United States Government Accountability Office

Report to Congressional Requesters

November 2023

CROP INSURANCE

Update on Opportunities to Reduce Program Costs

Accessible Version

GAO-24-106086

GAO Highlights

Highlights of GAO-24-106086, a report to congressional requesters

November 2023

CROP INSURANCE

Update on Opportunities to Reduce Program Costs

Why GAO Did This Study

The federal crop insurance program offers subsidized crop insurance to protect producers against financial losses from crop price declines and poor harvests due to natural causes.

In 2022, the program supported about 1.2 million policies that covered 493 million acres and cost the federal government $17.3 billion, according to USDA. The program's cost is projected to total more than $101 billion over the next decade, according to the Congressional Budget Office.

USDA partners with private insurance companies to deliver the program. The federal costs for the program include compensation to these companies and subsidies to pay for part of policyholders' crop insurance premiums.

GAO was asked to review the federal crop insurance program and opportunities to reduce its cost. This report builds on GAO's prior work to provide information on (1) private delivery of the crop insurance program through insurance companies and (2) premium subsidies for crop insurance policyholders.

GAO analyzed agency data and reviewed relevant legislation, regulations, agency documents, and academic studies. GAO also interviewed agency officials and organizations representing those affected by the crop insurance program, such as producers and insurance companies.

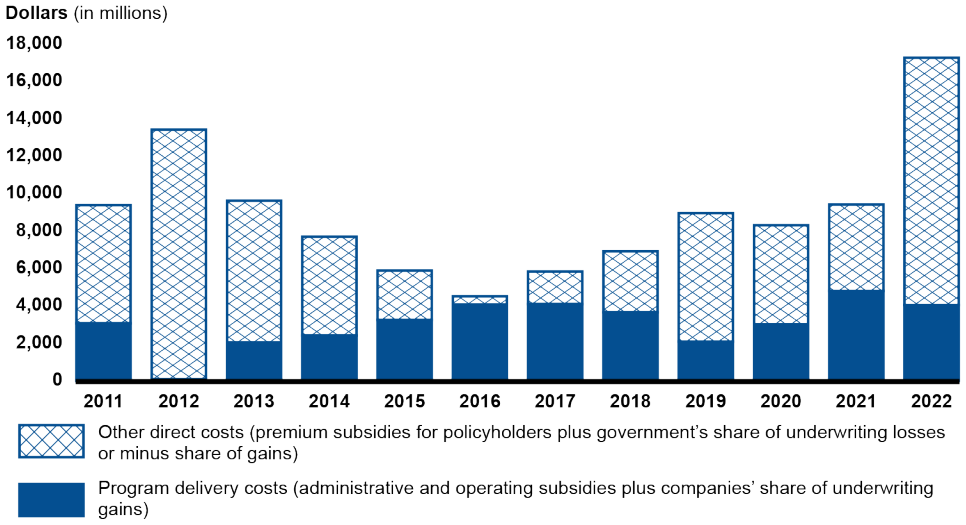
View GAO-24-106086. For more information, contact Steve Morris at (202) 512-3841 or morriss@gao.gov.

What GAO Found

Compensation to private insurers. The federal government pays private insurance companies to deliver the crop insurance program—that is, sell and service policies—to producers such as farmers. This compensation, set in reinsurance agreements between the U.S. Department of Agriculture (USDA) and the companies, includes subsidies for the companies' administrative and operating (A&O) expenses and their share of any financial gains associated with the policies (i.e., underwriting gains). The federal government and the companies may also share losses associated with the policies (underwriting losses).

In 2022, of the program's total cost of $17.3 billion, the government paid insurance companies about $3.7 billion to deliver the program. This compensation included about $2.2 billion in A&O subsidies, which are calculated as a percentage of premiums. It also included about $1.5 billion for the companies' share of underwriting gains from the premiums they retained (i.e., did not cede to the government). The compensation the government pays participating companies is projected to average $3.8 billion yearly from 2024 through 2033.

Cost of the Federal Crop Insurance Program, 2011-2022



Source: GAO analysis of Risk Management Agency data. | GAO-24-106086

Accessible Data for Cost of the Federal Crop Insurance Program, 2011-2022

Year	Program delivery costs (administrative and operating subsidies plus companies' share of underwriting gains)	Other direct costs (premium subsidies for policyholders plus government's share of underwriting losses or minus share of gains)
2011	3,066	6,321
2012	73	13,346
2013	2,036	7,585
2014	2,413	5,283
2015	3,244	2,645
2016	4,057	460
2017	4,094	1,740
2018	3,660	3,265
2019	2,089	6,867
2020	3,003	5,307
2021	4,801	4,612
2022	4,039	13,232

Source: GAO analysis of Risk Management Agency data. | GAO-24-106086

From 2011 through 2022, companies received an annual rate of return on retained premiums of 16.8 percent on average (about $1.4 billion in underwriting gains per year), which exceeded a market-based rate of return (10.2 percent), according to GAO's analysis. Adjusting the program's rate of return to more closely reflect market conditions could save the federal government hundreds of millions of dollars per year.

What GAO Recommends

GAO has previously recommended and still believes that Congress should consider repealing the 2014 farm bill provision that any revision to the agreement with insurance companies not reduce their expected underwriting gains and consider reducing premium subsidies for the highest-income participants. USDA did not have any comments on the report.

GAO's analysis shows the government could achieve such savings while still providing financial incentives for companies to participate.

A provision in the 2014 farm bill prevents the government from realizing any savings through changes to the reinsurance agreements. Specifically, the provision requires that any changes negotiated in new reinsurance agreements cannot reduce the total future underwriting gains for all insurance companies. Consequently, for the government to achieve any savings through revising the agreements, Congress would need to repeal this provision, as GAO recommended that Congress consider in July 2017.

Premium subsidies for policyholders. In addition to paying companies to deliver the program, USDA subsidizes the premiums that policyholders pay. In 2022, subsidies averaged about 62 percent of policyholders' premiums and totaled $12 billion, comprising the largest portion of the program's total cost of $17.3 billion.

Congress sets the subsidy rates, regardless of income level. In contrast, other USDA farm program benefits are not available to producers with incomes that exceed a statutory limit (3-year average adjusted gross income of $900,000 or more). GAO found that, of the 460,615 policyholders who participated in the crop insurance program in 2022, 1,341 (0.3 percent) were high-income. These high-income policyholders accounted for about 0.5 percent of total premiums in the program.

Policyholders in the Federal Crop Insurance Program, by Income Level, 2022

Category	High-income policyholders (adjusted gross income (AGI) $900,000 or more)	Other policyholders (AGI less than $900,000)
Number of policyholders	1,341	457,650
Percentage of policyholders	0.3%	99.7%
Percentage of premiums	0.5%	99.5%

Source: GAO analysis of U.S. Department of Agriculture data. | GAO-24-106086

Note: Policyholders' AGIs are averages calculated over a specified 3-year period.

GAO found that reducing premium subsidies for high-income policyholders could generate additional savings for the federal government. For example, if subsidies for such policyholders had been reduced by 15 percentage points (e.g., from 62 percent to 47 percent) in 2022, the government could have saved about $15 million.

GAO's analysis shows the government could likely achieve such savings with minimal effects on producer participation in the program and the program's financial soundness. To realize these savings, Congress would need to reduce premium subsidy rates for high-income policyholders, as GAO recommended that Congress consider in March 2015.

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Abbreviations

A&O	administrative and operating
AGI	adjusted gross income
CBO	Congressional Budget Office
FSA	Farm Service Agency
RBC	risk-based capital

RMA	Risk Management Agency
SBBI®	Stocks, Bonds, Bills, and Inflation®
USDA	U.S. Department of Agriculture

U.S. GOVERNMENT ACCOUNTABILITY OFFICE
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November 07, 2023

The Honorable Kirsten Gillibrand
Chair
Subcommittee on Livestock, Dairy, Poultry, Local Food Systems, and Food Safety and Security
Committee on Agriculture, Nutrition, and Forestry
United States Senate

The Honorable Cory Booker
United States Senate

The federal crop insurance program offers producers subsidized insurance to protect against financial losses from crop price declines and production losses due to natural causes, such as drought and flooding. In 2022, the program supported about 1.2 million policies that covered 493 million acres and cost the federal government $17.3 billion, according to the U.S. Department of Agriculture (USDA). To implement the program, USDA's Risk Management Agency (RMA) partners with private insurance companies, which deliver (i.e., sell and service) insurance policies to producers, or policyholders.[1]

The program provides subsidies for the insurance companies' administrative and operating (A&O) expenses and includes financial incentives for these companies to participate. For example, the companies share in the opportunity for gains associated with the policies, as established in RMA's financial agreements with the companies.[2] USDA also sets premium rates and subsidizes the premiums that policyholders pay to obtain their policies, in part to increase producer participation in the program. The program subsidizes the same percentage of policyholders' premiums regardless of their income, in contrast to other USDA farm

[1]Policyholders are entities (such as corporations or partnerships) or individuals that purchase federal crop insurance policies.

[2]USDA designated 13 companies to provide insurance coverage for the reinsurance year 2022.

programs, which are not available to producers with incomes that exceed statutory limits.[3]

We have previously examined the crop insurance program and identified opportunities for the government to reduce the program's cost. For example, in July 2017 and March 2015, we reported that making certain changes related to program delivery and premium subsidies, respectively, could reduce the program's cost by hundreds of millions of dollars in total.[4] In each report, we made suggestions for such changes, which have not been implemented.

You asked us to review the federal crop insurance program and opportunities to reduce its cost. This report provides information on (1) private delivery of the crop insurance program through insurance companies and (2) premium subsidies for crop insurance policyholders.

For both objectives, we reviewed relevant legislation and regulations; RMA data and documents, such as handbooks, and Farm Service Agency (FSA) data; and relevant government reports and academic studies. We interviewed officials from RMA and FSA, as well as representatives of organizations with various perspectives on the crop insurance program. We selected these organizations to represent a range of individuals and companies affected by the crop insurance program, such as small and large producers, insurance companies, and taxpayers.

To provide information on private delivery of the crop insurance program, we focused on three areas: the amount and types of compensation the government paid to insurance companies, how these companies' financial gains and losses reflect market conditions, and how adjusting compensation to reflect market conditions could affect the program. We reviewed relevant farm bill legislation, regulations, government reports, academic studies, and RMA's financial agreements with participating companies. We analyzed RMA data on compensation—including A&O subsidies—that the government paid to the companies for reinsurance years 2011 through 2022; the distribution of A&O subsidies in reinsurance

[3]For example, to be eligible for benefits under the Price Loss Coverage program, a producer's adjusted gross income (AGI) must not exceed $900,000. In 2015, we reported that about 5,000 producers whose incomes exceeded income limits for other USDA farm programs participated in the crop insurance program in 2013. See GAO, *Crop Insurance: Reducing Subsidies for Highest Income Participants Could Save Federal Dollars with Minimal Effect on the Program*, GAO-15-356 (Washington, D.C.: Mar. 18, 2015).

[4]GAO, *Crop Insurance: Opportunities Exist to Improve Program Delivery and Reduce Costs*, GAO-17-501 (Washington, D.C.: July 26, 2017); and GAO-15-356. See also GAO, *Farm Bill: Reducing Crop Insurance Costs Could Fund Other Priorities*, GAO-23-106228 (Washington, D.C.: Feb. 16, 2023).

year 2022 by policy size, policy type, crop, and producer demographic characteristics; and the companies' financial performance for reinsurance years 2011 through 2022.[5] We assessed the reliability of these data by, among other things, interviewing agency officials and reviewing technical documentation. We determined that the data were sufficiently reliable for the purposes of our reporting objectives.

We compared the data on companies' financial performance, including their underwriting gains and losses and actual rates of return, to the target rate of return set in RMA's agreements with participating insurance companies. We also compared these data to our updated estimate of a market-based rate of return, which follows a methodology used in a 2009 study that USDA commissioned.[6] We reviewed Congressional Budget Office (CBO) projections for the program's cost—including compensation to companies—for 2024 through 2033. We used our estimated market-based rate of return and CBO's projections to calculate potential cost savings if the insurance companies' actual rate of return had reflected market conditions in 2011 through 2022 and if it were adjusted to do so for 2024 through 2033.

To provide information on premium subsidies for crop insurance policyholders, we focused on three areas: the distribution of premium subsidies provided to policyholders by category, including state and crop; the extent to which high-income policyholders participate in the federal crop insurance program; and the potential effects on the program if premium subsidies were reduced for high-income policyholders. We defined high-income policyholders as those with an adjusted gross income (AGI) exceeding $900,000.[7] We analyzed RMA data from 2022

[5]The reinsurance year is the period from July 1 through June 30 of the following year and is identified by reference to the year containing June, according to the reinsurance agreements between USDA and participating insurance companies. All RMA data in this report are for reinsurance years, unless otherwise specified.

[6]We initially calculated an estimate of a market-based rate of return for our 2017 report; see GAO-17-501. This estimate follows the methodology used in Milliman, Inc., *Rate of Return Update - 2008: Reasonable Rate of Return Section 3.1*, a report prepared at the request of the Risk Management Agency, U.S. Department of Agriculture (June 23, 2009). While the methodology we used makes some assumptions, we believe it is a reasonable indication of a market-based return. Moreover, the methodology uses the average of two models—the discounted cash flow and capital asset pricing model—and both models produced similar results. For our report, we also assessed how three assumptions that the 2009 study's methodology used could affect the estimated rate of return that insurance companies earn from crop insurance policies. We also considered the effect of recent increases in interest rates on a market-based rate of return.

[7]We chose $900,000 because it was the income limit for some FSA farm programs in 2022.

on crop insurance policyholders' characteristics.[8] This included matching the RMA data with FSA data from 2021 on participants' compliance with income limits for farm programs.[9] We also analyzed RMA and FSA data to estimate the amount of subsidies paid on behalf of high-income policyholders. We assessed the reliability of these data by, among other things, screening for omissions and anomalies, interviewing agency officials, and reviewing technical documentation. We determined that the data were sufficiently reliable for the purposes of our reporting objectives.

We calculated the savings that would have resulted if subsidies paid on behalf of high-income policyholders were reduced by 15 percentage points—the amount proposed in a Senate-passed bill in 2013—for 2022.[10] We also identified how this change could affect the actuarial soundness of the crop insurance program by analyzing RMA data on loss experiences of, and premiums paid for, high-income policyholders and other policyholders from 2011 through 2021, the most recent year these data were available.

Additional details on our objectives, scope, and methodology can be found in appendix I. We also provide more details on the methodology and models we used to analyze a market-based rate of return in appendix II.

We conducted this performance audit from June 2022 to November 2023 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

[8]Some policyholders are entities such as general partnerships, which include multiple members, each of whom is subject to AGI limits for farm programs. Our analysis did not include these members.

[9]We used the FSA data from 2021 because they were the most complete data available on participants' general income levels. In matching the two datasets, we determined that about 99.7 percent of all crop insurance policyholders were in the FSA dataset.

[10]We chose 2022 because recent years more closely reflect current program provisions and participation levels.

Compensation to Insurance Companies Participating in the Crop Insurance Program

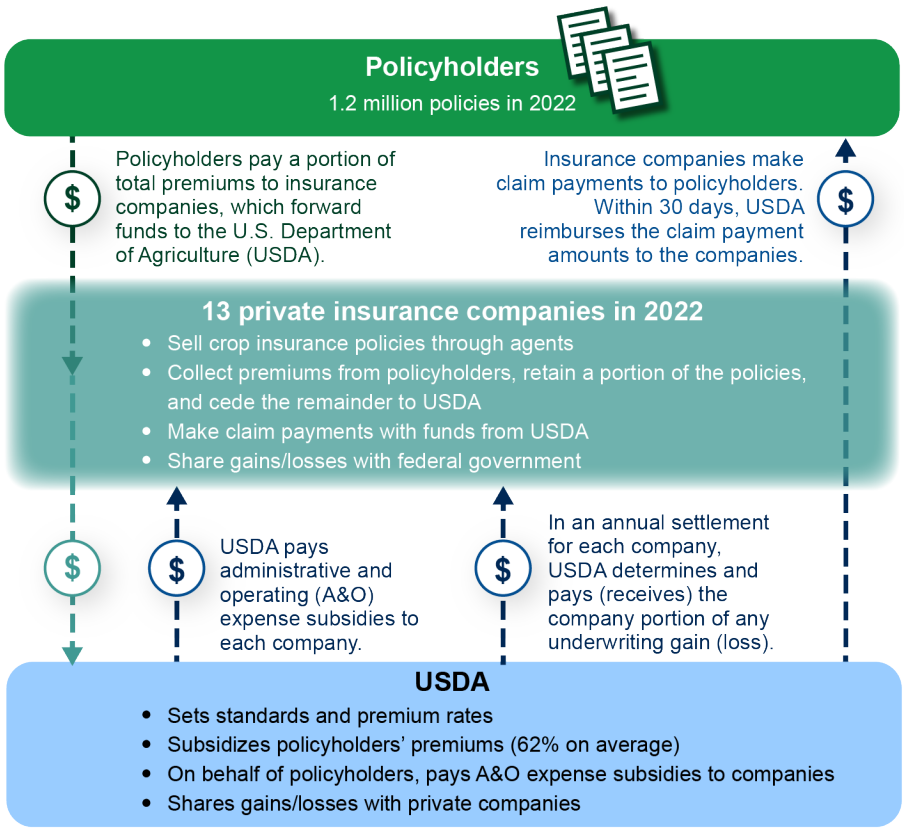
How Does Delivery of the Federal Crop Insurance Program Work?

The federal government pays private insurance companies to deliver the crop insurance program to producers. This compensation includes subsidies for the companies' A&O expenses and the companies' share of any financial gains associated with the policies (i.e., underwriting gains). The government and the companies may also share in financial losses associated with the policies (underwriting losses).[11]

RMA administers the program through the standard reinsurance agreement and livestock price reinsurance agreement, financial agreements that it negotiates with participating insurance companies. These agreements incorporate the terms and conditions by which the companies sell and service crop insurance policies to producers. RMA's most recent renegotiation of the standard reinsurance agreement—the 2011 agreement—was completed in 2010. RMA's most recent renegotiation of the livestock price reinsurance agreement—the 2003 agreement—was completed in 2002. Figure 1 shows an overview of the program.

