

Review of
Premium Reduction Plan Issues

By

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January, 2005

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Executive Summary

Premium Reduction Plans (PRPs) provide a framework for cost efficient insurance providers to compete on the basis of price and transfer these savings on to farmers in the form of premium reductions. For the most part, this will be a transfer of economic rents from the agents to the farmers. We outline what we consider to be the strengths and weaknesses of PRPs as well as any implications for the Board in its oversight role.

Strengths:

- (i) *Increased Farmer Participation* → Although crop insurance demand is inelastic and roughly 80% of the eligible acres are insured, a premium reduction will lead to a small increase in participation.
- (ii) *Increased Coverage* → While participation will increase only marginally, the average amount of coverage will increase to a greater extent.
- (iii) *Farmer Incomes will Increase* → With the reduction in premium rates farmer incomes will increase in the short run. Small, minority, and limited resource farmers will be able to experience these premium reductions as well.
- (iv) *Decrease Probability of Ad-hoc Disaster Assistance* → While this is a political economy question, certainly increased participation coupled with increased coverage will lessen the pressure for ad-hoc disaster assistance.
- (v) *AIP Incomes will Increase* → Because the riskiest farmers participate and do so at the highest levels of coverage first, when new participants enter the program or previous participants purchase greater coverage, they are less likely to have a claim and more likely to have an upwardly biased premium rate. As a result, AIPs gain as the average profit from A&O reimbursement as well as the average underwriting gain tends to increase.
- (vi) *Revelation of Delivery Costs* → RMA will get a much better handle on the true administrative and operating expenses of AIPs.

Weaknesses:

- (i) *Decreased Service* → As agent incomes decrease it is likely that some agents will choose to leave the industry while others will choose to provide less service. It is unlikely that there will be mass exodus because of the fixed human capital agents have invested in themselves regarding their jobs as crop insurance agents. Given the current A&O reimbursement scheme, it is likely that small and limited resource farmers will bear the majority of the service decreases despite the stipulations in the 2005 SRA.

Implications for Oversight Role:

- (i) *Accuracy of Cost Efficiencies* → It is necessary that the Board require ex-ante and ex-post external audits by certified public accountants that can attest that the premium reductions are being proposed where the cost efficiencies are recovered. We would suggest that the Board hire an expert forensic accountant to design a list of questions that the external audits must address. The ex-ante audit would cover issues relating to the proposed cost efficiencies whereas the ex-post audit would cover issues relating to the realized cost efficiencies.
- (ii) *Unfair Discrimination* → PRPs will alter agent compensation and AIP behavior. To avoid unfair discrimination the Board should not allow an AIP to offer the same line of insurance in the same state with and without premium reductions. The reductions may vary by state-crop-insurance plan but within a state-crop-insurance plan they must not. This also indicates that affiliated entities should not be allowed that differ within a state-crop-insurance plan as is being proposed by **[Redacted Confidential Business Information]**.
- (iii) *Allow AIPs Flexibility in their PRPs* → Allowing AIPs flexibility in their PRPs across states-crops-insurance plans has many advantages. First, the PRPs can be designed to more closely match actual cost efficiencies as required. Second, the greater flexibility the more an AIP will be able to pass along cost efficiencies to the farmers. Third, it promotes investment in a variety of cost efficient technologies. Fourth, it does not hinder small niche market AIPs to compete.

In conclusion, we would recommend that PRPs be approved by the Board. We would also recommend that these be used in changing the A&O rates next time the SRA is negotiated.

Research Report

This review and subsequent findings was undertaken with significant assistance of Professor Tronstad and Richard Scheel (Certified Accountant). Dr. Tronstad has undertaken a number of research projects for RMA, particularly in risk management education. Richard Scheel is a certified accountant with vast experience as a controller for an intermediary in a government sponsored program. Of course, any and all errors are my responsibility.

D) Impact of PRPs on Producers' Likely use of Insurance as a Risk Management Tool

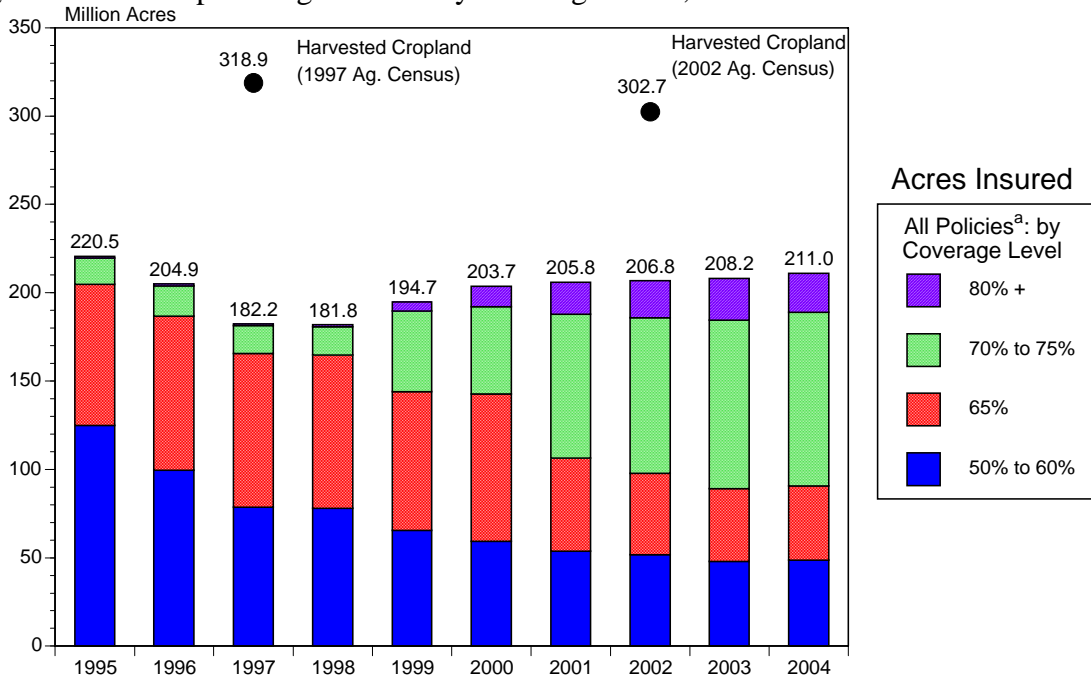
General Comments: PRPs represent a transfer of economic rents from agents to producers participating in those plans of insurance for which PRP is offered. As such, participation will increase and the level of coverage for those participating will increase as well. The increase in participation will not be pronounced as the demand for crop insurance is inelastic and 80% of the potential acres are already insured. There will be a greater effect on coverage levels. The implications are: (i) the financial well-being of participating producers will increase; and (ii) an increase in participation, particularly at higher coverage levels, will decrease the probability of ad-hoc disaster assistance.

