AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Crop Insurance Rate of Return *Issues & Concerns*

By Frank Schnapp, NCIS

In recent months, a variety of claims have been aired in the press regarding the cost of delivery of the Federal crop insurance program and the profitability of the private sector companies that deliver the program to farmers. These claims place the crop insurance industry in an unfavorable light, arguing that the industry is too profitable, that profits are guaranteed, and that Administrative and Operating (A&O) expense payments are excessive. Naturally, the companies participating in the program disagree. They argue that if profits were generous or excessive, new insurance companies would be entering the program on a regular basis. This is simply not taking place. At one time, 49 companies participated in the Federal program, but in recent years the number of insurers has not exceeded 16.

One explanation for the negative press received by the program is simply misinformation. Discussions of the industry's profitability often disregard recent funding reductions to the program, confuse basic financial concepts used to calculate industry returns, and fail to take into account that industry returns vary over time and differ across geographic regions. There are also serious questions about the data used to estimate the industry's rate of return.

Unfortunately, public statements regarding the rate of return have confused the issue even further. Industry leaders have met with the government to clarify the issues and look forward to continued dialogue. Among the concerns voiced about the rate of return estimates being discussed publicly are that they:

- Confuse gross revenues with net income;
- Assume that government A&O payments to companies on behalf of producers cover all program delivery costs, which they do not;
- Fail to account for certain other operational costs such as reinsurance;
- Ignore recent changes in the program; and
- Fail to provide insurance companies with the reasonable rate of return indicated by government's own study.

Up till now, the crop insurance industry has not attempted to respond to the misinformation appearing in the press. However, in view of the ongoing attacks against the program, the moment seems right to present an overview of the industry's finances as a counterweight to the distortions being presented to the public.

> Unfortunately, statements by government officials regarding the rate of return have confused the issue even further. Industry leaders have met with the government to clarify the issues and look forward to continued dialogue.

How Crop Insurance Works

In virtually every other Property and Casualty (P&C) line of insurance, insurance companies determine the rates they charge based on their own loss experience, expenses, and profit objectives. The Federal crop insurance program operates on an entirely differently basis. The Risk Management Agency (RMA) of the US Department of Agriculture establishes the rates that every farmer will pay. These represent expected indemnities only, without taking into account expenses or profit for the insurance company. Since no insurance company can operate without the ability to recoup its expenses or earn a profit, the government created a separate contractual arrangement by which it can enlist the services of the private sector in delivering the program to all eligible farmers while simultaneously providing participating insurers the ability to recoup their program delivery costs and the opportunity to earn a reasonable return.

The Standard Reinsurance Agreement (SRA) is a cooperative financial assistance agreement that outlines the responsibilities of insurance companies in delivering the program and specifies the financial arrangements under which the companies operate. One section within the SRA establishes the amount of A&O the government pays to compensate insurers for their cost of delivering the program. Delivery costs would be included as part of the premium in any other line of insurance, but the government has chosen to

reimburse these costs by making A&O payments on behalf of insured farmers.

As mentioned above, rates for the Federal crop insurance program exclude any loading for the insurer's profit. Instead, the SRA allows an insurance company to retain a portion of the total underwriting gains (defined as the difference between premiums and indemnity payments) produced on its book of business. At the same time it also requires the insurer to retain a portion of any underwriting losses. In the five Corn Belt states, an insurer's maximum underwriting gain is currently 34.75 percent of premium, while its underwriting loss can be as much as 94 percent of premium. In other states, underwriting gains are capped at 42.6 percent while underwriting losses can be up to 51.5 percent of premium. What should be kept in mind is that the underwriting gain or loss a company earns in a year depends primarily on the weather. When weather conditions are good and farmers have high yields, fewer claims are reported and companies are able to earn underwriting gains. However, in a year with poor weather conditions and low yields, farmers report more claims and insurers absorb underwriting losses. If poor weather affects a large number of states, the underwriting losses in those states could swamp the gains earned throughout the rest of the country. Due to the potential for widespread losses, crop insurance is much riskier than most other P&C lines of insurance. This point can be illustrated by considering how often an industry loses money. Industry sources report that the P&C industry as a whole has lost money only once, in 2001, due to the unprecedented attack on the World Trade Center in New York City. In comparison, the crop insurance industry has lost money in two years over just the past two decades, in 1993 and 2002. If the current SRA had been in effect during 1983 and 1988, two years with widespread crop failures, the industry would have lost money in those years as well.

