Farmer Mac Refresh: Managing Expectations

Dr. Dave Kohl
Topics to be covered:

- capital, liquidity, and credit risk management options for ag lenders,
- U.S. agricultural outlook – 2019 and beyond,
- new Farm & Ranch loan products and pricing options,
- ag real estate financing case studies,
- meet your underwriter – tips for successful loan originations,
- utilizing AgXpress – our new scorecard underwriting option, and
- working with USDA Rural Development, Farm Service Agency, and the secondary market.

www.farmermac.com/news-events/road-show
MANAGING EXPECTATIONS

Dr. David M. Kohl
Professor Emeritus, Agricultural and Applied Economics
Member of Academic Hall of Fame, College of Agriculture & Life Sciences
Virginia Tech, Blacksburg, VA

(540) 961-2094 (Alicia Morris) | (540) 719-0752 (Angela Meadows) | sullylab@vt.edu

Macro Clinic Video Blog: www.compeer.com/education
Road Warrior of Agriculture: www.cornandsoybeandigest.com
Ag Globe Trotter: www.northwestfcs.com
Dave’s GPS & Dashboard Indicators: www.farmermac.com

July 29, 2019
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
Volatility of Profits/Cash Flow

- trade negotiations and expectations
- weather/African swine flu
- political uncertainty
- consumer demand shifts
- structural changes in industry
Worst Lending Experiences

- fraud: missing grain, livestock and/or machinery
- excessive family living based upon good times
- attempting to bash an existing customer
- didn’t follow the plan
- continued refinances, switched lenders
- hidden account payables
- didn’t use line of credit properly
- rumors that were verified
- inherited business debt free/next generation broke
Best Lending Experiences

- family business, transition old to young- lender transition at the same time
- young producer FSA/bank now 10 years later, million in equity 5-45-50 program
- successfully developed and executed marketing plan
- followed a business plan, very successful advocate for other producers
- used financial benchmarking as a tool to improve the business
- developed a young producer educational program- investment paying off a decade later
- assist a customer work out of the business without losing all the equity
Economic Radar Screen

- international trade
  - USMCA
  - China’s Belt & Road Initiative
- synchronized global economic moderation
  - 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%
- India: 4%
- Western Europe: 22%

* ROW - Rest of World
Source: Global Insights, August 2018
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
By Mid-June, Longest Economic Expansion in the U.S.

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

<table>
<thead>
<tr>
<th>Period</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991 to 2001</td>
<td>120</td>
</tr>
<tr>
<td>2009 to present</td>
<td>120+ months</td>
</tr>
<tr>
<td>1961 to 1969</td>
<td>106</td>
</tr>
<tr>
<td>1982 to 1990</td>
<td>92</td>
</tr>
<tr>
<td>1938 to 1945</td>
<td>80</td>
</tr>
<tr>
<td>2001 to 2007</td>
<td>73</td>
</tr>
</tbody>
</table>

Source: NBER, Economic Cycle Research Institute (Note: current expansion still in progress)
GSBC Survey Results

SURVEY RESULTS ARE IN!

Graduate School of Banking at Colorado
Hot Off the Press – When Will the Next Recession Begin?

<table>
<thead>
<tr>
<th>Estimated Start Date</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Half of 2020</td>
<td>8%</td>
</tr>
<tr>
<td>Second Half of 2020</td>
<td>36%</td>
</tr>
<tr>
<td>2021</td>
<td>38%</td>
</tr>
<tr>
<td>2022</td>
<td>8%</td>
</tr>
<tr>
<td>2023</td>
<td>10%</td>
</tr>
</tbody>
</table>
Hot Off the Press – When the Next Recession Occurs, It Will Be….

<table>
<thead>
<tr>
<th>Recession Type</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very mild and short like recession in early 2000</td>
<td>72%</td>
</tr>
<tr>
<td>Similar to Great Depression in 2009 Era</td>
<td>10%</td>
</tr>
<tr>
<td>Possible depression in U.S. similar to the 1930’s</td>
<td>0%</td>
</tr>
<tr>
<td>Great Recession in the U.S. and globally</td>
<td>18%</td>
</tr>
</tbody>
</table>
## Hot Off the Press – Cause of Next Recession (More than 1 selected)

<table>
<thead>
<tr>
<th>Cause of Next Recession</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade issues</td>
<td>40%</td>
</tr>
<tr>
<td>2020 U.S. Presidential Election results</td>
<td>10%</td>
</tr>
<tr>
<td>2020 U.S. Presidential, Congress, and Senate results</td>
<td>25%</td>
</tr>
<tr>
<td>Debt issues: personal, corporate, government and student</td>
<td>45%</td>
</tr>
<tr>
<td>Asset price bubbles</td>
<td>19%</td>
</tr>
<tr>
<td>Stock market crash, more than 40%</td>
<td>8%</td>
</tr>
</tbody>
</table>
Hot Off the Press — How Would You Resolve the U.S. Federal Debt Issue?

