was multiplied by the selected development factor to arrive at the indicated ultimate loss ("paid loss development method").

For bankruptcy year 2008, we estimated the ultimate losses by separately estimating the frequency of bankruptcies and the expected cost of each bankruptcy (trended to current year 2008 level). This process is described below.

Frequency

In order to estimate the number of expected bankruptcies per bankruptcy year, we did the following:

1. Reviewed the historical number of bankruptcies each year and took various averages. The mean number of bankruptcies per year over a 15-year period was 10. However, there were 8, 9, and 9 bankruptcies observed for 2005, 2006, and 2007, respectively.
2. Reviewed the number of bankruptcies of self-insured employers who were designated low risk versus those that received the high risk assessment (HRA) over a 15-year period For example, we would observe if an employer who received a high-risk assessment period went bankrupt in that given year. We then aggregated the number of observed bankruptcies for HRA self-insured employers and divided by the number of total observations (for HRA self-insured employers). We also aggregated the number of observed bankruptcies for non-HRA self-insured employers and divided by the number of total observations (for non-HRA self-insured employers). The observed frequency of bankruptcies was about four per year for HRA self-insured employers and five per year for non-HRA self-insured employers (for a total of 9 bankruptcies per year).

Thus, both methods produced similar results with an expected 9 to 10 bankruptcies per year. We selected 9 as our expected number of bankruptcies per year.

Severity

In order to estimate the expected severity of a given bankruptcy of a self-insured employer, we trended our indicated bankruptcy year ultimate losses (from the paid loss development method described above) for 1980 to 2007 to the current 2007 level using a 3.0% trend factor. We took various averages (5, 8, 10, 15 years) of the trended bankruptcy year ultimate losses (excluding 2006 and 2007) and selected $5.4 million as the expected severity for a self-insured employer bankruptcy in 2007.

Thus, the trended severity for a self-insured employer bankruptcy in 2008 is $5.6 million. Since our expected number of bankruptcies is 9, the expected bankruptcy year 2008 losses are $50.3 million ($5.6 million times 9 bankruptcies).

Bornhuetter-Ferguson Method, Ultimate Loss Selection and Discounting

To obtain a second estimate of ultimate losses for each bankruptcy year, we also conducted the paid Bornhuetter-Ferguson method. This is a method that adds an estimate of future “expected” paid losses to losses paid to date for each bankruptcy year to come up with an estimate of ultimate losses for the year. The expected loss for each bankruptcy year was calculated by multiplying the 2007 expected loss per bankruptcy of $5.4 million (detrended by 3.0% for the appropriate time period for each bankruptcy year) by the number of actual bankruptcies for that given bankruptcy year. The indicated ultimate loss for the Bornhuetter-Ferguson method was then calculated by multiplying this expected loss by the expected percentage of unpaid bankruptcy year losses implied by the paid loss development factors, and adding it to the cumulative paid losses to date,

To select the ultimate loss for each bankruptcy year, we used the following criteria: If the paid loss & expense development factor was less than 2, we selected the indicated ultimate loss from the paid loss development method. If the paid loss & expense development factor was greater than 2 but less than 4, we weighted the indicated ultimate loss from the two methods based on straight-line interpolation. If the paid loss & expense development factor was greater than 4, we selected the indicated ultimate loss from the paid Bornhuetter-Ferguson method.

We then projected the payout of the ultimate liability for 2008 and prior bankruptcies using the selected paid loss & expense development pattern. The ultimate liability for all self-insured bankruptcies that occur prior to December 31, 2008 is then calculated by summing the estimated payments made in calendar years 2009 and subsequent. The ultimate liability used for our model was $576.4 million as of December 31, 2008. This represents the liability for both the SIEGF (post-1986) and the Surplus Fund (pre-1987). To determine the SIEGF only CY payments and reserves as of December 31, 2008, we estimated the ratio of the calendar year paid losses due to post-1986 occurrences to total calendar year paid losses by reviewing historical ratios. We observed the ratio to be increasing calendar upon calendar year. Therefore we set the SIEGF-only ratio to 57.5% for calendar year 2008 and increased the ratio for each calendar year by 0.005% for bankruptcies occurring in 2008 and prior, and 5.0% for bankruptcies occurring subsequent to 2008. The SIEGF only losses are run through the current assessment model utilized by BWC to determine the future SIEGF assessments for bankruptcies occurring in 2008 and prior.

As indicated previously, the current assessment procedure results in an unfunded liability being created for the liability of insolvent self-insurers. Using the assumptions of the previous paragraph, as of December 31, 2008, we estimated the SIEGF portion of that to be $354.6 million. Rather than presenting alternatives to fund for this immediately, our estimate uses the current assessment methodology to run off the payments for these losses, thus reducing the unfunded liability over time. As can be seen from the results on Table 1, this can produce large fluctuations over time. A methodology utilizing expected loss payments, along with a provision for addressing differences in actual versus expected payments, and a shorter time lag could smooth out some of these fluctuations.

Evaluation of Assessment Alternatives for 2009 and Subsequent Self-Insured Employer Bankruptcies

We then considered assessment alternatives and estimated the costs under these alternatives for 2009 and subsequent self-insured employer bankruptcies. The following six pre-assessment alternatives were considered along with the "as-is" post-assessment methodology.

Post-Assessment

(1) Current Post-Assessment – This is the "as-is" alternative assuming no changes to the current assessment process. In determining the future calendar year costs, expected calendar year payments for post-2008 bankruptcies were added to the 2008 and prior runoff payments described previously and run through the current BWC methodology.

Pre-Assessment

(2) Flat-Rate Pre-Assessment – This alternative contemplates assessing self-insured employers for the estimated cost of all bankruptcies in a given calendar year. There is no differentiation in assessment rates allocated to each self-insured employer.

(3) Risk-Based Pre-Assessment – This alternative contemplates assessing self-insured employers based on the potential risk that each employer bears to the SIEGF. The overall estimated costs are the same as in (2) but higher risk self-insureds would pay proportionately more than lower risk self-insureds.

(4) Risk-Based Pre-Assessment with Reinsurance purchased for losses in $25M excess of $35M layer – This alternative is identical to the prior alternative except that bankruptcy year losses in the $25M excess of $35M layer are reinsured. Although average costs under this alternative would be slightly higher, it would serve to limit the overall cost to the self-insured entities in the more severe years.

(5) Collateralized – This alternative contemplates the requirement of all self-insured employers to collateralize their actuarially determined expected outstanding self-insured liabilities with a Letter of Credit (LOC). An actuarial study by an appropriately qualified actuary would be required for each self-insured entity to provide an estimate of the amount of the applicant'self-insurance liabilities.

(6) Enhanced Collateralized – This alternative contemplates the requirement for higher risk self-insured employers to collateralize their actuarially determined expected outstanding self-insured liabilities with a LOC, while the group of lower risk self-insured employers would only fund for the expected losses arising from the bankruptcies of self-insureds from their group in the upcoming year. An actuarial study by an appropriately qualified actuary would be required for each higher risk self-insured entity to provide an estimate of the amount of the applicant's self-insurance liabilities.