Recent Program Changes

The finances of the crop insurance program regularly come up for Congressional review as part of the Farm Bill debate. Reforms introduced in the 2008 Farm Bill were estimated to have reduced industry revenues in excess of $6 billion over the ten year budgeting period. In addition, RMA renegotiates the terms of the SRA every five years. Based on information released by RMA, the recently completed negotiations for the 2011 SRA reduced industry underwriting gains and A&O payments by an additional $6 billion over the next 10 years. Under the terms of that agreement, government estimates of private sector underwriting gains (not Net Income) were 14.5 percent of retained premium.

Shortly after the conclusion of the SRA negotiations, RMA reduced its 2012 premium rates for corn and soybeans. These changes are estimated to reduce prospective underwriting gains by an additional 2 percent of retained premium.

The President's 2013 Budget proposal now seeks to reduce the overall return to the companies even further. This is a matter of serious concern for the industry. Even prior to the recent reductions, there were a number of states where companies have little or no opportunity to earn a fair return. The significant uncertainties regarding the adequacy of returns for the entire program and by region raise the issue of whether adequate incentives exist for private sector delivery of the program on a nationwide basis.

Table 1. **Crop Insurance Industry Income Statement**	
In Millions of Dollars	
Premium and Equity	
Gross Premium (a)	10,417
Retained Premium after reinsurance and Quota Share (a)	8,265
Equity (b)	10,871
Revenue	
Underwriting Gain/Loss (c)	1,033
Investment Income on Equity (d)	353
A&O Payments (e)	1,332
Expense	
Loss Adjustment and Company Overhead (f)	(629)
Commissions and processing fees (g)	(1,132)
Cost of borrowed funds due to delay in payment of A&O and Underwriting Gain (h)	(42)
Income = Revenue – Expense	
Pretax Income	915
Federal Income Tax (i)	(287)
After-tax Net Income	628
Rate of Return	
Return on Equity (ROE)	5.8%
Cost of Capital (Required Return on Equity) (j)	12.7%

(a) Estimated 2012 premium is based on 2011 actual premiums adjusted for corn and soybean rate changes and commodity price changes. Retained Premium is based on 2011 premium retention percentages and is net of Quota Share.

(b) For the purpose of this exhibit, industry equity has been developed under the assumption that the industry holds sufficient capital to make commercial reinsurance unnecessary. Federal Regulations require companies to hold capital of no less than twice the company's maximum possible underwriting loss. This assumption obviates the need to include the cost of reinsurance as an expense.

(c) Estimated underwriting gain is based on RMA's long-term estimated underwriting gain (14.5% of Retained Premium) as of June 28, 2010, reduced by the estimated impact of the new RMA ratemaking methodology (2.0% of Retained Premium) for the 2012 year. Additional reductions in underwriting gains are anticipated for 2013 but are as yet unknown.

(d) Equity is invested in short-term instruments to ensure that the money will be readily available when needed. Investment income is based on the Wall Street Journal prime rate of 3.25% as of July 9, 2012. No investment income is earned on insurance policy cash flows due to the brief period between collection of premium and payment of indemnities.

(e) 2012 A&O payments have been estimated based on the provisions of the 2011 SRA.

(f) Loss adjustment and overhead expenses are the average of 2009 and 2010 actual expenses reported in the most recent Grant Thornton report adjusted for annual inflation of 2 percent.

(g) Commissions are based on provisions in the 2011 SRA that provide up to 85% of A&O for agent commissions and processing fees. The SRA also allows additional agent compensation, which is not included in the figures presented here.