A1) To what extent will reduced crop insurance premiums induce producers to increase the use of crop insurance and increase coverage.

Studies are consistent in estimating the demand for crop insurance as being relatively unresponsive to changes in price (Glauber, *American Journal of Agricultural Economics*, 2004) or having an inelastic demand. That is, a one percent decline in producer premiums results in a percentage increase in insurance participation or liability per planted acre that is less than one percent. In a study of individual Kansas farmers, Serra, Goodwin, and Featherstone (paper presented at 2003 annual AAEA meeting) find the pre-1994 Reform Act elasticity for crop insurance participation to be -0.58 . For this same era, wheat farms in Montana (Smith and Baquet, *American Journal of Agricultural Economics*, 1996) were estimated to have an average price elasticity of liability per planted acre at -0.6 . After "mandatory participation" to crop insurance was lifted in 1996, elasticity values for crop insurance have been calculated as being even more inelastic. For example, Serra, Goodwin, and Featherstone report price elasticity values that range from -0.07 to -0.28 for the years from 1996 to 2000. However, as they note in their study, the response to higher subsidies would likely be more elastic if they could have considered coverage levels in their analysis.

Figure 1 below shows U.S. crop acreage by selected crop insurance coverage levels for the 10 years of 1995 through 2004. All policies are aggregated by coverage level. The percentage of acres insured at higher coverage and liability levels has steadily increased, as shown in figure 2. In 1995, 92.8% of all acres insured were by policies with a coverage level less than or equal to 65% and only 7.2% had a coverage level of 70% or greater. In 1999, a big jump in higher coverage levels occurred. Was this

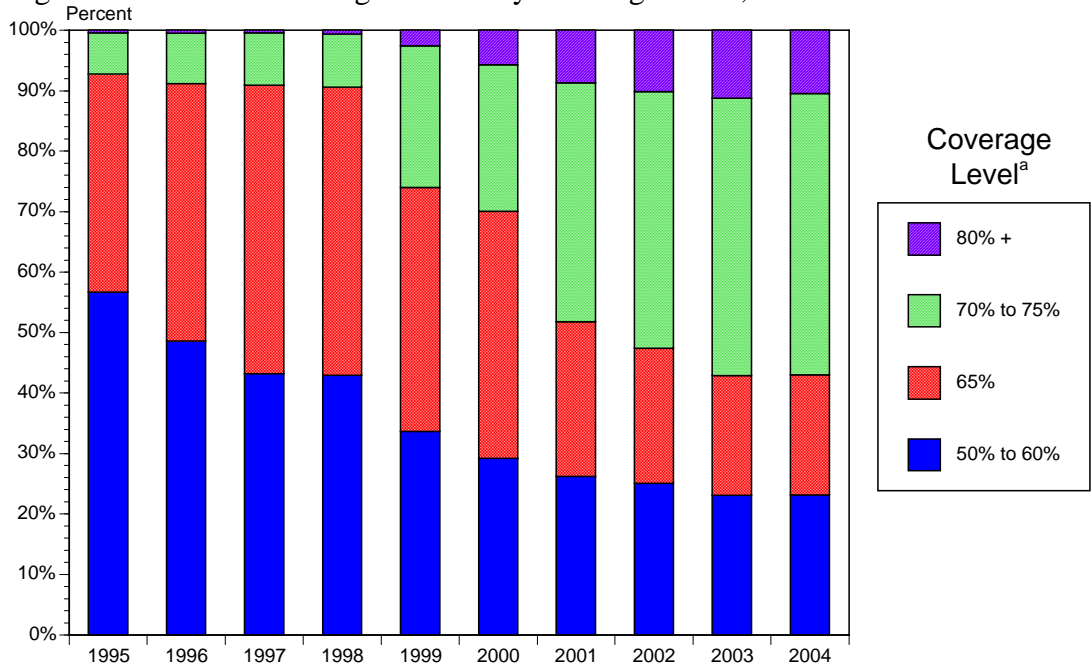
Figure 1. U.S. Crop Acreage Insured by Coverage Level, 1995 to 2004



Source: RMA Online Summary of Business Database as of 1/2/05 and U.S. Ag. Census.

^a Excludes "rangeland crop insurance policies" introduced in 1999 that equaled 10.4 million acres and have grown to 62.8 million acres in 2004.

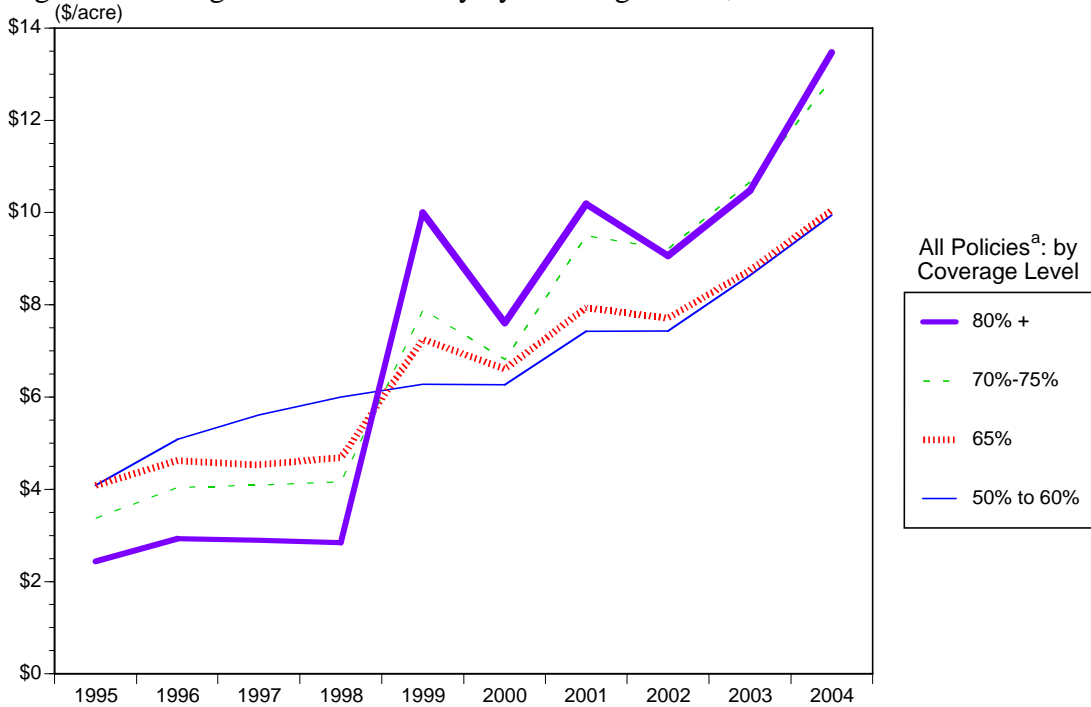
Figure 2. Percent of Acreage Insured by Coverage Level, 1995 to 2004



Source: RMA Online Summary of Business Database as of 1/2/05 and U.S. Ag. Census.

