

Explaining the Costs of the Crop Insurance Program

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This article examines the information typically presented to the public on the costs of the Federal crop insurance program. Government presentations, the source of most program cost data, range from simple to very complex. We believe that many presentations lead to misunderstanding of the role of payments made to approved insurance providers (AIPs), the companies that deliver the program to producers. Confusion about the financial data may lead to misunderstandings of the costs and benefits of the program to producers, taxpayers and the companies.

A couple of examples illustrate the issue of interpreting program financial data. While the risks of underwriting gains

and losses are shared between the government and the companies, the underwriting gains and losses of the government are seldom, if ever, presented. Often when the AIPs have a large underwriting gain, the government has one as well, which reduces the cost of the crop insurance program to the taxpayer. Another source of confusion is the vaguely labeled “administrative and operating expense reimbursement” that is paid to the companies to cover their costs to deliver the program, such as agent commissions, office space, equipment, etc. However, these payments, while a cost to the government, do not fully reimburse companies for their delivery expenses. Moreover, these payments,

which are often seen as a subsidy to the AIPs, are more properly viewed as a subsidy to producers. This article presents financial data on the crop insurance program to help clarify these ambiguities.

Federal Budget Presentations of Crop Insurance Program Costs

The Federal government presents data on the costs of Federal programs, including the crop insurance program, in a number of ways. To provide some background for those searching government data bases for crop insurance data, the following primary concepts are used in the Federal budget presentations:



- **Budget Authority:** The authority of the Executive Branch to commit funds of the Federal Treasury. Congress provides this authority to agencies to spend funds to carry out programs as provided in law through annual appropriations acts and other legislation that authorizes spending.
- **Program Level:** The gross value of all financial assistance provided to the public through a program. This assistance may be in several forms: grants; guaranteed or direct loans; cost-sharing; research, technical assistance or other services; or, in-kind benefits such as commodities. Program level may exceed actual spending when assistance provided does not result in spending. An example is a loan guarantee program where the program level is the value of all loans guaranteed, but the actual Federal spending may only be the payments made to lenders for a few defaulted loans.
- **Outlays:** The actual cash spent from the Federal Treasury to meet the funding commitments of agencies. Outlays are less than budget authority when the agency does not spend all the funding it is authorized to spend in a fiscal year (FY). This may happen for a variety of reasons, such as ineligibility of expected beneficiaries or spending that is paid out over several fiscal years. Outlays are further divided into discretionary outlays and mandatory outlays.
 - **Discretionary outlays:** Cash spent under authority of the annual appropriations acts developed by the Congressional appropriations committees as part of the yearly appropriations process.
 - **Mandatory outlays:** Cash spent that is not controlled by the annual appropriation process. Mandatory outlays generally cannot be increased or decreased in a given year without a change in substantive law by the authorizing committees that have jurisdiction over the governing statute.

For crop insurance, the data on these financial concepts are variously presented on a crop year, fiscal year, calendar year and reinsurance year basis for the



Risk Management Agency (RMA) and the Federal Crop Insurance Corporation (FCIC). There are four important sources of budget information for the crop insurance program. The first of these is RMA itself, which presents tables on their website for crop years and fiscal years for “Government Costs of the Crop Insurance Program, 2002-2011” with

additional tables for “Premium and Other Income.” These are available at <http://www.rma.usda.gov/aboutrma/budget/costsoutlays.html>. The tables show direct outlays and some of direct and indirect income flows that relate to outlays.

A second source is the USDA Office of Budget and Program Analysis (OBPA), which publishes the *Budget*

Summary and Annual Performance Plan of all USDA agencies at <http://www.obpa.usda.gov/budsum/FY12budsum.pdf>. Summary data are presented for budget authority, program level and outlays. The third source is detailed budget explanations of each agency's budget at http://www.obpa.usda.gov/explan_notes.html. The fourth source is the President's Budget, available from the Office of Management and Budget. The crop insurance accounts are presented in detail in the Appendix to the Budget at <http://www.whitehouse.gov/sites/default/files/omb/budget/fy2012/assets/agr.pdf>. In addition, there are other sources, such as FCIC financial reports.