[11]The crop insurance program's underwriting gains or losses are the amount by which total premiums exceed or are less than the total claims paid to policyholders for crop losses. These overall program underwriting gains or losses consist of the companies' share and the government's share. The companies' share of underwriting gains or losses is the amount by which the premiums that companies retain exceed, or are less than, their share of the claims paid to policyholders for crop losses.

Figure 1: Overview of the Federal Crop Insurance Program



Sources: GAO, adapted from the Congressional Research Service, and analysis of Risk Management Agency (RMA) data and documents; GAO (icons). | GAO-24-106086

Accessible Data for Figure 1: Overview of the Federal Crop Insurance Program

Policyholders (1.2 million policies in 2022)

Policyholders pay a portion of total premium to insurance companies, which forward funds to the U.S. Department of Agriculture (USDA).

Insurance companies pay loss claims to policyholders. Within 30 days, USDA reimburses the loss claim amount to the companies.

13 private insurance companies in 2022

- Sell crop insurance policies through agents

- Collect premiums from policyholders, retain a portion of the policies and cede the remainder to USDA
- Pay claims with funds from USDA
- Share gains/losses with federal government

USDA pays administrative and operating (A&O) expense subsidies to each company.

In an annual settlement for each company, USDA determines and pays (receives) the company portion of any underwriting gain (loss) USDA.

- Sets standards and premium rates
- Subsidizes policyholders premiums (62% on average)
- On behalf of policyholders, pays A&O expense subsidies to companies
- Shares gains/losses with private companies

Sources: GAO, adapted from the Congressional Research Service, and analysis of Risk Management Agency (RMA) data and documents; GAO (icons). | GAO-24-106086

Note: In addition to paying 62 percent of the premiums on average, RMA pays A&O expense subsidies on behalf of policyholders. If producers were purchasing policies in the private sector, their premiums would include A&O expenses.

Both agreements set terms for, among other things, subsidies for A&O expenses and the companies' share of underwriting gains and losses:

- **A&O expenses.** RMA pays subsidies to insurance companies to cover A&O expenses associated with selling and servicing crop insurance policies.[12] The subsidies are based on a percentage of crop insurance premiums. A&O expenses can include company overhead, such as employee salaries; fees paid to insurance adjusters to verify claims; and sales commissions and other compensation (e.g., profit sharing) paid to the insurance agents who sell crop insurance to producers. The reinsurance agreements set the level of the federal subsidy for A&O expenses, calculated as a percentage of premiums.

[12]While in private insurance, such as automobile insurance, these administrative expenses typically are captured through the premiums paid by all policyholders, in the federal crop insurance program, such expenses are not captured through the premiums that policyholders pay.

The standard reinsurance agreement sets an annual minimum and maximum, or cap, on the total A&O subsidies the government pays to the insurance companies for most, but not all, policies.[13] The livestock price reinsurance agreement also sets the amount of A&O subsidies, calculated as a percentage of premiums. The 2003 livestock price reinsurance agreement did not set an annual minimum or maximum on the total amounts the government pays to insurance companies.

- **Underwriting gains or losses.** The government shares underwriting gains and losses with participating insurance companies in accordance with the reinsurance agreements' gain/loss sharing provisions. As we describe in more detail below, participating insurance companies keep a portion of total premiums, while USDA holds the rest. The insurance companies' share of underwriting gains are calculated based on the premiums for the policies the companies keep (retained premiums) minus the portion of claim payments to policyholders that the insurance companies are responsible for. This amount is then adjusted based on the reinsurance agreements' gain/loss and quota sharing provisions.

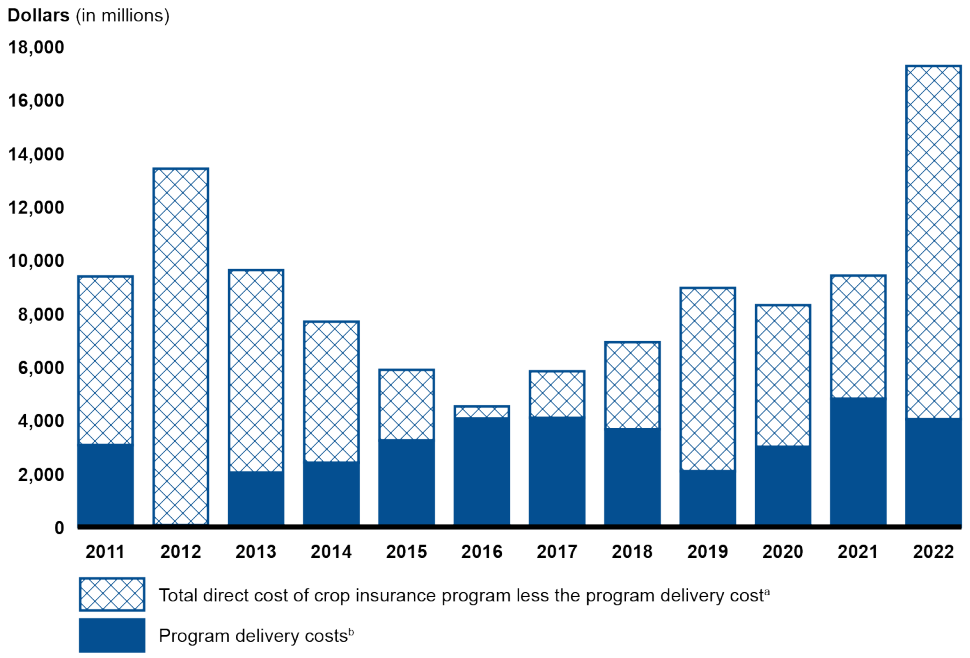
How Much Does the Government Pay the Insurance Companies?

From 2011 through 2022, the federal government paid private insurance companies a total of about $36.6 billion—about $3.0 billion per year, on average—to deliver the program. This amount, which comprised A&O subsidies and companies' underwriting gains (or losses), was a third of the program's total direct cost of about $107.7 billion—about $9.0 billion per year, on average.[14] Figure 2 provides the program's total cost, including delivery costs, for each year from 2011 through 2022.

[13]The standard reinsurance agreement's cap, which was $1.3 billion in 2022, controls government costs for certain types of policies, including revenue protection policies, which are insurance plans that provide protection against revenue losses due to yield losses resulting from natural causes such as drought, and losses caused by a change in the harvest price from the projected price. If the total A&O subsidies for policy types subject to the cap exceed the capped amount in a given year, the A&O subsidies for these policy types are proportionally reduced to make the total A&O subsidies for these policies equal to the capped amount. Policies not subject to the cap include area policies—insurance plans that provide coverage based on the experience of an entire area, such as a county—and livestock policies. We refer to policies not subject to the cap as uncapped policies.

[14]Total direct cost of crop insurance program less the program delivery cost includes the government's cost for premium subsidies, which averaged $7.2 billion per year from 2011 through 2022, and the government's share of underwriting gains or losses.

Figure 2: Cost of the Federal Crop Insurance Program, 2011-2022



Source: GAO analysis of Risk Management Agency data. | GAO-24-106086

Accessible Data for Figure 2: Cost of the Federal Crop Insurance Program, 2011-2022

Year	Program delivery costs[b]	Total direct cost of crop insurance program less the program delivery cost[a]
2011	3,066	6,321
2012	73	13,346
2013	2,036	7,585
2014	2,413	5,283
2015	3,244	2,645
2016	4,057	460
2017	4,094	1,740
2018	3,660	3,265
2019	2,089	6,867
2020	3,003	5,307
2021	4,801	4,612
2022	4,039	13,232

Source: GAO analysis of Risk Management Agency data. | GAO-24-106086

Total direct cost of crop insurance program less the program delivery costa

Program delivery costsb

Notes: Crop insurance costs are by reinsurance years, which begin on July 1 and are referred to by the year containing June. The 2012 program delivery cost was lower than typical ($73 million) because administrative and operating (A&O) subsidies were offset by the companies' underwriting losses caused by extreme drought.

[a]Total direct cost of crop insurance program less the program delivery cost includes the government's cost for premium subsidies plus the government's share of underwriting losses or minus the government's share of underwriting gains.

[b]Program delivery costs include A&O subsidies and the companies' share of underwriting gains.

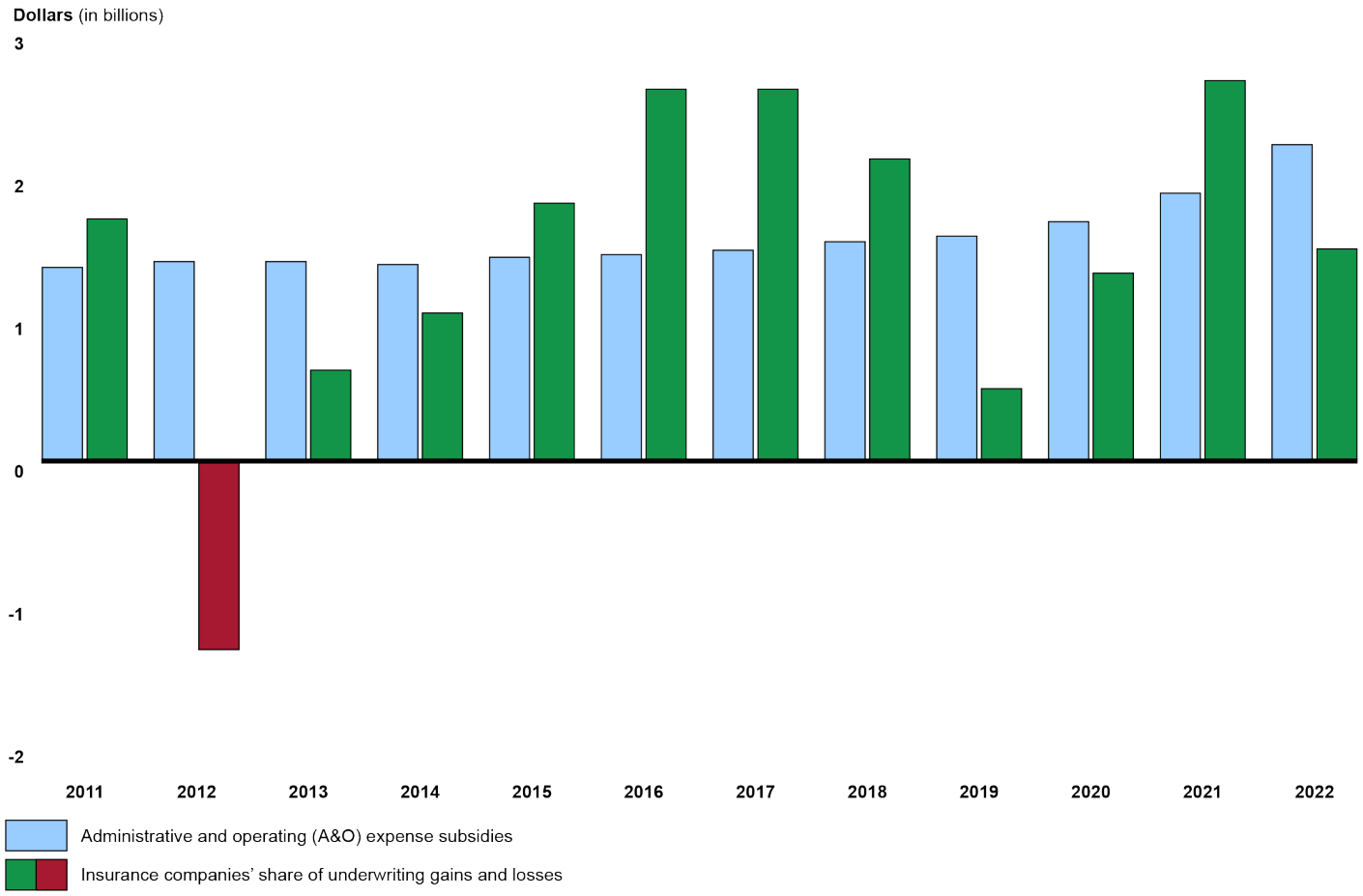
From 2011 through 2022, A&O subsidies averaged $1.6 billion per year, and the companies' underwriting gains averaged $1.4 billion per year, according to our analysis (see fig. 3).[15] We also found that during this time frame, participating insurance companies had underwriting gains in 11 of the 12 years; in 2012, they had underwriting losses.[16] In 2022, the federal government paid the insurance companies a total of about $2.2 billion in A&O subsidies, and the companies had $1.5 billion in underwriting gains.[17]

[15]The total A&O subsidy increased from an average of about $1.4 billion per year from 2011 through 2017 to an average of about $1.7 billion per year from 2018 through 2022. This increase is due, in part, to an increase in the number and size of uncapped policies. In 2022, the total A&O subsidy was $2.2 billion, about $900 million over the $1.3 billion maximum for capped policies.

[16]In 2012, a major drought led to underwriting losses.

[17]Of the 13 companies RMA designated to provide insurance coverage for 2022, six companies had ultimate parent companies domiciled in the U.S. and had approximately 28 percent ($1.0 billion) of total A&O subsidies and underwriting gains in 2022. Seven of the insurance companies had ultimate parent companies domiciled in five foreign countries (Australia, Bermuda, Canada, Japan, and Switzerland) and had the remaining approximately 72 percent ($2.7 billion) of total A&O subsidies and underwriting gains.

Figure 3: A&O Subsidies and Underwriting Gains or Losses for Insurance Companies Participating in the Federal Crop Insurance Program, 2011-2022



Source: GAO analysis of Risk Management Agency data. | GAO-24-106086

Accessible Data for Figure 3: A&O Subsidies and Underwriting Gains or Losses for Insurance Companies Participating in the Federal Crop Insurance Program, 2011-2022

Year	Administrative and operating (A&O) expense subsidies	Insurance companies' share of underwriting gains and losses
2011	1.36	1.70
2012	1.40	(1.32)
2013	1.40	0.64
2014	1.38	1.04
2015	1.43	1.81
2016	1.45	2.61

Year	Administrative and operating (A&O) expense subsidies	Insurance companies' share of underwriting gains and losses
2017	1.48	2.61
2018	1.54	2.12
2019	1.58	0.51
2020	1.68	1.32
2021	1.88	2.67
2022	2.22	1.49

Source: GAO analysis of Risk Management Agency data. | GAO-24-106086

Administrative and operating (A&O) expense subsidies

Insurance companies' share of underwriting gains and losses

Notes: In 2012, a major drought led to underwriting losses. A&O subsidies and underwriting gains and losses are by reinsurance year.

The crop insurance program is projected to cost a total of over $101 billion (about $10.1 billion per year) from 2024 through 2033, according to estimates CBO made in May 2023.[18] Of this $101 billion, approximately $38.1 billion (about $3.8 billion per year) will go to insurance companies to deliver the program over the same period, according to these estimates. Companies' A&O subsidies are also projected to average $2.0 billion per year and underwriting gains $1.8 billion per year from 2024 through 2033, according to CBO.[19] Thus, federal compensation to the companies for delivering the federal crop insurance program is projected to continue to comprise about a third of projected total program costs.

How Do the Reinsurance Agreements Share Risk between the Federal Government and Insurance Companies?

The reinsurance agreements set the terms for risk sharing between the federal government and participating insurance companies.[20] Insurance

[18]Congressional Budget Office, *CBO's May 2023 Baseline for Farm Programs* (Washington, D.C.: May 25, 2023).

[19]In its projections, CBO assumed a financially stable program in which premiums more than cover the policyholders' claim payments each year. As a result, its projections for individual years were relatively stable.

[20]Under net book quota share provisions in the 2011 standard reinsurance agreement, each company cedes to USDA a percentage of its premiums and potential underwriting gains or losses. The 2011 agreement set the net book quota share at 6.5 percent. The livestock price reinsurance agreement does not include a net book quota share provision.

companies are required to offer policies to all eligible producers in any state in which they operate. Under the terms in the reinsurance agreements, companies are permitted to retain some of those policies and assign others—typically higher-risk ones—to the federal government. The companies retain or cede policies by, after selling a policy, designating it to either the Assigned Risk Fund or the Commercial Fund, based on the crop, state, and policy plan.[21] Higher-risk policies, which companies generally designate to the Assigned Risk Fund, include policies in areas that have historically experienced higher insurance claims, such as areas that experience frequent drought and flooding.

The terms in the reinsurance agreements relate to, among other things, retained premiums. Specifically, the insurance companies retain part of the premiums and associated risk or opportunity for gain, and USDA holds the remaining premiums and risk. These allocations determine the companies' and government's share of each year's underwriting gain or loss.[22] For example, from 2011 through 2022, companies retained approximately 79 percent of total premiums.[23] During this time frame, companies realized a net underwriting gain of $17.2 billion on those retained premiums. In contrast, the government realized a net underwriting loss of $1.2 billion on the premiums the companies ceded to

[21]Companies' gains and the government's losses are due to the reinsurance agreements' risk-sharing terms. The standard reinsurance agreement's Assigned Risk Fund is a typically higher-risk fund with policies in areas that are expected to have more insurance claims and provides more loss protection to insurance companies through "stop-loss" coverage that reinsures against state-level disasters. Companies retain a 20 percent interest in the premiums and the potential for gains and losses from policies allocated to this fund. Those contracts cannot represent more than 75 percent of a company's crop insurance premiums in the state. All other policies are allocated to the Commercial Fund, and companies must retain at least a 35 percent interest in the premiums and the potential for gains and losses associated with those policies. The shares for the Commercial Fund also vary by state, such that insurance companies receive a smaller proportion of gains and a larger proportion of losses from Commercial Fund policies in the five states in which crop insurance has historically been the most profitable (Illinois, Indiana, Iowa, Minnesota, and Nebraska). With livestock price reinsurance agreement policies, companies allocate policies to either the Commercial Fund or the Private Market Fund.

[22]For any given year, an insurance company's rate of return is the company's underwriting gain (or loss) divided by its retained premiums.

[23]While there is no single limit on the portion of premiums that companies can retain, the reinsurance agreements have risk-sharing provisions that prevent companies from retaining all of the premiums.

the government due, in part, to the higher risk associated with those premiums' policies.[24]

What Is the Distribution of A&O Subsidies That Insurance Companies Receive, by Policy Size?

