Operating Structure

- Risk Management Agency (RMA) operates and manages the Federal Crop Insurance Corporation (FCIC)
- FCIC has no employees
- FCIC has a Board of Directors
  - USDA Chief Economist
  - Two Under Secretaries
  - Four Producers
  - Two Insurance Regulators
Program Overview

FCIC (RMA)
• Establishes policies, standards, and premium rates
• Subsidizes premium for growers
• Pay AIPs to market and service policies (A&O subsidy/Delivery Expense)
• Reinsurance to AIPs - AIPs and FCIC share in underwriting gains/losses

Approved Insurance Providers (AIPs)
• Market and service policies
• Collect and guarantee producer premium payment to FCIC
## Crop Statistics

<table>
<thead>
<tr>
<th>Program Information Comparison</th>
<th>Crop Year 2014 (Estimated)</th>
<th>Crop Year 2013 (Actual)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policies</td>
<td>1.20 million</td>
<td>1.22 million</td>
</tr>
<tr>
<td>Farmer Paid Premium</td>
<td>$3.88 billion</td>
<td>$4.51 billion</td>
</tr>
<tr>
<td>Premium Subsidies</td>
<td>$6.24 billion</td>
<td>$7.30 billion</td>
</tr>
<tr>
<td>Total Premium</td>
<td>$10.12 billion</td>
<td>$11.81 billion</td>
</tr>
<tr>
<td>Indemnities</td>
<td>$7.49 billion</td>
<td>$12.06 billion</td>
</tr>
<tr>
<td>Loss Ratio</td>
<td>74%</td>
<td>102%</td>
</tr>
<tr>
<td>Insurance Protection</td>
<td>$109.46 billion</td>
<td>$123.77 billion</td>
</tr>
</tbody>
</table>
Percentage of Insurance in Force by Type of Insurance Plan

- Actual Production History: 19%
- Revenue: 75%
- Other: 6%
Types of Insurance Plans

• Revenue Policies:
  • Policies to protect the producers against loss of revenue due to price fluctuations and yield loss due to natural causes.

• Actual Production History & Yield Protection Policies:
  • Policies insure producers against yield losses due to natural causes.

• Other Policies:
  • Policies based on county results rather than individual farms
  • Adjusted Gross Revenue
  • Fixed Dollar Amount of Insurance
Premium Rates

• Determined by RMA on behalf of FCIC

• Federal Crop Insurance Act:
  • “the amount of the premium shall be sufficient to cover anticipated losses and a reasonable reserve.”
  • “the Corporation shall periodically review the methodologies employed for rating plans of insurance”
  • “The Corporation shall take such actions. . . to achieve an overall projected loss ratio of not greater than 1.0.”
2011 Losses

2011 RMA Crops’ Indemnities
(As of 07/23/2012)

2011 Indemnity by County
No Indemnity ($0)
$1 to $500,000
$500,000 to $1,000,000
$1,000,000 to $5,000,000
$5,000,000 to $10,000,000
over $10,000,000

Drought Severity Index by Division
Weekly Value for Period Ending AUG 13, 2011
Long Term Palmer

-4.0 or less (Extreme Drought)
-3.0 to -3.9 (Severe Drought)
-2.0 to -2.9 (Moderate Drought)
-1.9 to +1.9 (Near Normal)
+2.0 to +2.9 (Unusual Moist Spell)
+3.0 to +3.9 (Very Moist Spell)
+4.0 and above (Extremely Moist)
2012 Losses
2013 Losses
2014 Losses
Premium Rating

• Pure premium rate
  • No expense load
  • Expected indemnities

• Loss cost method – Average rate of loss
  • Loss/Liability
  • Rolling 20 years

• Other Adjustments:
  • Credibility smoothing with adjacent counties
  • Catastrophic loading
  • Weather weighting
Individual Rates

- Individualization of Rate
- Coverage Level
- Unit Choice
- Yield Ratio
- Revenue Coverage
Loss Ratio History

Loss Ratios for the Crop Insurance Program, 1975-2013

1975-1994 Average = 1.39
1988 Drought, Loss Ratio = 2.39
1993 Flood, Loss Ratio = 2.19
2012 Drought, Loss Ratio = 1.57
1995-2013 Average = 0.89
Premium Pricing

• How are the pricing policies determined for premiums?
• Who sets the pricing policy for the premiums?

  • Actuarial Branch identifies specific issues
    • Address internally/contract with external party

  • Periodic Rate review
    • Contract with external party

  • Annual premium rating strategy memo
    • Studies and implementation
    • Generated and approved within RMA
Timing of Revenue Recognition

• When does your program bill for premiums and recognize revenue/unearned revenue?

• Premium Revenue is recognized each month as acreage reports are submitted. The acreage report is the basis for determining the amount of insurance provided and the premium charged.

• The acreage report shows:
  • crops planted
  • acreage prevented from planting
  • where crops are located
  • number of acres planted
  • dates planted
Components of Revenue

- Premium Revenue is comprised of two pieces
  - Producer Paid Premium
  - Premium Subsidy

- Recognized at the time acreage report is accepted
- FCIC receives an appropriation for premium subsidy.
- An Appropriations Used entry is recorded to recognize the benefit of the premium subsidy

Unexpended Appropriations – Used (SGL 3107)
Expended Appropriations (SGL 5700)
Unearned Revenue/
Premium Deficiency Reserve

At fiscal year end, liabilities are established for a portion of revenue deferred into the next fiscal year to pay the losses incurred in the next year. The amount is based on the average number of days between planting date to billing and planting date to end of insurance period compared to the days after the end of fiscal year.