(h) Delays in receiving A&O and underwriting gains impose a financial cost on the industry estimated to be -0.5% of Retained Premium.

(i) Applies a Federal corporate tax rate of 35% on operating income and 25.4% on investment income (obtained from the 2009 Milliman study).

(j) The average cost of capital as shown in the 2009 Milliman study prepared under contract with RMA.

Net Income, Return on Equity, and Cost of Capital

In order to respond to the public debate regarding the profitability of the program, we first need to clarify the distinction between gross revenue and net income. The net income, or profit, of a business is the difference between its revenue and expense. For a crop insurer, revenues consist of underwriting gains and A&O payments, as well as any income earned from the investment of the insurer's capital. Program delivery expenses include loss adjustment expense, agent compensation, and company overhead. Net income is also net of Federal, state, and local taxes.

While net income is important in itself, companies also need to know how well they are performing in comparison to their peers and other industries. The accepted standard for measuring the profitability of a company or an industry is its Return on Equity (ROE), defined as the ratio of net income to the equity (i.e., capital) invested in the business. According to financial theory, unless ROE is competitive with other uses for capital, capital will be withdrawn from an industry and be reinvested in industries with better rates of return. In general, the riskier a business, the greater its rate of return needs to be. Financial theory refers to the required rate of return of a business as its cost of capital. In effect, a company needs to achieve an ROE equal to its cost of capital in order to remain viable over the long term.

Cost Effectiveness

Another issue raised during public discussions has been the A&O payments made to the companies. A&O has often been described as extra profit that companies make in addition to their underwriting gains. The reality is that A&O is used to compensate insurers for their cost of delivery. A&O is paid on behalf of farmers rather than included as part of the premium in order to reduce farmers' out-of-pocket cost for risk protection.

One question critics raise with regard to A&O is whether the government is overpaying for private sector delivery of the program. This question can be addressed by comparing the cost of delivery of the Federal crop insurance program to other P&C lines of insurance. That comparison has been published in a report prepared by Grant Thornton LLP[1]. The report demonstrates that the crop insurance industry is vastly more cost effective than other sectors of the insurance industry. Total delivery expense in 2010 for the crop insurance industry was roughly 25 percent of expected indemnities. For the P&C industry in total, the comparable cost was in excess of 65 percent. Over the most recent five year period, loss adjustment expense for the crop

insurance industry averaged just 2.5 percent of expected indemnities versus 14.6 percent for Homeowners and Private Passenger Auto Physical Damage insurance. Agent compensation was 16.3 percent in comparison to 18.1 percent for the P&C industry in total. Company overhead expense for the crop insurance industry was only 4.9 percent versus 22.6 percent for the P&C industry as a whole. Clearly, the industry has very little fat left to trim.

Crop insurers also raise a question with regard to A&O payments, but their question is whether the amount of A&O they receive is adequate to cover their delivery cost. A&O has been cut drastically over time, from 35 percent of premium in the early years of the program, to an estimated 11 percent in 2011. Prior reductions had been feasible due to the rapid growth of the program, which enabled companies to spread their costs over a larger base. It needs to be recognized, however, that the current A&O reimbursement is a fraction of the amount that other insurers receive for delivering the Federal Flood insurance program, a program in which insurers share none of the risk, and a fraction of the premium expense loading in other sectors of the P&C industry. Out of this reduced A&O allotment, critics of the industry argue that companies should be able to pay loss adjusters to investigate and settle claims on one out of every four policies, cover company overhead costs such as employee salaries, benefits, rent, and utilities, and compensate agents for delivery of the program to farmers. This is simply not feasible. The reality is that A&O does not now and has not been adequate to cover program delivery cost for the past 15 years. Companies have been compelled to dig into their own pockets instead to pay the portion of expenses not covered by A&O.