Participating insurance companies receive more in A&O subsidies for larger crop insurance policies—those with higher premium amounts—than for smaller ones, according to our analysis of policies held in 2022.[25] The A&O subsidy is based on a fixed percentage of a policy's premium, as established in the reinsurance agreements. However, as we have previously reported, the workload to sell and service each policy does not necessarily correspond to the size of the policy.[26] Specifically, an increase in crop prices causes a crop insurance policy's premium to increase. As a result, the A&O subsidy also increases, even though the increase in crop prices did not increase the workload to sell and service the policy.

Furthermore, basing the A&O subsidy on a fixed percentage of a policy's premium creates incentives for companies to focus on selling and servicing large policies and does not adequately service small producers, according to representatives from a producer organization. Representatives from a crop insurance trade association told us that the A&O subsidy should continue to be based on a fixed percentage of a policy's premium. However, they also told us that the current cap on the A&O subsidy does not cover the actual A&O expenses. They added that if the total amount of A&O subsidies increased, it would be possible to create incentives for agents to focus on smaller producers. We discuss this in more detail later in this report.

We analyzed data on smaller policies—those that had an A&O subsidy of $500 or less—held in 2022 and found the following:

- Smaller policies comprised about 48 percent (579,241) of the 1.2 million policies in the crop insurance program and accounted for about 6 percent ($116.8 million) of total A&O subsidies ($2.1 billion).

[24]Net underwriting gains are when premiums exceed total payments to producers for claims. Net underwriting losses are when premiums are less than payments for claims.

[25]While premium amounts are one way to measure policy size, because the program sets A&O subsidies as a fixed percentage of premiums, for the purpose of our analysis, we use A&O subsidy amounts as a measure of policy size.

[26]GAO, *Crop Insurance: Opportunities Exist to Reduce Government Costs for Private-Sector Delivery*, GAO/RCED-97-70 (Washington, D.C.: Apr. 17, 1997).

- About 56 percent (326,000 of the 579,241) of smaller policies had A&O subsidies that were less than $200.[27]
- Of the 10,000 policies with the smallest A&O subsidies, 92 percent (9,210 policies) were subject to a cap on A&O subsidies under the reinsurance agreements, and 8 percent (790 policies) were uncapped policy plans. Insurance companies received approximately $75,000 in A&O subsidies for these 10,000 smallest policies, which were primarily for field crops (97 percent), such as corn and wheat, but also included 12 policies for vegetable crops and three livestock policies.

We also analyzed data on larger policies—those with an A&O subsidy of $10,000 or more—held in 2022 and found the following:

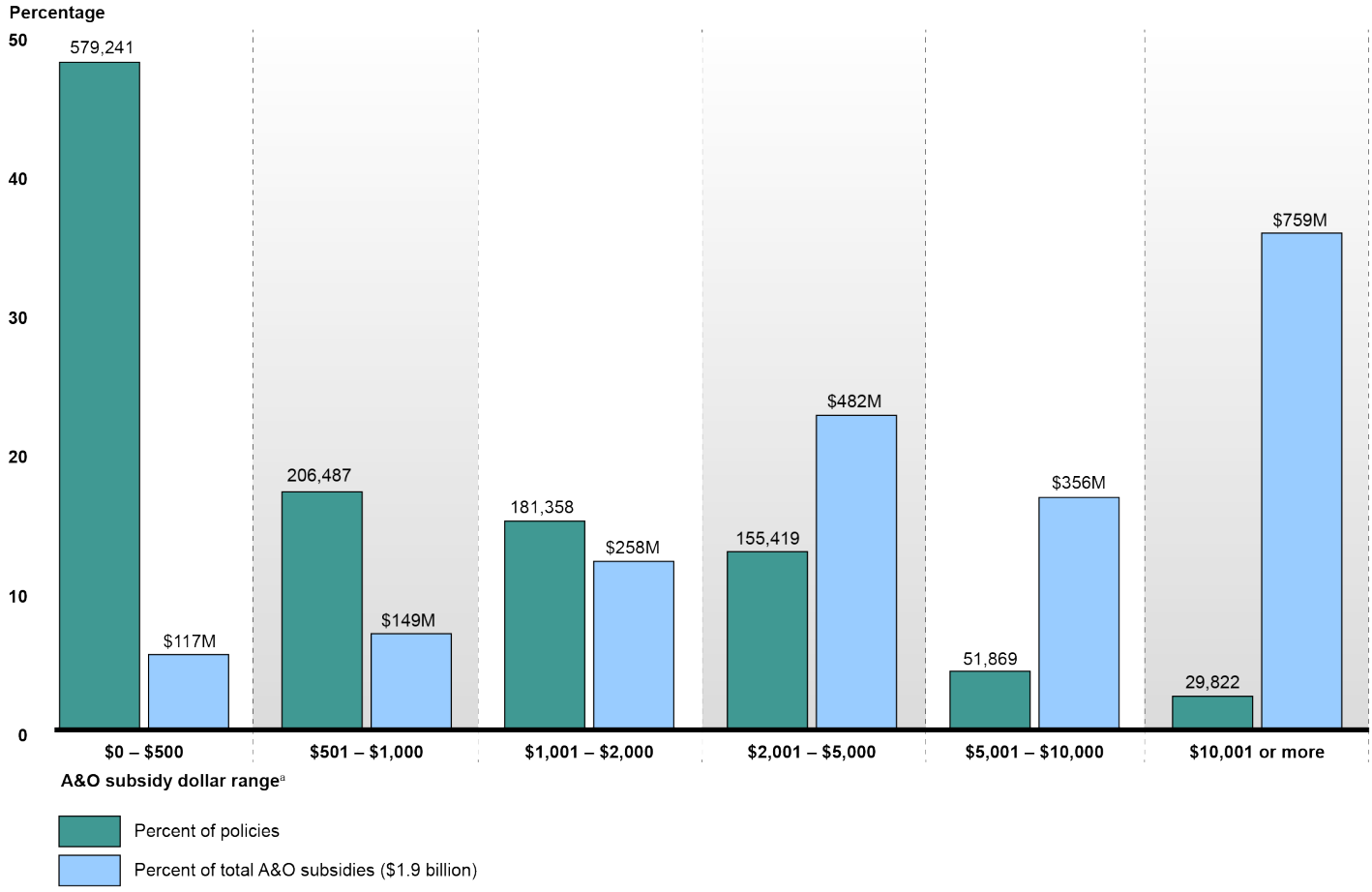
- Larger policies comprised about 2 percent (29,822) of 1.2 million policies and accounted for 36 percent ($759 million) of total A&O subsidies ($2.1 billion).
- The 14 largest policies each had A&O subsidies of more than $1 million. In two cases, insurance companies received more than $3 million for selling and servicing a single policy—one a dairy protection policy, and the other a Pasture, Rangeland, and Forage insurance policy, both in the western U.S.[28]
- Of the 100 policies with the largest A&O subsidies in 2022, 97 were among the policies that were not subject to a cap on A&O subsidies under the reinsurance agreements. These 97 policies included 61 for livestock and dairy protection, for which insurance companies received over $37 million in A&O subsidies, an average of approximately $614,000 per policy.[29]

[27]In 2022, 72 percent of producers held more than one policy, and the total A&O subsidies for 3 percent (12,000) of producers was less than $30.

[28]The Pasture, Rangeland, and Forage insurance policy covers losses of forage or hay for feeding livestock, if the losses result from a lack of precipitation.

[29]In 2022, the A&O subsidy percentage for livestock and dairy protection policies was 22.2 percent, the highest among the various types of crop insurance policies. According to provisions in the livestock price reinsurance agreement, the A&O subsidy percentage increases to 23.4 percent for states with a loss ratio greater than 1.2 in the current year. Moreover, the agreement gives USDA the authority to further adjust the A&O subsidies, as needed.

Figure 4: Federal Crop Insurance Program Distribution of Administrative and Operating (A&O) Subsidies, 2022



Source: GAO analysis of Risk Management Agency data. | GAO-24-106086

Accessible Data for Figure 4: Federal Crop Insurance Program Distribution of Administrative and Operating (A&O) Subsidies, 2022

Adjusted A&O Subsidy range (In dollars)	Percent of policies	Percent of total A&O subsidies ($1.9 billion)	Number of policies to appear at top of green bar	A&O $ to appear at top of blue bar
0-500	48.1%	5.5%	579,241	$117M
501-1,000	17.2%	7.0%	206,487	$149M
1,001-2,000	15.1%	12.2%	181,358	$258M
2,001-5,000	12.9%	22.7%	155,419	$482M
5,001-10,000	4.3%	16.8%	51,869	$356M
10,001 or more	**2.5%**	**35.8%**	**29,822**	**$759M**

Source: GAO analysis of Risk Management Agency data. | GAO-24-106086

[a]Percent of policies and A&O subsidies from the standard reinsurance agreement and livestock price reinsurance agreement. The 2011 standard reinsurance agreement, the most recently negotiated, capped A&O subsidies for the most common types of policies. If the total A&O subsidies for policy types that are subject to the cap exceed the capped amount in a given year, the A&O subsidies for these policy types are proportionally reduced to make the total A&O subsidies for these policies equal to the capped amount. The 2003 livestock price reinsurance agreement, the most recently negotiated, did not set a cap on A&O subsidies.

How Do A&O Subsidies for Policies Held by Historically Underserved Producers Compare with A&O Subsidies for Other Policies?

As part of certain USDA farm programs, including the crop insurance program, producers can voluntarily self-certify as a historically underserved producer, which USDA programs generally define as belonging to at least one group that the agency considers historically underserved. The four groups USDA considers historically underserved are those that are beginning to farm, have limited resources, are socially disadvantaged (i.e., belong to groups that have been subject to racial, ethnic, or gender prejudice), or are military veterans, according to USDA documents.[30]

Of the 460,615 policyholders that participated in the federal crop insurance program in 2022, about 7.5 percent (34,413) had self-certified, through at least one USDA program, as being a historically underserved producer, according to our analysis of USDA data. These historically underserved producers held a total of 94,080 policies. The distribution of A&O subsidies that the government paid insurance companies for these policies was consistent with the distribution of subsidies it paid for other policies, according to our analysis. Specifically, for policies held by historically underserved producers, the government paid participating

[30]The crop insurance program offers additional premium subsidies, among other benefits, to beginning farmers and ranchers, and veterans. To be determined socially disadvantaged, producers voluntarily certify their status (i.e., their race, ethnicity, or gender) on an FSA form. FSA, which manages some farm programs, collects data to determine whether producers meet the criteria to qualify for beginning, limited resource, and veteran status, based on supplemental information they are asked to provide. Because a person and farming operation member may qualify for more than one historically underserved group (e.g., a farmer can have both socially disadvantaged and veteran status), the number of such persons and members and their associated payments cannot be totaled across the groups without overcounting. However, by analyzing FSA data, we were able to determine how many persons and farming operation members had self-certified as belonging to each historically underserved group.

insurance companies more in A&O subsidies for larger policies than for smaller policies—a trend similar to other policies.

We also found the following:

- About 9 percent ($188 million of $2.1 billion) of total A&O subsidies paid to insurance companies were for policies held by historically underserved producers.
- Of the policies held by historically underserved producers, about 44 percent (41,525) were small policies, with A&O subsidies of less than $500. About 3.5 percent (3,297) were large policies, with A&O subsidies of $10,000 or more.
- The average A&O subsidy for policies held by historically underserved producers was $1,996 per policy, compared with $1,761 for other policies. According to RMA officials, historically underserved producers tend to grow—and insure—specialty crops (e.g., grapes in California) more frequently than other producers. Policies for specialty crops generally have higher premiums and, consequently, higher A&O subsidies, on average, than those for other crops (e.g., corn in Iowa), which could explain the higher A&O subsidy per policy.

However, historically underserved producers have participated in the crop insurance program at lower rates than other producers, according to an RMA analysis.[31] For example, in 2017 (the most recent year for which data were available), 64 percent of all producers participated in the program. In comparison, 51 percent of Black or African American producers and 43 percent of Native American producers participated, according to RMA's analysis.[32] We have previously reported on historically underserved producers and the specific challenges they have

[31]U.S. Department of Agriculture, Risk Management Agency, *Adequate Coverage for States and Underserved Producers: Report to Congress in Response to Section 11108 of the Agriculture Improvement Act of 2018* (Washington, D.C.: 2021).

[32]RMA used 2017 Census of Agriculture data to analyze participation in the crop insurance program. Not all producers who identify as members of a historically underserved group may have self-certified as such to USDA. As a result, these percentages may not fully reflect the extent to which producers who identify as a member of at least one historically underserved group participate or do not participate in the crop insurance program.

encountered in seeking services from USDA and steps USDA has taken to address these challenges.[33]

Insurance Companies' Underwriting Rate of Return in Relation to Market Conditions

What Is a Market-Based Rate of Return, and Why Is It Relevant to the Federal Crop Insurance Program?

A market-based rate of return is an annual rate of return, representative of market conditions, that produces financial earnings equal to earnings from alternative investment opportunities relative to the risk assumed. For the federal crop insurance program, a participating insurance company's rate of return for a given year is the company's underwriting gain (or loss) divided by the premiums on which the company retains a risk of loss or an opportunity for gain. For example, a company that had $500 million in retained premiums and earned underwriting gains of $50 million in a given year would have a rate of return of 10 percent.

RMA used an estimated market-based rate of return to inform its negotiations with participating companies on the target rate of return—the average annual rate of return that insurance companies are expected to earn—in the standard reinsurance agreement.[34] For example, when renegotiating the 2011 agreement, RMA used information from a 2009 USDA-commissioned study that estimated a market-based rate of return on shareholders' equity that companies participating in the federal crop insurance program would have been expected to earn.[35]

[33]See, for example, GAO, *Agricultural Lending: Information on Credit and Outreach to Socially Disadvantaged Farmers and Ranchers Is Limited*, GAO-19-539 (Washington, D.C.: July 11, 2019); *U.S. Department of Agriculture: Progress toward Implementing GAO's Civil Rights Recommendations*, GAO-12-976R (Washington, D.C.: Aug. 29, 2012); and *Beginning Farmers: Additional Steps Needed to Demonstrate the Effectiveness of USDA Assistance*, GAO-07-1130 (Washington, D.C.: Sept. 18, 2007).

[34]According to agency officials, RMA did not use the target rate of return to negotiate the livestock price reinsurance agreement provisions that became effective in 2002 because those negotiations predated the 2009 study that USDA commissioned that developed the market-based rate of return RMA used in its negotiations of the 2011 standard reinsurance agreement.

[35]Shareholders' equity is the dollar worth of a company to its owners after subtracting all of its liabilities from its assets. The study used data for 1989 through 2008 to calculate this estimated market-based rate of return. Milliman, Inc., *Rate of Return Update - 2008*.

How Does the Crop Insurance Program's Target Rate of Return Compare with a Market-Based Rate of Return?

The 2011 standard reinsurance agreement set the target rate of return on retained premiums at 14.5 percent, which has continued to exceed market conditions since we issued our 2017 report, according to our analysis of recent data. Specifically, while analyzing data to update the estimates in our 2017 report, we calculated a market-based rate of return of 10.2 percent for both the 7-year estimate (from 2016 through 2022) and the 20-year estimate (from 2003 through 2022).[36] The current target rate of return exceeds this market-based rate of return by 4.3 percentage points.

We calculated the average market-based rate of return for these two time frames because, as we discuss in more detail below, markets fluctuate from year to year. Using a market-based rate of return that is averaged over a period of time can moderate the effect of those fluctuations. Table 1 presents an overview of our updated analysis, and appendix II provides more information about how we calculated the market-based rate of return.

Table 1: Market-Based Rate of Return Estimates, 2003-2022 (in percentages)

Years	Capital asset pricing model rate of return on equity	Discounted cash flow model rate of return on equity	Market-based rate of return on equity (average of capital asset pricing model and discounted cash flow model)
2003-2022 (20-year average)	10.3	10.1	10.2
2016-2022 (7-year average)	10.2	10.2	10.2
2022	11.3	11.7	11.5

Sources: GAO analysis of data from the Federal Reserve; Value Line Investment Survey; 2023 Ibbotson Stocks, Bonds, Bills, and Inflation® (SBBI®) Classic Yearbook; and a 2009 study commissioned by the U.S. Department of Agriculture. | GAO-24-106086

Notes: A 2009 USDA-commissioned study found that the reasonable (market-based) rate of return on shareholders' equity for the 20 years from 1989 through 2008 was an average of 12.8 percent. In 2017, using the 2009 study's method for determining a market-based rate of return on equity, we conducted an analysis updating the study's results for the 20 years from 1996 through 2015. We estimated that the market-based rate of return on equity for that period was 11.0 percent. The market-based rate of return on equity is the average of the rates from the capital asset pricing model and the discounted cash flow model. Appendix II provides more information on these models and our analysis.

[36]GAO-17-501. In our July 2017 report, we estimated a market-based rate of return for 20 years (1996 through 2015) to be 11.0 percent, and 7 years (2009 through 2015) to be 9.6 percent. We based our analysis on the 2009 USDA-commissioned study, which calculated rates of return for 20 years (1989 through 2008). We calculated a 7-year rate of return to reflect a more recent time frame and because it was the length of time that elapsed between the 2009 study and our 2017 report and between the dates of analysis in our 2017 report and this report.

The models we used for our estimates, which are based on the methodology of a 2009 study USDA commissioned, use inputs that include interest rates and the share prices of property and casualty insurance companies.[37] Because those inputs fluctuate from year to year, the market-based rate of return also fluctuates. Specifically, higher interest rates contribute to higher market-based rates of return, and lower interest rates contribute to lower market-based rates of return. For example, interest rates on U.S. Treasury securities—one measure of an average interest rate—fell from 2.2 percent in 2009 to 0.6 percent in 2020 and then rose to 2.4 percent in 2022.[38] During this time frame, while the market-based rate of return decreased slightly from 11.6 percent in 2009 to 11.5 percent in 2022, there were large fluctuations during the period. The lowest rate was 8.8 percent in 2013 and 2015, and the highest was 11.5 percent in 2009.

Using an average market-based rate of return over a period can moderate the effect of year-to-year fluctuations in interest rates. Given that individual-year estimates can fluctuate rapidly, particularly in periods of economic instability, these estimates could be updated annually to reflect the most current economic conditions, according to the USDA-commissioned study.[39] However, the study also recognized that there is a balance between stability and responsiveness. For example, using the most responsive method, in which the rate would be determined based on data for that particular year, the market-based rate of return would have been 8.8 percent in 2015 and 11.5 percent in 2022. Both are lower than the current target rate of return of 14.5 percent.