^a Excludes "rangeland crop insurance policies."

Figure 3. Average Producer Subsidy by Coverage Level, 1995 to 2004



Source: RMA Online Summary of Business Database as of 1/2/05.

^a Excludes "rangeland crop insurance policies" introduced in 1999.

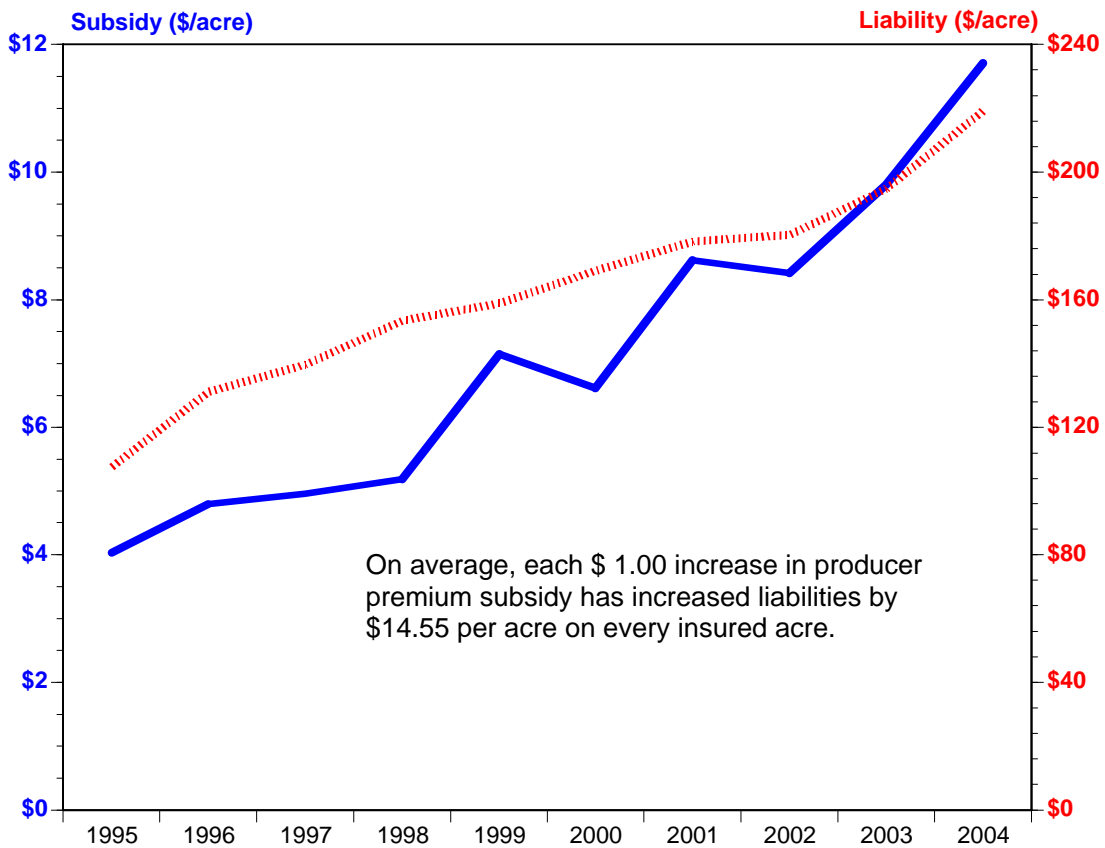
increase in response due to a willingness of producers to shift dollars saved from reduced premiums into higher coverage levels or other factors? While reduced premium rates enticed producers to secure higher coverage levels in 1999, a change in the per acre subsidy by policy level also occurred. As shown in figure 3, the subsidy rate or a measure of the expected potential return to crop insurance switched between the higher and lower coverage levels in 1999. As shown in figure 3, coverage levels of 65% and lower had a higher per acre expected return from 1995 to 1998 as measured through the subsidy applied to producer premiums. But with the discounts applied in 1999 and essentially made permanent with the Agricultural Risk Protection Act of 2000, per acre subsidies have been greater on average for coverage levels of 70% and above. A spike in average per acre producer subsidies occurs in 1999 for all coverage levels, but the increase is greatest for the higher coverage levels.

Subsequently, producers have responded by shifting more acres into policies with higher coverage levels. From 1998 to 1999, acres insured with a coverage level of 70% or greater increased from 9.4% to 26.0% of all insured acres. By 2004, 57.0% of all insured acres had a coverage level of 70% or greater while 43.0% were insured at 65% or less. Clearly, gains have been made at increasing coverage levels when one considers that the percent of insured acres in the 65% or less coverage category was cut in less than half from 1998 to 2004 by going from 90.6% to 43.0% of all insured acres.

What is the impact of higher subsidies on liability exposure? Figure 4 describes how

higher per acre subsidies for all coverage levels have corresponded with greater producer coverage or higher per acre liability exposure levels. On average, every dollar per acre increase in producer subsidy has increased liability exposure by \$14.55 per acre. In percentage terms, a 10% subsidy increase at the margin results in around a 6.4% increase in liability exposure, evaluating at mean averages over the 1995 to 2004 period. But this 10% subsidy increase would only translate into a 1.5% increase in acres insured if using the 1999 to 2004 period. Given that almost 80% of the potential crop acres are already insured, excluding hay and rangeland, the ability to increase acreage insured through higher subsidies or further reducing producer premiums appears fairly limited. This is consistent with the literature of prior studies that have found the demand for crop insurance to be quite inelastic.