(7) Enhanced Collateralized with Reinsurance purchased for losses in $25M excess of $25M layer – This alternative is identical to the prior alternative except that bankruptcy year losses in the $25M excess of $25M layer are reinsured for the lower risk self-insured employer group.

Simulations

In order to provide a basis for evaluating the variability of estimated costs, we simulated the expected cost of self-insured employer bankruptcies for a given bankruptcy year by using a frequency/severity model for each risk group. The risk groups were determined by using Altman z-score to split the self-insured population into two groups: (1) Low risk – with Altman z-score above 1; and (2) High risk – with Altman z-score below 1. For simplicity sake, we used only two groups.

Our approach uses stochastic simulation to determine non-exceedence probabilities for bankruptcy losses. Non-exceedence probabilities display the probability of losses in total or by loss layer not exceeding a predetermined confidence level. The stochastic simulation for a given bankruptcy year relies on two distributions:

(1) Frequency – A poisson is assumed for the expected number of bankruptcies. The mean and variance was selected based on the number of historical self-insured bankruptcies for each year. The Poisson distribution is frequently used by actuaries to model the number of claims (in this case, the number of bankruptcies). The Poisson distribution requires one input variable, the expected (mean) number of bankruptcies in one annual period. The Poisson distribution typically works best for modeling periods with stable financial conditions. Consequently, this model can be useful to compare the impact of various alternatives considered, but such a model would not reflect current economic conditions.

(2) Severity – A lognormal distribution is assumed for the expected severity of a bankruptcy (i.e., average self-insured losses assumed by SIEGF per bankruptcy). The mean and variance is based on the historical average cost of self-insured bankruptcies. The lognormal distribution is frequently used by actuaries to model claim severity. The distribution requires two input variables, the mean and standard deviation of the ultimate loss per bankruptcy. The Lognormal distribution works best for modeling periods with stable financial conditions. Consequently, this model can be useful to compare the impact of various alternatives considered, but such a model would not reflect current economic conditions.

Monte Carlo Simulation was used to simulate bankruptcy ultimate losses for various non-exceedence probabilities. The simulation was performed 10,000 independent times. For each of the 10,000 simulations, a random number of bankruptcies were generated based on the Poisson distribution and for each of these bankruptcies, a loss value was randomly generated based on the lognormal distribution. Depending on the amount of loss generated for a particular bankruptcy, the loss associated with any layer of loss can be determined. When all bankruptcy losses have been generated, the losses for the various layers are summed over all bankruptcies to obtain the total losses or losses by layer for the one simulation.

Discount

We then simulated the payout of the total bankruptcy losses for a given bankruptcy year by assuming a log-normal distribution for the payment pattern selected previously. The loss payouts are then discounted back to January 1, 2009 using a 3.0% discount rate. The expected undiscounted bankruptcy year 2009 losses are $51.9 million. We then calculated the SIEGF portion of the ultimate losses using 57.5% base ratio (for 2008) and a 5.0% growth assumption. The expected undiscounted bankruptcy year 2009 losses for SIEGF only are $31.3 million (57.5% * 1.05 of $51.9 million); $17.4 million for lower risk self-insured employers and $13.9 million for higher risk self-insured employers. The expected discounted bankruptcy year 2009 losses for SIEGF only are $20.8 million.

Estimated Costs for Pre-Assessment Alternatives for Bankruptcy Year 2009 and Subsequent

For each of the six pre-assessment alternatives, we then used the simulated results of the models to calculate the total expected cost (SIEGF only) for each bankruptcy year for 2009 through 2018. The methodology used to estimate costs for bankruptcy year 2009 are described below.

(2) Flat-Rate Pre-Assessment – The total cost of bankruptcy year 2009 losses for SIEGF only are $20.9 million on a discounted basis. $18.8 million of these losses would be assessed against the 90.0% of self-insured employers (current total of 1,275) who did not receive the HRA (Altman Z-score greater than 1). $2.1 million of those losses would be assessed against the 10% of self-insured employers who did receive the HRA (Altman Z-Score less than 1). The 90%/10% distribution is based on our observation of the historical number of those self-insured employers who don’t receive/receive the HRA.

(3) Risk-Based Pre-Assessment – Under this alternative, 56% of the $20.9 million of discounted bankruptcy year 2009 losses would be assessed against the non-HRA self-insured employers and 44% would be assessed against the HRA self-insured employers based on the expectation that 5/9 of the expected number of bankruptcies would be from non-HRA self-insured employers and 4/9 would be from HRA self-insured employers. Thus, the HRA self-insured employers would be assessed $9.2 million as opposed to $2.1 million (increase of $7.2 million) in Pre-Assessment Alternative #2. The non-HRA self-insured employers would likewise see a decrease in their assessment of $7.2 million down to $11.6 million. Thus, the total costs of $20.9 million under this alternative are identical to Alternative #2.

(4) Risk Based Pre-Assessment with Reinsurance purchased for losses in $25M excess of $35M layer – The cost under this alternative is the $20.9 million of discounted bankruptcy year 2009 losses plus the estimated cost of $2.9 million to reinsure the $25M excess of $35M layer for a total of $23.8 million. The estimated reinsurance cost is equal to the simulated losses at the expected level in the $25M excess $35M layer multiplied by 125% to account for the reinsurer's expenses & profit. The $25M excess $35M layer represents simulated bankruptcy year losses between the 70% and 95% confidence levels.

(5) Collateralized – The cost under this alternative is based on the requirement of all self-insured employers to collateralize their expected outstanding self-insured liabilities with a Letter of Credit (LOC). We first estimated the total unpaid loss & expense as of December 31, 2008 for all self-insured Ohio employers to be $3.981 billion. This estimate is obtained by multiplying the number of self-insured employers (1,275) multiplied by the estimated cost of a 2007 bankruptcy ($5.4 million), multiplied by the expected % of SIEGF payments to total SIEGF/Surplus Fund payments (57.5%). We then estimated that the LOC costs would be 100bps for the non-HRA self-insured employers and 200bps for the HRA self-insured employers. Multiplying the total unpaid loss & expense by the 90% of the employers who don't receive the HRA assessment and then multiplying by the estimated LOC cost of 1% equals $35.8 million. Multiplying the total unpaid loss & expense by the 10% of the employers who get the HRA assessment and then multiplying by the estimated LOC cost of 2% equals $8.0 million. In addition, at the expected level, there are bankruptcy losses that will exceed the collateral posted by individual self-insured employers who go bankrupt. We have estimated this additional cost to be $5.9 million. Thus, the total estimated costs under this alternative are $49.7 million.