How Does the Actual Rate of Return That Participating Insurance Companies Earn Compare with the Market-Based Rate of Return?

The average actual rate of return that participating insurance companies earn has continued to exceed market conditions, according to our analysis. From 2011 through 2022, the insurance companies earned an average annual rate of return on retained premiums of 16.8 percent (an average of $1.4 billion in underwriting gains per year). This actual rate is

[37]Milliman, Inc., *Rate of Return Update – 2008.*

[38]These particular average interest rates represent an average of yields on short-, intermediate-, and long-term U.S. Treasury securities, as published by the Federal Reserve.

[39]Milliman, Inc., *Rate of Return Update – 2008.*

6.6 percentage points higher than the market-based rate of return of 10.2 percent.[40]

The companies' actual rate of return can vary significantly from year to year, as we found in our analysis. In 8 of the past 12 years, the companies received underwriting gains at a rate of return that exceeded the market-based rate; in the other 4 years, their rate of return was below the market-based rate.[41] In some years, such as in 2016 and 2017, the rate of return exceeded 30 percent, while in 2012, the rate of return was negative, as table 2 shows.[42]

Table 2: Crop Insurance Companies' Rate of Return, 2011-2022

Year	Total program premiums (in billions)	Companies' retained premiums (in billions)	Companies' underwriting gains/losses (in billions)	Target rate of return on retained premiums	20-year rolling average market-based rate of return on equity[a]	Companies' actual rate of return on retained premiums[b]
2011	$12.00	$9.56	$1.70	14.5%	12.0%	17.8%
2012	$11.15	$8.65	($1.32)	14.5%	11.8%	(15.3%)
2013	$11.83	$9.24	$0.64	14.5%	11.5%	6.9%
2014	$10.10	$7.91	$1.04	14.5%	11.3%	13.1%
2015	$9.78	$7.40	$1.81	14.5%	11.0%	24.5%
2016	$9.35	$7.55	$2.61	14.5%	10.8%	34.6%
2017	$10.09	$8.32	$2.61	14.5%	10.7%	31.4%
2018	$9.92	$7.95	$2.12	14.5%	10.6%	26.7%
2019	$10.26	$8.47	$0.51	14.5%	10.5%	6.0%
2020	$10.40	$8.40	$1.32	14.5%	10.3%	22.1%
2021	$14.29	$11.15	$2.67	14.5%	10.2%	24.0%
2022	$19.23	$14.99	$1.49	14.5%	10.2%	10.0%

[40]As described earlier, participating insurance companies' rate of return on retained premiums is their underwriting gains divided by the premiums that they retain. A 2017 CBO study stated: "There is some evidence that crop insurance companies earn a greater profit than similar insurers earn in the private market. However, data limitations make that comparison uncertain." According to that study, "Several factors make CBO's estimate uncertain. Although any single factor would be unlikely to bring the estimated rate of return for crop insurers in line with that of other property and casualty insurers, the combined effect of multiple factors could conceivably do so." Congressional Budget Office, *Options to Reduce the Budgetary Costs of the Federal Crop Insurance Program* (December 2017).

[41]As we previously reported, for most lines of insurance that have a significant catastrophe exposure, insurers expect to earn significant profits in noncatastrophic years and significant losses in years with catastrophes. See GAO-17-501.

[42]As previously mentioned, a major drought led to underwriting losses in 2012.

Year	Total program premiums (in billions)	Companies' retained premiums (in billions)	Companies' underwriting gains/losses (in billions)	Target rate of return on retained premiums	20-year rolling average market-based rate of return on equity[a]	Companies' actual rate of return on retained premiums[b]
Total	**$138.41**	**$109.58**	**$17.21**	**na**	**na**	**na**
Annual average	$11.53	$9.13	$1.43	14.5%	10.9%	16.8%

Sources: GAO analysis of data from Risk Management Agency (RMA); Federal Reserve; Value Line Investment Survey; 2023 Ibbotson Stocks, Bonds, Bills, and Inflation® (SBBI®) Yearbook; and a 2009 study commissioned by the U.S. Department of Agriculture (USDA). | GAO-24-106086

Notes: Using a 2009 USDA-commissioned study's method for determining the market-based rate of return on equity, we conducted our own analysis updating the study's results through 2022. The market-based rate of return on equity is the average of the rates from the capital asset pricing model and the discounted cash flow model. RMA used the target rate of return—the average annual rate of return that insurance companies are expected to earn—to inform its negotiations with companies for the 2011 standard reinsurance agreement.

[a]The 10.9 percent is the average of the rolling averages for each year from 2011 through 2022. For example, the 20-year rolling average of 12.0 percent for 2011 was the average market-based rate of return from 1992 through 2011.

[b]These actual rates of return are estimated as a percentage of retained premiums rather than as a percentage of equity because of data limitations. The reinsurance agreement renegotiations use rates of return as a percentage of retained premiums, as data on retained premiums have been more easily obtainable than data on equity.

As we have previously reported, adjusting the target rate of return on retained premiums to reflect market conditions could produce significant cost savings for the federal government.[43] For this report, we estimated how much the government could have saved had companies earned either the target or market-based rate of return instead of the actual rate of return:

- **Cost savings with target rate of return.** If companies had earned the target rate of return of 14.5 percent from 2011 through 2022, the federal government could have saved a total of $1.3 billion over this period. Participating companies' underwriting gains would have been about $1.3 billion per year instead of about $1.4 billion over this 12-year time frame.
- **Cost savings with market-based rate of return.** If companies had earned the average market-based rate of return of 10.2 percent in 2021 and 2022, the federal government could have saved a total of

[43]See GAO-23-106228 and GAO-17-501. The standard reinsurance agreement includes provisions for determining the portion of underwriting gain or loss retained by participating insurance companies. These portions vary with the loss ratio (ratio of insurance claims to premiums) by state in a given year. The mechanism by which RMA could reduce companies' expected rate of return would be to negotiate changes to the provisions, such as by reducing the portion of underwriting gains, or increasing the portion of underwriting losses, retained by companies.

$1.5 billion over this period. Participating companies' underwriting gains would have been about $1.3 billion per year instead of about $2.1 billion per year for these 2 years.[44]

What Other Factors Can Affect Insurance Companies' Financial Gains or Losses?

Other factors that can affect the financial gains and losses insurance companies experience from participating in the crop insurance program include third-party reinsurance, capital requirements, and expenses to sell and service policies relative to A&O expense subsidies. The 2009 USDA-commissioned study on the program made certain assumptions about these three factors that can have implications for whether the actual rate of return on retained premiums fully reflects the financial gains or losses that participating insurance companies experience. In our examination of those factors, we found that (1) some participating insurance companies receive payments from third-party reinsurers, (2) the companies may have relatively low capital requirements to make crop insurance claim payments, and (3) the insurance companies have reported that their expenses to sell and service the policies are higher than the A&O subsidies they receive from the program.

Some Insurance Companies Receive Payments from Third-Party Reinsurers

Third-party reinsurance can be an additional tool to insulate participating companies in years with catastrophic losses. In addition to reinsurance from the federal government, participating companies may also transfer—or cede—a portion of their retained premiums, and the risk of potential insurance claims on those premiums, to a third-party private reinsurance company, as we found in our review of RMA documents.[45]

Generally, insurance companies may pay a third party to reinsure a portion of their line of business to protect themselves from potentially large losses, such as in a catastrophic drought or flood year. This means

[44]We applied the 10.2 percent rate to the insurance companies' retained premiums of about $26.1 billion (from 2021 through 2022) to reach this estimate of the decrease in these companies' underwriting gains.

[45]The federal government is the primary reinsurer for participating insurance companies that take on the risk of covering, or "underwriting," losses to insured producers.

reinsurance is usually a net cost.[46] However, some participating companies receive payments from reinsurers, making third-party reinsurance potentially a net gain for these companies.[47] Specifically, we found that some insurance companies earned a commission on the amount of the premiums they ceded to the third-party reinsurer. For example, in our review of 2022 documentation, 11 of the 13 participating insurance companies ceded a portion of their retained premiums to third-party reinsurers and received payments from the reinsurers.[48] Further, we found that five of these companies received payments that exceeded the market-based rate of return of 10.2 percent.

However, reinsurance may still have a net cost to the insurance company. In particular, the insurance company forgoes some of the underwriting gains it would have expected to earn, had it kept the premiums it ceded to the reinsurer.[49]

Insurance Companies May Have Relatively Low Capital Requirements to Make Claim Payments

In our review of industry documentation, we found that crop insurance has a relatively low capital requirement in comparison to other property and casualty insurance. This means companies do not need as much capital to participate in the federal crop insurance program. Generally, in property and casualty insurance, companies draw on such capital to make claim payments. However, in the crop insurance line, companies generally need to put in less capital because of the reinsurance arrangement with the federal government. According to a third-party reinsurer that purchased a crop insurance company in 2016, a strategic

[46]The net cost with these stop-loss reinsurance contracts, is the difference between the amount an insurance company pays for a reinsurance contract and the amount that the reinsurance company pays to the insurance company for the reinsurance company's claim payment costs.

[47]Another type of third-party reinsurance contract is the quota share contract in which the reinsurance company shares in a percentage of the companies' retained premiums and underwriting gains or losses.

[48]Information about the payment amounts was available for six of the 11 companies. Payments for these six companies ranged from 9.5 percent to 20.0 percent of the portion of premiums ceded to the third-party reinsurer. For five of the 13 companies, the contracts indicated that they received commissions for ceding a portion of their retained premiums; however, the amount was not clear.

[49]If the company keeps the A&O subsidy, the net cost would be the forgone underwriting gains ceded to the reinsurer less the A&O subsidies on the retained premiums and the commission received from the reinsurer.

benefit of the purchase was the low capital requirements of crop insurance compared with other insurance lines of business.

The relatively low capital requirements associated with crop insurance also have implications for the rate of return companies earn from participating in the crop insurance program. When negotiating the current target rate of return of 14.5 percent, USDA used retained premiums rather than shareholders' equity, which is the dollar worth of a company to its owners after subtracting all of its liabilities from its assets. USDA did so because data on retained premiums are available, while company shareholders' equity data are not publicly available. In short, USDA used the assumption that retained premiums were a proxy for shareholders' equity.

However, the low capital requirements for crop insurance may indicate that shareholders' equity is generally less than retained premiums.[50] As a result, participating insurance companies' rate of return may be greater than estimates using a rate of return on retained premiums.[51] As mentioned in an example above, a company that had $500 million in retained premiums and earned underwriting gains of $50 million in a given year would have a rate of return on retained premiums of 10 percent. However, if that company had $400 million in shareholders' equity, its rate of return on equity would be 12.5 percent. Appendix III provides more information on capital requirements for crop insurance.

Insurance Companies Have Reported That Their Expenses to Sell and Service Policies Are Higher Than the A&O Subsidies They Received from the Program

Each year, participating insurance companies report to RMA their expenses to sell and service crop insurance policies. Such expenses include commissions to insurance agents and agencies to sell the actual crop insurance policies to producers. In 2020 and 2021, the companies'

[50]According to a company's presentation to shareholders, benefits of the company's participation in the program included low capital requirements. Current data are not available to determine the ratio of shareholders' equity to retained premiums. However, in earlier analyses, RMA had found that the average premium-to-equity ratio for crop insurance had been an average of 131 percent from 1989 to 2008, and an average of 115 percent from 2001 to 2008.

[51]Return on equity is return on premium multiplied by the ratio of premium to equity (capital). For insurance lines of business that require less capital, the return on equity could be higher than the return on premium.

reported expenses exceeded the A&O subsidies that they received.[52] Additionally, in both years, the companies spent over 90 percent of the total A&O subsidies they received on commissions, according to our analysis of company expense reports.[53]

Participating companies have a financial incentive to spend a large portion of A&O subsidies on these commissions. Because RMA is required by law to set the premiums for crop insurance policies, companies cannot compete by making the cost of policies more attractive through reducing premiums. As we noted in our 2009 report, a key way for the companies to increase their market share is to draw insurance agencies (and their books of business) away from competing companies. One way they do so is by raising the rates for the commissions they pay these agents.[54]

Additionally, companies' reported expenses have remained greater than A&O subsidies since the mid-1990s, according to a study by a former USDA chief economist and chairman of the board of directors of the Federal Crop Insurance Corporation.[55] Representatives of a crop insurance trade association and a public policy institute also told us that the A&O subsidies do not fully compensate for the companies' expenses. However, the study explained that agent commissions tend to be highest in states where underwriting gains are largest, suggesting that companies compete for business by buying independent insurance agents' books of business by offering higher commissions.[56] The study cited an

[52]RMA requires insurance companies to report A&O expenses annually. However, these expenses are not required to be audited and, therefore, may not be reliable.

[53]The 2011 standard reinsurance agreement capped the amount of compensation that a company can pay to crop insurance agents within a state to no more than the total A&O subsidy amount for that state. Specifically, companies may not pay more than 80 percent of A&O by state as base commission to agents. However, a company may pay compensation (i.e., base commission and profit sharing) up to 100 percent of A&O by state, if certain conditions are met. There is no limitation on how much any given agent may receive, so long as it is within the maximum amount allowable per state.

[54]GAO-09-445.

[55]The Federal Crop Insurance Corporation is a government corporation managed by RMA and that administers the federal crop insurance program.

[56]Joseph W. Glauber, *Crop Insurance and Private Sector Delivery: Reassessing the Public-Private Partnership* (Washington, D.C.: Taxpayers for Common Sense, December 2016).

econometric analysis that suggested a significant and positive relationship between net underwriting gains and agent commissions.[57]

Besides Rate of Return, Is There Another Way to Assess the Underwriting Profitability of Participating in the Federal Crop Insurance Program?

Since the combined ratio is another method insurance companies use to measure underwriting profitability, we used this method to analyze insurance industry data for 2011 through 2022. We found that the combined ratio method also shows that crop insurance earned more underwriting profit than other property and casualty insurance during this time frame.[58]

The combined ratio is the sum of losses (insurance claims) and expenses divided by premiums, so a lower combined ratio represents more profitability.[59] In our analysis, we found that companies participating in the crop insurance program had an average combined ratio of 97.0, while companies participating in the property and casualty industry had an average combined ratio of 100.4.[60] The lower combined ratio indicates that the companies that participated in the crop insurance program earned more underwriting profit than companies in other lines of insurance during this period. According to our review, this greater underwriting profitability may be due to the target rate of return exceeding the market-based rate of return. We also found that the participating companies' profits varied more from year to year than in the property and casualty industry. Appendix III provides more information on our combined ratio analysis.

[57]V. Smith, J. Glauber, and R. Dismukes, *Rent Dispersion in the US Agricultural Insurance Industry,* IFPRI Discussion Paper 01532 (May 2016).

[58]We used data from AM Best Company, Inc., a global credit rating agency, news publisher, and data analytics provider specializing in the insurance industry.

[59]For the crop insurance program, this ratio would not include expenses in either the numerator or denominator of the ratio because the company received the A&O subsidy to cover its expenses, and the premium does not include a provision for expenses.

[60]A combined ratio less than 100 indicates underwriting profit, while a combined ratio that is greater than, or equal to, 100 indicates underwriting losses.

Potential Effects of Adjusting the Rate of Return for the Crop Insurance Program

How Could Adjusting Insurance Companies' Rate of Return to Reflect Market Conditions Affect the Future Cost of the Crop Insurance Program?

Adjusting the rate of return to reflect market conditions would reduce the cost of the crop insurance program to the federal government by decreasing the underwriting gains that insurance companies receive. As described above, the insurance companies' average actual rate of return has exceeded both market conditions and the current target rate of return. As a result, the federal government has opportunities to reduce the crop insurance program's delivery costs by hundreds of millions of dollars per year while allowing the companies to earn returns that are comparable to market conditions. For example, as mentioned above, the government could have saved a total of $1.5 billion for 2021 and 2022 if it had adjusted the target rate of return to reflect market conditions.

We also calculated potential future savings if the government adjusts the rate of return that companies earn to either the target or market-based rate of return instead of the average actual rate of return of 16.8 percent:[61]

- **Cost savings with target rate of return.** If companies earn the target rate of return of 14.5 percent, the federal government could save about $251 million per year from 2024 through 2033. Participating companies' expected underwriting gains would decrease from about $1.8 billion to about $1.6 billion per year.
- **Cost savings with market-based rate of return.** If companies earn the market-based rate of return of 10.2 percent, the federal government could save about $720 million per year from 2024 through 2033. Participating companies' expected underwriting gains would decrease from about $1.8 billion to about $1.1 billion per year.

[61]To estimate the potential savings the government could realize from adjusting the rate of return, we used CBO projections of future premiums from 2024 through 2033, RMA data on the percentage of premiums that companies retained from 2011 through 2022 (79 percent), the 20-year average market-based rate of return we calculated for 2003 through 2022 (10.2 percent), and the actual rate of return participating companies received from 2011 through 2022 (16.8 percent).

According to representatives of a crop insurance trade association, reducing the expected rate of return would make it harder for companies to generate a profit and could encourage companies to stop offering crop insurance in some states. However, representatives from a public policy institute and a producer organization we interviewed told us that even if rates of return were reduced, the crop insurance program would still be profitable for companies. They also said such changes would not affect the delivery of the crop insurance program to producers because companies would continue to participate in the program. Moreover, the representatives further stated that some consolidation among the companies would not be a concern because the number of companies selling crop insurance has varied over the years. In 2023, USDA approved a new company to participate in the program, bringing the total number of approved participating companies to 14, according to agency officials. Our analysis indicates that USDA could adjust the expected rate of return to the market-based rate while still providing financial incentives for participation. To do so would require renegotiating this provision in the standard reinsurance agreement.

The federal government can reduce the cost of the crop insurance program without affecting the premiums that producers pay because RMA, rather than the companies, sets premium rates. In fact, RMA is required by law to set premiums that improve the actuarial soundness of the federal crop insurance program. It is also required to operate the program so that losses do not exceed premiums (i.e., its loss ratio does not exceed 1.0).[62] As a result, RMA must set premium rates and implement changes to these rates in a timely manner to cover expected losses and allow for a reasonable reserve, regardless of the companies' underwriting gains.

