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A study by the RAND Institute for Civil Justice

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California's Volatile Workers' Compensation Insurance Market

Problems and Recommendations
for Change

Lloyd Dixon, James W. Macdonald, William Barbagallo

Prepared for the Commission on Health and Safety and Workers' Compensation



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A study by the RAND Institute for Civil Justice

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Summary

The California workers' compensation insurance market entered a new era in 1995, when insurers were allowed far greater flexibility in setting rates. For reasons that go beyond price deregulation, the market has been very volatile since. Insurer pretax underwriting profit in the California market dropped dramatically in the second half of the 1990s, and 31 insurers that wrote workers' compensation coverage in the state, including some of the largest market participants, failed.¹ The market share of the State Compensation Insurance Fund (State Fund), which both provides workers' compensation coverage to employers that cannot find it elsewhere and competes with other insurers for business, rose to 53 percent in 2003, and the private market appeared near collapse. In response to legislative reforms between 2002 and 2004, the private market then sharply rebounded. Underwriting profits reached historic highs in 2006, and the State Fund's market share retreated to a more typical 20 percent. Recently, however, low pricing and rising claim costs have led some to fear a return to the dire conditions of the first part of the decade.

The price paid for workers' compensation insurance by California's employers has been volatile since 1995 as well, continuing the considerable variation that occurred in earlier years. Average premium per \$100 of payroll net of policyholder dividends rose by 81 percent between 1983 and 1993 before falling 46 percent between 1993 and 1995. And, since 1995, average premium per \$100 of payroll has varied by nearly a factor of three. Such variability makes it difficult for businesses to plan and makes California a less attractive place to do business. In addition, the insurer insolvencies have been costly to the state's employers, injured workers, and California residents more generally. Employers are expected ultimately to be assessed \$4.9 billion to pay for the unresolved claims of insolvent insurers. Insolvencies can delay benefits to injured workers, and residents are affected because workers' compensation costs may discourage employers from locating in the state.

¹ While not large in number compared with the total number of insurers participating in the market, the insurers that eventually became insolvent accounted for between 23 and 31 percent of the market between 1995 and 1999.

The purposes of this monograph are to identify the different factors that contributed to the market volatility and large number of insolvencies following price deregulation and to suggest policy changes that can reduce the severity of these problems in the future. Our findings and recommendations are based on information obtained through interviews with a wide range of interested parties, detailed examination of eight insurer groups that became insolvent and eight that survived, a review of previous studies, and an analysis of data from the CDI, the Workers' Compensation Insurance Rating Bureau (WCIRB), the State Fund, the California Insurance Guarantee Association (CIGA), and the Conservation and Liquidation Office (CLO).

Findings

We identified six key factors that contributed to the insolvencies and volatility in the past 15 years:

- inaccurate projections of claim costs
- pricing below expected costs
- reinsurance contracts that gave insurers and reinsurers insufficient stake in the profitability of the policies they wrote
- managing general agents who had little financial interest in the ultimate profitability of policies
- underreserving for claim costs by insurers
- insurer policyholder surplus that was inadequate to provide a cushion against adverse events.