(6) Enhanced Collateralized – Under this alternative, the HRA self-insured employers are required to collateralize their expected outstanding self-insured liabilities but non-HRA self-insured employers have no such requirement. Thus, the cost for HRA self-insured employers under this alternative is identical to the $8.0 million estimate from Alternative #5 plus the expected level of their losses that will exceed the collateral which we estimate to be $2.5 million. For the non-HRA self-insured employers, the estimated cost of $11.60 million is the same as under Alternative #3. Thus, the total estimated costs under this alternative are $22.2 million.

(7) Enhanced Collateralized with Reinsurance purchased for losses in $25M excess of $25M layer –The cost under this alternative is the $22.2 million estimate from Alternative #6 plus the estimated cost of $3.3 million to reinsure the $25M excess of $25M layer for a total of $25.5 million. The estimated reinsurance cost is equal to the simulated losses at the expected level in the $25M excess $25M layer multiplied by 125% to account for the reinsurer's expenses & profit. The $25M excess $25M layer represents simulated bankruptcy year losses between the 70% and 95% confidence levels.

Summary of Costs at Expected Confidence Level

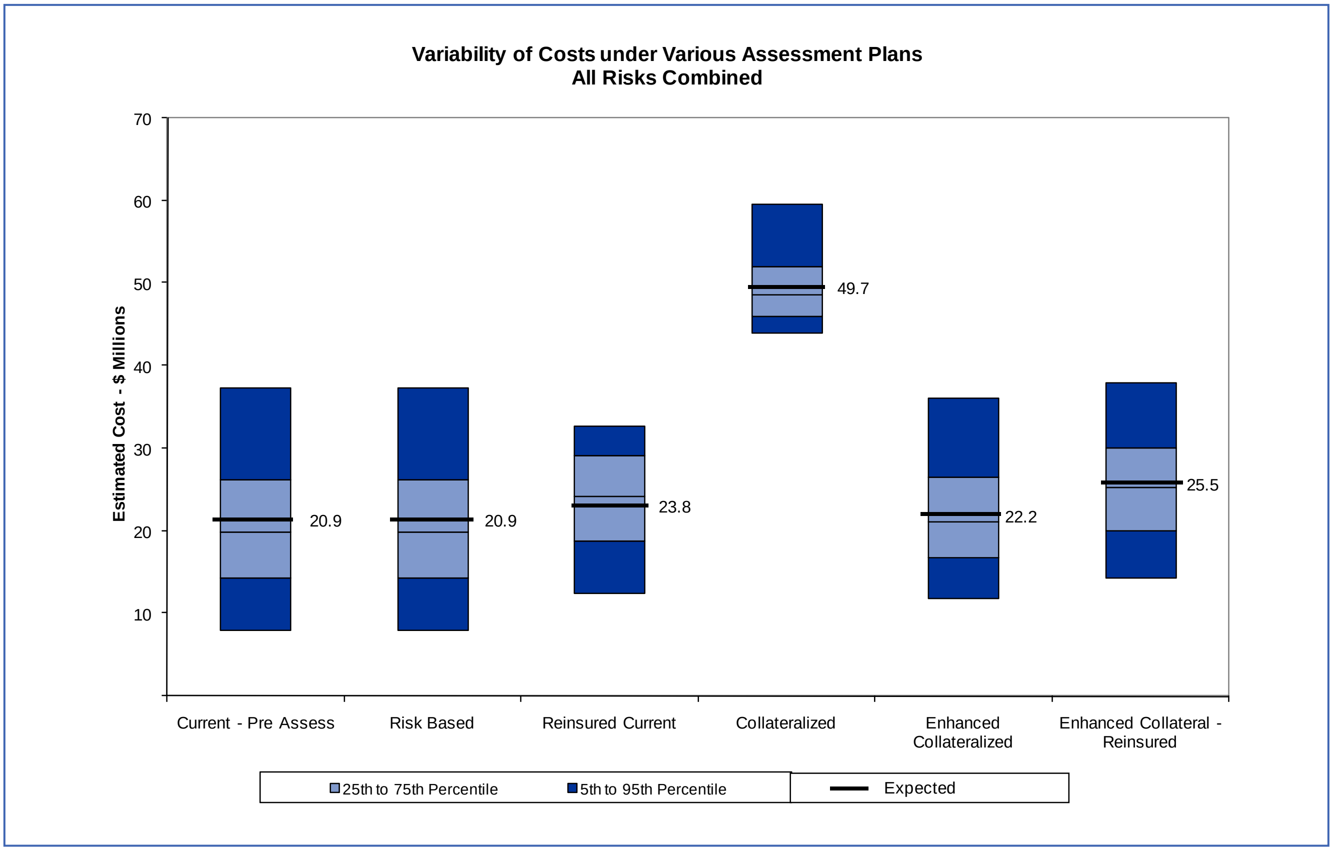
Please see Table 1 for the total payments for calendar years 2009 through 2018 for all six pre-assessment alternatives and the "as-is" post-assessment method. The table shows (a) the run-off of SIEGF costs associated with bankruptcy years 2008 and prior, (b) the estimated going-forward costs under the six pre-assessment alternatives for bankruptcy years 2009 and subsequent, and (c) the combined run-off and going-forward costs for all bankruptcy years.

