

Farm and Ranch Stress Test

Date prepared:

Liquidity

$$\text{Current ratio} = \frac{\text{Current farm assets}}{\text{Current farm debt}}$$

Solvency

$$\text{Debt to asset ratio} = \frac{\text{Total farm debt}}{\text{Total farm assets}}$$

Profitability

$$\text{Net farm income from operations} = \text{Gross cash farm income} - \text{total cash farm expenses} \pm \text{inventory changes} - \text{depreciation}$$

$$\text{Rate of return on farm assets} = \frac{(\text{Net farm income from operations} + \text{farm interest expense} - \text{value of operator's labor \& management})}{\text{Average farm assets}}$$

$$\text{Rate of return on farm equity} = \frac{(\text{Net farm income from operations} - \text{value of operator's labor \& management})}{\text{Average farm equity}}$$

Repayment capacity

$$\text{Debt coverage ratio} = \frac{(\text{Net farm income from operations} + \text{net nonfarm income} + \text{depreciation} + \text{interest on term debt} - \text{income and social security taxes} - \text{family living expenses})}{(\text{scheduled principal and interest on term debt})}$$

Efficiency

$$\text{Operating expense ratio} = \frac{(\text{Gross farm expense} - \text{farm interest expense} - \text{depreciation expense})}{\text{Gross farm revenue}}$$

$$\text{Interest expense ratio} = \frac{\text{Interest expense}}{\text{Gross farm revenue}}$$

$$\text{Asset turnover ratio} = \frac{\text{Gross farm revenue}}{\text{Average farm assets}}$$

Low Stress

High Stress

