

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.

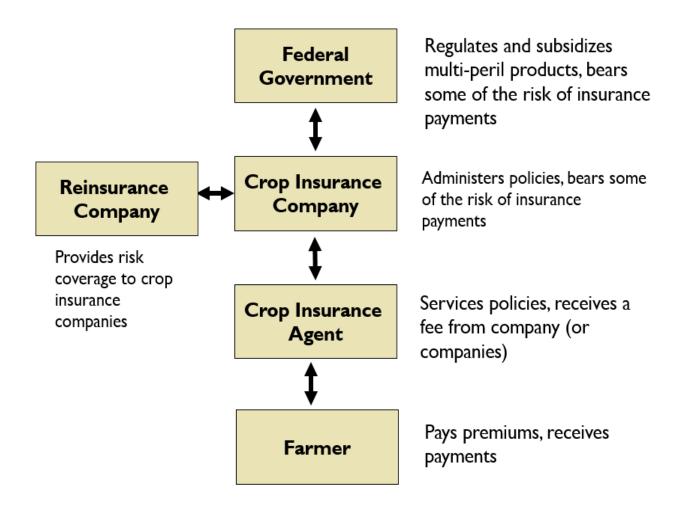
Evaluation of Returns and Delivery Costs of Private Crop Insurance Companies

Gary Schnitkey, Joshua Woodard, and Bruce Sherrick





Public-Private Partnership





Background

- Crop insurance compensation terms set by Federal agencies and terms do not vary across companies
 - Premiums set by RMA
 - Standard Reinsurance Agreement (SRA) sets A&O reimbursements and risk sharing terms
- 25% of Federal costs of crop insurance associated with crop insurance compensation
 - A&O reimbursement
 - Underwriting gain or loss of companies



Issues

- Concerns about too high of compensation to crop insurance companies
- Led to renegotiation of SRA (Implemented in 2011)
 - Lowered A&O reimbursements
 - Changed risk sharing to be less favorable
- Continue to introduce new legislation targeting crop insurance compensation



Study

Evaluate net returns from 1998 to 2015 and show

- 2011 SRA significantly reduced returns
- Much of the concern in 2000s may have resulted from:
 - Growth in program
 - Low loss years



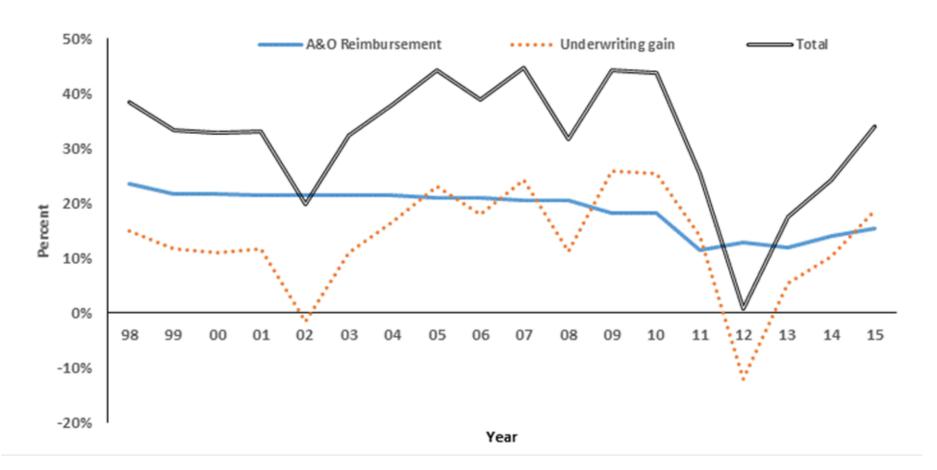
Figure 1. Total Premium and Acres Insured, Federal Crop Insurance Program, 1998 - 2015.