These sources present an array of data that are made very complicated by use of alternative time periods and budget concepts. In some cases, a single table will mix crop year, fiscal year and budget concepts. A fiscal year includes data from two crop years, so it may be difficult to relate a fiscal year's program costs to how natural disasters or price changes for one crop year show up in the data. Timing of payments and receipts also affect fiscal year data. To simplify our discussion here, we focus primarily on data closely associated with a crop year.

The difference between the three budget concepts also needs to be considered. Because the crop insurance program has authority to spend funds as necessary to operate the program, "budget authority" is usually determined by and thus very similar to outlays. The concept of "program level" is essentially gross indemnities plus payments to companies, i.e., the gross assistance before producer-paid premiums are considered. The goal in this discussion is to present the cost of the crop insurance program as "outlays," that is, direct spending associated with delivering the program and paying claims for the annual cycle of planting and harvesting a crop. In reality, some small level of outlays may be obligated in the crop year but paid out during the next crop year, or some outlays within a crop year may be for obligations made during the prior crop year.

Table 1. Crop Insurance Program Government Costs (million dollars)

	FY 2010	FY 2011 1/
Discretionary		
RMA Operating Expenses	80	80
Mandatory		
Delivery and Other Administrative Expenses 2/	1,430	1,393
Gross Indemnities	3,118	7,588
Underwriting Gains 3/	2,448	999
Transfer to Agricultural Management Assistance Program	-6	-6
Program Level	6,996	9,980
Less Producer Paid Premium and Other Fees	-2,449	-2,986
Budget Authority, Discretionary and Mandatory	4,627	7,074
Outlays 4/	4,784	7,069

1/ Estimate based on initial FY 2011 Continuing Resolution.

2/ Includes research, development and other expenses.

3/ Payments to approved private insurance companies.

4/ Outlays are from the USDA Budget Summary and Annual Performance Plan (p. 121). Outlays differ from budget authority for the following reasons. The FY 2010 outlay exceeds the budget authority because unpaid obligations from FY 2009 were paid out in FY 2010, and these exceeded the unpaid obligations from FY 2010 carried into FY 2011. For FY 2011, the level of unpaid obligations carried into FY 2012 is estimated to be \$5 million more than the level of unpaid obligations carried into FY 2011 from FY 2010.

Crop Insurance Program Outlays

As an example of a crop insurance program cost presentation by USDA, consider the data in USDA's *Budget Summary and Annual Performance Plan* (p. 30) used to explain RMA's budget proposed by the administration for FY 2012. Table 1 shows cost data for FYs 2010 and 2011.

While Table 1 provides an overview of the costs of the crop insurance program, it does not explicitly provide data on payments to the companies, subsidies to producers or underwriting gains of the government. The data presented make it difficult to understand the distribution of the program costs among the program participants. However, other government tables provide additional information. In addition, the accounting firm Grant Thornton, LLP publishes an annual report on the profitability and effectiveness of the crop insurance industry using data obtained from the AIPs. Using these alternative sources, Table 2 was constructed to provide greater insight into the program outlays, the distribution of program benefits and costs, and the relationship of the costs to crop year production performance. RMA agency and related administrative cost data are not included. Most of the data presented are RMA rein-

insurance report data but crop year data are also used.

Because government and private data sources do not report all variables for the same time periods and include different cost components, total program outlays in Table 2, which use reinsurance data and crop year data may differ slightly from other presentations. Some presentations include RMA administrative costs (e.g., salaries, IT costs, etc.) and other income (e.g., interest, transfers from other appropriations, etc.) and other expenses (e.g., research costs from mandatory funding). These categories are very small in comparison with the items presented in Table 2. Even variables in government sources that are presented for the same time period and appear to include the same components sometimes differ across sources, and not enough detail is presented to explain the differences.

Focus on the last column of Table 2, program outlays. We first discuss outlays as typically presented: cost items that are direct spending by the government. Such spending items are payments to producers, which are net indemnities (defined as gross indemnities, column (3), minus farmer-paid premium, column (2)) plus payments made to AIPs. We then examine alternative presentations.