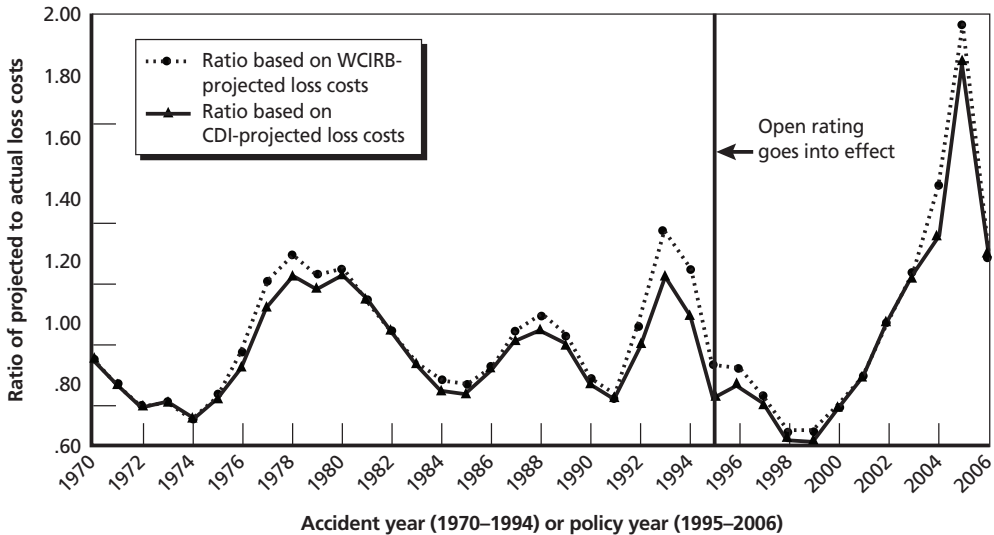
Next, we summarize our findings in each area. Refer to the glossary for information on unfamiliar terms.

Inaccurate Projections of Claim Costs

For reasons that had little to do with price deregulation, the cost of workers' compensation claims rose rapidly following the move to open rating. Delayed recognition of this rapid increase was an important factor behind the insolvencies. Absent accurate estimates of expected future claim costs, insurers tended to price policies too low and thus collect insufficient revenue to cover future claim payments.

Figure S.1 compares the projected claim costs from 1980 through 2006 with recent estimates of what the claim costs will actually turn out to be. Both the ratio of WCIRB-projected loss costs to recent estimates of actual loss costs and the ratio of the CDI-projected loss costs to recent estimates of actual loss costs are reported. In the years following open rating, projections swung from being

Figure S.1
Comparison of Claim Costs Projected by the Workers' Compensation Insurance Rating Bureau and the California Department of Insurance to Recent Estimates of Actual Claim Costs



RAND MG949-S.1

roughly 35 percent too low to nearly 100 percent too high. With a few exceptions, there is not a great deal of difference in the accuracy of the WCIRB projections and the CDI projections.

Repeated major legislative and judicial changes in the workers' compensation benefit system were primary drivers of the under- and overprediction of workers' compensation claim costs. A substantial increase in costs followed the *Minniear* decision in 1996 (*Minniear v. Mt. San Antonio Community College District*, 61 CCC 1055, 24 CWCR 261), and a substantial decline in costs followed a series of bills enacted by the California legislature between 2002 and 2004. It was very difficult to predict the effects of these changes on claim costs. Compounding the problem were a slowdown in claim-payment patterns in the second half of the 1990s, incomplete data on certain types of claims, and the fact that the WCIRB does not have direct access to transaction-level data on claim payments.