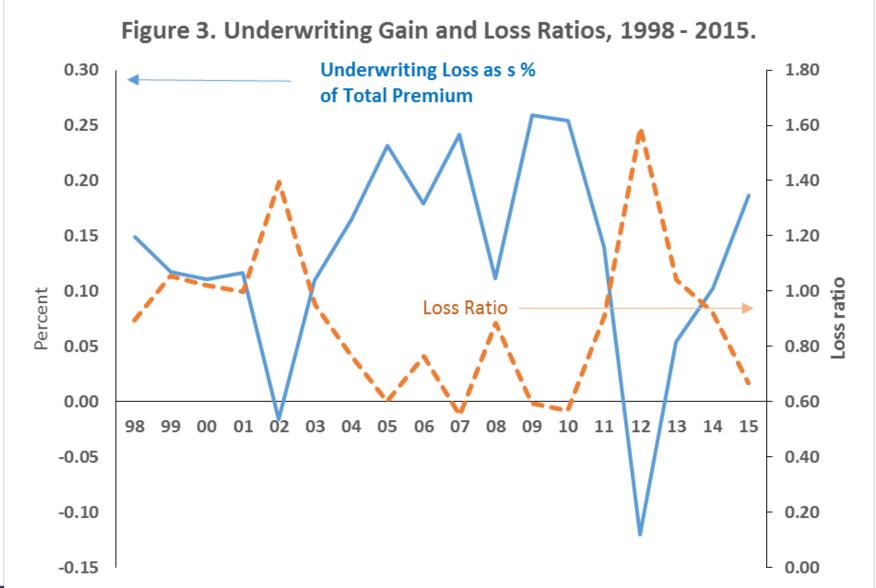


ļ	Crop Insurance Co	ompany Comp Under-	Insurance Company	Insurance Company	A&O Reimburse.	
	Operating (A&O)	writing		Delivery	Net	Minus
Year	Reimbursement ¹	Gain ²	Total	Costs ³	Returns	Delivery Cost
			\$ (million)		\$ (million)
1998	443	279	722	553	169	-110
1999	499	272	771	615	156	-116
2000	552	282	834	692	142	-140
2001	636	345	981	819	162	-183
2002	628	-47	581	826	-245	-198
2003	736	377	1,113	896	217	-160
2004	894	691	1,585	1,021	564	-127
2005	833	915	1,748	990	758	-157
2006	962	822	1,784	1,164	620	-202
2007	1,335	1,572	2,907	1,565	1,342	-230
2008	2,011	1,094	3,105	2,124	981	-113
2009	1,621	2,298	3,919	2,113	1,806	-492
2010	1,371	1,914	3,285	1,876	1,409	-505
2011	1,363	1,662	3,025	1,951	1,074	-588
2012	1,405	-1,319	86	1,835	-1,749	-430
2013	1,398	629	2,027	2,089	-62	-691
2014	1,384	1,011	2,404	2,165	239	-781
2015 4	1,473	1,786	3,259	2,230	1,029	-757

Figure 2. Compensation to Crop Insurance Companies Divided by Total Premium.









Crop Insurance Company Compensation Insurance Insurance						
A	Administrative and Und		. III sation	Company	Company	A&O Reimburse.
Year	Operating (A&O) Reimbursement ¹	writing Gain ²	Total	Delivery Costs ³	Net Returns	Minus Delivery Cost
			\$ (million)			\$ (million)
1998	443	279	722	553	169	-110
1999	499	272	771	615	156	-116
2000	552	282	834	692	142	-140
2001	636	345	981	819	162	-183
2002	628	-47	581	826	-245	-198
2003	736	377	1,113	896	217	-160
2004	894	691	1,585	1,021	564	-127
2005	833	915	1,748	990	758	-157
2006	962	822	1,784	1,164	620	-202
2007	1,335	1,572	2,907	1,565	1,342	-230
2008	2,011	1,094	3,105	2,124	981	-113
2009	1,621	2,298	3,919	2,113	1,806	-492
2010	1,371	1,914	3,285	1,876	1,409	-505
2011	1,363	1,662	3,025	1,951	1,074	-588
2012	1,405	-1,319	86	1,835	-1,749	-430
2013	1,398	629	2,027	2,089	-62	-691
2014	1,384	1,011	2,404	2,165	239	-781
2015 4	1,473	1,786	3,259	2,230	1,029	-757

A&O Reimbursements Do Not Cover Costs (Underwriting Gains Needed for Private Involvement)