Measuring the Crop Insurance Industry Rate of Return

Because companies within the crop insurance industry differ with respect to their scale of operation, regional spread of business, and organizational structure, there is no single rate of return that can be

> Another issue raised during public discussions has been the A&O payments made to the companies. A&O has often been described as extra profit that companies make in addition to their underwriting gains.

ascribed to every company in the industry. The following analysis instead attempts to estimate the average rate of return expected for the industry as a whole. Results have been developed based on an estimate of 2012 premium. These results do not reflect actual experience for 2011 or what may happen in 2012 due to effect of the drought. Instead, they represent what would have been expected for 2012 at the start of the year, before effects of the drought became apparent.

- As noted above, the level of underwriting gains negotiated under the 2011 SRA were estimated to be 14.5 percent of retained premium. However, underwriting gains are now expected to be 2 points less than this due to the effect of the 2012 rate reductions.
- A&O has been estimated based on the provisions of the 2011 SRA.
- Estimated loss adjustment and industry overhead expenses for 2012 are the average of 2009 and 2010 actual expenses from the most recent Grant Thornton report adjusted for annual inflation of 2 percent;
- Commissions are based on provisions in the 2011 SRA that provide up to 85 percent of A&O for commissions and processing fees. Total agent compensation is limited to 100 percent of A&O plus an additional 5 percent for processing.
- The delay in receiving A&O and underwriting gains imposes a financial cost on the industry of 0.5 percent of retained premium;
- Equity retained in support of the program has been developed under the assumption that industry capital fully satisfies the requirements of the Code of Federal Regulations. This eliminates the need for commercial reinsurance and allows the cost of reinsurance to be excluded from the analysis.
- Investment income is earned through the investment of the insurer's equity in the bond markets. Equity is assumed to be invested in short-term instruments at 3.25% to ensure that the money will be available when needed. No investment income is earned on premium cash flows since premiums are collected close to the time when indemnities are paid.

The attached exhibit estimates the crop insurance industry expected rate of return. Once all of the relevant factors have been taken into account, the industrywide expected return on equity of 5.8 percent is well below the estimates quoted in the press. It is also significantly less than the industry's cost of capital as reported in the 2009 Milliman study commissioned by RMA[2]. The industry's rate of return is roughly half of the level needed to retain capital in the program. While critics might argue that an adequate rate of return could be achieved if industry were to reduce its expenses even further, this is not the case. Even if A&O covered all program delivery costs, industry ROE would be just 8.3 percent, still well below the industry's cost of capital.

Additional Observations on the Rate of Return

The one certainty in the crop insurance industry is that change is continual. Ongoing program changes may bring about further changes. How these may affect the industry is yet to be determined. Additional points to keep in mind with regard to the results shown here are that returns earned by the industry are not guaranteed. Companies are exposed to considerable risk that may cause their results to vary widely from year to year and from region to region. The high degree of risk has not been adequately considered in any analysis provided by the government. Furthermore, an adequate

rate of return at the national level may not ensure an adequate return for individual states. Certain states, particularly in the Southern Plains, have extremely low or even negative expected rates of return, which has serious implications for the long-term viability of the private delivery system in those regions.

As the 2012 Farm Bill debate continues, it is hoped that everyone recognizes that the crop insurance system is working exactly as Congress intended by reducing taxpayer risk and speeding relief to growers when they need it the most.

Summary

As the 2012 Farm Bill debate continues, it is hoped that everyone recognizes that the crop insurance system is working exactly as Congress intended by reducing taxpayer risk and speeding relief to growers when they need it the most. This is why farmers and their bankers are strong proponents of the existing crop insurance structure and have asked that it not be weakened further. The crop insurance companies are doing more with less and fear that the misinformation reported in the press may undermine the successful public-private partnership that has taken more than three decades to build.

The crop insurance industry welcomes the opportunity for an open and honest dialogue regarding the profitability of the program. We believe that an impartial analysis of the industry's profitability will demonstrate that the industry is earning a rate of return less than industries of similar risk, and well below the industry's cost of capital.

[1] **http://www.ag-risk.org/NCISPUBS/SpecRPTS/GrantThornton/Grant_Thornton_Report-2011.pdf**

[2] Table 1 from Historical Rate of Return Analysis, prepared by Milliman, Inc., August 18, 2009