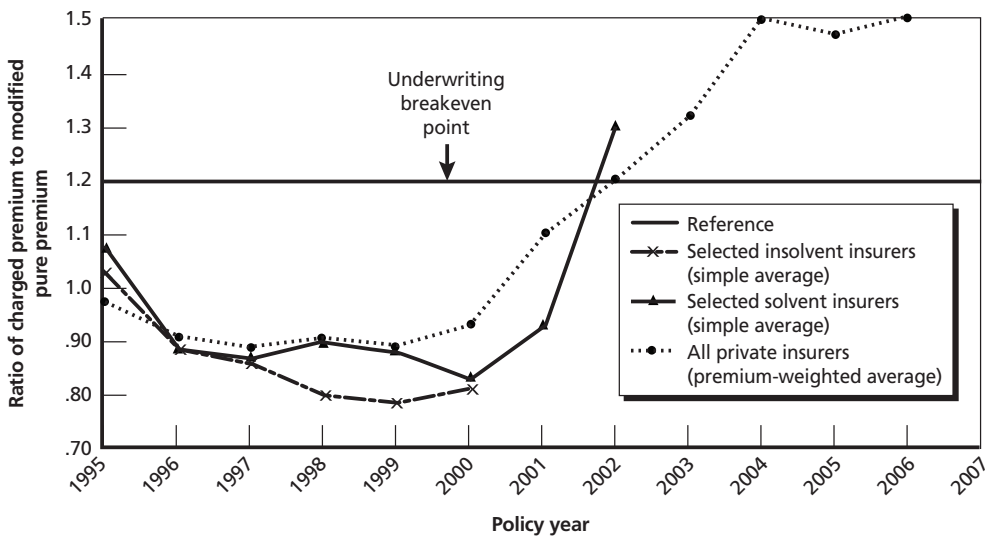
Pricing Below Projected Costs

The pricing practices of workers' compensation insurers during the second half of the 1990s contributed to the surge in insolvencies that began in 2000. Insurers charged prices that were below the already low projections of claim costs, resulting in revenue that was not adequate to cover the ultimate cost of the claims, let alone the other expenses incurred in writing the policies.

Figure S.2 shows the ratio of the premium charged by insurers to the *modified pure premium rate* (expected medical, indemnity, and loss-adjustment expenses adjusted to reflect an employer's recent claim history) approved by the CDI for that year. A ratio below 1.2 (which includes other insurer expenses) typically suggests that an insurer is not charging enough to cover the ultimate costs of providing the coverage.²

As shown in Figure S.2, the premium charged by California insurers (excluding the State Fund) was near or below the expected loss and loss-adjustment costs (ratio less than 1.0) between 1995 and 2000.³ Also shown are the pricing ratios for the insurance groups selected for detailed analysis in this study. As might be expected, the figure suggests that the groups that ultimately became insolvent priced more aggressively than those that did not. The sample sizes are relatively small, however, and the differences may not be statistically significant.

Figure S.2
Ratio of Charged Premium to Modified Pure Premium, Calculated Using California Department of Insurance–Approved Pure Premium



RAND MG949-S.2

² Insurers earn a rate of return on their investment portfolios, and these returns can allow an insurer to earn a profit on its overall business even if it is losing money on its underwriting operations. The investment return earned on modified pure premium is typically on the order of 20 percent of pure premium, which roughly offsets the insurer's expenses not included in the pure premium rate. Thus, an insurer may still be making money on its workers' compensation operation if the ratio of charged premium to modified pure premium were 1.0 or higher. Other factors that would need to be considered in determining overall insurer profitability include federal taxes and the cost of capital.

³ Note that the ratio is calculated using the CDI-approved premium rate. If the WCIRB-recommended rates were used, the ratios would be noticeably lower for some years.

We found that the low pricing was driven by a number of different factors, including the following:

- concern by companies that specialized in California workers' compensation market that national, multiline insurance companies would reduce rates to gain market share
- lack of experience among the smaller monoline companies in an open-rating setting
- unrealistically inexpensive reinsurance
- entry of group health insurers that mistakenly believed that their health-care experience would give them an advantage in controlling medical costs in the very complex California workers' compensation system
- reduced concern by employers about the financial health of insurers, given that CIGA pays the claims of insurers in the event they become insolvent
- aggressive competition from the State Fund.

Our analysis suggests that the State Fund was competing aggressively for large accounts in the late 1990s and the early 2000s. The ratio of charged premium to modified pure premium did not decline much in the period following open rating for the State Fund's smaller accounts, but it dropped sharply for larger accounts, resulting in charged premium that was well below expected loss and loss-adjustment costs. Due to the aggressive pricing and other factors, such as increased broker commissions and insurer insolvencies, the number of large policies written by the State Fund jumped dramatically between 1999 and 2003, and the State Fund's market share jumped from 22 percent in 1999 to 53 percent in 2003.