Table 1

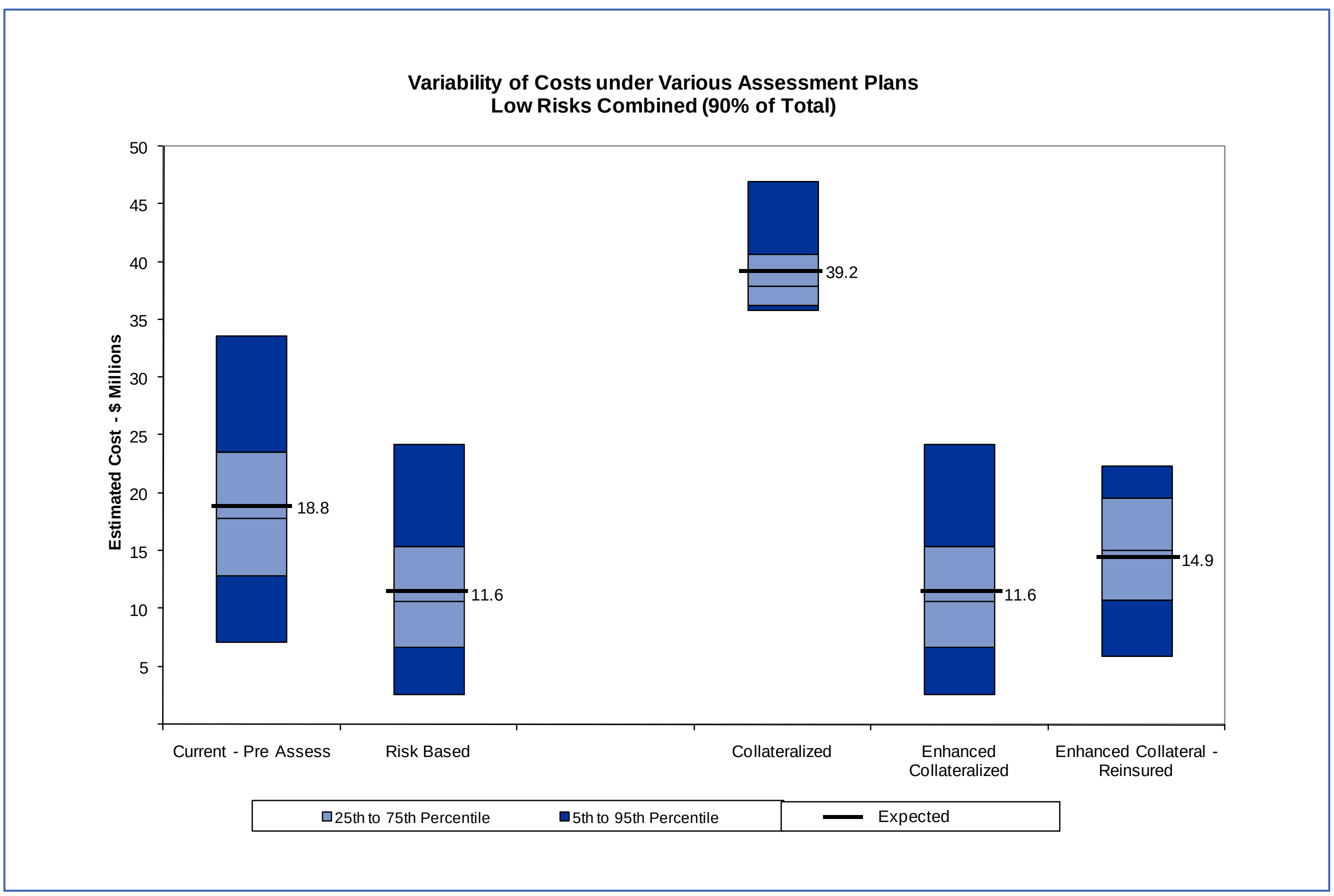
Estimated Costs by SIEGF Assessment Structure (in Millions)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Run-off Costs	11.5	.0	.0	12.3	27.3	30.5	16.5	.0	.0	5.7
Going Forward										
(1) Current – Post Assess	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
(2) Current – Pre Assess	20.9	22.6	24.4	26.4	28.6	30.9	33.4	36.2	39.1	42.3
(3) Risk Based Assess	20.9	22.6	24.4	26.4	28.6	30.9	33.4	36.2	39.1	42.3
(4) Reinsured 25M excess of 35M	23.8	25.7	27.8	30.1	32.5	35.2	38.0	41.1	44.5	48.1
(5) Collaterized	49.7	53.8	58.1	62.9	68.0	73.6	79.6	86.0	93.0	100.6
(6) Enhanced Collaterized	22.2	24.0	26.0	28.1	30.4	32.9	35.5	38.4	41.6	44.9
(7) Enhanced Collateralized - Reinsured 25M excess of 35M	25.5	27.6	29.8	32.2	34.9	37.7	40.8	44.1	47.7	51.6
Run-off + Going Forward										
(1) Current – Post Assess	11.5	.0	.0	22.4	46.1	50.1	30.3	9.2	10.0	34.1
(2) Current – Pre Assess	32.4	22.6	24.4	38.7	55.8	61.4	49.9	36.2	39.1	48.0
(3) Risk Based Assess	32.4	22.6	24.4	38.7	55.8	61.4	49.9	36.2	39.1	48.0
(4) Reinsured 25M excess of 35M	35.3	25.7	27.8	42.4	59.8	65.7	54.6	41.1	44.5	53.8
(5) Collaterized	61.3	53.8	58.1	75.2	95.3	104.1	96.1	86.0	93.0	106.4
(6) Enhanced Collaterized	33.7	24.0	26.0	40.4	57.6	63.4	52.0	38.4	41.6	50.7
(7) Enhanced Collateralized - Reinsured 25M excess of 35M	37.0	27.6	29.8	44.5	62.1	68.2	57.3	44.1	47.7	57.3

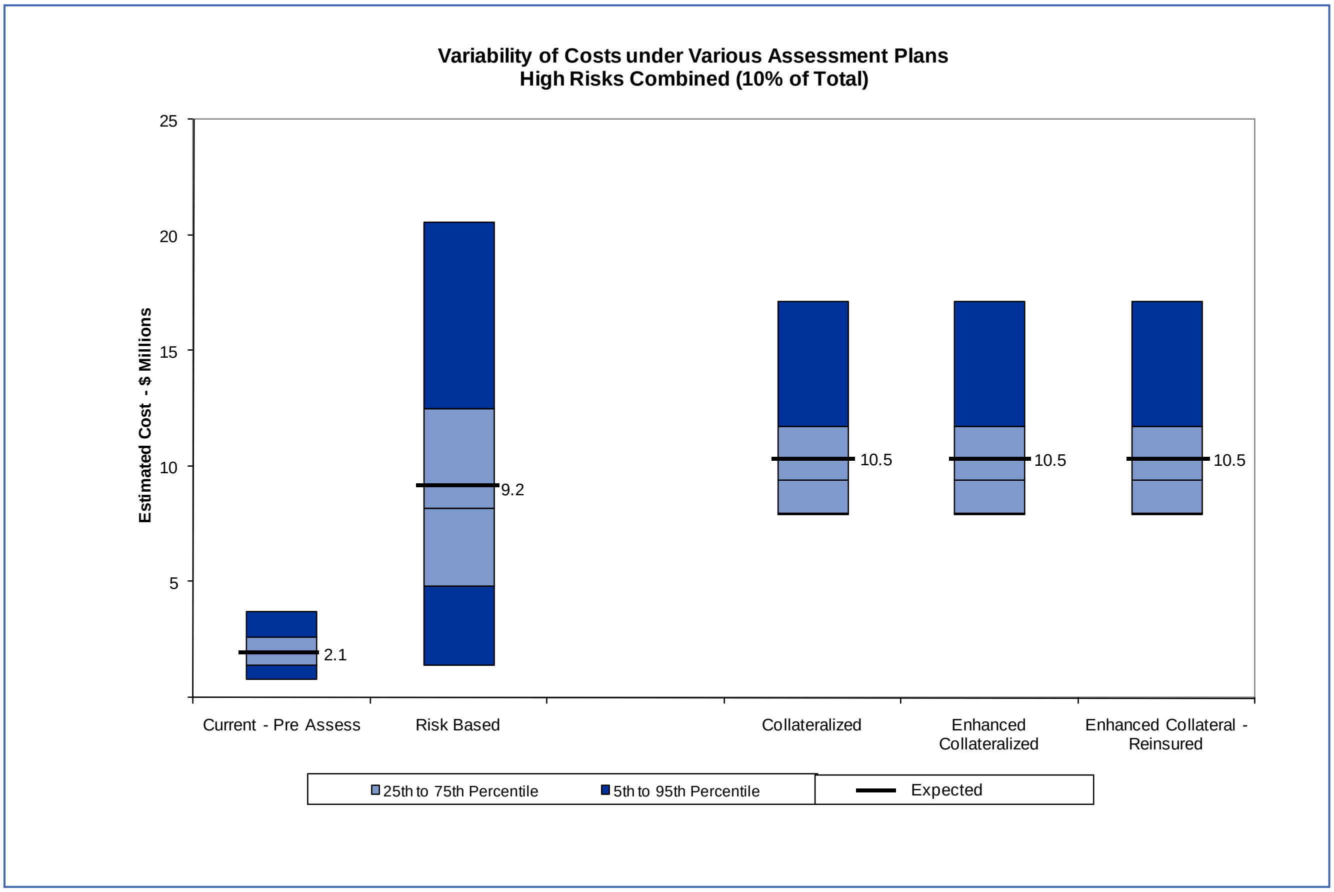
The graphs on the following pages display the bankruptcy year 2009 losses for all six pre-assessment alternatives for all self-insureds and then separately for the low risk and high risk self-insureds. The graphs show the variability in costs at various confidence levels for each alternative.