The premium rates that RMA sets affect the premiums that producers pay and the companies' underwriting gains. Specifically, premium rates contributed to the program's loss ratio averaging 0.85 from 2011 through 2021—meaning that premiums generally exceeded claim payments over that time frame.[63] In general, with a loss ratio of 0.85, producers are paying higher premiums than they would if the loss ratio was closer to or at 1.0, which would indicate that premiums and claim payments are in

[62]Specifically, RMA is directed by statute to operate the program "to achieve an overall projected loss ratio of not greater than 1.0." 7 U.S.C. § 1506(n)(2). The loss ratio is calculated as claim payments divided by total premiums, and a loss ratio of less than 1.0 means premiums were greater than claim payments.

[63]In its May 2023 baseline projection of crop insurance program spending for 2023 through 2033, the Congressional Budget Office used a loss ratio of 0.85.

closer balance. Furthermore, the more that premiums exceed claim payments, the greater the companies' underwriting gains. If RMA reduces premium rates so that the loss ratio is closer to or at 1.0, the premiums producers pay would decrease, as would companies' underwriting gains. This indicates that the federal government could realize savings without increasing the premiums producers pay.

How Could Adjusting the Amount of Premiums That Insurance Companies Retain Affect the Future Cost of the Crop Insurance Program?

We have previously reported, and our analysis continues to show, that the federal government could realize additional dollar savings by reducing the companies' portion of retained premiums. Doing so would reduce the companies' expected underwriting gains because they would earn their rate of return on a smaller premium base, thus retaining a smaller portion of underwriting gains or losses.

We estimate that the government could save over $100 million per year in program delivery costs if it reduced the portion of total program premiums that companies retain, as follows:

- **Our calculation.** To calculate this estimate, we reduced the total premiums that companies retained from 2011 through 2022 by 5 percentage points, from 79 percent to 74 percent. We applied this to CBO's projections for total premiums from 2024 through 2033 (about $138.2 billion, or about $13.8 billion per year).[64]
- **Cost savings.** We found that, assuming an average actual rate of return of 16.8 percent, reducing the insurance companies' portion of projected premiums from 79 percent to 74 percent could save the government about $116 million per year from 2024 through 2033.

What Is Preventing RMA from Taking Steps to Reduce the Program's Delivery Costs?

A provision in the 2014 farm bill prevents the government from being able to achieve cost savings by reducing the delivery costs of the crop insurance program, as we have previously reported.[65] Specifically, the

[64]Congressional Budget Office, *CBO's May 2023 Baseline*.

[65]GAO-17-501 and GAO-23-106228.

provision requires that any changes negotiated in new reinsurance agreements be budget neutral. This means that any changes to the reinsurance agreements cannot reduce the total future underwriting gains for all insurance companies. It also means that the estimated total A&O subsidies cannot be less than the amounts that would have been provided under the immediately preceding reinsurance agreements. The 2014 farm bill also requires that if the federal government realizes any savings from revising the reinsurance agreements, these savings be used to increase participating insurance companies' underwriting gains or A&O subsidies.

As discussed above, delivering the crop insurance program from 2024 through 2033 is projected to cost approximately $38.1 billion (over a third of the total $101 billion projected cost of the program), according to CBO. In order for the federal government to achieve any savings through the reinsurance agreements by, for example, reducing the target rate of return or the portion of premiums that companies retain, Congress would need to repeal the "budget neutrality" provision, as we suggested in our July 2017 report.[66]

Amount and Distribution of Premium Subsidies

What Are Crop Insurance Premium Subsidies, and How Much Does the Government Pay in Subsidies?

Premium subsidies for crop insurance are the portion of premiums that the federal government provides to insurance companies on policyholders' behalf. Without these subsidies, producers participating in the crop insurance program would have to pay the full amount of their policy premiums. Congress sets premium subsidy rates—the percentage of the premium that the government pays. These rates vary by the level of insurance coverage that the policyholder chooses and the geographic diversity of the crops insured. For most policies, the statutory premium subsidy rates range from 38 percent to 80 percent.[67] The average premium subsidy rate for 2022 was about 62 percent.

[66]Legislation has been proposed that would eliminate the provision and permit USDA to renegotiate the standard reinsurance agreement to achieve savings; however, no such legislation has been passed. See, for example, Assisting Family Farmers through Insurance Reform Measures Act, H.R. 2332, 115th Cong. (2017-2018).

[67]See 7 U.S.C. § 1508(e).

Premium subsidies make up the largest portion of the federal government's cost for the crop insurance program. According to RMA, from 2011 through 2022, the program cost the federal government $9.0 billion annually, on average. In 2022, the program's total cost was $17.3 billion, while total premium subsidies were $12.0 billion, according to USDA.[68]

Premium subsidies for producers are separate from the A&O subsidies for insurance companies intended to cover expenses for selling and servicing policies. However, in private insurance, such as automobile insurance, these A&O expenses typically are captured through the premiums paid by policyholders. The A&O subsidies for crop insurance can, therefore, be considered a subsidy to policyholders, since premiums are lower than they would otherwise be. For example, in 2022, when premium subsides averaged 62 percent, the addition of A&O subsidies would have brought the total subsidy rate to an average of 66 percent.

What Is the Distribution of Premium Subsidies among Policyholders?

In 2022, the federal government provided about $12 billion in premium subsidies to 460,615 policyholders. These policyholders insured a variety of commodities and were geographically distributed across all 50 states.

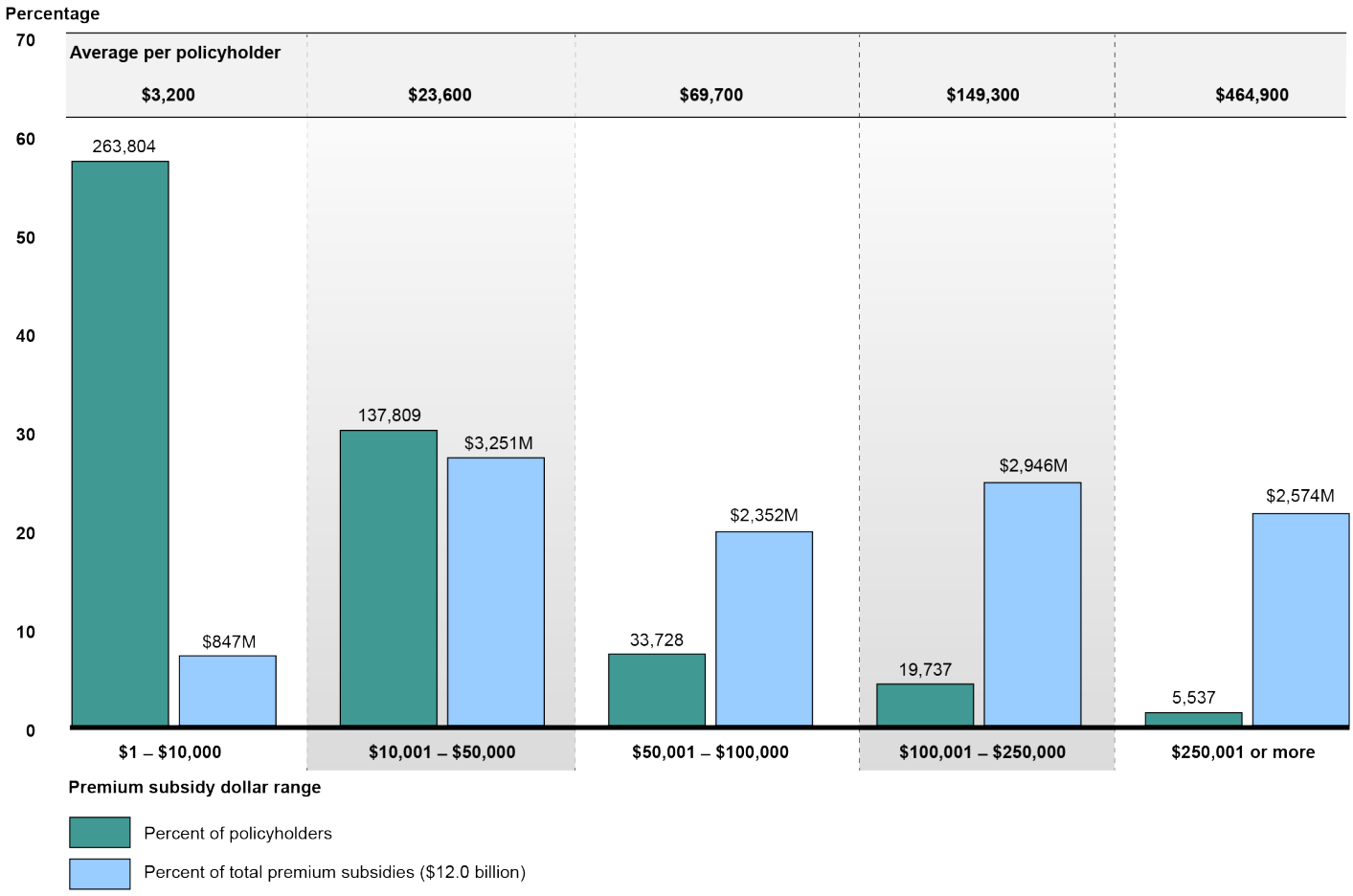
We analyzed RMA policyholder and subsidy data for 2022 and found the following:

- Smallest subsidies. About 57 percent of policyholders (263,804 of 460,615) accounted for 7 percent of premium subsidy dollars ($847 million total), with an average premium subsidy of about $3,200 per policyholder.
- Largest subsidies. About 1 percent of policyholders (5,537 of 460,615) accounted for 22 percent of premium subsidy dollars (about $2.57 billion), with an average premium subsidy of $464,900 per policyholder. The 19 policyholders with the largest premium subsidies each had more than $3 million in subsidies. For example, a nursery in the southern U.S. benefited from $7.7 million, and a dairy farming operation in the western U.S. benefited from $6.6 million.

[68]In 2022, premium subsidies increased because premiums increased, which was a result of prices increasing for major crops, such as corn and soybeans. In addition to premium subsidies, the program's total cost includes A&O subsidies and underwriting gains paid to insurance companies.

Figure 5 shows the distribution of premium subsidies among policyholders, by dollar amount.

Figure 5: Distribution of Premium Subsidies among Federal Crop Insurance Program Policyholders, 2022



Source: GAO analysis of Risk Management Agency data. | GAO-24-106086

Accessible Data for Figure 5: Distribution of Premium Subsidies among Federal Crop Insurance Program Policyholders, 2022

Subsidy dollar range	No. policyholders	percentage policyholders	Premium subs $$ amount	percentage premium subsidies ($)	Average premium subsidy per policyholder
$1-$10,001	263,804	57.3%	$847	7.1%	$3,200
$10,001-$50,000	137,809	29.9%	3,251	27.2%	23,600
$50,001-$100,000	33,728	7.3%	2,352	19.7%	69,700

Subsidy dollar range	No. policyholders	percentage policyholders	Premium subs $$ amount	percentage premium subsidies ($)	Average premium subsidy per policyholder
$100,001- $250,000	19,737	4.3%	2,946	24.6%	149,300
$250,001 or more	5,537	1.3%	2,574	21.5%	464,900

Source: GAO analysis of Risk Management Agency data. | GAO-24-106086

Of the 100 policies with the largest premium subsidies in 2022, 27 insured livestock and dairy; 26 insured principal crops such as corn and soybeans; 24 insured pasture, rangeland, and forage; and 14 insured fruits and nuts.[69] Of the other nine policies, four insured nursery, two insured sugarcane, and one insured each of the following: orange trees, annual forage, and all commodities on the farm (whole farm insurance).

Distribution of premium subsidies was clustered in certain states. Specifically, 24 of the 100 policies with the largest premium subsidies in 2022 were for policyholders in Texas. An additional 36 were for policyholders in four states—Arizona, California, Florida, and Nevada. For more information on premium subsidies by state, see appendix IV.

High-Income Policyholder Participation in the Federal Crop Insurance Program

What Are “High-Income Policyholders,” and How Many Are in the Program?

In this report, we refer to “high-income policyholders” as those with AGIs that exceeded the farm program income limit of $900,000 in 2021, according to our analysis of RMA and FSA data.[70] High-income

[69]While most of our analyses on premium subsidies focus on policyholders, in this case, we focused on policies because policyholders may hold multiple policies, and these policies may be for different commodities, in different states, or both. Principal crops are barley, corn, cotton, grain sorghum, peanuts, potatoes, rice, soybeans, tobacco, and wheat, consistent with an RMA market report.

[70]Statutory income limits have varied by program and changed over time, but for 2021, they generally state that a program applicant exceeded this limit if their AGI, averaged over a specified 3-year period, exceeded $900,000. Because the statutory AGI limit of $900,000 for FSA farm programs applied to individuals, in some cases married couples filing a joint Internal Revenue Service tax return could earn up to twice this amount without exceeding the limit.

policyholders may have received income from operating farms, nonfarm sources, or both.[71]

According to our analysis, of the 460,615 policyholders that participated in the crop insurance program in 2022, 1,341 (0.3 percent) were high income.[72] These high-income policyholders accounted for about 0.5 percent of total premiums in the program (see table 3). However, the percentage of individual participants (rather than policyholders) with an average AGI exceeding $900,000 could be higher than 0.3 percent. This is in part because some policyholders are entities such as general partnerships, which include multiple members, each of whom is subject to AGI limits for farm programs. Our analysis did not include these members.[73]

Table 3: High-Income Policyholders and Other Policyholders in the Federal Crop Insurance Program, 2022

Category	High-income policyholders[a]	Other policyholders[b]
Number of policyholders	1,341	457,650
Percentage of policyholders	0.3%	99.7%
Percentage of premiums	0.5%	99.5%

Sources: GAO analysis of data from Risk Management Agency and Farm Service Agency (FSA). | GAO-24-106086

[a]High-income policyholders are those for which we have FSA data showing that their average adjusted gross incomes, calculated over a specified 3-year period, exceeded $900,000.

[b]Other policyholders are those for which we have FSA data showing that their average adjusted gross incomes, calculated over a specified 3-year period, did not exceed $900,000. Other policyholders also include entities—such as general partnerships and states and political subdivisions—for which FSA did not have data showing whether their incomes exceeded $900,000 because the entities were not subject to income eligibility requirements. In 2022, about 21,000 policyholders were entities that were not subject to these requirements.

[71]Certain current and past programs, including USDA's 2020-2021 Coronavirus Food Assistance Program, allow a producer to be exempt from the $900,000 AGI limit if at least 75 percent of the average AGI was derived from farming, ranching, or forestry operations. In our analysis, we included these policyholders in the "high-income policyholders" group because they had an average AGI that exceeded $900,000.

[72]We did not have FSA data on incomes for 1,624 policyholders (0.35 percent) in the crop insurance program.

[73]In March 2015, we reported data on individual participants in the crop insurance program. Specifically, we found that from 2009 through 2013, about 1 percent of participants would have been affected if premium subsidies had been reduced for participants with incomes exceeding the limits in effect under the 2008 farm bill. The number of participants that would have been affected during this period was about 7,500 annually on average. See GAO-15-356. For USDA's Coronavirus Food Assistance Program in 2021, which had AGI limits for applicants including members of entities, 2,783 applicants had AGIs exceeding $900,000.

How Do High-Income Policyholders Compare with Other Policyholders in Terms of Premium Subsidies, Commodities Insured, and Geographic Distribution?

In 2022, high-income policyholders differed from other, non-high-income policyholders in the following ways:

- **Premium subsidies.** High-income policyholders generally were not among those with the largest premium subsidies—of the 100 policyholders with the largest subsidies, two were high-income policyholders.[74] However, on average, high-income policyholders benefited from more in premium subsidies than other policyholders—about $43,000 in 2022, compared with about $26,000 for other policyholders.
- **Commodities.** High-income and other policyholders most frequently insured principal crops, but high-income policyholders were more likely than other policyholders to insure livestock and dairy. For high-income policyholders, principal crops accounted for 51.9 percent of premiums, and livestock and dairy accounted for 23.5 percent of premiums. For other policyholders, principal crops accounted for 78.7 percent of premiums, and livestock and dairy accounted for 4.3 percent of premiums, as table 4 shows.

Table 4: Crop Insurance Premiums, by Policyholder Income Level and Commodity Category, 2022

Commodity category	High-income policyholders[a] (premiums in millions)	High-income policyholders[a] (portion of premiums)	Other policyholders[b] (premiums in millions)	Other policyholders[b] (portion of premiums)
Principal crops[c]	$52.2	51.9%	$15,031.0	78.7%
Livestock and dairy	$23.7	23.5%	$822.0	4.3%
Fruits and nuts	$5.4	5.3%	$675.1	3.5%
Other field crops[d]	$2.1	2.1%	$767.2	4.0%
Vegetables	$2.1	2.1%	$94.6	0.5%
Other crops[e]	$15.2	15.1%	$1,715.4	9.0%
Total	$100.6	100.0%	$19,105.0	100.0%

Sources: GAO analysis of data from the Risk Management Agency and Farm Service Agency (FSA). | GAO-24-106086

[74]Premium subsidies for the two high-income policyholders were $1.8 million and $1.7 million.

[a]High-income policyholders are those for which we have FSA data showing that their average adjusted gross incomes, calculated over a specified 3-year period, exceeded $900,000.

[b]Other policyholders are those for which we have FSA data showing that their average adjusted gross incomes, calculated over a specified 3-year period, did not exceed $900,000. Other policyholders also include entities—such as general partnerships and states and political subdivisions—for which FSA did not have data showing whether their incomes exceeded $900,000 because the entities were not subject to income eligibility requirements. In 2022, about 21,000 policyholders were entities that were not subject to these requirements.

[c]Principal crops are barley, corn, cotton, grain sorghum, peanuts, potatoes, rice, soybeans, tobacco, and wheat.

[d]Other field crops are herbaceous plants grown on a large scale in cultivated fields, such as alfalfa and rye, that are not included in principal crops.

[e]Other crops are all other crops insured by policyholders that are not included in the categories above.