The CDI became aware that insurance rates were inadequate at several companies in 1999 but did not act aggressively to force insurers to raise rates because of both a limited ability and limited willingness to act. Before 2002, when new legislation was enacted, the CDI was required to show that an insurer was operating in a way that would impair or threaten its solvency before it could require rate increases. This requirement limited the CDI's ability to act quickly because the consequences of low workers' compensation rates typically become manifest only slowly over time and because multiline insurers can offset losses in workers' compensation with returns in other lines. A strong philosophical commitment to rate deregulation at the department during the second half of the 1990s and concern that higher rates would dampen economic activity reduced the department's willingness to act.

Reinsurance Contracts That Gave Insurers and Reinsurers Insufficient Stake in Profitability of the Policies They Wrote

The workers' compensation reinsurance market changed importantly in the mid-1990s with the entry of several large life insurers that wrote reinsurance treaties that provided reimbursement for the health and disability losses resulting from workers' compensation accidents. The life underwriters had little experience in the workers' compensation market and wrote treaties that reimbursed insurers once claim costs exceeded relatively low levels. The pricing offered for this protection was also far below normal.

While reinsurance is a critical part of a well-functioning workers' compensation market, the particular reinsurance arrangements that arose during this period contributed to at least some of the insolvencies. The negative repercussions of reinsurance in this setting were a consequence of some insurers not retaining a large-enough stake in the ultimate profitability of the policies they wrote. The very low reinsurance retentions created incentives to reduce prices, relax underwriting standards, and passively process claims. In the late 1990s, insurers were starting to see the need to increase prices, but availability of low-cost reinsurance with low retentions delayed pricing increases.

The reinsurance rates that many thought were too good to be true did indeed turn out to be so. Once reinsurers realized that their exposure to losses was much greater than what they had allegedly been led to believe at the time the contracts were negotiated, they began to delay payments and seek arbitration to suspend or modify terms of their reinsurance contracts. Some insurers had written policies on the presumption that attractive reinsurance reimbursement would be available. Once the reinsurance contracts were rescinded or modified, the insurers bore a greater share of the costs of the policies. Had the insurers retained a greater financial interest in the business they wrote, they might have taken more care in the pricing and underwriting decisions for which they were ultimately responsible, regardless of whether reinsurance was collectible.

Managing General Agents Who Had Little Financial Interest in the Ultimate Profitability of Workers' Compensation Policies

Managing general agents (MGAs), who are empowered by an insurance company to produce, underwrite, and commit the insurer to a policy, were active both in the primary California workers' compensation insurance market following the switch to open rating and in the reinsurance markets to which the primary carriers turned. While many of those interviewed for this study stated that there are responsible MGAs who have performed well over time, the actions of some MGAs exacerbated the volatile market conditions following open rating and contributed to some insolvencies. MGAs are often given authority to negotiate and bind insurance policies ("given the pen") but are not required to invest in the insurer's bal-

ance sheet. Because losses in workers' compensation take many years to develop, the profitability of the policies they write is not clear for at least three or four years, and conflicts are created between the growth goals of MGAs and the profitability concerns of insurers or reinsurers.

Underreserving

Analyses by the WCIRB suggest that, following open rating, California workers' compensation insurers in the aggregate failed to post reserves that were adequate to cover the claim costs expected at that time. Beginning in 1999, the WCIRB calculated the difference between the claim costs reported by insurers (which include reserves for future claim costs) and its estimate of the ultimate cost of the claims. In 1999, reported losses were \$4.3 billion below WCIRB estimates of ultimate claim costs, and the gap reached \$12.4 billion in 2002—larger than the \$11.0 billion in workers' compensation premium written that year.

Insurance regulators have put in place requirements meant to deter and detect underreserving. The CDI conducts regular financial exams to assess reserve levels, and, since the early 1990s, insurers have been required to annually submit an opinion from a qualified actuary attesting that their reserves are adequate. It was only after CDI examinations that large reserve deficiencies were uncovered at several of the insolvent insurers selected for detailed study. The large amount of underreserving occurred despite the fact that an actuary confirmed that the reserves of each insurer were reasonable. These findings suggest that the system for ensuring that reserves are adequate had broken down.