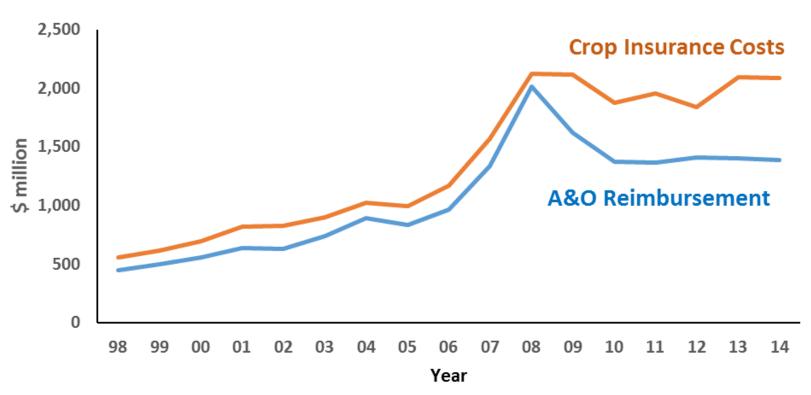
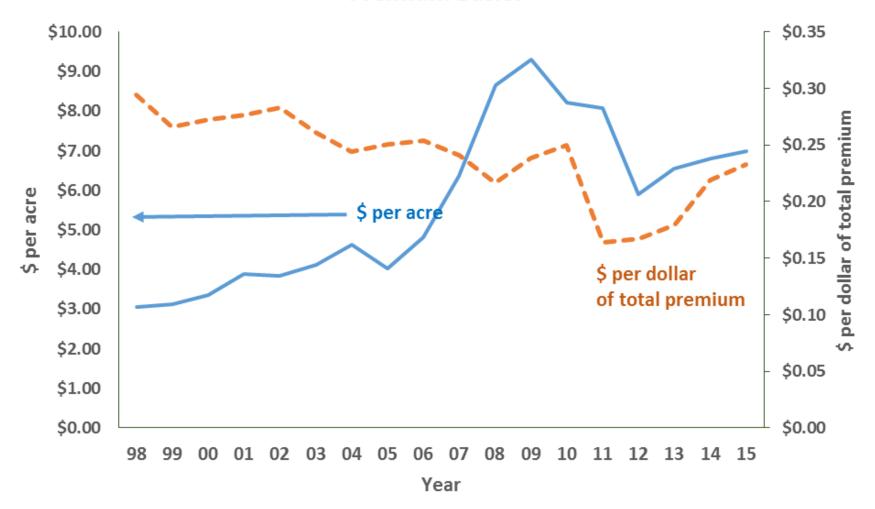




Figure 4. Delivery Costs on a Per Acre and Per Dollar of Premium Basie.





	A&O					
Crop Insurance Co		Under-		Insurance Company	Insurance Company	Reimburse.
	Operating (A&O)	writing		Delivery	Net	Minus
Year	Reimbursement ¹	Gain ²	Total	Costs ³	Returns	Delivery Cost
			\$ (millio	า)		\$(million)
1998	443	279	722	553	169	-110
1999	499	272	771	615	156	-116
2000	552	282	834	692	142	-140
2001	636	345	981	819	162	-183
2002	628	-47	581	826	-245	-198
2003	736	377	1,113	896	217	-160
2004	894	691	1,585	1,021	564	-127
2005	833	915	1,748	990	758	-157
2006	962	822	1,784	1,164	620	-202
2007	1,335	1,572	2,907	1,565	1,342	-230
2008	2,011	1,094	3,105	2,124	981	-113
2009	1,621	2,298	3,919	2,113	1,806	-492
2010	1,371	1,914	3,285	1,876	1,409	-505
2011	1,363	1,662	3,025	1,951	1,074	-588
2012	1,405	-1,319	86	1,835	-1,749	-430
2013	1,398	629	2,027	2,089	-62	-691
2014	1,384	1,011	2,404	2,165	239	-781
2015 4	1,473	1,786	3,259	2,230	1,029	-757