Figure 4. Average Per Acre Subsidies and Liabilities for All Policies, 1995 to 2004

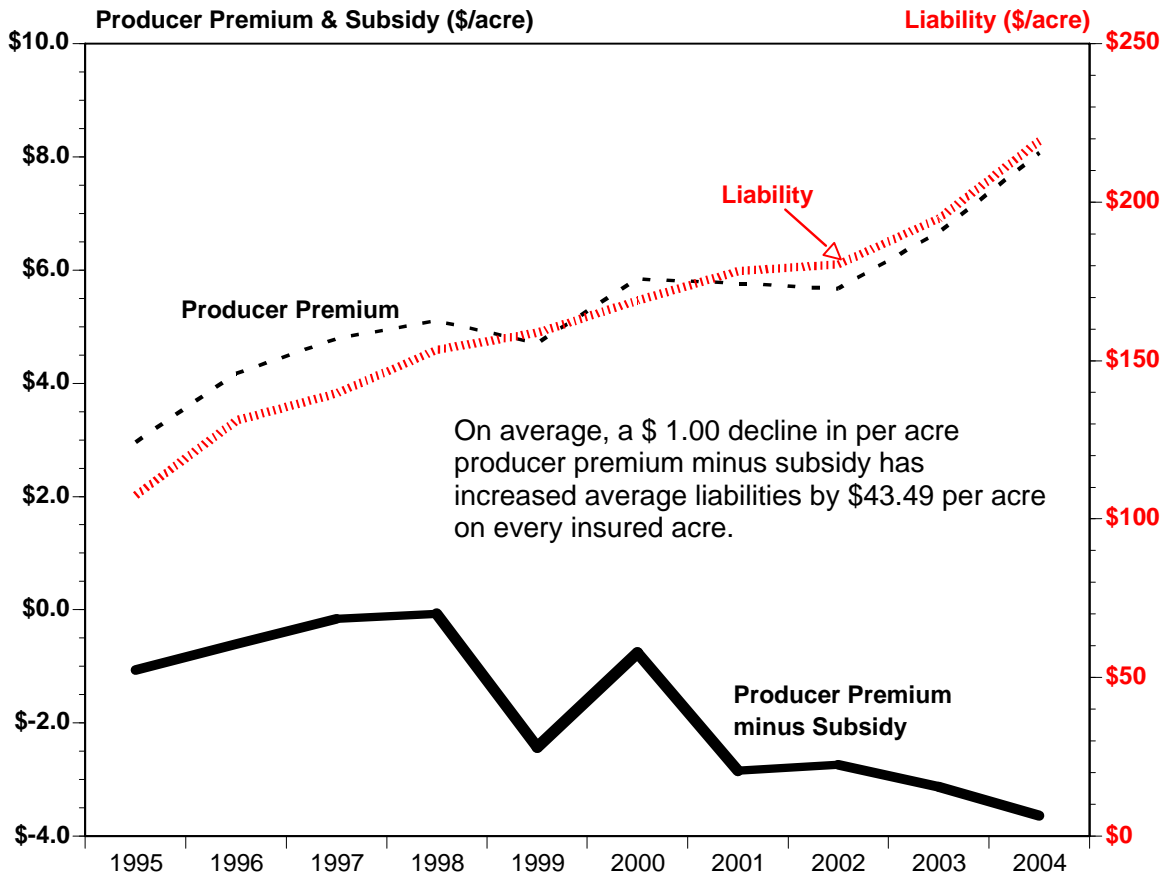


Source: RMA Online Summary of Business Database as of 1/2/05.
 Note: Excludes "rangeland crop insurance policies" introduced in 1999.

Because producers have migrated to higher coverage levels, per acre producer premium costs have also moved higher as described in figure 5 below. But the “net cost” to producers can be viewed as the producer premium paid minus the subsidy, assuming calculated premium rates are actuarially sound on average. Given that the subsidy rate has trended higher than the increase in producer premiums, every dollar decline in the per acre “Producer Premium minus Subsidy” value has resulted in a per

acre liability increase or producer coverage of \$43.49 per acre, over the 1995 to 2004 period. In percentage terms, a 10% decrease in the “Producer Premium minus Subsidy” results in a 6.4% increase in liability. In quantifying acreage response, a 10% decrease in this value would only increase acreage insured by 1.5% spanning the higher subsidy years of 1999 to 2004.

Figure 5. Producer Premiums and Subsidies, and Liabilities, 1995 to 2004



Source: RMA Online Summary of Business Database as of 1/2/05.
 Note: Excludes "rangeland crop insurance policies" introduced in 1999.

A2) Based on your answers to A1 how will the effectiveness of Federal crop insurance as a risk management tool or otherwise strengthen the economic stability and financial capacity of agricultural producers.

From A1 we note PRPs will increase both participation and coverage level. From this perspective, the effectiveness of crop insurance as a risk management tool will increase in that it is being utilized to a greater extent. Since economic rents are transferred from agents to the producers this will increase their financial capacity and

should bring about greater stability in the short term. In the long term, these rents are bid into the land values.

B1) Will the introduction of PRPs decrease the need for future ad-hoc agricultural disaster assistance.

Ad-hoc agricultural disaster assistance is really a political economy question in the sense that ad-hoc disaster assistance requires action by lawmakers. Innes (*American Journal of Agricultural Economics*, May 2003) notes that in the absence of ex-ante crop insurance, ex post disaster assistance will prevail. Lawmakers will provide economic rents in the form of disaster assistance in return for political rents from the producers. However, if there is fixed political costs of enacting disaster assistance -- which there is and it is substantial -- then the greater the participation the less likely that sufficient political rents are held by the uninsured producers facing financial stress to justify the fixed political costs of enacting disaster aid.

An average disaster payment of \$4.43/acre for each insured acre was made for 1994 through 2003, given that disaster payments averaged \$845 million (Glauber, *American Journal of Agricultural Economics*, 2004) and an average of 190.8 million acres were insured over this period. If a national disaster to agriculture was to cause a potential of \$4B in disaster payments for a given year, additional liabilities of only \$20/acre on average would be required to cover this. However, this average probably has little merit since disasters often strike with heavy damage in specific geographic areas within regions. Therefore, it is doubtful that lower producer premiums would eliminate future ad-hoc disaster assistance. At the margin, reduced premiums will increase liability coverage and decrease the need for ad-hoc disaster assistance. However, it is unlikely to significantly decrease the probability of future disaster assistance.

II) Impact of PRPs on Delivery System for Crop Insurance

General Comments: PRPs will transfer economic rents from agents to farmers or producers. This will have an effect on the delivery system for crop insurance. From reviewing the AIP submissions, all will reduce agent commissions. Reduced agent commissions will have a twofold effect: (i) agent work force will decline; and (ii) agents remaining will have less incentive to service small and limited resource farmers. Some of the negative effects to small and limited resource farmers can be mitigated by enforcing similar rules to that which currently exist in the 2005 SRA. For example, stipulate that AIPs must either offer or not offer a fixed premium reduction on a given plan of insurance in a given state. That is, an AIP would not be able to sell/write MPCCI policies for one producer with a premium reduction and not for another producer when both farm the same crop in the same state. It appears from the submissions of the AIPs that some wish to vary their premium reduction to farmers (have multiple corporations, specifying up to a maximum percent, etc) which unfairly discriminates against small and limited resource farmers.

There is no harm in allowing AIPs to choose which states and plans of insurance to offer premium reductions. To be consistent with the requirement that the premium reduction be derived directly from the efficiency gain -- a gain that may be state, crop, or plan of insurance specific -- we would suggest that AIPs be allowed to vary their premium reductions across their Book of Business. However, we would not allow the premium reduction to vary within a state-crop-plan of insurance combination, particularly, at the farmer level.