Variability of Costs under Various Assessment Plans
All Risks Combined
Estimated Cost - $ Millions
70
60
50
40
30
20
10
49.7
20.9
20.9
23.8
22.2
25.5
Current - Pre Assess
Risk Based
Reinsured Current
Collateralized
Enhanced Collateralized
Enhanced Collateral - Reinsured
25th to 75th Percentile
5th to 95th Percentile
Expected



Variability of Costs under Various Assessment Plans
Low Risks Combined (90% of Total)
Estimated Cost - $ Millions
50
45
40
35
30
25
20
15
10
5
39.2
18.8
11.6
11.6
14.9
Current - Pre Assess
Risk Based
Collateralized
Enhanced Collateralized
Enhanced Collateral - Reinsured
25th to 75th Percentile
5th to 95th Percentile
Expected



Variability of Costs under Various Assessment Plans
High Risks Combined (10% of Total)
Estimated Cost - $ Millions
25
20
15
10
5
2.1
9.2
10.5
10.5
10.5
Current - Pre Assess
Risk Based
Collateralized
Enhanced Collateralized
Enhanced Collateral - Reinsured
25th to 75th Percentile
5th to 95th Percentile
Expected

Conclusions

Findings

The current funding of the SIEGF poses issues impacting financial strength and stability of the Ohio workers' compensation system, its effectiveness and efficiency, and the Ohio economy in general. Specifically, the SIEGF is currently funded on a "pay as you go" basis through assessments on the active self-insureds based on prior SIEGF calendar year payments. Under this methodology, the assessments have large fluctuations from year to year and do not recognize future liabilities to the SIEGF.

In addition, insolvency of a large self-insured may result in a current increase in the financial burden on remaining self-insured employers which would continue on for many years until the last claimant is paid. This can effectively result in the "last company standing" footing the bill.

Other issues that impact the financial strength and stability of the Ohio workers' compensation system are:

- SIEGF has unlimited loss potential.
- No difference in assessment rates based on the creditworthiness or financial strength of the self-insured employer other than the high-risk assessment (HRA) which is not calculated based on actual differences in cost.
- Quality of data collected to date by BWC does not easily facilitate the quantification of true self-insurance exposure to risk.

Performance Assessment

We assessed the performance of the Ohio workers' compensation system compared to these four overarching themes: Effectiveness & Efficiency; Financial Strength & Stability; Transparency; and Ohio Economic Impact. Each broad study element (Ohio Benefit Structure; Pricing Process; Cost Controls; Financial Provisions; and Actuarial Department Functions & Resources) is reviewed with these themes in mind to develop a performance assessment of the current state. Our performance assessment is made on each element in the context of its contribution to supporting the overarching themes.

For these performance assessments, the following scoring method applies:

●	Strongly supports system performance
◕	Supports system performance
◑	Some support for system performance
◔	Some opportunity for system performance change/enhancement
○	Significant opportunity for system performance change/enhancement

Based on this scoring method, here is the performance assessment for SIEGF area:

Peers and Industry Standards Considered

Other States Security/Guaranty Fund Requirements.

Recommendations

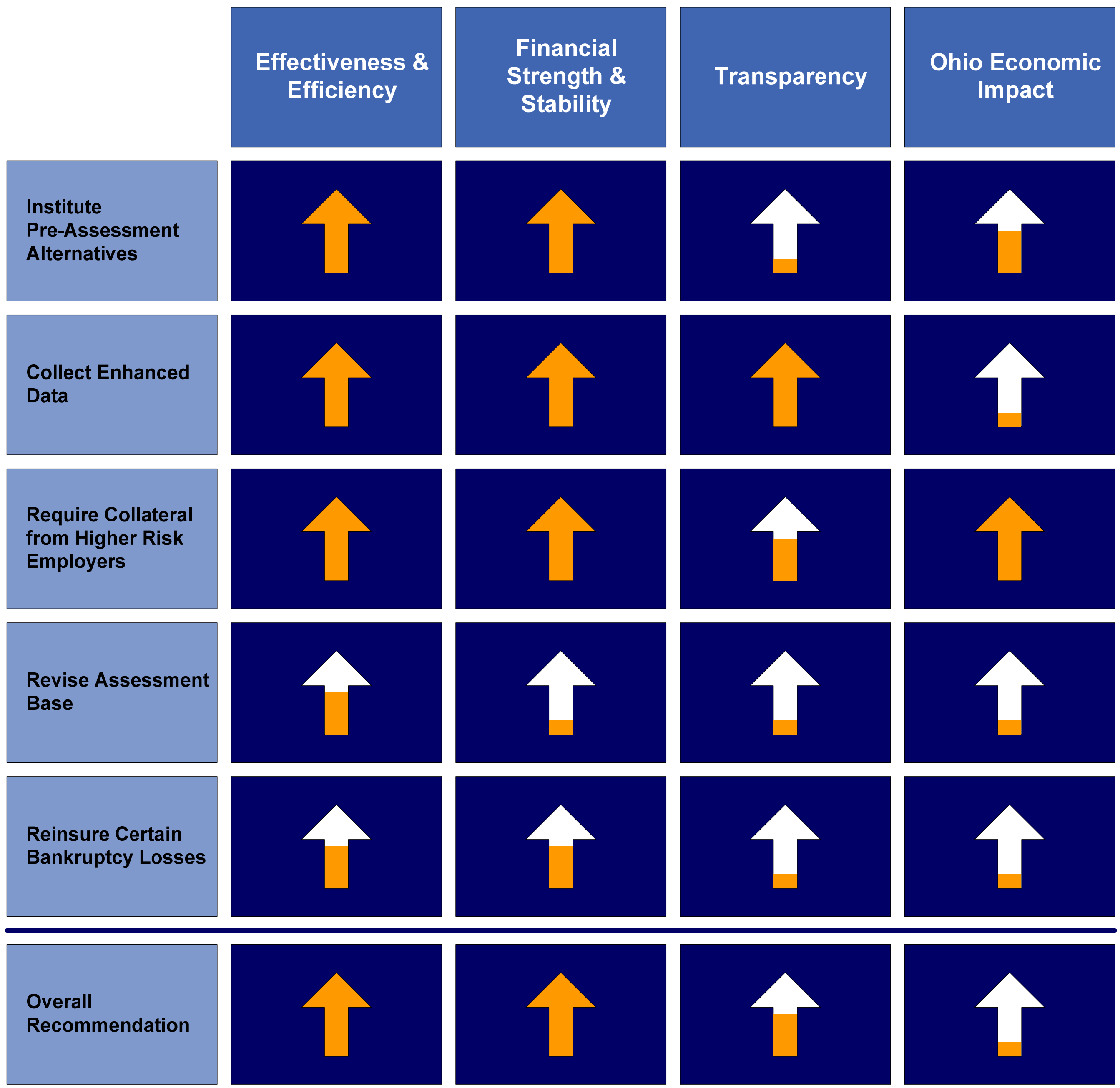
Our recommendations based on our analysis are as follows:

1. **Institute Pre-Assessment Alternatives**: Consider instituting one of the pre-assessment alternatives in order to build a surplus to help improve the ability of SIEGF to pay for future self-insured employer bankruptcies, mitigate the additional financial burden that this would pose to remaining self-insured employers and minimize the fluctuations in SIEGF assessments. The pre-assessment rate would be based on the estimated ultimate discounted cost of self-insured bankruptcies for a given bankruptcy year as opposed to the "as-is" post-assessment rate which is based on prior calendar year payments. Although overall costs to the self-insured employers under the pre-assessment alternatives may be greater than the current "as-is" methodology, the volatility in future assessments would be tempered and costs for low-risk self-insureds would be lower than the costs for high-risk self-insureds, thereby providing a better matching of expected costs with the risk that a given self-insured poses to the SIEGF.
2. **Collect Enhanced Data**: Enhance the quality and quantity of data collected from self-insured employers to facilitate measurement of self-insurance exposures. This would include the collection of more detailed data from all self-insured employers on an ongoing basis in electronic format and/or required actuarial reports.
3. **Require Collateral from Higher Risk Employers**: Self-insured employers whose exposure poses a greater risk to the SIEGF should be required to collateralize their expected outstanding self-insured liabilities with an LOC. An actuarial study by an appropriately qualified actuary would be required for each self-insured entity to provide an estimate of the amount of the applicant's self-insurance liabilities.
4. **Revise Assessment Base**: Change the base for assessing from calendar year paid compensation to actuarially determined unpaid loss & expense (indemnity, medical & ALAE) for each self-insured employer, which is a better measure of the exposure of self-insured bankruptcies to the SIEGF.
5. **Reinsure Certain Bankruptcy Losses**: The BWC should also explore the cost of reinsuring the bankruptcy losses for certain excess layers (i.e., $25M excess $25M layer) for low-risk self-insureds under the enhanced collateralized with reinsurance alternative (#7).

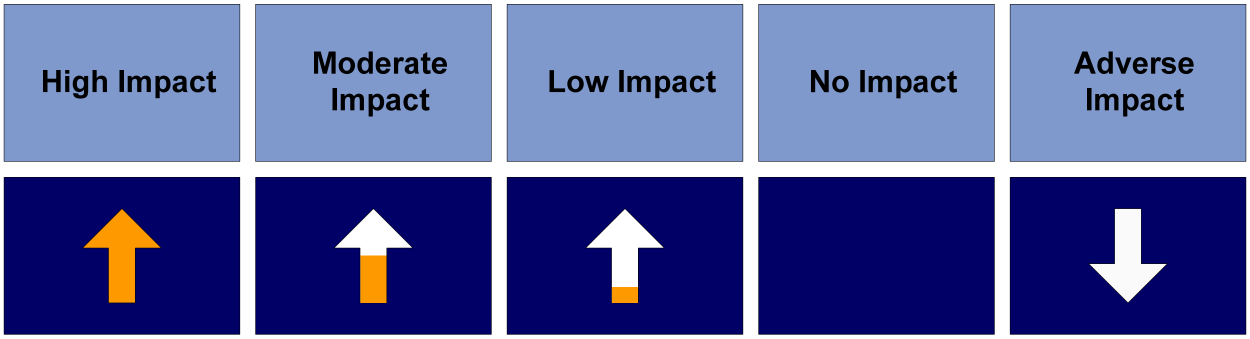
Overall Recommendation – Use Enhanced Collateral Alternatives and Reinsurance: Considering the comments above, we would recommend the enhanced collateralized alternatives (#6 and #7) and examine the cost of having third-party reinsurers or the capital markets reinsure aggregate losses over various retentions. Under alternatives #6 and #7, the SIEGF and reinsurers would only be exposed to potential bankruptcy losses for those self-insureds who are not deemed high risk, and those self-insureds should have a lower exposure to unexpected SEIGF losses.

Impact

The impact (high, moderate, or low) of these recommendations as they relate to the overarching themes is shown in the following table:



Legend



The Deloitte Consulting team remains available to clarify or amplify any issues raised in this report. We express our appreciation for BWC process constituents' time, effort and guidance in completing this integral task of our comprehensive study.

Appendix A – Deliverable Matrix

Group 1 Study Elements

Pricing Process
Statewide Rate Level
1) Data
a) Data quality and reliability
b) Experience period
c) Credibility
d) Payroll information
e) Paid versus incurred data
2) Methodology
3) Use of Reserves
4) ELR Comparison
5) Other
Class Ratemaking
1) Private Employer
2) Public Employer Taxing District
3) Rating Rules and Laws
Experience Rating
1) Grouping of employers for experience rating
2) Individual Experience Rating
3) Use of MIRA II
4) Possible Alternatives
Self-Insurance
1) Approval Process
2) Return to BWC
Programs
1) Premium Discount Program
2) Drug Free Workplace Program
3) Safety Council Program
4) One Claim Program
Alternative Pricing Methods

Cost Controls
Subrogation
$15,000 Medical Only Program
Salary Continuation

Financial Provisions
SIEGF
1) Sufficiency Requirements
2) Contribution Calculation Methodology
3) SIEGF Assessments
4) Surplus Fund Assessments