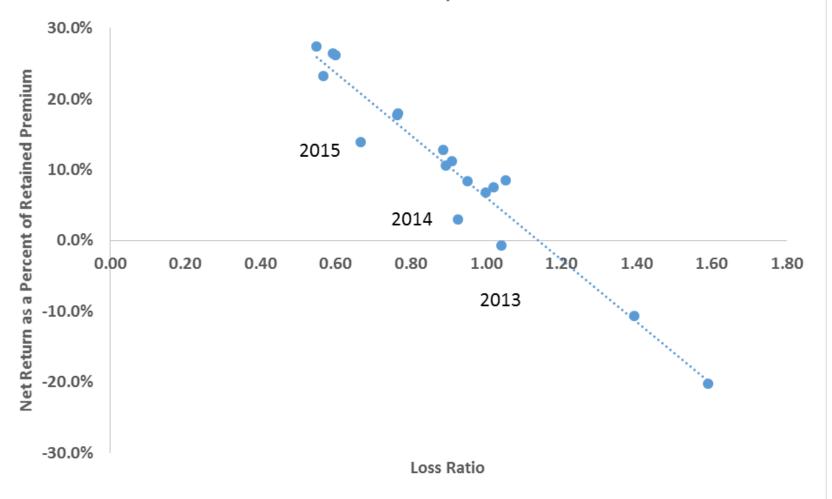
Year	Net Return ¹	Retained Premium ²	Net Return as a Percent of Retained Premium ³	Underwriting Gain as a Percent of Retained Premium ⁴	Loss Ratio ⁵
	\$ (n	illion)			
1998	169	1,592	10.6%	17.5%	0.89
1999	156	1,837	8.5%	14.8%	1.05
2000	142	1,894	7.5%	14.9%	1.02
2001	162	2,372	6.8%	14.5%	1.00
2002	-245	2,294	-10.7%	-2.0%	1.39
2003	217	2,606	8.3%	14.5%	0.95
2004	564	3,140	18.0%	22.0%	0.77
2005	758	2,891	26.2%	31.6%	0.60
2006	620	3,500	17.7%	23.5%	0.77
2007	1,342	4,898	27.4%	32.1%	0.55
2008	981	7,696	12.7%	14.2%	0.89
2009	1,806	6,831	26.4%	33.6%	0.59
2010	1,409	6,063	23.2%	31.6%	0.57
2011	1,074	9,539	11.3%	17.4%	0.91
2012	-1,749	8,642	-20.2%	-15.3%	1.59
2013	-62	9,226	-0.7%	6.8%	1.04
2014	239	7,897	3.0%	12.8%	0.93
2015	1,029	7,384	13.9%	24.2%	0.67

Year	Net Return ¹	Retained Premium ²	Net Return as a Percent of Retained Premium ³	Underwriting Gain as a Percent of Retained Premium ⁴	Loss Ratio 5
1998-2015			10.6%	17.2%	0.90
1998-2010)		14.1%	20.2%	0.85
2011-2015 2011-2015 (without 2012)			1.5% 6.9%	9.2% 15.3%	1.03 0.89
2006-2015	1)		11.5%	18.1%	0.85

Regression with net return related to loss ratio and dummy variable (1 in 2011 and after) imply a 5% lower return after 2011



Figure 5. Net Returns as a Percent of Retained Premium Related to Loss Ratios, 1998 to 2015.



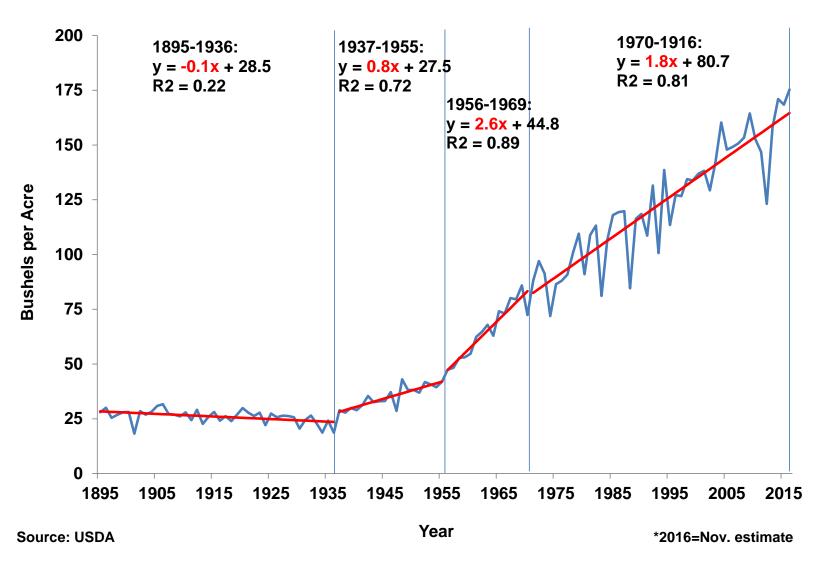


Summary

- 2011 SRA resulted in reduction in net returns by about 5%
- Future returns impacted by:
 - Interest rates
 - Loss ratios



U.S. Average Corn Yield, 1895-2016*





Summary

- 2011 SRA resulted in reduction in net returns by about 5%
- Future returns impacted by:
 - Interest rates
 - Loss ratios (more variable loss experience would lower underwriting gains)



Impacts of SRA on Company Losses in Commercial Fund