Table 2. Crop Insurance Program Outlays (million dollars)

Year	Gross Premium (1)	Producer Share of Premium (2)	Gross Indemnities (3)	Loss Ratio (4)	UNDERWRITING GAINS			PRODUCER SUBSIDIES		AIP Actual A&O Expenses (10)	Program Outlays (8) + (9) - (7) (11)
					Gross (5)	AIP Share 1/ (6)	FCIC Share (7)	For Premium (8)	For AIP A&O (9)		
2001	2,978	1,206	2,965	1.00	12	346	-334	1,772	636	816	2,741
2002	2,909	1,168	4,058	1.39	-1,149	-48	-1,101	1,741	628	826	3,470
2003	3,434	1,392	3,259	0.95	176	377	-201	2,042	736	900	2,980
2004	4,186	1,709	3,291	0.79	895	691	203	2,477	894	1,021	3,167
2005	3,945	1,601	2,341	0.59	1,604	915	689	2,344	833	990	2,488
2006	4,709	2,027	3,551	0.75	1,158	822	336	2,682	962	1,159	3,308
2007	6,547	2,724	3,465	0.53	3,082	1,572	1,510	3,823	1,335	1,565	3,648
2008	9,832	4,141	8,719	0.89	1,113	1,095	18	5,691	2,013	2,173	7,686
2009	8,949	3,522	5,216	0.58	3,733	2,298	1,435	5,427	1,619	2,130	5,611
2010	7,592	2,882	4,235	0.56	3,357	1,919	1,438	4,710	1,371	1,815	4,643
Total	55,081	22,372	41,100	0.75	13,981	9,987	3,993	32,709	11,027	13,394	39,742

1/ After net book quota share.

The data in this table are taken from publicly available sources. Crop year and reinsurance year data are used; as a result, aggregated numbers may differ slightly from other presentations.

Sources by column number:

■ Columns (1), (3), and (6) are reinsurance data from RMA Reinsurance Reports accessed on 1/3/12, available online at <http://www.rma.usda.gov/tools/reinsurance.html>. Column (4) is (3) divided by (1). Column (5) is column (1) minus column (3). Column (7) is column (5) minus column (6), and represents the AIP share of underwriting gains on a reinsurance year basis and adjusted for quota share.

■ Column (2) is column (1) less column (8), where column (8) is from the RMA National Summary of Business Reports, available online at <http://www.rma.usda.gov/data/sob.html>.

■ Column (9) is from an RMA table "Crop year government cost of federal crop insurance," available online at <http://www.rma.usda.gov/aboutrma/budget/cycost2002-11.pdf>.

■ Column (10), actual expenses as a percent of gross premium, is from Grant Thornton, LLP, "Federal Crop Insurance Program Profitability and Effectiveness Analysis, 2010 Update," January 13, 2011, available online at http://www.ag-risk.org/NCISPUBS/SpecRPTS/GrantThornton/Grant_Thornton_Report-2010_FINAL.pdf. The reported expense shares are for calendar years and were multiplied by gross premium for the corresponding reinsurance year (e.g., 2009 expense share multiplied by 2009 gross premium). The average expense share for 2005-09, 23.9%, was used to estimate actual expenses for 2010.



Typical presentation

Outlays = net indemnities + AIP underwriting gains + payments made to AIPs on behalf of producers for program delivery (A&O payments)

Using column numbers:
(11) = (3) - (2) + (6) + (9)

This aggregation highlights, for example, that increases in farmer paid premiums (2) reduce program costs and increases in AIP underwriting gains (5) increase them.

However, program outlays may be obtained by aggregating the data in the table several different ways. The different ways chosen can be used to illustrate which activities add to, or reduce, crop insurance program costs.

Alternative presentation #1

Outlays = gross indemnities - gross premiums + AIP underwriting gains + producer premium subsidies + payments made to AIPs on behalf of producers for program delivery (A&O payments)

Using column numbers:
(11) = (3) - (1) + (6) + (8) + (9)

Although premium subsidies are not direct spending by the government, this aggregation shows the important role of premium subsidies and A&O subsidies paid on behalf of the producer in the total cost of the program. This presentation also highlights a common error in evaluating the cost of the program. Critics tend to

focus on the revenue paid to the AIPs, (6) + (9), disregarding the large premium subsidies to producers. The ability for AIPs to earn the underwriting gains shown in (6) comes about from the gross underwriting gains for the program itself as shown in (5). These gains are shared between the AIPs and FCIC.

Alternative presentation #2

Outlays = producer premium subsidies + payments made to AIPs on behalf of producers for program delivery (A&O payments) - FCIC underwriting gains

Using column numbers:
(11) = (8) + (9) - (7)

This aggregation is used in the heading for column (11) of Table 2. The aggregation shows how positive FCIC underwriting gains reduce program outlays. This ability of the government to reduce its cost via underwriting gains is generally not considered in discussions of the performance of the program.

