Dr. Kohl’s Prescription to Surviving and Thriving the 2019 Ag Challenges and Beyond

Doug Johnson, Director, Sales

June 20, 2019
Join Dr. David Kohl, professor emeritus, Virginia Tech, and Doug Johnson from Moody’s Analytics as they discuss the “Prescription to Surviving and Thriving” the challenges we face in agriculture today and in the foreseeable future.

Dr. Kohl will share stories and experiences of traveling across the country. He will explain troubled signs to look for, how ag lenders are being impacted with critical decisions, and what key metrics should be leveraged to help with discussions on taking the next step. Join this webinar for a very candid discussion on the question we are all asking: What will it take for ag producers and ag lenders to not just survive, but to thrive during this grinder cycle in agriculture?
Agenda:

• Producer vs. Manager
• Indicators: Behavior and Fraud
• Analysis & Performance Metrics
• Global vs. Local
• “Your” score as a Lender
• Tomorrows Ag
Moody’s Analytics Loan Origination

SaaS Platform

Product Solutions
- Lending Cloud
- CECL
- Stress Testing

New
- Ag Peer Benchmarking
- Ag Scorecard

Integrated Tools
- Workflow
- Ticklers
- Data Integration
- Credit Bureaus
- Document Mgmt.
- Contact Mgmt.
- MARQ™
- Lender App
Ag Peer Comparison: Internal & External
Ag Peer Comparison: Internal & External

Benchmark to Bank | State | Regional | National
### Ag Scorecard

**Score Now**

8.27 % PD Risk Rating: 13

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquidity Ratio</td>
<td>0.91</td>
</tr>
<tr>
<td>Debt to Assets</td>
<td>51.29%</td>
</tr>
<tr>
<td>Term Debt Coverage Ratio</td>
<td>-0.36</td>
</tr>
<tr>
<td>Interest Expense Ratio</td>
<td>4.01%</td>
</tr>
<tr>
<td>Return on Assets</td>
<td>-3.98%</td>
</tr>
</tbody>
</table>

**1 to 14 point scale**

1 = best | 14 = worst

% likely to Default next year

- **Quantitative Factors**
  - **Hardcoded**
  - **65% Weight**

- **Qualitative Factors**
  - **Hard Coded | Manual Answers**
  - **35% Weight**

**Comments**

Wordpad for User Comments

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**MOODY’S ANALYTICS**

Dr. Kohl’s Prescription to Surviving and Thriving  June 2019
Ag Scorecard

Your Bank Risk Rating

Score = 1.50
2 Good

REVIEW

Moody's can help predict Probability of Default (PD) and identify potential Risk in your portfolio

Moody's Ag Scorecard

Score Now

8.27 % PD Risk Rating: 13

Liquidity Ratio: 0.91
Debt to Assets: 51.29%
Term Debt Coverage Ratio: -0.36
Interest Expense Ratio: 4.01%
Return on Assets: -3.98%

Ag Sector Type: Crop
Industry Conditions: Declining
Diversification of Products: Non-Diversified
Years in Relationship: 1-3 Years
Conduct of Account: Fair
Farm Conditions: Fair
Experience in Ag: 3-15 Years
Financial Reporting and Formal Planning: Poor
Risk Management: Fair

Wordpad for User Comments
Presenters

Dr. David Kohl
Professor Emeritus, Virginia Tech

Doug Johnson
Director – Sales Management
Moody’s Analytics Lending Cloud
Dr. Kohl’s Prescription for Surviving and Thriving the 2019 Ag Challenges and Beyond

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June 20, 2019

Macro Clinic Video Blog: www.compeer.com/education
Road Warrior of Agriculture: www.cornandsoybeanigest.com
Ag Globe Trotter: www.northwestfcs.com
Dave’s GPS & Dashboard Indicators: www.farmermac.com
1980’s: eliminated many of the average to poor production managers

current economic cycle: eliminating the average and below average business managers

baby boomer lenders managing many of the larger, more complex credits are in the twilight years of their careers

larger complex credits are exhibiting considerable financial stress
  - 21,000+ head of livestock not accounted for
  - $14 million in grain inventory on the balance sheet was $2 million on inspection
  - five to seven lenders and agribusinesses were impacted in both cases
  - livestock case - numerous producers and stockyards were impacted
Views from the Road

- Lagging indicators
  - Bankruptcy and debt to asset ratio

- Leading indicators
  - Refinancing, increase in accounts payable, decline in working capital, and partial liquidation

- Non-regulated shadow lenders
  - Alive and well in agriculture on the operating credit side of the balance sheet

- As agriculture consolidates, credit concentrates
  - 10 to 12 percent of farms have 2/3 of total debt