Pricing Process Areas

Statewide Rate Level	Tasks Involved
1) Data	1. Review and make written recommendations with regard to the private employer premium and public employer taxing district rate calculations. This review would include a complete analysis of the rating program including but not limited to the experience period, the credibility tables used, loss information including quality and reliability of the data, payroll information, the off-balance calculation, the expected loss rates, the grouping of employers for experience rating, the use of reserves in the rate calculation, the payroll inflation factors, rating rules and laws, the transparency of the rate making process, and all rating calculations. This analysis should compare the BWC's rating calculation to industry standards, other state insurance funds and monopolistic state insurance funds, actuarial ratemaking principles as promulgated by the Casualty Actuarial Society, and the Actuarial Standards of Practice promulgated by the Actuarial Standards Board of the American Academy of Actuaries.
a) Data quality and reliability	
b) Experience period	
c) Credibility	
d) Payroll information	
e) Paid versus incurred data	
2) Methodology	
3) Use of Reserves	12. Review and make written recommendations on the reserving methodology used in the rate making process. This evaluation would include a review of the current MIRA reserving system, an evaluation of the new MIRA II Reserving system expected to be implemented in 2008 and alternative reserving methodologies that can be incorporated into the BWC experience rating system which will make the system more transparent. This evaluation would include the practice of reducing reserves due to certain compensation payments or the nonreserving of claims due to certain injury types.
4) ELR Comparison	24. Conduct a study of the loss rates and base rates of the Ohio BWC as compared to other states. This study would evaluate the trends in Ohio as compared to industry peers.
5) Other	1. See above.

Pricing Process Areas - continued

Class Ratemaking	Tasks Involved
1) Private Employer 2) Public Employer Taxing District 3) Rating Rules and Laws	1. Review and make written recommendations with regard to the private employer premium and public employer taxing district rate calculations. This review would include a complete analysis of the rating program including but not limited to the experience period, the credibility tables used, loss information including quality and reliability of the data, payroll information, the off-balance calculation, the expected loss rates, the grouping of employers for experience rating, the use of reserves in the rate calculation, the payroll inflation factors, rating rules and laws, the transparency of the rate making process, and all rating calculations. This analysis should compare the BWC's rating calculation to industry standards, other state insurance funds and monopolistic state insurance funds, actuarial ratemaking principles as promulgated by the Casualty Actuarial Society, and the Actuarial Standards of Practice promulgated by the Actuarial Standards Board of the American Academy of Actuaries.

Pricing Process Areas - continued

<table>
<tr><th>Experience Rating</th><th>Tasks Involved</th></tr>
<tr><td>1) Grouping of employers for experience rating</td><td rowspan="4">6. Review and make recommendations to enhance the equity of the experience-rating system and the resulting rates (public and private), including, but not limited to, discounts and dividends. This review would include analysis of the Drug Free Workplace program, the One Claim Program, the Premium Discount Program, the group rating program, and the safety council program. The analysis should include a study of the cost effectiveness of each program and an evaluation of each program with respect to industry standards.</td></tr>
<tr><td>2) Individual Experience Rating</td></tr>
<tr><td>3) Use of MIRA II</td></tr>
<tr><td>4) Possible alternatives</td></tr>
</table>

Pricing Process Areas – continued

Self-Insurance	Tasks Involved
1) Approval Process	19. Evaluate the selection criteria used for self-insured employers. This evaluation would include the application of rules and laws in determining the employer's ability to manage and fund a self-insured program. The analysis will include suggestions for the financial evaluation performed upon application and the use of guarantees and securities to protect the Self-Insured Guaranty Fund (SIEGF).
2) Return to BWC	18. Evaluate the BWC rules, laws, policies and procedures for rating an employer who is self-insured and desires to return to the state insurance fund. This evaluation would include the experience modifier selected, the use of self insured experience, and the future liability for Ohio.

Pricing Process Areas – continued

Programs	Tasks Involved
1) Premium Discount Program 2) Drug Free Workplace Program 3) Safety Council Program 4) One Claim Program	6. Review and make recommendations to enhance the equity of the experience-rating system and the resulting rates (public and private), including, but not limited to, discounts and dividends. This review would include analysis of the Drug Free Workplace program, the One Claim Program, the Premium Discount Program, the group rating program, and the safety council program. The analysis should include a study of the cost effectiveness of each program and an evaluation of each program with respect to industry standards.

Pricing Process Areas – continued

	Tasks Involved
Alternative Pricing Methods (Described throughout)	35. Identify methods of rate setting and reserving, in addition to those already contemplated otherwise in the RFP that the administrator could use to make the rate setting and reserving process more transparent for employers and employees.

Cost Controls Areas

	Tasks Involved
Subrogation	8. Review and make written recommendations on the subrogation standards applied by the BWC. This review would include a review of legislation, the BWC subrogation collection process, the application of subrogation receipts to individual employer's experience, and the assigning of subrogated claims to individual employers.

Cost Controls Areas – continued

	Tasks Involved
$15,000 Medical Only Program	22. Conduct a study on the payment of salary continuation by employers in lieu of temporary total compensation. This study would include an evaluation of the reserve calculation to determine if the premium collected by the BWC is appropriate for the liability presented and an evaluation to determine if salary continuation is a cost effective for employers. Conduct a study on the $15,000 medical only program. This study would include an evaluation of the reserve calculation for claims in this program and an evaluation to determine if the premium collected by the BWC is appropriate, and if the program is a cost effective program for employers.

Cost Controls Areas – continued

	Tasks Involved
Salary Continuation	22. Conduct a study on the payment of salary continuation by employers in lieu of temporary total compensation. This study would include an evaluation of the reserve calculation to determine if the premium collected by the BWC is appropriate for the liability presented and an evaluation to determine if salary continuation is a cost effective for employers. Conduct a study on the $15,000 medical only program. This study would include an evaluation of the reserve calculation for claims in this program and an evaluation to determine if the premium collected by the BWC is appropriate, and if the program is a cost effective program for employers.

Financial Provisions Areas

<table>
<tr><th>SIEGF</th><th>Tasks Involved</th></tr>
<tr><td>1) Sufficiency Requirements</td><td rowspan="2">20. Evaluate the SIEGF sufficiency requirements and recommend criteria to be used for determining the methodology for the Administrator to establish self insured employers contributions to the SIEGF pursuant to Ohio Revised Code 4123.351. This analysis would include analysis of the BWC’s historical funding of the SIEGF and recommendations for funding the SIEGF particularly whether the fund should be pre-assessment or post-assessment.</td></tr>
<tr><td>2) Contribution Calculation Methodology</td></tr>
<tr><td>3) SIEGF Assessments</td><td rowspan="2">11. Review and make written recommendations with regard to assessments for self-insured employers for the surplus fund and for the Self-Insuring Employers’ Guaranty Fund. This review would include an analysis on the loss history used for the calculation, the paid compensation basis, the projected payout, and the methodology used to calculate the assessment rates.
19. Evaluate the selection criteria used for self-insured employers. This evaluation would include the application of rules and laws in determining the employer’s ability to manage and fund a self-insured program. The analysis will include suggestions for the financial evaluation performed upon application and the use of guarantees and securities to protect the Self-Insured Guaranty Fund (SIEGF).</td></tr>
<tr><td>4) Surplus Fund Assessments</td></tr>
</table>