A1) What impacts do each of these types of PRPs have on:

- (i) *Agent Workforce* → Both the quality and quantity of the agent workforce will be negatively effected. PRPs represent a transfer of economic rents from agents to farmers and thus will reduce agent compensation. The labor literature can provide some insight here. Each agent has a stock of human capital which consists of their knowledge, experience, and contacts. However, the future stream or return to that human capital has decreased because of the introduction of PRPs and an accompanying reduction in their compensation. Each agent will decide whether to continue to be a crop insurance agent or change jobs. There are fixed costs associated with changing positions such as search costs and possible investments in additional human capital. Therefore, we would suspect that older agents with more experience are less likely to withdraw from the crop insurance industry because the future revenues in another position are calculated over a shorter stream and thus the fixed costs of changing positions are more heavily weighted. There may be a relatively small counter effect in that the premium reduction will yield more farmer demand and at higher levels which will have a positive effect on agent incomes. However, it is unlikely that this effect will dominate in the majority

of agents and we expect agent incomes in general will decrease because of PRPs.

- (ii) *Agent Training* → Under the assumption that agents are trained to the minimum requirements as outlined in the 2005 SRA, there will not be any negative effect on agent training. To the extent that AIPs provide additional training and/or agents self-train, the returns to this investment in agent capital are decreased so supplemental training will decline. Provided that the conditions laid out for agent training in the 2005 SRA (section II, A6) are sufficient for proper service, PRPs should not have a material effect on the delivery and service of the program.
- (iii) *Claims Adjustment* → There should be no effect on the claims adjustment process unless companies have incorrectly specified their efficiency gains and thus are unable to meet their financial obligations under the SRA. In such cases there may be pressure placed on loss adjusters to reduce legitimate claims. Note however that this is not much different than in the past when excess rents went to the agents rather than the farmers.
- (iv) *AIPs* → While PRPs primarily represents a transfer from agents to farmers, AIPs are positively affected. Because the riskiest farmers participate and do so at the highest levels of coverage first, when new participants enter the program or previous participants purchase greater coverage, they are less likely to have a claim and more likely to have an upwardly biased premium rate. As a result, AIPs gain as the average profit from A&O reimbursement as well as the average underwriting gain tends to increase. Finally, it may be easier for AIPs to compete in the farmer marketplace than in the agent marketplace thus reducing barriers to entry.
- (v) *Small Niche Market AIPs* → While PRPs in general will benefit AIPs, some of the possible structures of PRPs could have pronounced negative effects on small niche market AIPs. If a large AIP institutes a PRP that is fixed across its entire Book of Business, there is likely to be some subsidization from one state-crop-insurance plan combination to another. Generally, the state-crop-plans being subsidized will be small markets (crops, states, or plans) and those AIPs that only serve those small markets will not be able to compete. Therefore, it is reasonable to have sufficient flexibility in allowing PRPs to vary by state-crop-plan.
- (vi) *Crop Insurance Marketplace* → Because farmers and AIPs should be better off financially the crop insurance marketplace will be better off once a new equilibrium is reached given the structural change for agents.
- (vii) *Service to Producers* → Service to producers will necessarily decrease as the return to service for agents decreases. As outlined in (i) the agent work force will not either be as large or as competent – but both effects should be

marginal. As a result, service to producers will be decreased. It may be worthwhile to evaluate “producer satisfaction” of their insurance products and experiences through questionnaires and/or interviews of producers. This more directly measures the end product of service provided and producer satisfaction rather than expenditures into inputs that are used to develop producer satisfaction.

- (viii) *Service of Small and Limited Resource Farmers* → Small and limited resource farmers who purchase significantly less coverage in total dollars have always been disadvantaged relative to large farmers because of the incentives created by a reimbursement scheme that returns a fixed percentage of total premium to AIPs. Each agent has an opportunity cost to their time and now the return to their time in servicing clients will be decreased (could be driven to zero in which case they exit crop insurance business). As a result, they will tend to service fewer clients and by way of the reimbursement scheme will drop small purchasers of insurance – generally small and limited resource farmers. Agents play a vital education role and so it is important that PRPs be incorporated into RMA education plans.

B1) Should AIPs be required to offer their PRP for all states and plans of insurance they write?

No. This may be inconsistent with the requirement that the premium reduction match where the efficiencies are recovered. If the efficiencies are with respect to fixed or indirect costs than they would be correctly spread over the entire Book of Business. Conversely, if the efficiencies are with respect to direct costs that vary by state or plan of insurance, they would be incorrectly spread over the entire Book of Business. Because some efficiencies may be state or plan of insurance specific, if allocated across the entire Book of Business, it may cause undue harm to those AIPs operating in states or plans of insurance that do not, for reasons beyond their control, do not enjoy any efficiencies. This will hinder their ability to compete because of the inability to cross-subsidize. Also, by giving AIPs flexibility across state-crop-insurance plan it maximizes their transfer to farmers.

B2) Should AIPs be allowed to limit their PRP to a limited number of state?

Yes. To not allow this could be inconsistent with the requirement that the “premium reduction be offered in the same place the efficiency was derived” if the efficiency is state, crop, or plan of insurance specific. Again, if AIPs were forced to apply the PRP to their entire Book of Business it could discourage their participation in states that do not enjoy the efficiency. Also, by giving AIPs flexibility across state-crop-insurance plan it maximizes the potential transfer to farmers.

B3) Should AIPs be allowed to pick the plans of insurance for their PRP?

Yes. To not allow this could be inconsistent with the requirement that the “premium reduction be offered in the same place the efficiency was derived” if the efficiency is plan of insurance specific. Again, if AIPs were forced to apply the PRP to all plans of insurance, it could discourage their participation in certain states where the majority of business involves plans of insurance that do not enjoy the cost efficiency.

C) Should AIPs or RMA be allowed to select the states and what criteria should be used?

AIPs should be allowed to select the states because they may not enjoy efficiencies gains in the same manner. Hence, mandating all AIPs to either offer or not offer PRPs in RMA specified states could be inconsistent with the requirement that the “premium reduction be offered in the same place the efficiency was derived”. Also, if AIPs were forced to apply the premium reduction to only RMA specified states, it could discourage their participation in certain states where the majority of business involves plans of insurance that do not enjoy the cost efficiency. The criteria that should be used by AIPs to choose the states for their PRP would necessarily be that the premium reduction be offered in the states where the efficiency was derived.