There are a number of reasons that actuaries may declare reserves reasonable when they are most likely not. Important among them is the fact that insurers hire and pay actuaries and can change actuaries if they do not like the findings. Also important is the fact that most actuarial firms do not have seasoned claim personnel on staff and, thus, are not able to independently opine on whether the reserves posted for individual claims are reasonable. Rather, actuaries typically rely on data provided by the insurer on claim frequency, payments to date, claim reserves, and reserve-development factors (changes in reserves over time). Thus, an actuary may be unaware that an insurer's reserve practices have changed and fail to appropriately account for these changes in his or her estimates of ultimate claim costs.

Inadequate Surplus Cushion

The policyholder surplus held by the insurers that ultimately become insolvent did not provide an adequate cushion for the adverse events that led up to their insolvencies. As evidenced by the \$4.9 billion in expected employer assessments, the assets of these insurers turned out to be billions of dollars short of their liabilities. The risk-based capital (RBC) system developed by the National Association of Insurance Commissioners (NAIC) specifies how much policyholder surplus a

property-casualty insurer should hold and spells out what regulatory actions are appropriate should policyholder surplus fall below the target. The RBC system was not fully in place during the period leading up to the insolvencies, and we thus examined what type of regulatory action would have been indicated if the current RBC system had been in place.

For four of the eight insolvent insurers selected for detailed analysis, the *company action level* would not have been triggered at all or would have been triggered at nearly the same time the insurer was taken over by the CDI.⁴ Thus, the RBC system would have been of little help in prompting action to avert these insolvencies. For two of the other four insurers, the company action level would have been triggered nine months before the company was taken over by the CDI. The current RBC system could therefore conceivably have resulted in corrective action before these insurers were conserved by the CDI. However, it is up to the insurer to identify the conditions that contributed to the company action level and to prepare a corrective action plan. Preparing the plan, CDI review, and implementation all take time, with the result that, in these two cases, there may not have been much that would have been done before the insurers were conserved. If that were the case, the RBC would again have done little to avoid a situation in which insurers had inadequate assets to cover their claims.

Large reserve deficiencies were discovered at three of the four insurers for which the company action level either would not have been triggered or would have been triggered at the nearly the same time as conservation. If the losses at these companies had been properly reserved, the company action level may have been triggered earlier. However, the fact remains that the current RBC action levels did not do a good job of indicating trouble for insurers that underreserve.

Recommendations

Based on our findings, we offer policy recommendations to reduce the volatility of the market and the frequency of insolvencies while realizing the benefits of a competitive market. The recommendations are motivated by goals that seem desirable for the workers' compensation market:

- Coverage should be available to all businesses.
- Workers' compensation insurance prices should reflect the cost of providing the required benefits.

⁴ The first level of response in the RBC system is the company action level. When the company action level is triggered, the insurer must identify the conditions that contributed to the event and prepare a report to the commissioner outlining the corrective actions the company intends to take in order to come back into compliance with the RBC requirements.

- The market should encourage innovation.
- Insurer liquidations and insolvencies should be rare.
- The market should not be overly volatile.

Four broad themes run through the recommendations. A first theme is the importance of improving the predictability of the workers' compensation system. During our interviews, the lack of predictability was repeatedly emphasized as a key driver of the volatility in the market following open rating. A second theme is the benefit of enhancing the transparency of the system. Providing more information to investors and other market participants allows them to better monitor the actions of workers' compensation insurers and can help curtail some of the excesses that can occur in an open-rating setting. A third theme is the need to better align the incentives of the major players involved in the workers' compensation market, and a final theme is the need to improve CDI oversight. In this section, we provide an overview of the recommendations. A detailed discussion of each recommendation is contained in the body of the monograph.

Improve the Reliability of Cost Projections

The WCIRB has responded in a number of ways to the substantial unreliability in cost projections during the past 15 years. For example, in response to a request from the CDI, it conducted an assessment of the accuracy of its rate filings. It also retained an outside firm to conduct a thorough review of its rate-making methodologies and established a committee to identify changes in medical and indemnity costs early on. In addition, it is developing plans to collect transaction-level data directly from insurers.