Growing Season
Insurance Period

<table>
<thead>
<tr>
<th></th>
<th>FY 2014 - 75%</th>
<th>FY 2015 - 25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Planting Date</td>
<td>6/30/14</td>
<td></td>
</tr>
<tr>
<td>Billing Date</td>
<td>8/30/14</td>
<td></td>
</tr>
<tr>
<td>Fiscal Year End</td>
<td>9/30/14</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>10/30/14</td>
<td></td>
</tr>
<tr>
<td>End of Insurance Period</td>
<td>12/30/14</td>
<td></td>
</tr>
</tbody>
</table>
Estimating Claims

• Does your program estimate claims for the remaining open policy period following the end of the reporting period? If yes, how?

• Limited data – major crops
• NASS yield projections
• Commodity Market Prices

![Graph showing Loss Ratio v. Yield](image)
Challenges in Estimating Claims

• Growing season for 93% of premium extends past September 30
  • Final yield is not known as of September 30
• Damage is not a one-time event
  • Decline in yield occurs over time
  • Pinpointing loss date is difficult
  • Currently, RMA uses the same percentage of time as the earned revenue to determine incurred losses
• Fluctuation in market prices
• Over 75% of insurance policies are based on revenue
• Revenue products based on market prices as of October/November are not known at September 30
Incurred But Not Reported Claims

• FCIC uses model to estimate Total Losses for all policies in force.

• Incurred Losses in current fiscal year = Total Losses - Unearned Premium and PDR

• IBNR = Incurred Losses less Recorded Losses
Example of Accounting Impact

Assumptions:

• 1 policy with total premium of $100
• Producer Premium = $40
• Premium Subsidy = $60
• 75% of growing season from crop is in FY 14 and 25% in FY 15
• Expected Loss ratio at September 30 is 1.0
• Indemnity payment is $100
## Scenario Example: FY 2014

<table>
<thead>
<tr>
<th>Event</th>
<th>Accounting Transaction</th>
<th>Amount</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apportionment</td>
<td>Receive Appropriation for Premium Subsidy</td>
<td>$60</td>
<td>Cash (1010)</td>
<td>Unexpended Appropriation -Received (3101)</td>
</tr>
<tr>
<td>Acreage Report</td>
<td>Producer Premium recognized</td>
<td>$40</td>
<td>Accounts Receivable (1310)</td>
<td>Premium Revenue (5500)</td>
</tr>
<tr>
<td>Acreage Report</td>
<td>Premium Subsidy recognized</td>
<td>$60</td>
<td>Unexpended Appropriations -Used (3107)</td>
<td>Expended Appropriations (5700)</td>
</tr>
<tr>
<td>Billing</td>
<td>Producer Premium Collected</td>
<td>$40</td>
<td>Cash (1010)</td>
<td>Accounts Receivable (1310)</td>
</tr>
<tr>
<td>Year-End</td>
<td>Record Unearned Producer Premium</td>
<td>$10</td>
<td>Premium Revenue (5500)</td>
<td>Deferred Revenue (2320)</td>
</tr>
<tr>
<td>Year-End</td>
<td>Record Premium Deficiency Reserve (PDR)</td>
<td>$15</td>
<td>Future Funded Expense (6800)</td>
<td>Estimated Losses for Insurance (2660)</td>
</tr>
<tr>
<td>Year-End</td>
<td>Record Incurred But Not Reported (IBNR)</td>
<td>$75</td>
<td>Future Funded Expense (6800)</td>
<td>Estimated Losses for Insurance (2660)</td>
</tr>
</tbody>
</table>
### Scenario Example: FY 2015

<table>
<thead>
<tr>
<th>Event</th>
<th>Accounting Transaction</th>
<th>Amount</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse Year-end accruals</td>
<td></td>
<td>$10</td>
<td>Deferred Revenue (2320)</td>
<td>Premium Revenue (5500)</td>
</tr>
<tr>
<td>Reverse Year-end accruals</td>
<td></td>
<td>$15</td>
<td>Estimated Losses for Insurance (2660)</td>
<td>Future Funded Expense (6800)</td>
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<td></td>
<td>$75</td>
<td>Estimated Losses for Insurance (2660)</td>
<td>Future Funded Expense (6800)</td>
</tr>
<tr>
<td>Loss Adjustment</td>
<td>Pay Claims</td>
<td>$100</td>
<td>Operating Expense (6100)</td>
<td>Cash (1010)</td>
</tr>
</tbody>
</table>
# Scenario Example: Financial Statement Impact

## Balance Sheet Liabilities

<table>
<thead>
<tr>
<th>Estimated Losses on Insurance Claims:</th>
<th>FY 2014</th>
<th>FY 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBNR</td>
<td>$75</td>
<td>-</td>
</tr>
<tr>
<td>PDR</td>
<td>$15</td>
<td>-</td>
</tr>
<tr>
<td>Total Estimates Losses</td>
<td>$90</td>
<td>-</td>
</tr>
<tr>
<td>Unearned Revenue</td>
<td>$10</td>
<td>-</td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>$100</td>
<td>-</td>
</tr>
</tbody>
</table>

## Statement of Net Cost

<table>
<thead>
<tr>
<th>Claims Incurred</th>
<th>FY 2014</th>
<th>FY 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDR</td>
<td>$15</td>
<td>($15)</td>
</tr>
<tr>
<td>Total Cost</td>
<td>$90</td>
<td>$10</td>
</tr>
<tr>
<td>Less Revenue</td>
<td>$90</td>
<td>$10</td>
</tr>
<tr>
<td>Net Cost</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>
FCIC Reports

What reports (other than your financial statements) are available that provide information about premium pricing, unearned revenue, future estimated losses, and projections of future fiscal year results?

• The premium prices and actuarial methodology is available on RMA’s public website at: http://www.rma.usda.gov/

• Whitepaper on Loss Projection Methodology is available upon request.
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