<table>
<thead>
<tr>
<th>Solution</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raise taxes</td>
<td>1%</td>
</tr>
<tr>
<td>Cut the budget</td>
<td>22%</td>
</tr>
<tr>
<td>Combination of tax increases and budget cuts</td>
<td>35%</td>
</tr>
<tr>
<td>Cut taxes</td>
<td>1%</td>
</tr>
<tr>
<td>Cut entitlements and spending</td>
<td>15%</td>
</tr>
<tr>
<td>Implement fiscal and monetary policy designed to grow the economy</td>
<td>16%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
</tr>
</tbody>
</table>
Hot Off the Press – Will the U.S. and China Sign Meaningful Trade Deal in the Next 12 Months?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>52%</td>
</tr>
<tr>
<td>No</td>
<td>48%</td>
</tr>
</tbody>
</table>
Hot Off the Press – Will a Meaningful USMCA Trade Deal be Passed Within the Next 12 Months?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>74%</td>
</tr>
<tr>
<td>No</td>
<td>26%</td>
</tr>
</tbody>
</table>
## Top Five Economic Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Growth</th>
<th>Neutral</th>
<th>Recession</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEI/Diffusion Index</td>
<td>Positive</td>
<td>Flat/Decline</td>
<td>Decline 0.3% for 3 consecutive months AND &gt;1% overall</td>
</tr>
<tr>
<td>Consumer Sentiment</td>
<td>&gt;90</td>
<td>80-90</td>
<td>&lt;80</td>
</tr>
<tr>
<td>Housing Starts</td>
<td>1.5 Million</td>
<td>1.0-1.5 Million</td>
<td>&lt;1.0 Million</td>
</tr>
<tr>
<td>PMI</td>
<td>&gt;50</td>
<td>41.7-50</td>
<td>&lt;41.7</td>
</tr>
<tr>
<td>Stock Market</td>
<td>10% increase</td>
<td>Flat</td>
<td>&gt;30% decrease</td>
</tr>
</tbody>
</table>
Yield Curves and Recessions

Treasury Spread: 10 yr bond rate-3 month bill rate
Monthly Average (Percent)

Feb 2019 = 0.24208

Source: Federal Reserve [https://www.newyorkfed.org/medialibrary/media/research/capital_markets/Prob_Rec.pdf](https://www.newyorkfed.org/medialibrary/media/research/capital_markets/Prob_Rec.pdf)
Median Net Farm Income - All, High 20% and Low 20%

2018 Update:
High 20% = $184,000
Low 20% = $ -72,000
Year to Year Movement Between NFI Groups, 2006-2015

Sources: Minnesota Farm Business Management Education
SW Minnesota Farm Business Management Association, U of M
Copyright 2018, Center For Farm Financial Management, University of Minnesota
Net Farm Income, 2017

FINBIN Database, Minnesota Median by Gross Income in Thousands

Data Sources: Minnesota Farm Business Management Education
SW Minnesota Farm Business Management Association, U of M
Copyright 2018, Center For Farm Financial Management, University of Minnesota
Tim’s Triple Play

- cost control, right cost
- marketing and risk management
- asset, capital and human efficiencies
Trouble Shooting Matrix

Insufficient Repayment Capacity

- Cut Business Cost
  - Reduce Four Largest Expenses: Crop, Feed, Labor, ??