While cost projections will always be subject to error, making the system more predictable and improving the WCIRB's and the CDI's access to data can improve the accuracy of cost projections in the future. The following three recommendations aim to make the system more predictable:

1. *Increase clarity of legislative intent.* The legislature can help reduce uncertainty about the impact of reforms by writing legislation in unambiguous language and being as clear as possible about the intent and scope of the legislation.
2. *Expediently release guidance and regulations on issues when there are important disagreements among stakeholders.* The California Department of Industrial Relations (DIR) could reduce uncertainty about the interpretation and impact of legislative reform by more expeditiously issuing regulations and guidance.
3. *Review the performance of the Workers' Compensation Appeals Board system.* The evaluation should focus on the consistency of decisions across judges as well as how closely judges follow the law.

The next three recommendations attempt to help the WCIRB, the CDI, and insurers do a better job of predicting costs:

4. *Explore the most appropriate way for the WCIRB to take advantage of transaction-level data.* The advantages of alternative approaches for providing the WCIRB with direct access to transaction-level data should be explored. Analysis of such data could allow the WCIRB to recognize emerging trends not yet explicit in benefit payment data.
5. *Increase the comprehensiveness of data provided to the WCIRB.* The cost and practicality of providing or improving the data available to the WCIRB should be examined for three types of claim payments: payments by CIGA on the claims of insolvent insurers, payments on claims by self-insured employers, and payments on claims brought under large-deductible policies.
6. *Fast-track analyses of the impact of important legislation and judicial opinions.* Such analysis by CHSWC or other organizations can help the WCIRB and the CDI better anticipate the effects of important changes in the system.

Increase Pricing Discipline in an Open-Rating Setting

There have been a number of changes in the CDI's rate-making authority and procedures since the rash of insolvencies. In 2002, legislation was passed that allowed the CDI to require that workers' compensation rates be adequate to cover an insurer's losses and expenses. The CDI's financial examiners now interview the company's underwriting officer and review the company's underwriting policies. Although these changes are steps in the right direction, there appears to have been little fundamental change in the CDI's approach to rate regulation since the insurer insolvencies.

Some of those interviewed believed that California should return to some form of minimum-rate regime. However, support for such a change was not widespread. Others we interviewed supported prior CDI approval of workers' compensation insurance rates, as is done for many other insurance lines in California. However, given the pressure on the CDI to protect employers from high rates rather than inadequate ones, requiring prior approval does not seem to be a dependable solution for underpricing. The CDI might attempt to use its existing authority to require that workers' compensation rates be adequate to cover an insurer's losses and expenses. However, it is very difficult to regulate workers' compensation rates in an open-rating setting: Insurer pricing schedules are complex, and insurers can put together compelling arguments to support the rates they charge. In our view, a better approach is to retain competitive pricing but to emphasize solvency regulation.

Even though we do not recommend that the CDI attempt to ensure that rates are adequate, there are a number of changes that the CDI, the State Fund, CIGA, and other participants in the system can make that we believe would increase pricing discipline in an open-rating setting.

The following six recommendations are directed at the CDI:

7. *Make WCIRB pricing reports public.* Every quarter, the WCIRB provides the CDI with a confidential report comparing the premium charged to the modified pure premium for each insurer. Making these reports public would increase scrutiny of insurer pricing practices.
8. *Post insurers' annual and quarterly financial statements on the CDI Web site.* Insurers are required to submit annual and quarterly financial statements to the CDI. Posting them on the CDI's Web site would facilitate broader access to this information.
9. *Consider publicly releasing the results of CDI field rating and underwriting exams.* Releasing these reports would provide valuable information on whether the insurer has provided documentation and support for schedule credits and whether it is adhering to the rate plan and underwriting guidelines filed with the CDI.
10. *Impose penalties for violations in field rating and underwriting examinations.* There are no penalties in the insurance code specifically for violations uncovered in the field rating and underwriting examinations. Consideration should be given to imposing penalties sufficient to deter violations.
11. *Improve training and professional standards for workers' compensation underwriters.* Currently, there are no licensing or minimum certification requirements for insurer personnel who negotiate rates and terms with potential policyholders. The CDI could work with insurers and professional organizations to develop an appropriate training program that would increase professionalism and underwriting discipline.
12. *Create a whistle-blower program to report excessively low rates.* The CDI would also benefit from intelligence on low pricing from the people in the field, but currently there are no formal procedures for making such complaints. The CDI might set up a whistle-blower program and then pay particularly close attention to the surplus or RBC ratios of insurers consistently identified by whistle-blowers.

The next recommendation aims to improve incentives on the demand side of the market:

13. *Explore ways to give insurance brokers and other intermediaries a greater stake in the financial soundness of the insurers with which they place policies.* CIGA

might begin to levy surcharges on insurance brokers and other intermediaries who place policies with insurers that subsequently became insolvent.

The following two recommendations are designed to increase discipline in the State Fund's pricing practices:

14. *Publicly release the State Fund's ratio of charged premium to modified pure premium, by size of account.* Making these ratios public would allow better oversight of the State Fund's pricing practices for different-sized accounts.
15. *Increase State Fund staffing flexibility.* It is important to remove incentives for the State Fund to price more aggressively in a soft market, and such incentives may be created by the desire to maintain enough premium volume to support a fairly inflexible staffing level. The State Fund might consider setting a permanent staffing level required for a relatively low market share—say, 10 percent—and then address additional demands using temporary staff and contractors.

Better Align Incentives Created by Reinsurance and Managing General Agent Contracts

The California legislature and the CDI have moved to better align the incentives created by reinsurance contracts and by MGA contracts, but not far enough. The following suggestions may help mitigate the downsides of reinsurance while maintaining some of its benefits:

16. *Evaluate adequacy of current risk-retention requirement and enforcement mechanism.* Policymakers and regulators should assess whether the current requirement that insurers retain at least 10 percent of the risk in a reinsurance transaction is adequate. Providing the CDI with the authority to issue corrective orders to increase retentions and to impose fines when retentions are found insufficient or when insurers fail to comply with corrective orders should also be considered.
17. *Require licensed insurers to obtain approval before entering the reinsurance business.* Licensed insurance companies are generally free to enter the business of unaffiliated, assumed reinsurance in any of the insurance lines in which they are licensed. Policyholders and regulators should consider establishing a preapproval process that would review the business plan for such entries.

The following three recommendations aim to increase the stake of MGAs in the profitability of the insurer or reinsurer and to increase the care with which insurers monitor their MGAs:

18. *Broaden definition of managing general agent to include firms that take on substantial roles in underwriting or paying insurance claims.* Insurers and firms in the delegated-authority business are able to game the MGA definition in the California insurance code so as to avoid being legally classified as an MGA. Policymakers and regulators should consider how to broaden the MGA definition to capture a substantial share of the firms that, in effect, take on the insurance functions of insurers.
19. *Augment the requirements on MGA contracts to give MGAs more skin in the game.* The California insurance code requires profit sharing between insurers and MGAs to be delayed under certain circumstances until claims mature. Policymakers and regulators should assess whether the current language is sufficiently broad to apply to most circumstances in which insurers delegate important underwriting or claim-payment authority to outside firms.
20. *Enforce requirements that insurers regularly audit their MGAs.* Current code requires semiannual on-site review of the underwriting and claim-paying operations of an MGA. The CDI should monitor whether insurers are complying with this requirement and whether the audits meet minimum standards.