Of the approximately 9,200 policyholders that insured livestock and dairy in 2022, 44 were high-income policyholders. Premium subsidies for these 44 policyholders ranged from $89 to more than $1 million and averaged about $226,000. Among the 44 high-income policyholders, 18 had dairy insurance and each benefited from about $362,000 in premium subsidies, on average, and 27 had livestock insurance and each benefited from about $128,000 in premium subsidies, on average.[75]

- **Geographic distribution.** In 2022, 52 percent of high-income policyholders and 38 percent of other policyholders were in four states (Texas, Iowa, Kansas, and Illinois). Of these states, Texas had the highest number of high-income policyholders, as table 5 shows.

Table 5: High-Income Policyholders in the Federal Crop Insurance Program, by State, 2022

State	Number of high-income policyholders[a]	Total high-income policyholder premiums (in millions)	High-income policyholders as portion of all crop insurance policyholders in each state (by number of policy holders)	High-income policyholders as portion of all crop insurance policyholders in each state (by premiums)
Texas	270	**$12.6**	0.78%	0.56%
Iowa	199	**$12.8**	0.38%	0.88%

[75]We included one policyholder that had both dairy and livestock insurance in counts for both groups. The 18 policyholders with dairy insurance held policies in nine states: California, Colorado, Georgia, Idaho, Iowa, Kansas, North Carolina, Texas, and Wisconsin. The 27 policyholders with livestock insurance held policies in 13 states: Arizona, Colorado, Florida, Idaho, Iowa, Kansas, Minnesota, Nebraska, Oklahoma, South Dakota, Texas, Wisconsin, and Wyoming. Dairy insurance is Dairy Revenue Protection, and livestock insurance is Livestock Gross Margin or Livestock Risk Protection.

State	Number of high-income policyholders[a]	Total high-income policyholder premiums (in millions)	High-income policyholders as portion of all crop insurance policyholders in each state (by number of policy holders)	High-income policyholders as portion of all crop insurance policyholders in each state (by premiums)
Kansas	156	**$6.2**	0.36%	0.52%
Illinois	111	**$3.4**	0.23%	0.27%
Nebraska	88	**$4.2**	0.26%	0.42%
California	57	**$5.3**	0.36%	0.74%
Oklahoma	55	**$1.2**	0.56%	0.33%
Missouri	51	**$1.9**	0.24%	0.30%
South Dakota	50	**$4.2**	0.26%	0.35%
North Dakota	46	**$3.7**	0.27%	0.24%
All other states	324	**$45.1**	0.19%	0.60%

Sources: GAO analysis of data from Risk Management Agency and Farm Service Agency (FSA). | GAO-24-106086

Note: Policyholders are counted in each state where they held policies in 2022, so some policyholders are counted multiple times.

[a]High-income policyholders are those for which we have FSA data showing that their average adjusted gross incomes, calculated over a specified 3-year period, exceeded $900,000.

For information on the number and percentage of high-income policyholders for all states, see appendix V.

Potential Effects of Reducing Premium Subsidies for High-Income Policyholders

How Would Reducing Premium Subsidies for High-Income Policyholders Affect the Costs of the Crop Insurance Program, and What Other Factors Can Affect These Costs?

Cost Savings

By reducing premium subsidies by 15 percentage points (e.g., from 62 percent to 47 percent) for high-income policyholders in the crop insurance program in 2022, the federal government could have saved about $15 million that year, according to our analysis. In our estimate, we assumed

all 2022 policyholders remained in the program and did not change coverage levels, and we excluded catastrophic policies.[76]

Factors That Can Affect the Amount of Savings

Other factors can affect the amount of savings the federal government could realize in premium subsidies costs. Such factors include crop prices, policyholders' incomes and choices about insurance protection, and legislative provisions.[77] For example, because crop prices affect premiums and premium subsidies are a set percentage of premiums, the subsidies would rise or fall with crop prices from year to year, resulting in smaller or larger savings to the federal government. Additionally, the government could achieve more savings if some high-income policyholders chose less expensive plans or lower coverage levels, because total premium subsidies would decrease.

While one stakeholder stated that reduced coverage levels would increase the demand for ad hoc disaster assistance, we found that this potential increase would be small. Specifically, an organization representing producers told us that if high-income policyholders reduced their coverage levels as a result of lower premium subsidies, the demand for ad hoc disaster assistance would increase. However, even if some high-income policyholders reduced their coverage levels and experienced losses that were not covered, the potential increase in demand for ad hoc assistance would be small for two reasons:

1) High-income policyholders account for a very small percentage of total claim payments provided by the crop insurance program. Specifically, from 2011 through 2021, the value of high-income policyholders' claim payments (about $41.8 million per year)

[76]We used this approach for our calculations because it was consistent with proposals raised during the 2014 farm bill debate, including one passed by the Senate. See S. 954, 113th Cong., § 11033, *engrossed in the Senate* (June 10, 2013). GAO does not take a position on the specific provisions of this bill.

[77]If policyholders' incomes changed, the number of policyholders with incomes exceeding a given threshold could also change, affecting the amount of savings to the federal government. Additionally, legislative provisions could affect savings by specifying an income threshold or reduction in subsidies that differs from the ones used in our analysis. For example, if premium subsidies were not reduced for high-income policyholders that reported earning 75 percent of their income from farming, ranching, or forestry-related activities, the savings would be smaller. For USDA's Coronavirus Food Assistance Program, which had this provision in 2020 and 2021, 2,783 applicants had AGIs exceeding $900,000, and 1,440 of these applicants reported receiving 75 percent of their income from farming, ranching, or forestry-related activities, according to USDA documents.

represented about 0.4 percent of the overall program's annual claim payments.

2) If high-income policyholders reduced their coverage levels but stayed in the program, they would still receive claim payments through the program. Consequently, any demand for ad hoc disaster assistance would reflect only the portion of losses not covered by the reduced coverage levels.

Moreover, high-income policyholders are unlikely to significantly change their program participation for several reasons, which we discuss in the next section. These include (1) policyholders on average get back much more in claim payments than they pay in premiums, (2) premiums are a very small portion of producer costs, (3) insurance coverage is important to lenders, and (4) it is risky to operate without an insurance safety net.

How Would Reducing Premium Subsidies for High-Income Policyholders Affect the Actuarial Soundness of the Crop Insurance Program?

As mentioned earlier, RMA is required by law to adopt rates and coverages that will improve the actuarial soundness of the crop insurance program.[78] This requirement means that premiums must be adequate to cover expected claim payments.[79] According to our analysis of RMA and FSA data and our review of government and academic studies, reducing premium subsidies for high-income policyholders likely would not affect the actuarial soundness of the program for several reasons.

First, high-income policyholders account for a very small portion of premiums. Because high-income policyholders represent about 0.3 percent of all policyholders and account for about 0.5 percent of premiums in the crop insurance program, their decisions to leave or stay in the program likely would not affect its actuarial soundness. Regardless of high-income policyholders' decisions to leave or stay, the pool of

[78]The Actuarial Standards Board, which is the standards-setting entity of the U.S. actuarial profession, has noted that the phrase "actuarial soundness" has different meanings in different contexts and that its meaning in a particular context might be imposed by an entity outside of the actuarial profession (e.g., a statute). The board's standards state that if an actuary defines a process or result as "actuarially sound," the actuary should define the meaning of "actuarially sound" in that context. We have not reviewed the actuarial soundness of RMA's premium rate-setting methodology.

[79]The law requires an expected program-wide loss ratio of no more than 1.0, meaning that the amount of premiums at least equal claim payments.

policyholders and total premiums in the program would remain large, which means that risk would still be widely spread.

Furthermore, high-income policyholders are not generally lower risk to the crop insurance pool than other policyholders, according to our analysis of RMA and FSA data. We found that high-income policyholders had the same average loss ratio—0.85—as other policyholders from 2011 through 2021.[80] This loss ratio of less than 1.0 means that, similar to other policyholders, total premiums paid by and on behalf of high-income policyholders (including the portion subsidized by the government) have generally been enough to cover the cost of claim payments they received from insurers during this time frame.

Representatives of a crop insurance trade association told us that if premium subsidies were reduced for high-income policyholders, RMA would need to raise premium rates for all participants in the crop insurance program. They said that this is because high-income policyholders might leave the program, which would change the risk pool. However, we found that high-income policyholders' premiums generally have corresponded to their likelihood of collecting claim payments, with loss ratios similar to other policyholders. Consequently, their decisions to stay in or leave the program would not have affected the program's insurance risk pool or its actuarial soundness over the period we studied.[81] If high-income policyholders had left the program, the program's overall loss ratio would have stayed the same, and RMA would

[80]As described earlier, the loss ratio is calculated as claim payments divided by total premiums, and a loss ratio of less than 1.0 means that premiums were greater than claim payments. In 2015, we reported the average premium rate and loss cost ratio, or claim payments as a percentage of insured coverage, in addition to the loss ratio. See GAO-15-356. From 2011 through 2021, the average premium rate (total premium as a percentage of insured coverage) was lower for high-income policyholders (7.9 percent) than for other policyholders (9.3 percent). The lower premium rate for high-income policyholders is consistent with the types of commodities they insured. Premium rates for insuring livestock and dairy, fruits, nuts, and vegetables are generally lower than for insuring other crops, and proportionally more high-income policyholders insured these commodities in 2022 than did other policyholders. To set premium rates, RMA uses data on average loss cost ratios for each crop and location, among other things, so the loss cost ratio is closely linked to premium rates. The loss cost ratio from 2011 through 2021 was also lower for high-income policyholders (6.7 percent) than for others (7.9 percent), on average.

[81]In this report, we use the phrase "likelihood of receiving claim payments" to denote both the probability of receiving claim payments and the amount received.

not have needed to raise premium rates for policyholders remaining in the program.[82]

Additionally, high-income policyholders are unlikely to leave the crop insurance program because of the benefits of having crop insurance, incentives to retain it, and risks of dropping it, according to our analysis. For example, from 2011 through 2021, high-income policyholders, as a group, received about $250.1 million more in claim payments than they paid in their portion of premiums—an average of $2.19 for each dollar they paid, according to our analysis. If subsidies had been 15 percentage points lower for high-income policyholders during this time frame, they still would have received more than they paid—an average of $1.59 for each dollar they paid, according to our analysis.[83]

While reducing subsidies would require high-income policyholders to pay a larger portion of their premiums, the effect on their overall costs would be limited because premium subsidies generally represent a small fraction of average production costs per acre. For example, if premium subsidies were reduced by 15 percentage points for high-income policyholders, in 2022 total production costs per acre would have increased for corn by about 1.3 percent, and for wheat by about 1.6 percent. In addition, high-income policyholders may have an incentive to retain crop insurance because, according to a CBO report, it is important to lenders who provide farm production loans to policyholders.[84] Furthermore, according to a document from a producer organization, high-income policyholders would be unlikely to leave the crop insurance program because of the high risk of operating without any subsidized safety net. According to academic literature and representatives we interviewed from a producer organization and a public policy institute, policyholders would be more likely to reduce the amount of coverage they purchased than to leave the program entirely.

[82]It is possible that, if premium subsidies were reduced for high-income policyholders, high-income policyholders that presented the lowest risk—those with the lowest likelihood of receiving claim payments—would leave the program, and others would stay. In such a scenario, policyholders leaving the program would represent less than 0.3 percent of policyholders in the pool and account for less than 0.5 percent of premiums. Consequently, their effect on the overall loss ratio for the program would be minimal, and RMA would be unlikely to need to significantly raise premium rates.

[83]Some research indicates that a producer's decision about crop insurance coverage may be better explained as an investment decision than as a choice about how to manage the risk associated with farming, according to the CBO.

[84]Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options* (Washington, D.C.: March 2011).

What Steps Are Necessary for the Federal Government to Realize Savings by Reducing Premium Subsidy Rates for High-Income Policyholders?

Congressional action would be necessary before the federal government can realize savings by reducing premium subsidy rates for high-income policyholders, as we have previously reported. Specifically, Congress sets these subsidy rates, as mentioned above, and RMA does not have the authority to reduce them. Our updated analysis of recent data corroborates our March 2015 report's findings that reducing subsidies for high-income policyholders could save millions of dollars, with minimal effect on policyholders and the program. To achieve such savings, Congress would need to reduce premium subsidy rates for high-income policyholders, as we suggested in March 2015.

If such a statutory provision were enacted, USDA agencies could use existing procedures to reduce subsidies for high-income policyholders without adding requirements for the majority of policyholders. For example:

- FSA has existing procedures to administer income limits for its farm programs and for the Natural Resources Conservation Service's conservation programs. FSA could also use these procedures to identify high-income policyholders in the crop insurance program, according to FSA officials.[85]
- RMA has existing procedures to administer the eligibility requirements of the crop insurance program and to reduce benefits—including premium subsidies—under certain conditions.[86]
- RMA also coordinates with FSA and the Natural Resources Conservation Service to administer a provision prohibiting crop insurance participants from having premium subsidies, unless they comply with certain conservation requirements. RMA could use similar procedures and coordination mechanisms to reduce premium subsidies for high-income policyholders.

[85]For more information about how USDA could implement a reduction in premium subsidies for high-income crop insurance participants, see GAO-15-356.

[86]Specifically, a statutory provision first enacted in the 2014 farm bill, and extended in the 2018 farm bill, calls for RMA to reduce premium subsidies by 50 percentage points for 4 years if a producer chooses to plant an insurable crop on native sod in certain states.

Concluding Observations

Federally subsidized crop insurance, which helps farmers manage the risk inherent in farming, is an important part of the farm safety net. The crop insurance program is projected to cost the federal government $10.1 billion per year over the next decade. As we have previously reported, and our analysis of more recent data reaffirms, Congress has opportunities to achieve significant savings to the federal government by reducing the cost of the program. If Congress takes action to reduce premium subsidies for high-income policyholders, as we suggested in March 2015, it could save taxpayers millions of dollars. And if Congress repealed the "budget neutrality" provision, as we suggested in June 2017, USDA would be able to take steps to reduce the cost of the program and save taxpayers billions of dollars over the next decade.

Agency Comments

We provided a draft of this report to the Department of Agriculture for review and comment. USDA did not have any comments on the report.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 7 days from the report date. At that time, we will send copies to the appropriate congressional committees, the Secretary of Agriculture, and other interested parties. In addition, the report will be available at no charge on the GAO website at https://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-3841 or morriss@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix VI.

Steve Morris
Director, Natural Resources and Environment

Appendix I: Objectives, Scope, and Methodology

Our objectives were to provide information on (1) private delivery of the federal crop insurance program through insurance companies and (2) premium subsidies for crop insurance policyholders.

For both objectives, we reviewed relevant legislation, including farm bills, and regulations; Risk Management Agency (RMA) data and documents, such as handbooks, and Farm Service Agency (FSA) data; and relevant government reports and academic studies. We interviewed officials from RMA and FSA, as well as representatives of organizations with various perspectives on the crop insurance program. We selected these organizations to represent a range of individuals and companies affected by the crop insurance program, such as small and large producers, insurance companies, and taxpayers.

Private Delivery of Crop Insurance Program

To provide information on private delivery of the crop insurance program, we focused on three areas: the amount and types of compensation the government paid to insurance companies, how these companies' financial gains and losses reflect market conditions, and how adjusting compensation to reflect market conditions could affect the program. For all three areas, the relevant statutes and regulations we reviewed included provisions of the Food, Conservation, and Energy Act of 2008 (2008 farm bill), the Agricultural Act of 2014 (2014 farm bill), and the Agriculture Improvement Act of 2018 (2018 farm bill). We also reviewed RMA documents, including RMA's financial agreements with insurance companies, particularly, among other things, sections of the 2011 standard reinsurance agreement and 2003 livestock price reinsurance agreement.[1] We also reviewed RMA documents on the development and implementation of the reinsurance agreements, RMA's crop insurance handbooks, and crop insurance industry documents. In addition, we reviewed relevant prior GAO, Congressional Research Service, and Congressional Budget Office (CBO) reports. We also interviewed RMA

[1]We reviewed the 2011 standard reinsurance agreement and 2003 livestock price reinsurance agreement because they are the most recent renegotiations between RMA and participating insurance companies.

officials about the development and implementation of the reinsurance agreements.

To describe compensation the government paid to insurance companies, including the distribution of administrative and operating (A&O) subsidies, we reviewed and analyzed crop insurance data from RMA, CBO, and companies' financial reports from 2011 through 2022. In addition, we analyzed CBO budget projection data from 2024 through 2033.[2] We reviewed and analyzed the distribution of premium subsidies and A&O subsidies by policy size, policy type, and crop for 2022. We chose 2022 because it was the most recently completed reinsurance year at the time of our review.[3] We categorized larger and smaller policies and analyzed data for each group, for illustrative purposes.[4]

We also analyzed the distribution of A&O subsidies by producers' demographic characteristics, including whether they belonged to historically underserved groups, as defined by U.S. Department of Agriculture (USDA).[5] To do so, we matched RMA data on producers in the crop insurance program with FSA data on producers and their characteristics, such as whether they belonged to historically underserved groups.[6] We used policyholder-level data for this analysis because a single producer may have multiple policies.[7] By aggregating the policies to the producer level, we were able to assess the number, and characteristics, of individuals or businesses associated with policies for which insurance companies received A&O subsidies in 2022.

The RMA data we used provided unadjusted A&O subsidy amounts (i.e., the amounts before adjustment in accordance with the 2011 standard

[2]Congressional Budget Office, *CBO's May 2023 Baseline for Farm Programs* (Washington, D.C.: May 25, 2023).

[3]The reinsurance year begins July 1 and ends on June 30 of the following year. The 2022 reinsurance year—the most recent year for which complete data were available—began on July 1, 2021, and ended on June 30, 2022.

[4]In 2022, about 48 percent of policies had A&O subsidies of $500 or less and accounted for 5 percent of all A&O subsidies. Conversely, about 2 percent of policies had A&O subsidies of $10,000 or more and accounted for 36 percent of A&O subsidies.

[5]Historically underserved producers include producers that are beginning to farm, have limited resources, are socially disadvantaged (i.e., belong to groups that have been subject to racial, ethnic, or gender prejudice), or are military veterans, according to criteria established by USDA.

[6]We matched over 99.5 percent of the policyholders in these RMA data to producers in FSA data.