Insights from Crop Insurance Program Cost Data

Several conclusions may be drawn from the data presentation in Table 2 that may not be generally reported when crop insurance program costs are presented in discussions about crop insurance.

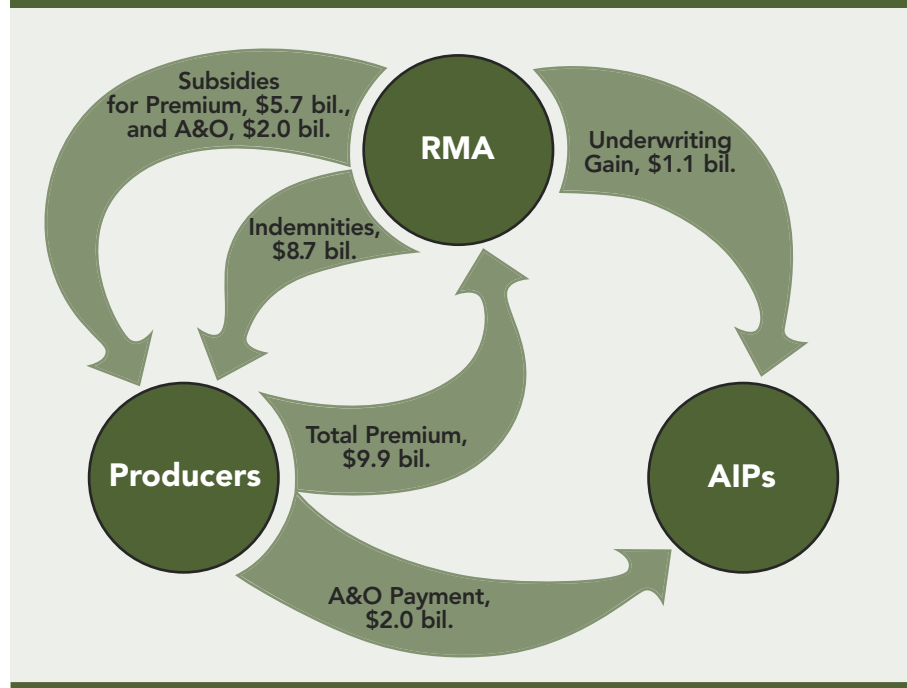
- **The crop insurance companies do not receive all the crop insurance program underwriting gains, particularly in recent years.** For background, underwriting gains are part of the gross income of AIPs. Gross income must be high enough to cover gross expenses and a profit. The profit must be sufficiently high to provide a competitive rate of return (net return on retained premium, assets or equity) to ensure private sector participation in the program. Otherwise, private investments in crop insurance would migrate to more profitable industries over time. Underwriting gains are not profit; they are gross income that contributes to profits. In any year, underwriting gains



may be positive or negative. To offset years with low or negative gains, gains must be high—above average—in other years to ensure that AIPs earn a competitive rate of return over time. Since 2001, the crop insurance companies have received 71 percent of the underwriting gains generated by the program. Over the past five years (2006-10), the industry has received just 62 percent of the underwriting gains.

- **The government receives a high share of underwriting gains.** The share of underwriting gains not received by the AIPs—29 percent of gains over the past 10 years and 38 percent of the gains over the past five years—went to FCIC.
- **Government underwriting gains reduce the cost of the crop insurance program.** These gains represent a benefit to the Treasury and taxpayers that is not identified in most government accounts of program costs.
- **Total program cost is usually less than the total of premium subsidies, AIP underwriting gains and delivery payments to companies.** This emphasizes that the combined payments to companies and premium subsidies to producers overstate the commitment of the taxpayer to the program. The true cost to taxpayers also needs to take into consideration the excess of premiums over indemnities as indicated in (5). An illustration of the cash flows is presented in Figure 1.
- **Producer subsidies include payments made to companies on behalf of producers to pay program delivery expenses. In insurance markets generally, a purchaser of insurance pays a premium for protection that includes two components: a risk premium, which covers expected losses due to insured risks, and an expense load, which covers delivery costs including sales, loss adjustment and other administrative costs.** Under the crop insurance program, producers receive a subsidy that covers on average about 60 percent of the risk premium and a subsidy that covers 100 percent of the expense load.