Improve Reliability of Actuarial Opinions

There was a sense among those we interviewed that the independence and objectivity of actuaries have improved in recent years. However, it is difficult to determine how often actuaries will opine that reserves are reasonable when they likely are not. Situations could still arise in which actuaries have incentives to give less-than-objective assessments. These suggestions aim to reduce the chances that such situations will arise:

21. *Require that actuarial opinions provide additional information.* Currently, the actuarial opinion states only that the reserves are reasonable. Opinions might be required to report a range of reserve projections using different actuarial methodologies and document the accuracy of the projections in past opinions and the identity of actuaries preparing those projections.
22. *Require that actuarial opinions review reserves for a sample of claims.* Requiring claim audits in certain circumstances based on statistically valid samples might allow actuaries to confirm whether there have been changes in reserving practices.
23. *Consider requiring the CDI to appoint and pay actuaries.* To reduce potential conflicts of interest in the preparation of actuarial reports, the actuary could be hired and paid by the CDI. The insurer could then be assessed to cover the costs of its actuarial opinion.

24. *Review the CDI's prioritization scheme for financial examinations, and consider a mandatory trigger for examinations.* It is important that the CDI continue to regularly conduct financial examinations and reserve studies. The CDI should review the system for prioritizing reviews that is now in place and consider whether to identify conditions under which an examination would be required.
25. *Impose penalties for inadequate reserving.* Currently, no penalties are assessed if a CDI financial exam reveals substantial underreserving. Policymakers and regulators should consider establishing fines that are sufficient to deter such behavior from recurring or occurring in the first place.

Improve Formula and Reporting Requirements for Risk-Based Capital to Maintain an Adequate Surplus Cushion

Our findings suggest that the RBC system in place today would not have done a particularly good job of alerting regulators to financial weakness and requiring regulatory intervention during the period leading up to the insolvencies. This conclusion is based on a fairly small number of insurers, however, and would be strengthened by including data on more insurers.

Here, we make a number of recommendations aimed at improving the ability of the RBC system to avoid the types of insolvencies that plagued the California workers' compensation market following open rating. In light of the ongoing Solvency II discussions in the European Union,⁵ now is a particularly opportune time to consider such changes. Recommendations in this area are best implemented by the NAIC as opposed to the CDI, but, as the largest member of the NAIC, California is well positioned to make the case for such changes.

26. *Consider strengthening the trigger for the company action level.* The advantages and disadvantages of more-stringent thresholds for the RBC ratio and the combined ratio should be explored. Our investigation suggests that relatively modest changes in the current trigger would not make a major difference absent elimination of substantial underreserving. Further analysis is needed to determine the appropriate trigger, and progress in efforts to improve reserve adequacy should be an important factor in any such analysis.
27. *Consider modifying the RBC formula to better reflect the risks faced by workers' compensation insurers.* Currently, the RBC formula considers the worst average reserve-development percentage or the worst average loss ratio over a ten-year period, and the ten-year period is changed only infrequently.

⁵ Solvency II is a set of regulatory requirements for insurance firms operating in the European Union. See EU (2009).

Lengthening the period would enable the RBC system to provide protection against a more diverse set of adverse events. The RBC formula also only partially reflects the risk of an insurer whose business is concentrated in states with a difficult workers' compensation market. Modifications to the RBC formula should be considered to more fully reflect the insurer's situation.

28. *Consider requiring insurers to submit RBC calculations more frequently.* Much can happen in the insurance industry in one year, and it seems appropriate to consider whether the RBC calculations should be updated either quarterly or semiannually.
29. *Introduce systemic risk and enterprise-level "stress testing" into evaluations of capital adequacy.* A shortcoming of the RBC approach is the implicit assumption that the past is reasonably predictive of the future. We suggest that, when evaluating policyholder-surplus adequacy, state regulators consider plausible scenarios that could stress workers' compensation insurers and their reinsurers, such as major court decisions, earthquakes, and economic downturns.

Moving Forward

These recommendations have been motivated by problems identified in the operation of the workers' compensation insurance market following rate deregulation. All the recommendations are in need of further evaluation and refinement, and it is important to the California economy that such an assessment be done and changes implemented expeditiously.