[7]In 2022, 72 percent of producers had more than one policy.

reinsurance agreement's cap on total A&O subsidies for policy types that are subject to this cap).[8] We calculated adjusted A&O subsidy amounts according to the 2011 agreement's provisions and other information from RMA officials. We compared our adjusted A&O subsidy amounts with other RMA data—such as state and national totals—to confirm that our adjustments were accurate. We assessed the reliability of these A&O subsidy and FSA producer data by testing the data for missing values and outliers, interviewing agency officials about the reliability of these data, and reviewing technical documentation. We determined that the data were sufficiently reliable for providing information about the distribution of A&O subsidies in 2022.

To describe how financial gains and losses that participating insurance companies experience reflect market conditions, we calculated a market-based rate of return and analyzed data on the financial performance of these companies for crop and livestock policies for 2011 through 2022. To calculate a market-based rate of return, we used two models that we previously used in our 2017 report to estimate a market-based rate of return.[9] These estimates follow the models used in a 2009 study commissioned by USDA and which RMA used to inform the 2011 reinsurance agreement renegotiations.[10] The USDA-commissioned study derived, for the 20 years from 1989 through 2008, the annual rate of return on shareholders' equity that companies participating in the federal crop insurance program should be expected to earn (i.e., market-based rate of return).

In our 2017 report, we used the 2009 study's method to update the 20-year estimate for 1996 through 2015. In that report, we extended the study's results to estimate a market-based rate of return on equity for the 7-year period from 2009 through 2015. For this report, we used these same models to estimate a market-based rate of return on shareholders' equity for the 20-year period from 2003 through 2022 and the 7-year

[8]The 2003 livestock price reinsurance agreement did not have a minimum or maximum on the total amounts paid to insurance companies annually.

[9]GAO, *Crop Insurance: Opportunities Exist to Improve Program Delivery and Reduce Costs*, GAO-17-501 (Washington, D.C.: July 26, 2017). See also GAO, *Farm Bill: Reducing Crop Insurance Costs Could Fund Other Priorities*, GAO-23-106228 (Washington, D.C.: Feb. 16, 2023).

[10]Milliman, Inc., *Rate of Return Update - 2008: Reasonable Rate of Return Section 3.1*, a report prepared at the request of the Risk Management Agency, U.S. Department of Agriculture (June 23, 2009). We also used a related report, Milliman, Inc., *Historical Rate of Return Analysis*, a report prepared at the request of the Risk Management Agency, U.S. Department of Agriculture (Aug. 18, 2009).

period from 2016 through 2022. We also identified factors that the USDA-commissioned study used to estimate a market-based rate of return and collected data on these factors from sources of financial information such as the Federal Reserve, *Value Line Investment Survey*; and the 2023 Ibbotson Stocks, Bonds, Bills, and Inflation® (SBBI®) Yearbook.[11] Additional information on the models used to calculate a market-based rate of return is in appendix II.

We analyzed RMA data on the actual rates of return on retained premiums of participating insurance companies to identify these companies' underwriting gains and losses and their actual rate of return from 2011 through 2022. We then compared these actual rates of return with the target rate of return set in the reinsurance agreements and with our updated estimate of a market-based rate of return. We assessed the reliability of these companies' financial performance data by, among other things, interviewing agency officials about the reliability of these data; reviewing technical documentation; and comparing these data with publicly available sources of data, including RMA's summary of business and CBO reports. We determined that the data were sufficiently reliable for providing information about the companies' gains and losses from 2011 through 2022.

The 2009 USDA-commissioned study—and by extension, the methodology we used to calculate a market-based rate of return for this report—made certain assumptions about three factors that can have implications for whether the actual rate of return on retained premiums fully reflects the financial gains or losses that participating insurance companies receive from the program. These three factors were obtaining third-party reinsurance, capital requirements, and A&O expenses relative to A&O subsidies. We assessed how these three factors could affect the estimated rate of return that insurance companies could earn from crop insurance policies. Although the methodology made these three assumptions, we believe it is a reasonable indication of a market-based rate of return. Moreover, the market-based estimate uses the average of two models, and both models produced similar results. We also considered the effect of recent increases in interest rates on a market-based rate of return.

In addition to the model described above, we calculated an alternative measure of underwriting gains—the combined ratio—to assess and compare the crop insurance companies' underwriting gains with the

[11] *Value Line Investment Survey* is an independent investment advisory service that provides extensive coverage on approximately 1,700 publicly traded stocks.

underwriting gains of property and casualty insurance companies. More information on our calculation of the combined ratio is in appendix III.

To describe how adjusting USDA's compensation to insurance companies to reflect a market-based rate of return could affect the crop insurance program, we also used the market-based rate of return, as described above, to estimate the potential effects on the program's cost if USDA adjusted the rate of return for insurance companies to reflect market conditions. To describe opportunities, if any, for the federal government to reduce its delivery costs for the program, we reviewed and summarized RMA data on companies' underwriting gains and risk sharing, as expressed by total program premiums and premiums retained by companies for the 12 years since USDA renegotiated the reinsurance agreements with the companies, from 2011 through 2022.

To understand the potential effects on the crop insurance program's insurance companies and producers, we interviewed representatives of four organizations with various perspectives on the program, including a crop insurance trade association, producer advocacy organizations, and a public policy institute, and reviewed the organizations' position statements. We selected these organizations because they had a strong understanding of the crop insurance program, and they represented a diversity of individuals and companies affected by the crop insurance program, including small and large producers, insurance companies, and taxpayers.

Premium Subsidies for Crop Insurance Policyholders

To provide information on premium subsidies for crop insurance policyholders, we focused on three areas: the distribution of federal crop insurance premium subsidies provided to policyholders by category, including state and crop; the extent to which high-income policyholders participate in the federal crop insurance program; and the potential effects on the program if premium subsidies were reduced for high-income policyholders.

To describe the distribution of federal crop insurance premium subsidy dollars provided to policyholders by category, we analyzed RMA data from 2022 on crop insurance policyholders' characteristics, including the amount they had in premium subsidies, the states where they were located, and the commodities they insured. To determine the extent to which high-income policyholders participate in the crop insurance program, we matched RMA data from 2022 on crop insurance policyholders' characteristics with FSA data on participants' compliance

with income limits for farm programs in 2021. We used the FSA data from 2021 because they were the most complete data available on participants' general income levels. In matching the two datasets, we determined that about 99.7 percent of all crop insurance policyholders were in the FSA dataset. For those policyholders, we identified the number with adjusted gross incomes (AGI), averaged over 3 specified years that exceeded $900,000, according to FSA data. We also analyzed the data to compare the characteristics of high-income policyholders with those of other policyholders.

To determine the potential effects on the program if premium subsidies were reduced for high-income policyholders, we calculated potential government savings and potential effects on the actuarial soundness of the program. To determine potential savings, we analyzed RMA and FSA data to estimate the amount of subsidies paid on behalf of policyholders with AGI that exceeded $900,000, and we calculated the savings that would have resulted if these subsidies were reduced in 2022 by 15 percentage points. We chose $900,000 because it was the income limit for some FSA farm programs in 2022. We chose a reduction in premium subsidies of 15 percentage points because it is the amount that was proposed in a Senate-passed bill in 2013. We chose 2022 because recent years more closely reflect current program provisions and participation levels.

To identify effects on the actuarial soundness of the crop insurance program, we analyzed RMA data on loss experiences of, and premiums paid for, (1) high-income policyholders; and (2) other policyholders, from 2011 through 2021. We chose this period to capture variability in weather and other factors that change over time, such as crop prices. In addition, we reviewed government and academic studies, and interviewed officials from RMA and FSA, and spokespersons from organizations with a strong understanding of the crop insurance program regarding the potential effects of reducing premium subsidies for high-income policyholders in the crop insurance program. We selected the organizations to represent a range of individuals and companies affected by the crop insurance program, such as small and large producers, insurance companies, and taxpayers.

We assessed the reliability of RMA data on premium subsidies, policyholder characteristics (including commodities insured, type of policy purchased, and state of residence), total premiums, claim payments, and liabilities; and FSA data on participants with incomes exceeding $900,000, and their characteristics. We did so by, among other things, screening for omissions and anomalies, interviewing agency officials

about the reliability of these data and reviewing technical documentation. We determined that the data were sufficiently reliable for providing information about the distribution of premium subsidies, the extent to which high-income policyholders participated in the crop insurance program, and the potential effects on the program if premium subsidies were reduced for high-income policyholders in 2022.

We conducted this performance audit from June 2022 to November 2023 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Analysis of Market-Based Rate of Return

We updated the market-based rate of return for insurance companies based on the methodology of a 2009 USDA-commissioned study, which derived the annual rate of return that companies participating in the federal crop insurance program should be expected to earn during the period from 1989 through 2008.[1] We used this same methodology in our prior work to estimate the market-based rate of return from 2009 through 2015.[2] In this report, we have again updated the market-based rate of return estimates from 2003 through 2022. The U.S. Department of Agriculture (USDA)-commissioned study used the opportunity cost of capital as the definition of the market-based rate of return for crop insurance. In order to determine a market-based rate of return for companies participating in the federal crop insurance program, the 2009 study averaged the results obtained using two methods: the capital asset pricing model and the discounted cash flow model.

Capital Asset Pricing Model

The capital asset pricing model uses the return on a risk-free asset, usually a U.S. Treasury security, to estimate the additional return an investor should expect as compensation for the additional risk associated with alternative investments. The capital asset pricing model uses the following equation to calculate the cost of capital:

$$K = rf + \beta * rd$$

in which rf is the risk-free rate, β is the beta coefficient, and rd is the equity risk premium.

[1]Milliman, Inc., *Rate of Return Update - 2008: Reasonable Rate of Return* Section 3.1, a report prepared at the request of the Risk Management Agency, U.S. Department of Agriculture (June 23, 2009). Milliman is a consulting firm.

[2]GAO, *Crop Insurance: Opportunities Exist to Improve Program Delivery and Reduce Costs*, GAO-17-501 (Washington, D.C.: July 26, 2017).

Discounted Cash Flow Model

According to the 2009 USDA-commissioned study, the discounted cash flow model is perhaps the most widely used method for estimating the cost of capital, particularly in regulated industries, such as public utilities. The discounted cash flow model is constructed on the assumption that the cost of an investment (for instance, a stock) will equal the present value of cash flows (such as future dividend payments or capital gains) resulting from the investment. If the present value of cash flows resulting from the investment does not equal the price, investors will bid on (or against) the investment until the values are equal. The USDA-commissioned study collected data for a sample of publicly traded property and casualty insurance companies from Value Line Investment Survey.

The discounted cash flow model uses the following equation to calculate the cost of capital:

$K = D_1/P_0 + g$

The first element, $D_1/P_{0,}$ is the dividend yield expected in the first year. The dividend, $D1$, reported by Value *Line Investment Survey*, is the estimate of the cash dividends payable in the next 12 months. P0 is the price of the stock at the beginning of the 12-month period.

The second element in the discounted cash flow model, g, is an average of the growth forecast method and fundamental analysis. The growth forecast method is an estimate of growth based on an equally weighted average of 10-year historical earnings and dividends, 5-year historical earnings and dividends, and a Value Line analyst's forecasted dividends and earnings. Sustainable ("fundamental") growth is the rate at which companies retain and reinvest earnings. Fundamental analysis assumes that retained earnings can be reinvested and used to produce greater earnings in the future—earnings that might produce higher dividends in the future. Alternatively, the company may grow by issuing stock above book value, proceeds from which could finance new investments, thereby generating higher dividends in the future.

Results

We estimated the 20-year (2003 through 2022) average market-based rate of return to be 10.2 percent, and for the most recent 7 years (2016

through 2022) to be 9.8 percent. Table 6 presents an overview of our updated analysis.

Table 6: Market-Based Rates of Return Estimates, 2003-2022 (in percentages)

Years	Capital asset pricing model rate of return on equity	Discounted cash flow model rate of return on equity	Market-based rate of return on equity (average of capital asset pricing model and discounted cash flow model)
2003-2022 (20-year average)	10.3	10.1	10.2
2016-2022 (7-year average)	10.2	10.2	10.2
2022	11.3	11.7	11.5

Sources: GAO analysis of data from the Federal Reserve; Value Line Investment Survey; 2023 Ibbotson Stocks, Bonds, Bills, and Inflation® (SBBI®) Yearbook; and a 2009 study commissioned by the U.S. Department of Agriculture (USDA). | GAO-24-106086

Notes: A 2009 USDA-commissioned study found that the reasonable (market-based) rate of return on shareholders' equity for the 20 years from 1989 through 2008 was an average of 12.8 percent. In 2017, using the 2009 study's method for determining the market-based rate of return on equity, we conducted an analysis updating the study's results for the 20 years from 1996 through 2015 and estimated that the market-based rate of return on equity for that period was 11.0 percent. The market-based rate of return on equity is the average of the rates from the capital asset pricing model and the discounted cash flow model.

Although we estimated market-based rates of return for 20-year and 7-year time frames, the market-based rate of return can fluctuate from year to year. The models we used for our estimates, which are based on the methodology of a 2009 study that the USDA commissioned, use inputs that include interest rates and the share prices of property and casualty insurance companies. Because those inputs fluctuate from year to year, the market-based rate of return also fluctuates, as table 7 shows. For example, while the market-based rate of return decreased slightly from 11.6 percent in 2009 to 11.5 percent in 2022, there were large fluctuations during the period—the lowest was 8.8 percent in 2013 and 2015 and the highest was 11.6 percent in 2009.

Table 7: Market-Based Rate of Return, 1989-2022

Year	Market-based rate of return (percent)	Capital asset pricing model[a] (percent)	Discounted cash flow model[b] (percent)	20-year rolling average market-based rate of return (percent)
1989	15.9	16.3	15.4	
1990	16.2	16.2	16.2	
1991	15.4	14.8	16.0	
1992	14.5	13.8	15.2	
1993	13.8	12.6	14.9	
1994	13.7	13.8	13.6	
1995	13.6	13.8	13.4	
1996	13.3	13.7	12.8	

Year	Market-based rate of return (percent)	Capital asset pricing model[a] (percent)	Discounted cash flow model[b] (percent)	20-year rolling average market-based rate of return (percent)
1997	12.9	13.5	12.3	
1998	13.1	13.2	13.0	
1999	12.7	13.5	11.9	
2000	13.1	14.5	11.8	
2001	12.0	12.5	11.4	
2002	10.8	11.6	10.1	
2003	9.7	10.2	9.1	
2004	10.3	10.9	9.8	
2005	10.7	11.2	10.2	
2006	11.8	12.6	10.9	
2007	11.7	12.4	11.0	
2008	11.5	10.2	12.9	12.8
2009	11.6	10.5	12.6	12.6
2010	10.5	10.5	10.6	12.3
2011	9.6	10.2	8.9	12.0
2012	8.9	8.9	9.0	11.8
2013	8.8	9.3	8.4	11.5
2014	9.1	9.2	8.9	11.3
2015	8.8	9.0	8.6	11.0
2016	8.9	9.5	8.3	10.8
2017	10.0	10.1	9.8	10.7
2018	11.2	10.7	11.6	10.6
2019	10.7	10.8	10.6	10.5
2020	9.7	9.2	10.1	10.3
2021	9.7	9.9	9.6	10.2
2022	11.5	11.3	11.7	10.2

Sources: GAO analysis of data from the Federal Reserve; Value Line Investment Survey; 2023 Ibbotson Stocks, Bonds, Bills, and Inflation® (SBBI®) Yearbook; and a 2009 study commissioned by the U.S. Department of Agriculture (USDA). | GAO-24-106086

Notes: Market-based rate of return: Cost of capital estimates are based on an average of the capital asset pricing model and discounted cash flow model columns for each year from 2009 through 2022. We used reasonable rate of return results for 1989 through 2008 from the 2009 USDA-commissioned study.

[a]Capital asset pricing model: Our estimated cost of capital is based on the capital asset pricing model. We used results for 1989 through 2008 from the 2009 USDA-commissioned study.

[b]Discounted cash flow model: We computed the estimated cost of capital for 2009 through 2022 using only property and casualty insurance companies for which all required values were available in the Value Line Investment Survey. We used discounted cash flow model results for 1989 through 2008 from the USDA-commissioned study.

Because interest rates are a variable in the formula that the USDA-commissioned study used to estimate the market-based rate of return, fluctuations in interest rates contribute to fluctuations in the market-based rate of return. Specifically, higher interest rates contribute to higher rates of return, and lower interest rates contribute to lower rates of return. For example, interest rates on U.S. Treasury securities—one measure of an average interest rate—ranged from 2.2 percent in 2009 to 0.6 percent in 2020 and then rose to 2.4 percent in 2022.[3]

Using an average market-based rate of return over a period of time can account for year-to-year fluctuations, such as in interest rates. Given that individual-year estimates can fluctuate rapidly, particularly in periods of economic instability, according to the USDA-commissioned study, the estimates could be updated annually to reflect the most current economic conditions.[4] However, the study also recognized that there is a balance between stability and responsiveness. For example, using the most responsive method, in which the rates would be determined based on data for that particular year, the market-based rate of return would have been 8.8 percent in 2015 and 11.5 percent in 2022.

[3]The "average interest rate" is the average of yields on short-, intermediate-, and long-term U.S. Treasury securities.

[4]Milliman, Inc., *Rate of Return Update – 2008.*

Appendix III: Measuring Property and Casualty Insurance Companies' Profit

This appendix provides information on measures of property and casualty insurance companies' profitability and compares these companies' profitability with that of insurance companies that participate in the federal crop insurance program. It also provides information on capital requirements for property and casualty insurance companies and the companies participating in the federal crop insurance program.

Components of Property and Casualty Insurance Companies' Profitability

The financial performance of property and casualty insurance companies, including companies that participate in the federal crop insurance program, is determined primarily by two factors: underwriting performance and investment performance. Underwriting performance refers to how much an insurer pays out in claims relative to what it earns in premiums. Investment performance refers to how much an insurer earns on its portfolio of invested assets.

Underwriting profit is the net profit that an insurer derives from providing insurance coverage, exclusive of the income it derives from investments. It does not include the gains made from invested premiums and equity capital. It is calculated by taking the net collected premiums (net of reinsurance premiums) less losses, loss adjustment expenses, and underwriting expenses.[1] Investment profit includes net investment income from insurance operations, as well as net investment income from an insurer's equity capital.