Figure 1. The Financial Flows Underlying Crop Insurance for 2008



Consider data for 2010, a year in which producers paid \$2.9 billion in premiums. In an unsubsidized market, assuming the same premium rates as in 2010, had producers purchased the same level of coverage, they might have paid a total premium of \$9.4 billion (\$7.6 billion in risk premium and \$1.8 billion in expense load, columns (1) and (10)), assuming 2010's actual delivery expenses. The \$2.9 billion producers actually paid amounted to only 31 percent of the premium that might have prevailed in an unsubsidized market. Of course, actual delivery expenses in a free market are unknown, and 2010's actual expenses are used as a proxy for the free market delivery cost.

- **Producer subsidies account for the bulk of crop insurance program costs and benefits.** Alternative presentation #1 showed that program costs are equal to gross indemnities less gross premiums plus AIP underwriting gains plus producer premium subsidies plus producer A&O subsidies. For the past five years, program outlays averaged \$5 billion. Premium and delivery expense subsidies to producers averaged \$5.8 billion, as compared an average of \$1.5 billion in AIP underwriting

gains. AIP underwriting gains were paid out of the \$2.5 billion in average underwriting gains for the program, with the government retaining the remaining gains.

- **Producer subsidies for A&O do not cover the actual delivery costs of companies.** Discussions of the program often treat the producer A&O subsidy as a benefit to the AIPs or even as an additional source of profit. In reality, the existence of the A&O subsidy is simply a consequence of the way the government accounts for its costs. In a typical insurance program, policyholders would pay for the cost of delivery as part of their premium. Under the Federal crop insurance program, FCIC pays this cost directly to AIPs on behalf of producers. This works to the benefit of taxpayers and to the disadvantage of AIPs in that payments have been below actual delivery expenses by an average of over \$250 million per year during 2005-2009. Although the 2011 Standard Reinsurance Agreement will cap agent compensation at the total A&O payment, it is likely that total delivery costs will continue to exceed the A&O subsidy to producers.

An Alternative Perspective on the Government's Role

The presentation of government outlays in support of the Federal crop insurance program, as described above, could easily be misinterpreted. Table 2 describes the program as though the government was the risk bearer and the AIPs were merely a means for delivering the program to producers. The reality is quite different: AIPs actually take the lead role in bearing the risk. As such, AIPs are entitled to an economically fair return or profit due to their willingness to risk their own capital in the program. Rather than being the risk bearer, FCIC is more accurately described as participating in the program as a reinsurer. FCIC is not the only reinsurer active in the program—private sector reinsurers are also heavily involved. The difference is that AIPs have the ability to negotiate both the structure and cost of reinsurance with their reinsurers, whereas their ability to negotiate with FCIC is extremely limited. FCIC's involvement as a reinsurer comes about for two distinct reasons. First, the terms of the SRA require AIPs to issue policies to all eligible producers. However, many producers would find it difficult to obtain insurance for various reasons in a fully private insurance market. To satisfy the social objective of making insurance available to all eligible producers, AIPs have been willing to insure these risks, but only under the condition that FCIC provide reinsurance protection due to the likelihood that these risks will be unprofitable. The second reason is to address the possibility of widespread losses due to drought or other weather events that are beyond the capacity of the insurance industry to absorb. This was an important issue in the early years of the program but is much less important today, as private sector reinsurers have gained familiarity with the program. Even though the need for or benefit of reinsurance through FCIC is relatively limited, FCIC still takes a large share of the potential underwriting gains. While it might be possible for AIPs to obtain more favorable terms from private sector reinsurers than from FCIC, this option is not available to them. However, if FCIC did not participate as a reinsurer, the taxpayer cost of the program could be expressed more directly as the total producer premium subsidies in (8) and (9). From this perspective, the government's role in the crop insurance program is more clearly understood as ensuring the functioning of the market by providing financial support to producers and providing incentives to AIPs to ensure that protection is available to all eligible producers.

Conclusion

In conclusion, the components of the public costs of the Federal crop insurance program are not easy to find and may be interpreted in various ways, depending on how the components are aggregated and described. Various interpretations may be seen in media articles that emphasize the importance of different components, such as payments to companies or producer premium subsidies. Hopefully, this article will further the understanding of how different financial flows in the crop insurance program interact to explain overall program costs.