- Appraisals will be challenged
  - Specialized assets and fewer buyers

- Analysis and understanding of accountant-prepared financial statements
Economic Radar Screen

- international trade
  - USMCA
  - China’s Belt & Road Initiative
- synchronized global economic slowdown
  - China - slowest growth rate in 28 years
  - Japan - negative growth rate
  - Germany – negative growth rate
  - Central Bank’s stimulus in China
  - high debt levels in urban real estate in China

- political uncertainty
  - Brazil
  - Venezuela
  - Mexico
  - Argentina
  - Germany, Britain & Euro Sector
  - U.S.
North America’s Economic Power Block

- 28% of the global economy’s GDP
- energy & oil
  - U.S. #1
  - Canada #4
  - Mexico #8
- 450+ million people
- 47% of Mexico’s population is under 25
- ag trading partners:
  - Canada #1
  - Mexico #3
Rising of Asia

1990

- ROW*: 28%
- U.S.: 23%
- Japan: 12%
- Africa: 3%
- Western Europe: 31%
- China: 2%
- India: 1%

2020

- ROW*: 29%
- U.S.: 21%
- Japan: 7%
- China: 14%
- Western Europe: 22%
- India: 4%

* ROW- Rest of World
Source: Global Insights, August 2018
Farm Real Estate- Last Line of Defense

- 83% of U.S. farm balance sheet assets
- great bridge over economic troubled waters
- equity often leads to management complacency
- farm real estate is local, be careful of state and national statistics
Farm Real Estate Perspectives

- Farm real estate appreciated or stayed level 79% of years from 1910-2017
- Since WWII (1941) farm real estate appreciated or stayed level 88% of the years
- 1910-WWII (1940) farm real estate appreciated 57% of the years
- Farm real estate was flat or declined for 13 years from 1920-1933
- Farm real estate declined for four years in the 1980’s
Drivers of Change on Land Values

- interest rates
- investor funds
- refinancing cycle
- baby boomer farmer
- relatives who inherit land
- supply and demand of commodities
- crop insurance
By Mid-June, Longest Economic Expansion in the U.S.

Longest economic expansions in modern U.S. history
(As of June 2019)

- 1991 to 2001: 120 months
- 2009 to present: 120+ months
- 1961 to 1969: 106 months
- 1982 to 1990: 92 months
- 1938 to 1945: 80 months
- 2001 to 2007: 73 months

Source: NBER, Economic Cycle Research Institute (Note: current expansion still in progress)
Federal Reserve’s Interest Rate Barometer

- one possible rate increase in 2019
- one possible rate decline in 2019

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Current Estimated “Flag” Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment</td>
<td>Below 5.0% or Above 6.0%</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>Above 3.0% or Below 2.0%</td>
</tr>
<tr>
<td>Inflation</td>
<td>Above 2.5% or Below 1.0%</td>
</tr>
<tr>
<td>Consumer Sentiment</td>
<td>Above 90 or Below 80</td>
</tr>
</tbody>
</table>

- trends matter
- stock market/real estate wealth effect
- copper prices
Volatility of Profits/Cash Flow

- trade negotiations and expectations
- weather/African swine flu
- political uncertainty
- consumer demand shifts
- structural changes in industry
Volatility on Balance Sheet

- lender appetite for refinances/restructure
- customer appetite for refinances/restructure
- supply/demand- real estate, equipment and/or livestock
- regulators
- suppliers of operating credit
Low Margin Era

- technology - supply exceeds demand
- worldwide - new resources in production
- weather and climate changes
- base hits vs. home run profits & cash flow
- managing expectations
- focus on fiduciary fundamentals
Thriving Producer/Customer - “Proactive”

- knows and communicates numbers internally & externally
- line by line monitoring of revenue/expenses
- plans & executes marketing and risk management plan
- drive towards competitiveness- earns & turns
- all assets are fully employed (capital, human, etc.)
- modest on family living- business vs. personal budget
Struggling Producer/Customer - “Reactive”

- equity complacent
- growth issues - capital/management
- transition issues
- victim/know-it-all
- high maintenance - living/capital expenditures
## Business IQ: Management Factors