III) Impact of PRPs on Small, Minority, and Limited Resource Farmers

General Comments: PRPs will not have a direct effect on minority farmers but will have an effect on small and limited resource farmers. The structure of the A&O reimbursement scheme -- a fixed percentage of total premium -- is such that agents have greater incentive to service high total premium purchasers of crop insurance rather than small total premium purchasers of crop insurance. PRPs will exaggerate this problem for the reasons discussed in section II, question A1 (i) and (viii). That is, because the return to their time is decreased they are less likely to service as many clients and will reduce systematically the lower insurance purchasing producers which tend to be small and limited resource farmers. Because RMA has access to the AIPs historical and current book of business they can statistically determine whether they have ignored certain sectors of the farmer population such as small, minority, and limited resource farmers. RMA can also ensure that small and limited resource farmers are not unfairly discriminated against by not allowing AIPs to sell both premium reduced and not premium reduced identical lines of insurance, such as MPCI, in the same crop-state combination. RMA can also incorporate PRPs into their risk management education programs, particularly those that target small and limited resource farmers.

A 2003 National Agricultural Statistics Service–U.S. Department of Agriculture report indicates that 58% of all farm households have access to a computer, up from 38% in 1997. However, farms with gross sales over \$100,000 had higher adoption rates with 75% having computer access. Internet access was available to 48% of all U.S. farm households or over 80% of all households with computer access, and most of these producers were using a phone line to access the Internet. Thus, it may appear that technology puts relatively small producers at a disadvantage to larger producers. However, at the margin, technology like the Internet may actually work to the advantage of small producers. Henderson, Dooley, and Akridge found that a key item perceived among agribusiness managers on getting farmers to support e-commerce over the Internet is building personal relationships and satisfying farmers' service needs. To the extent that communication technologies like the Internet offer a more efficient vehicle for developing and building personal relationships, crop insurance providers may very well be able to enhance service and information flows to both small and large farmers. Tronstad, Teegerstrom, and Osgood report that in moving a seed crop coordination map from a paper map that could only be accessed at one location to an Internet-based map that could be accessed from anywhere, smaller producers actually gained some power in selecting specialty seed planting fields relative to the larger producers. The reduction in transaction and communication costs of selecting fields as provided through the Internet, allowed small producers to access a more complete set of information.

Clearly, if small producers do not have access to the Internet, they will not benefit from the greater information set and discounted e-commerce opportunities it can provide. But if insurance providers were required to post their PRPs on the Internet using a user-friendly premium calculator, small producers would also have the opportunity to more

easily shop and compare premium rates. Although a large producer will undoubtedly benefit more than a small producer from PRPs, the number of small farmers that stand to benefit from PRPs will likely exceed the number of large farmers. To track or ensure that a disproportionate number of small or minority producers are not left with poorer service due to PRPs, producer satisfaction measures obtained through questionnaires and/or interviews could be done as argued above. In addition, requiring that information on PRPs from all providers is available 24/7 would allow for monitoring opportunities and ensure that pricing information is readily available as required for a competitive marketplace.

IV) Impact of Requiring Phase-in of PRPs

General Comments: We do not feel it is necessary to require phase-in of PRPs. Presumably good business practices would ensure that AIPs employ some type of phase-in on their own and they should be given the freedom to determine that for themselves. Determining premium reductions is not an exact science so AIPs should be encouraged, not mandated, to phase-in premium reductions and thus should not be limited (on a year to year basis) in changing those premium reductions

A) Is it necessary to have established AIPs phase in their PRPs.

No. We do not think it is necessary to have new or established AIPs phase-in their PRPs. To do so would create a barrier to entry and thus limit competition. In addition, it could limit competition of late adopters. I think requiring an ex-ante and ex-post external audit that attests to the proposed and then actual cost efficiencies is sufficient. There is a very small probability that there may arise unintended consequences of widespread PRP adoption of AIPs but that can and should be dealt with ex-post. Having ex-ante and ex-post external audits by independent and credible CPAs should minimize the probability of this event.

B) What should be the recommended number of states in the first year and for how many years it should take to completely phase in the PRP.

As alluded to in (A), this should be left to the discretion of the AIP.

C) Should changes be allowed to the PRP from year to year.

Changes should definitely be allowed from year to year of the PRP. The environment is very uncertain and as such the AIPs should not be hindered in adapting to their ever changing environments. Within a year they should not be allowed to change their PRP after it is approved.

V) Impact of Allowing Complex PRPs

General Comments: In some, perhaps even most circumstances, it will be very difficult for RMA (in-house) to verify the sources and magnitude of efficiency gains that warrant the proposed premium reductions. We wondered why RMA is so concerned with tracking the efficiency gains. We have concluded the concern is rooted in the oversight role which must ensure AIPs maintain the financial capability to honor their SRA commitments even under “significant nationwide losses”. RMA must balance its intrusiveness and constraints placed on AIPs with respect to PRPs against RMA’s confidence in the AIP’s financial capabilities to honor their commitments under the SRA. This requirement is already outlined in the 2005 SRA (section IIA, paragraph 8). It appears that RMA, the Board, or both would prefer more detailed information/proof on the validity of proposed efficiency gains. RMA should hire Certified Public Accountants (CPAs), preferably forensic Accountants, to outline a set of questions -- much like given to expert reviews -- that require AIPs to have external/outside independent CPAs attest to. These would become part of the AIPs PRP submission. The statements that would require CPAs to attest to would include but are not limited to: (i) that costs are properly restated on a reinsurance year basis; (ii) the cost reduction attributable to each type of efficiency; and (iii) the proper allocation of costs across PRP and non PRP lines of insurance, across states, are consistent with generally accepted accounting principles. Of course, the expense of these accountants will need to be born by the AIPs themselves which will tend to favor the larger AIPs that can spread such fixed costs over a larger Book of Business. RMA does not have expertise in the area of forensic accounting and while we are suggesting that AIPs provide statements from CPAs attesting to their practices, it would be necessary for RMA to attain some degree of expertise in forensic accounting to attest to the competency of these statements much like RMA has some in-house expertise in economics and statistics. Finally, the AIP should need to submit two external audits: an ex-ante external audit that attests to the validity of the proposed costs and efficiencies and an ex-post external audit that attests to the realized costs efficiencies, and their correspondence to the previously proposed cost efficiencies. RMA should also consider penalties for significant unexplained differences between proposed and realized efficiencies.

A) How can RMA verify the AIP’s are properly restating costs that were originally presented on a calendar year basis to a reinsurance year.

Proactive monitoring of both actual and projected provider activity by RMA (or an outside/external accountant) would be necessary. The reporting and subsequent monitoring of BOTH the calendar and reinsurance year costs over time provides the data necessary to assess whether AIPs are properly restating costs. While year-to-year differences will exist between the two time series they should over a longer period represent similar totals. However, this begs the question how long of time period is required to analyze the two costs series for significant discrepancies. This is a statistical question and is a

function of the variability of year-to-year costs which can be highly variable due to number of claims and the magnitude of the cost misreporting. I would suspect that at least 3-5 years of cost data is required to conduct any analysis. This does not seem to be a sufficiently tight monitoring system and thus we would suggest that AIPs be required to have external CPAs audit and sign a statement attesting to the fact that the AIP is properly restating costs originally presented on a calendar year basis to a reinsurance year basis. While these statements will be sufficient in the short-run, statistical analysis on the two different time series (costs on a calendar year, costs on a reinsurance year) should be analyzed every five years.