- Non-Farm Revenue
  - Job Stability/Availability, Job Cost
  - Job Earnings, Skills, Time Management

- Increase Income
  - Sell Capital Assets, Deferred Taxes,
  - Increase Production, Increase Price

- Cut Living Withdrawals
  - Purchase Financial Software, Small Cost Containment

- Restructure Debt
  - Longer Term, Interest Only,
  - Principal/Interest Deferred

- Capital Infusion
  - Equity Capital, Family Capital,
  - Supplemental Cash Flow

- Bankruptcy
  - Voluntary, Involuntary,
  - Chapter 7, 11, 12, 13
The Burn Rate – Working Capital

**Defensive “Adversity Oriented”**
- Current Assets: $2,000,000
- Current Liabilities: $1,000,000
= Working Capital: $1,000,000

Projected Loss: $500,000

Working Capital = 2 Years

<table>
<thead>
<tr>
<th>Color</th>
<th>Range</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>&lt; 1.0 Year</td>
<td>Vulnerable</td>
</tr>
<tr>
<td>Yellow</td>
<td>1.0-3.0 Years</td>
<td>Resilient</td>
</tr>
<tr>
<td>Green</td>
<td>&gt;3.0 Years</td>
<td>Agile</td>
</tr>
</tbody>
</table>

**Offensive “Opportunity Oriented”**
- Current Assets: $2,000,000
- Current Liabilities: $1,000,000
= Working Capital: $1,000,000

Debt Service (Existing & New) Payments: $200,000

Working Capital = 5 Years

Total Debt Service Payments

<table>
<thead>
<tr>
<th>Color</th>
<th>Range</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>&lt; 2.5 Years</td>
<td>Vulnerable</td>
</tr>
<tr>
<td>Yellow</td>
<td>2.5-5.0 Years</td>
<td>Resilient</td>
</tr>
<tr>
<td>Green</td>
<td>&gt;5.0 Years</td>
<td>Agile</td>
</tr>
</tbody>
</table>
# Burn Rate on Core Equity Adversity vs. Opportunity

(Assume $500,000 Earnings Loss & 20% land value decline)

<table>
<thead>
<tr>
<th>Assets- Market Value</th>
<th>Estimated Value</th>
<th>Loan Maximum</th>
<th>Collateral Position</th>
<th>Remaining Principal</th>
<th>Equity Excess Reserves</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Long Term (20% Decline on Land)</td>
<td>$6,000,000</td>
<td>X 70%</td>
<td>$4,200,000</td>
<td>- $2,200,000</td>
<td>$2,000,000</td>
</tr>
<tr>
<td></td>
<td>$4,800,000</td>
<td>X 70%</td>
<td>$3,360,000</td>
<td>- $2,200,000</td>
<td>$1,160,000</td>
</tr>
<tr>
<td>2. Intermediate</td>
<td>$3,000,000</td>
<td>X 60%</td>
<td>$1,800,000</td>
<td>- $800,000</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>3. Current</td>
<td>$1,650,000</td>
<td>X 80%</td>
<td>$1,320,000</td>
<td>- $860,000</td>
<td>$460,000</td>
</tr>
</tbody>
</table>

**Burn Rate: Land & Long Term Equity Reserves**

- **Excess Reserves** = $2,000,000 = 4.0 Years
- **Earnings Loss¹** = $500,000

20% Decline

**Burn Rate: Land & Long Term Equity Reserves**

- **Excess Reserves** = $1,160,000 = 2.32 Years
- **Earnings Loss¹** = $500,000

¹ Assume Earnings Loss of $500,000

- **Red** < 4.0 Years = Vulnerable
- **Yellow** 4.0-7.0 Years = Resilient
- **Green** >7.0 Years = Agile
Bridge or Pier Concept

- before: Term Debt = $1,000,000 = 4 to 1
  EBITDA $250,000
- after: Term Debt = $1,250,000 = 5 to 1
  EBITDA $250,000
- no improvement in EBITDA
- refinancing using land equity
- debt levels higher
- owner equity loss, more debt service
- water is deeper near the end of pier
- the longer the pier, then the narrower the pier
Business IQ: Spectrum of Performance Possibilities

High Working Capital

High Collateral

High Equity & High Efficiency

High Profits & Cash Flow

Low Profits & Cash Flow

Low Collateral

Low Working Capital

Low Equity & Low Efficiency

Code Green
35+ B. IQ

Code Yellow
20-34 B. IQ

Code Red
< 20 B. IQ

Code Orange
20-40 B. IQ

B. IQ= Business IQ
Bottom of Cycle Perspectives

- monitor financials monthly or quarterly
- one page plan
- be careful of technology: lender liability
- large specialized farm issues
- DISC personality profile: know communication styles
- build better business in down cycle
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