### Critical Questions for Crucial Conversations

<table>
<thead>
<tr>
<th>Customer Checklist</th>
<th>Green (3-4 points*)</th>
<th>Yellow (2 points)</th>
<th>Red (1 point)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Knows cost of production</td>
<td>Written</td>
<td>In head</td>
<td>No idea</td>
</tr>
<tr>
<td>2. Knows cost of production by enterprise</td>
<td>Written</td>
<td>In head</td>
<td>No idea</td>
</tr>
<tr>
<td>3. Goals- business, family &amp; personal</td>
<td>Written</td>
<td>In head</td>
<td>No idea</td>
</tr>
<tr>
<td>4. Record keeping system</td>
<td>Accrual</td>
<td>Schedule F (one &amp; done)</td>
<td>No idea</td>
</tr>
<tr>
<td>5. Projected cash flow</td>
<td>Written</td>
<td>In head</td>
<td>No idea</td>
</tr>
<tr>
<td>6. Sensitivity analysis</td>
<td>Written</td>
<td>In head</td>
<td>No idea</td>
</tr>
<tr>
<td>7. Understand financial ratios, break evens</td>
<td>Written</td>
<td>In head</td>
<td>No idea</td>
</tr>
<tr>
<td>8. Work with advisory team and lender</td>
<td>Yes</td>
<td>Sometimes</td>
<td>Never</td>
</tr>
<tr>
<td>9. Marketing plan written and executed</td>
<td>Yes</td>
<td>Sometimes</td>
<td>Never</td>
</tr>
<tr>
<td>10. Risk management plan executed</td>
<td>Yes</td>
<td>Sometimes</td>
<td>Never</td>
</tr>
<tr>
<td>11. Modest lifestyle habits, family living budget</td>
<td>Yes</td>
<td>Sometimes</td>
<td>Non existent</td>
</tr>
<tr>
<td>12. Written plan for improvement executed &amp; strong people management</td>
<td>Yes</td>
<td>Sometimes</td>
<td>Non existent</td>
</tr>
<tr>
<td>13. Transition plan/Business Owner plan</td>
<td>Yes</td>
<td>Working on plan</td>
<td>Non existent/controversy</td>
</tr>
<tr>
<td>14. Educational seminars/courses</td>
<td>Yes</td>
<td>Sometimes</td>
<td>Never attend</td>
</tr>
<tr>
<td>15. Attitude</td>
<td>Proactive</td>
<td>Reactive</td>
<td>Indifferent</td>
</tr>
</tbody>
</table>

### Extra Points:
- **Progressive Business** may receive 4 points for #2,6,7,8,14
- **Struggling Business attempting turnaround** may receive 4 points for #3,5,8,11,12

### Score

<table>
<thead>
<tr>
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<th>Overall Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>35-50</td>
<td>Strong management rating &amp; viability</td>
</tr>
<tr>
<td>20-34</td>
<td>Moderate risk &amp; viability; will most likely show previous refinancing</td>
</tr>
<tr>
<td>&lt;20</td>
<td>High risk &amp; lack of long term viability</td>
</tr>
</tbody>
</table>
Spectrum of Performance Possibilities

High Working Capital

High Collateral

High Equity & High Efficiency

Low Profits & Cash Flow

Proactive Manager

Code Yellow

Low Equity & Low Efficiency

Code Red

Low Working Capital

Code Orange

Low Profits & Cash Flow

Reactive Manager

Low Collateral
Upper Right Quadrant
Green - Disciplined Growth

- > 60% equity
- strong business IQ, proactive manager
- term debt to EBITDA <2.5:1
- operating expense/revenue ratio (excluding interest and depreciation) <75%
- working capital to expenses >30%
Upper Left Quadrant

Yellow - Limited Growth

- 70% equity
- working capital to expenses >20%
- operating expenses/revenue ratio (excluding interest and depreciation) >80%
- competitive issues in industry
- moderate business IQ, reactive manager
Lower Right Quadrant

Orange - Excessive Growth

- strong earnings
- <50% equity
- working capital to expenses <10%
- excessive growth and family living expenses
- moderate business IQ, reactive manager
Lower Left Quadrant

Red - Partial or Total Liquidation

- <40% equity
- working capital is negative
- operating expense to revenue over 90%
- excessive family living expenses
- poor business IQ, victims & “know-it-alls”
Thriving Lenders/Lending Institutions

- use financial statements as a mode of communications
- trust and verify using a network of people
- education/personal development/training
- six C’s
- A.R.E.’s
Questions for Discussion

- What is the biggest character flaw of a potential bad credit?
- What advice do you have for a young lender?
- What advice do you have for a young producer?
- What is the most common mistake that ag lenders make?
- What advice can you give concerning family living cost estimates?
- What is the most important credit factor?
- How do you spot a bad credit in advance?
- What are producers doing to be successful in the down turn?
- What are the biggest changes in technology?
- What are common triggers that lead to stressed credits?
Agriculture in the Future: Sustainability & Resilience
Strengthening our Lending Community Together!

Helping grow your lending business through education, innovation and community.

Industry Experts
Informative Sessions
Peer Networking

www.moodysanalytics.com/CALC19
Q&A
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