B) How can RMA accurately determine and verify the cost reduction attributable to each type of efficiency.

As the complexity of the efficiency plan initiatives increases the ability to accurately quantify and verify their impact decreases. The challenge is to develop a finite reporting set that meet the needs of RMA without being onerous to the AIP. The data necessary to substantiate the PRPs exists within the AIPs operation as they would/should have undertaken such analyses to determine the form and magnitude of a premium reduction they could financially afford. Thus, the pertinent details supporting the changes could be provided in the form of a narrative to facilitate an efficient and effective review, the results of which may necessitate or preclude the AIP from further analysis. This narrative must contain statements from CPAs that attest that each type of efficiency contributed certain cost reductions.

C1) How should costs that span both PRP and non PRP lines of insurance be allocated?

The methodology to allocate indirect/fixed costs across different business lines must be prescriptive to ensure consistent application by all AIPs and transparent to enable RMA to verify. On the other hand, it must also be sufficiently flexible to enable AIPs to maximize the efficiency gains they wish to pass along to the farmer. The ideal model, whether utilizing revenue, cost or some other basis of allocation, will distribute the indirect/fixed costs to the various lines of insurance in a manner consistent with the resource consumption. Risk and capacity are two key elements to consider. Again, this is not an area that RMA currently has the expertise or should attain significant expertise. It should require AIPs submit statements from independent CPAs that the costs are allocated along generally accepted accounting principles -- that is, in a manner consistent with resource consumption.

C2) How RMA can detect and prevent improper allocation of costs between PRPs and other activities of the AIP?

Extremely detailed cost information on all activities of the AIP, some of which RMA may not be entitled to, coupled with a significant investment in RMA personnel (retraining as CPAs or hiring experienced CPAs) would be required for RMA to “detect and prevent improper allocation of costs between PRPs and other activities of the AIP”. Again, I would suggest that the burden be placed on the AIPs to prove, by way of independent external verification by experienced CPAs, that there was not improper allocation of costs between PRPs and other activities of the AIP.

D) How costs should be allocated and how RMA can detect and prevent improper allocation of costs between states?

The same arguments for (C) apply to this question. First, RMA should guard against intrusiveness on AIPs as long as they are assured that the AIP maintains the financial and operation resources to honor its commitments under the SRA during high loss years. Second, the burden of proof must lie with the AIPs and as such should be required to have external CPAs attest to their proper allocation of costs between states in accordance with generally accepted accounting principles. Third, that RMA hire some in-house expertise in the area of forensic accounting.

E) How RMA can verify that the same allocation of costs was used to determine the total costs before the application of the efficiency, the amount of the efficiency, and the total costs after application of the efficiency.

The Board can require an ex-post external audit which requires that CPAs attest to the realized efficiency gains and costs. These can be compared with the ex-ante external audit to verify that the proposed and realized are sufficiently similar. As a result, it is required that the ex-ante external audit is sufficiently detailed such that the ex-post audit can attest to the similarity or lack thereof between the proposed and realized costs.

F&G) The Board wants know whether there is a fair and equitable system of cost identification that can be applied to all approved insurance providers offering premium reduction plans. What would it look like and how should it be applied.

Yes. We believe there is a fair and equitable system of cost identification that can be applied to all AIPs. That system is that first a forensic CPA stipulates a set of conditions of cost identification that need to be addressed by any external audit. Second, the onus is on the AIP to proof compliance with all

cost identification conditions. This compliance should entail, but not limited to, two external audits that attests to these conditions. The first ex-ante external audit would deal with compliance regarding **proposed** cost efficiencies and would be part of any PRP. The second ex-post external audit would deal with compliance regarding **realized** cost efficiencies and would be part of the subsequent years PRP.

H) There is also a requirement that the premium reduction be offered in the same place where the efficiency was derived. Given these complex premium reduction plans, the Board wants to know how RMA can determine and verify that the efficiencies correspond to the plans of insurance, states, or areas where the premium reduction plan is to be offered.

The requirement that the premium reduction be offered in the same place where the efficiency was derived is excellent and should be one of the stipulations that must be addressed by the ex-ante and ex-post external audits. Interestingly, this is where RMA may be able to undertake some relatively inexpensive in-house analysis. The PRP will detail the premium reduction by state-plan of insurance and thus allows a qualitative, if not, quantitative analysis.

VI) Impact of Affiliated Entities

General Comments: Affiliated entities could seriously undermine the integrity of the crop insurance program by enabling discrimination against certain farmer types. **[Redacted Confidential Business Information]**. Agents will be employed with both corporations and thus will be able to sell the given plan of insurance with a premium reduction or without a premium reduction. Informed farmers will demand the premium reduction but uninformed farmers will not unless the agent informs them. Given agents are one of the primary sources of crop insurance education to most farmers, they have an incentive to not inform the farmer about the premium reduction. Because the uninformed farmers are more likely to be small or limited resource, then they will be unfairly discriminated against. I think this could seriously compromise the integrity of the crop insurance program. Finally, the ex-ante and ex-post external audits would have to include not only entities offering premium reductions but those affiliated entities not offering premium reductions as well.

A) Could such arrangements result in unfair discrimination against certain producers?

Yes. Such arrangements would result in unfair discrimination. In fact, they are set up to discriminate between informed and uninformed farmers. The tendency is for small and limited resource farmers to be uninformed and thus they are unfairly discriminated against. The larger, high premium farmers, will be educated by their agent because the agent will be fearful of losing the farmer if they subsequently found out another farmer was offered a premium reduction. However, the agents and AIPs will be much less concerned about losing small premium farmers (small and limited resource farmers) and thus they may not educate them on the premium reductions. While some of this can be mitigated with a strong education program by RMA, the majority of education farmers receive on risk management is by way of their agent. There would be a strong incentive for agents not to reveal the premium reductions if they received higher commissions when they sold non-premium reduced plans of insurance.

B) Could such arrangements compromise the integrity of the crop insurance program?

Yes. If one defines integrity of the crop insurance program as disallowing unfair discrimination against certain producers then yes such arrangements would compromise the integrity.

C) Could such arrangements allow improper allocation of costs among affiliated entities to the detriment of some producers and to the crop insurance program in general?

Yes. Affiliated entities such arrangements would make it more difficult for CPAs to determine the proper allocation of costs and whether expected efficiencies match premium reductions, and finally whether, ex-post, these efficiencies were realized. There would be an incentive to subsidize the entity offering premium reductions to the detriment of the producers serviced by the entity not offering premium reductions. This would adversely effect the integrity of the crop insurance program.