Appendix B – Background on Self-Insured Assessments

Self-Insured Assessments

- It is our understanding that the following assessments are currently levied on Ohio self-insured employers:
  - **Surplus Fund (mandatory)**: Primarily covers the cost of claims associated with bankrupt self-insured employers where the surety was inadequate on claims **filed** prior to January 1, 1987.
  - **Surplus Fund (optional disallowed claims)**: Reimburses self-insured employers who have not made an election to opt out of the disallowed claim reimbursement program.
  - **Surplus Fund (optional rehabilitation)**: Used for rehabilitation reimbursement for all self-insured employers who have not made an election to opt out of the rehabilitation reimbursement program.
  - **Surplus fund (optional handicap)**: Used for handicap reimbursements for all self-insured employers who have not made an election to opt out of the handicap reimbursement program. No policy is participating as of the July 1, 2002 rating year.
  - **Safety and Hygiene Fund**: Covers the self-insured employer's proportionate share of the fund. Division of Safety & Hygiene has responsibility for conducting investigations and performing research for the prevention of industrial accidents & diseases.
  - **Administrative Cost Fund**: Covers the self-insured employer's proportionate share of the operating expenses for the BWC and the Industrial Commission (IC).
  - **Self-Insured Employers' Guaranty Fund (SIEGF)**: Ensures adequate fund balance to guarantee the payment of any claims against the SIEGF in case of default in payment by a self-insured employer for claims **filed** after January 1, 1987.

Self-Insured Assessment Calculations

- It is our understanding that the calculations for each of the assessments currently levied on Ohio self-insured employers are as follows:
  - **Surplus Fund (mandatory)**: Disbursements (Regular) less Guaranty Fund Charges (AD) plus Bankrupt Rehab Disbursements (BK Rehab) minus Bankruptcy Collections (BC) for the current fiscal year divided by Paid Compensation Total (PCTOT) of all self-insured employers. Current Year Adjustment (CYA) is for shortages or surpluses that can be accrued or anticipated.
    - **Annual Rate**: (AD + BK Rehab – BC – CYA)/PCTOT
  - **Surplus Fund (optional disallowed claims)**: Projected disallowed claim reimbursements (CLMRE) divided by paid compensation for those opting to participate (DCPCIN).
    - **Annual Rate**: CLMRE/DCPCIN
  - **Surplus Fund (optional rehabilitation)**: Projected Rehab Reimbursements (PRR) divided by paid compensation for those opting to participate (PCIN).
    - **Annual Rate**: PRR/PCIN
  - **Surplus fund (optional handicap)**: No policies currently participating in handicap fund.
    - **Annual Rate**: .2480 fixed assessment over several years.

- **Safety and Hygiene Fund**: Safety and Hygiene Self-Insured Assessment (SHSI) divided by Paid Compensation Total (PCTOT) of all self-insured employers, including state fund compensation for new self-insured employers.
    - **Annual Rate**: SHSI/PCTOT
- **Administrative Cost Fund**: Separate Administrative Cost Self-Insured Fund Assessment for the BWC (ACFBWC) and the Industrial Commission (ACFIC) divided by Paid Compensation Total (PCTOT) of all self-insured employers, including state fund compensation for new self-insured employers.
    - **Annual Rate**: ACFBWC/PCTOT
    - **Annual Rate**: ACFIC/PCTOT
- **Self-Insured Employers' Guaranty Fund (SIEGF)**: The Amount Needed for Minimum Fund Balance (PRJASST) equals Prior Year Disbursements (PYD) x 1.25 plus Projected Current Year Disbursements (CYD) minus the End of Year Fund Balance (EOYFB). PRJASST is then divided by Paid Compensation Total (PCTOT) of all self-insured employers, including state fund compensation for new self-insured employers. Prior Year Disbursements (PYD) equals Surety losses plus DWRF losses plus MCO fees.
    - **Annual Rate**: PRJASST/PCTOT

History of SIEGF

- Prior to 1987, Ohio required that self-insured employers post surety bonds to collateralize their self-insured obligations
- House Bill 107 changed the Surety Bond Fund to the SIEGF which covers the cost of claims for those self-insured employers who default on their responsibility
    - For claims occurring after January 1, 1987
    - Assessments for SIEGF are on a "pay as you go" basis
    - New self-insured employers are assessed 6.0% of the premium at base rate for the first three years. If they are found to be financially unstable beyond the three years, they will continue to contribute 6.0% of the previous year's paid compensation as reported to the BWC.
    - When the BWC determines that there are insufficient funds in the SIEGF and an assessment is necessary to ensure the minimum balance in the fund, the BWC shall assess all self-insuring employers an annual contribution to maintain the minimum balance. Currently, the BWC shall maintain a minimum balance of funds in the SIEGF of 1.25 times the prior year's payments from the fund as determined at the end of each calendar year. A simplified example of the 2007 calculation is shown below:
        - Prior Year (2006) Disbursements (PYD) – $22.130 million (Surety + DWRF + MCO)
        - Projected Current Year (2007) Disbursements (CYD) – $23.430 million
        - End of Year Fund Balance (EOYFB) at 12/31/06 – $39.600 million
        - Paid Compensation Total – $218 million
        - Amount Needed for Minimum Fund Balance (PRJASST) = (PYD x 1.25) + CYD - EOYFB = ($22,130,000 x 1.25) + $23,430,000 - $39,600,000 = $11,492,500
        - 7/1/07 Assessment Rate: PRJASST/PCTOT = $11,492,500/$218,000,000 = 5.27%

Appendix C – Data and Documentation

- Database contained detailed SI-40 information for the past 10 years
- Listing of Letters of Credit collected by BWC since 2002
- Listing of high risk assessments since 2002
- Listing of new self-insured employer assessments since 2002
- Sample actuarial reports supporting the Letters of Credit required by the BWC
- Calculation of current Letters of Credit where actuarial reports were not provided
- Inception-to-date listing of bankrupt self-insureds including dates of default through 2007
- Calculation of the SIEGF and other assessment rates as of 7/1/05, 7/1/06, 7/1/07 and 7/1/08
- Schedule of historical assessments, disbursements, collections and surplus levels by fund for past 10 years through 12/31/07
- Database containing financial information used to calculate z-scores for years 1995 through 2007
- Database containing SI-40 paid compensation information used to calculate the assessment base for years 1995 through 2007
- Database containing disbursements from the surplus and SIEGF funds for all accident years beginning in calendar year 1993 through 2008 as of 3/28/2008
- Mercer actuarial report related to the SIEGF as of 6/30/07
- PowerPoint deck titled “Becoming a Self-Insuring Employer”
- PDF file describing assessment methodologies