Measuring Profitability

A standard measure of financial performance across all industries is the rate of return on shareholders' equity, which is the ratio of profit to a

[1]Underwriting expenses include agents' commission, staff salaries, and other overhead expenses paid.

company's average net worth (also known as equity for publicly traded companies, or surplus for mutual insurance companies).

The rate of return on equity can be calculated as the product of the rate of return on premium and the premium-to-equity ratio. Some insurance industry analysts use rate of return on premium as a proxy for the rate of return on equity, when equity for a line of business for multiline insurers is not readily available. For example, when calculating the rate of return on equity for crop insurance, many insurance industry analysts use the rate of return on premium (earned premium net of reinsurance) to measure the profit. A 2009 study that the U.S. Department of Agriculture (USDA) commissioned calculated the historical rate of return by using the property and casualty insurance industry premium-to-equity ratio and found that the average premium-to-equity ratio was 130 percent from 1989 to 2009, an indication that the actual rate of return on equity might be higher than the rate of return on premium.[2] During 2001 through 2009, a period in which the crop insurance program grew substantially, the average premium-to-equity ratio was 121 percent.

Capital Requirement

Crop insurance companies had comparable overall operating ratios to property and casualty insurance companies from 2011 to 2022, according to an AM Best report.[3] Since the operating ratio measures a company's overall operational profitability from underwriting and investment activities, crop insurance companies earned a comparable return relative to property and casualty insurance companies, doing so with much less investment profit, an indication of lower capital requirements for crop insurance companies.[4]

[2]Milliman, Inc., *Historical Rate of Return Analysis*, a report prepared at the request of the Risk Management Agency, U.S. Department of Agriculture (Aug. 18, 2009).

[3]From 2011 through 2020, the average operating ratios for crop insurance and property and casualty insurance were 96.0 and 95.2, respectively. *2021 Cumulative By Line Underwriting Experience – Net Premiums Written* report (New York, NY: AM Best Company, Inc, August 2021).

[4]For example, if (1) Company A and Company B have the same amount of written premium and earn the same rate of return (5 percent) on investment with no other income; (2) Company A had a combined ratio of 90 percent, while company B had a combined ratio of 95 percent; and (3) both companies had the same target profit goal of a 90 percent operating ratio, Company B would need to have invested additional capital to earn an investment return of 5 percent, while Company A would need no more capital investment to achieve the operating ratio of 90 percent.

Risk-based capital (RBC) requirements are governed by model laws developed by the National Association of Insurance Commissioners and adopted in each of the states. Under RBC, each insurance company performs a set of prescribed calculations that measure needed capital as a function of the particular risks to which that insurer is uniquely exposed. Specifically, the RBC instructions ascribe quantitative factors to each component of risk to which that insurer is subject — for example, investment assets, liabilities, underwriting risk, credit risk, interest rate risk and others, yielding an amount of capital ("authorized control level") that is deemed the minimum necessary for that insurer in order to carry on its business. Compared with property and casualty insurance companies, crop insurance companies have lower underwriting risk because of the reinsurance arrangement with the federal government via the standard reinsurance agreement. Further, crop insurance is also subject to less asset risk and interest rate risk. As a result, crop insurance companies should have relatively lower RBC requirements compared with property and casualty insurance companies more generally.

Combined Ratio

Insurance companies and industry analysts also use a metric known as the "combined ratio" to measure underwriting profit. The combined ratio is calculated by dividing the sum of claim-related losses and expenses by earned premium.[5] Combined ratios are seen as a good measure of an insurance company's underwriting performance and health over an extended period because they examine profitability only from the standpoint of the company's insurance operations.

A combined ratio of more than 100 percent means that an insurance company had more losses plus expenses than earned premiums and lost money on its operations. Conversely, a combined ratio of less than 100 percent means that a company had more earned premiums than losses plus expenses and is operating at a profit, while a combined ratio of exactly 100 percent is the breakeven point. It is in the best interest of the company to maintain a low combined ratio of losses and expenses relative to premiums earned, to maximize its profitability.

[5]Combined Ratio = (Incurred Losses + Expenses)/Earned Premiums, where the earned premium is net of reinsurance. For companies paying dividends, combined ratio after dividends is a measure or gauge of the profitability of an insurer that reflects its financial standing relative to the volume of business it generates. Combined Ratio After Dividends = (Incurred Losses + Expenses – Dividends to Policyholders)/Earned Premiums.

As shown in table 8 below, companies participating in the federal crop insurance program had an average combined ratio of 97.0 from 2011 to 2022. Property and casualty insurance companies more generally had an average combined ratio of 100.4 over the same 12-year period. Note that the premium for crop insurance companies is the "pure premium," while the premium for other commercial property and casualty insurance companies includes the pure premium and the cost of expenses and profit load.[6] Crop insurance companies earned relatively more underwriting profits than the property and casualty insurance from 2011 to 2022.[7] This greater underwriting profitability may be due to the risk-sharing provision of the crop insurance program's standard reinsurance agreement, which has the target rate of return exceeding the market-based rate of return, thereby increasing crop insurance companies' underwriting gains.

Table 8: U.S. Crop Insurance and Property and Casualty Insurance Combined Ratio, 2011-2022 (in percentages)

Year	Crop insurance companies' combined ratio after dividend	Property and casualty insurance companies' combined ratio after dividend
2011	90.5	107.7
2012	103.9	103.1
2013	103.3	96.9
2014	105.0	97.2
2015	102.4	97.7
2016	81.7	100.5
2017	84.1	103.7
2018	85.0	99.0
2019	108.6	98.8
2020	100.0	98.8
2021	94.9	99.5
2022	103.8	102.4
Average	97.0	100.4
Standard deviation	9.4	3.2

[6]According to RMA, the pure premium rate is the premium rate that should have been charged to exactly pay those losses.

[7]The combined ratio for crop insurance had larger year-to-year variation, compared with property and casualty insurance companies. This is expected, because crop insurance financial results can be strongly affected by weather-related losses. For example, crop losses due to a 2012 drought in the Midwest caused participating insurance companies to have underwriting losses.

Source: GAO analysis of data from AM Best Company, Inc. | GAO-24-106086

Note: The premium for crop insurance companies is the "pure premium," while the premium for other commercial property and casualty insurance companies includes pure premium and the cost of expenses and profit load.

While the combined ratio is a simple and widely used measure of underwriting performance, the operating ratio, which reflects both the combined ratio and return on investments, measures the overall profit of insurance companies.[8]

[8]The operating ratio is calculated by subtracting the ratio of investment income divided by the earned premium from the combined ratio. Thus, investment income is included in this profit measure.

Appendix IV: Distribution of Premium Subsidies among Policyholders, by State

Table 9 shows the distribution of premium subsidies among policyholders in 2022 for 14 states, which collectively accounted for about 75 percent of premium subsidies nationwide. The table also shows the distribution of premium subsidies among policyholders in 2022 for all other states and the nation.

Table 9: Distribution of Premium Subsidies among Federal Crop Insurance Program Policyholders by State, 2022

State	State and premium subsidy range	Premium Subsidies (sum – dollars in millions[a])	Premium Subsidies (percentage)	Policyholders (number)	Policyholders (percentage)
Texas	$1-$10,000	$62.4	4.1%	20,665	59.4%
Texas	$10,001-$50,000	182.0	12.1	7,864	22.6
Texas	$50,001-$100,000	165.0	10.9	2,314	6.7
Texas	$100,001-$250,000	387.7	25.7	2,465	7.1
Texas	$250,001 or more	710.3	47.1	1,465	4.2
Texas	Subtotal	$1,507.4	100.0%	34,773	100.0%
North Dakota	$1-$10,000	$21.3	2.0%	5,735	33.5%
North Dakota	$10,001-$50,000	134.2	12.8	5,106	29.8
North Dakota	$50,001-$100,000	200.4	19.0	2,777	16.2
North Dakota	$100,001-$250,000	425.5	40.4	2,806	16.4
North Dakota	$250,001 or more	270.8	25.7	689	4.0
North Dakota	Subtotal	$1,052.2	100.0%	17,113	100.0%
South Dakota	$1-$10,000	$29.0	3.6%	7,885	41.0%
South Dakota	$10,001-$50,000	173.9	21.4	6,765	35.2
South Dakota	$50,001-$100,000	176.3	21.7	2,503	13.0
South Dakota	$100,001-$250,000	246.5	30.3	1,650	8.6

State	State and premium subsidy range	Premium Subsidies (sum – dollars in millions[a])	Premium Subsidies (percentage)	Policyholders (number)	Policyholders (percentage)
South Dakota	$250,001 or more	188.1	23.1	434	2.3
South Dakota	Subtotal	$813.7	100.0%	19,237	100.0%
Iowa	$1-$10,000	$112.8	14.5%	32,346	61.9%
Iowa	$10,001-$50,000	378.6	48.8	16,976	32.5
Iowa	$50,001-$100,000	151.2	19.5	2,236	4.3
Iowa	$100,001-$250,000	83.7	10.8	590	1.1
Iowa	$250,001 or more	49.0	6.3	95	0.2
Iowa	Subtotal	$775.3	100.0%	52,243	100.0%
Kansas	$1-$10,000	$79.8	10.6%	30,110	68.8%
Kansas	$10,001-$50,000	229.0	30.4	9,826	22.5
Kansas	$50,001-$100,000	167.1	22.2	2,413	5.5
Kansas	$100,001-$250,000	174.1	23.1	1,194	2.7
Kansas	$250,001 or more	102.2	13.6	225	0.5
Kansas	Subtotal	$752.1	100.0%	43,768	100.0%
Illinois	$1-$10,000	$90.3	12.3%	31,234	65.7%
Illinois	$10,001-$50,000	300.3	40.8	12,895	27.1
Illinois	$50,001-$100,000	160.0	21.7	2,347	4.9
Illinois	$100,001-$250,000	128.0	17.4	908	1.9
Illinois	$250,001 or more	58.1	7.9	142	0.3
Illinois	Subtotal	$736.7	100.0%	47,526	100.0%
Minnesota	$1-$10,000	$64.5	9.5%	16,658	52.5%
Minnesota	$10,001-$50,000	268.9	39.5	11,718	36.9
Minnesota	$50,001-$100,000	157.4	23.1	2,287	7.2
Minnesota	$100,001-$250,000	131.9	19.4	917	2.9
Minnesota	$250,001 or more	58.4	8.6	141	0.4
Minnesota	Subtotal	$681.1	100.0%	31,721	100.0%
Nebraska	$1-$10,000	$65.5	11.1%	20,534	59.7%

State	State and premium subsidy range	Premium Subsidies (sum – dollars in millions[a])	Premium Subsidies (percentage)	Policyholders (number)	Policyholders (percentage)
Nebraska	$10,001-$50,000	261.0	44.1	11,064	32.2
Nebraska	$50,001-$100,000	139.5	23.6	2,050	6.0
Nebraska	$100,001-$250,000	95.1	16.1	668	1.9
Nebraska	$250,001 or more	30.3	5.1	74	0.2
Nebraska	Subtotal	$591.5	100.0%	34,390	100.0%
Missouri	$1-$10,000	$40.1	9.2%	13,400	61.8%
Missouri	$10,001-$50,000	142.0	32.7	6,003	27.7
Missouri	$50,001-$100,000	99.5	22.9	1,435	6.6
Missouri	$100,001-$250,000	108.1	24.9	737	3.4
Missouri	$250,001 or more	44.1	10.2	112	0.5
Missouri	Subtotal	$433.8	100.0%	21,687	100.0%
California	$1-$10,000	$32.6	8.1%	9,763	61.4%
California	$10,001-$50,000	100.9	25.1	4,456	28.0
California	$50,001-$100,000	65.1	16.2	922	5.8
California	$100,001-$250,000	83.3	20.7	547	3.4
California	$250,001 or more	120.5	29.9	225	1.4
California	Subtotal	$402.5	100.0%	15,913	100.0%
Indiana	$1-$10,000	$32.5	8.1%	9,791	54.8%
Indiana	$10,001-$50,000	140.6	35.0	5,859	32.8
Indiana	$50,001-$100,000	102.2	25.4	1,481	8.3
Indiana	$100,001-$250,000	92.4	23.0	648	3.6
Indiana	$250,001 or more	34.3	8.5	87	0.5
Indiana	Subtotal	$402.1	100.0%	17,866	100.0%
Wisconsin	$1-$10,000	$28.7	9.5%	7,397	55.5%
Wisconsin	$10,001-$50,000	100.7	33.4	4,512	33.8
Wisconsin	$50,001-$100,000	58.9	19.5	845	6.3

State	State and premium subsidy range	Premium Subsidies (sum – dollars in millions[a])	Premium Subsidies (percentage)	Policyholders (number)	Policyholders (percentage)
Wisconsin	$100,001-$250,000	71.2	23.6	475	3.6
Wisconsin	$250,001 or more	42.2	14.0	101	0.8
Wisconsin	Subtotal	$301.7	100.0%	13,330	100.0%
Ohio	$1-$10,000	$34.8	12.1%	10,500	60.8%
Ohio	$10,001-$50,000	123.6	43.1	5,442	31.5
Ohio	$50,001-$100,000	65.8	22.9	965	5.6
Ohio	$100,001-$250,000	46.2	16.1	331	1.9
Ohio	$250,001 or more	16.5	5.7	39	0.2
Ohio	Subtotal	$287.0	100.0%	17,277	100.0%
North Carolina	$1-$10,000	$8.6	3.6%	2,345	42.5%
North Carolina	$10,001-$50,000	45.7	19.0	1,824	33.1
North Carolina	$50,001-$100,000	49.1	20.5	695	12.6
North Carolina	$100,001-$250,000	77.0	32.1	510	9.2
North Carolina	$250,001 or more	59.3	24.7	140	2.5
North Carolina	Subtotal	$239.8	100.0%	5,514	100.0%
All other states	$1-$10,000	$144.6	4.8%	45,441	51.5%
All other states	$10,001-$50,000	669.9	22.4	27,499	31.2
All other states	$50,001-$100,000	595.0	19.9	8,458	9.6
All other states	$100,001-$250,000	795.5	26.6	5,291	6.0
All other states	$250,001 or more	789.8	26.4	1,568	1.8
All other states	Subtotal	2,994.9	100.0%	88,257	100.0%
National totals	$1-$10,000	$847.4	7.1%	263,804	57.3%
National totals	$10,001-$50,000	3,251.3	27.2	137,809	29.9
National totals	$50,001-$100,000	2,352.5	19.7	33,728	7.3
National totals	$100,001-$250,000	2,946.3	24.6	19,737	4.2
National totals	$250,001 or more	2,574.1	21.5	5,537	1.3

State	State and premium subsidy range	Premium Subsidies (sum – dollars in millions[a])	Premium Subsidies (percentage)	Policyholders (number)	Policyholders (percentage)
National totals	Total	$11,971.6	100.0%	460,615	100.0%

Source: GAO analysis of data from Risk Management Agency. | GAO-24-106086

[a]Numbers may not sum to totals because of rounding.

Appendix V: High-Income and Other Policyholders in the Federal Crop Insurance Program, 2022

Table 10 provides information on high-income policyholders and their premiums, by state.

Table 10: High-Income Policyholders in the Federal Crop Insurance Program, by State, 2022

State	Number of high-income policyholdersa	Total high-income policyholder	High-income policyholders as percentage of all crop insurance policyholders in each state (by number of policyholders)	High-income policyholders as percentage of all crop insurance policyholders in each state (by premiums)
Texas	270	**$12,591**	0.78%	0.56%
Iowa	199	**12,822**	0.38	0.88
Kansas	156	**6,232**	0.36	0.52
Illinois	111	**3,378**	0.23	0.27
Nebraska	88	**4,212**	0.26	0.42
California	57	**5,294**	0.36	0.74
Oklahoma	55	**1,192**	0.56	0.33
Missouri	51	**1,932**	0.24	0.30
South Dakota	50	**4,156**	0.26	0.35
North Dakota	46	**3,737**	0.27	0.24
Minnesota	41	**4,626**	0.13	0.41
Colorado	36	**1,906**	0.48	0.56
Idaho	24	**2,967**	0.80	1.76
Wisconsin	22	**12,160**	0.17	2.56
Indiana	20	**1,077**	0.11	0.16
Tennessee	17	**337**	0.45	0.23
Georgia	16	**3,459**	0.32	1.08
Ohio	16	**733**	0.09	0.16
Kentucky	15	**526**	0.25	0.20
Florida	9	**2,393**	0.24	0.90
Louisiana	8	**138**	0.24	0.09

State	Number of high-income policyholdersa	Total high-income policyholder	High-income policyholders as percentage of all crop insurance policyholders in each state (by number of policyholders)	High-income policyholders as percentage of all crop insurance policyholders in each state (by premiums)
New Mexico	8	**412**	0.42	0.26
North Carolina	8	**1,540**	0.15	0.42
Oregon	8	**821**	0.26	0.57
Washington	8	**692**	0.11	0.25
Arkansas	7	**689**	0.11	0.26
Maryland	7	**226**	0.43	0.47
Alabama	6	**13**	0.21	0.01
Montana	6	**301**	0.09	0.09
Michigan	5	**521**	0.06	0.17
Northeastern states with 1-4 high-income policyholders[b]	15	**2,166**	0.21	0.91
Southern states with 1-4 high-income policyholders[c]	13	**1,995**	0.17	0.41
Western states with 1-4 high-income policyholders[d]	9	**5,386**	0.24	1.45
Alaska	0	**0**	0	0
Hawaii	0	**0**	0	0
New Hampshire	0	**0**	0	0
Rhode Island	0	**0**	0	0
Vermont	0	**0**	0	0

Sources: GAO analysis of data from Risk Management Agency and Farm Service Agency (FSA). | GAO-24-106086

Note: Policyholders are counted in each state where they held policies in 2022, so some policyholders are counted multiple times.

[a]High-income policyholders are those for which we have FSA data showing that their average adjusted gross incomes, calculated over a specified 3-year period, exceeded $900,000.

[b]Northeastern states in this category include Connecticut, Maine, Massachusetts, New Jersey, New York, and Pennsylvania.

[c]Southern states in this category include Delaware, Mississippi, South Carolina, Virginia, and West Virginia.

[d]Western states in this category include Arizona, Nevada, Utah, and Wyoming.

Appendix VI: GAO Contact and Staff Acknowledgments

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Staff Acknowledgments

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