D) How could RMA detect the improper allocation of costs among affiliated entities?

This would be very difficult to detect. Enforcing external audits, ex-ante and ex-post, by CPAs as outlined in section V would reduce the likelihood of this happening. However, the external audits would necessarily have to include all entities, not just those entities offering premium reductions. It is unclear whether the Board has the ability to demand that entities not offering premium reductions be included in the audits.

VII) Impact of Changes in Agent Compensation

General Comments: If agents share in the underwriting gains of the contracts they sell farmers that tend to experience a loss will be unfairly discriminated. If however agents share in the underwriting gains of the AIP and the AIP is sufficiently large such that the underwriting gains/losses of the contracts a specific agent sells are independent of the total underwriting gains/losses of the AIP, there will not be any rational reason for those farmers that tend to experience a loss to be unfairly discriminated. However, agents that incorrectly believe the policies they write can effect the total underwriting gains/losses of the AIP will behave in a fashion that discriminates against producers who have a poor loss experience. Therefore, RMA should not allow agents compensation to be a function of the underwriting gains/losses of the contracts they write. If AIPs wish to compensate agents based on their total profits then they must prove that the returns to the set of contracts by every agent are independent of the AIP profits. Certainly new and old forms of agent compensation can be used to hid deliver expenses and as such need to be considered in the external audits. However, if future SRA incorporated these delivery efficiencies and AIPs expected this, they would have an incentive to report their true delivery costs. PRPs represent a transfer of economic rents from agents to farmers and as such will somewhat alter the crop insurance delivery system. However, the farmers will benefit from those premium reductions and will tend to be better off. In addition, the premium reduction will tend to attract greater participation and at higher coverage from low risk producers. In this sense, the AIPs and the financial stability of the program should be better off in the long run. Small and limited resource farmers although will not receive the same service as before, they will enjoy significant premium subsidies that may have a much greater impact on their survival than bigger farms.

A) What standards should be used to evaluate agent compensation arrangements?

The standards that should be used are whether an arrangement provides incentives for agents to unfairly discriminate against a certain segment of producers. If such an arrangement does discriminate, then it should not be allowed. While sometimes these incentives are obvious, other times these incentives are not and as such RMA should continually monitor the compensation arrangements and the composition of an agents' book of business. If certain segments are not adequately represented then further investigation into the compensation arrangement by RMA would be warranted. For example, agent compensation that is a function of underwriting gains/losses corresponding to the contracts they sell would adversely effect those producers with a poor loss history.

B) Could such arrangements misstate crop insurance delivery expenses?

There is an incentive for AIPs to understate delivery expenses but if such expenses were used in future SRAs to determine A&O rates then there would be a corresponding incentive to report accurate expense data.

C) Impact on long-term financial stability and capacity of the crop insurance program.

While agents will be worse off, the remaining stakeholders should be better. Increased subsidies will increase participation and coverage. In turn, this will decrease the likelihood of future disaster assistance. Because riskier individuals are more likely to purchase insurance and at higher levels, the new business should increase profits of AIPs by way of greater underwriting gains and less claims eating away at A&O. While all producers are likely to experience a minimal decline in service, small and limited resource farmers will experience the majority of the decrease. However, small and limited resource farmers will also enjoy a significant decrease in their premiums and will tend to be better off.

VIII) AIP Financial Capabilities

General Comments: One of the biggest benefits of the PRPs is that there exist incentives to reveal true costs, perhaps even understate those costs. Future SRAs need to incorporate this information to determine accurate A&O reimbursements. It is crucial that the Board require ex-ante and ex-post external audits to verify the proposed and realized efficiencies. I think the verification of these complex PRPs require external audits by CPAs. Of course, the AIP should pay for the audit so that such expense does not represent an externality that is appropriately incorporated.

A) How such a fair standard should be designed and implemented?

As mentioned in earlier answers, a fair standard would require ex-ante and ex-post audits by certified CPAs that answer a set of questions, designed by RMA with the assistance of forensic CPAs. Such a standard will provide the necessary flexibility to encourage investment in a variety of potential cost efficient technologies given the comparative endowments of each AIP. RMA should analyze the future PRPs and the AIPs Book of Business to determine that there is not unfair discrimination by the companies.

B) Should the Board require an independent CPAs audit?

YES. If questions are properly designed -- with the assistance of a forensic accountant – the ex-ante combined with ex-post and significant penalties would be a very effective oversight tool.

C) If the audit is not effective what would be?

n/a

D) Should the AIP pay for the audit?

Yes. One can make an argument for either. On the one hand the AIP should properly incorporate the costs of the audits into their delivery expenses. Conversely, given that the AIPs are paying the external auditors there may be a conflict of interest. I think the latter is less concerning given there is a different climate of business accountability now than in the past.

Short Bios

Alan P. Ker

Over the past three years Professor Ker (Department Head, Agricultural and Resource Economics, University of Arizona) has conducted numerous reviews for the Board as well as numerous studies on rating methodologies (MPCI, RA, CRC, IP, and GRP) for the Board. Professor Ker has published many articles on crop insurance in peer refereed journals. Professor Ker has a joint PhD in statistics and economics from North Carolina State University in 1996.

Russ Tronstad

Professor Tronstad received his PhD from the University of Illinois in 1989 in Agricultural Economics. He delivers risk management education to producer audiences that are comprised of both large commodity producers and small-scale specialty producers. Producer perspectives on crop insurance policy options, coverage levels, and returns are addressed in his extension activities. He has received several grants from RMA that include providing hands-on training of computer and Internet risk management tools to underserved audiences.

Richard Scheel

Richard graduated from the University of Waterloo in 1990 where he earned his Bachelor of Mathematics degree in the Honors Chartered Accountancy Option/Information Systems Co-operative Program. In 1993 he received his Chartered Accountant designation. Richard's portfolio includes the specialized reporting to the Ontario Ministry of Health and Long Term Care (MOHLTC). The Ministry utilizes this data to monitor the operation and cost performance of Hospitals as well as drive funding allocation decisions. The delivery of healthcare in Ontario is not dissimilar to the crop insurance programs delivered by the Federal Crop Insurance Corporation (FCIC). In both cases the Government delivers its program, healthcare or crop insurance, through intermediaries, such as hospitals and private insurance companies. The intermediaries, in turn, must report the program operations to the Government in sufficient detail for the Government to ensure the delivery is efficient and sustainable. Canadian healthcare utilizes a common reporting framework, referred to as the MIS Guidelines, to collect financial and statistical data. Richard's proficiency with this framework enables him to envision the application of a similar framework for the crop insurance programs.