The Farm Financial Situation

Allen M. Featherstone
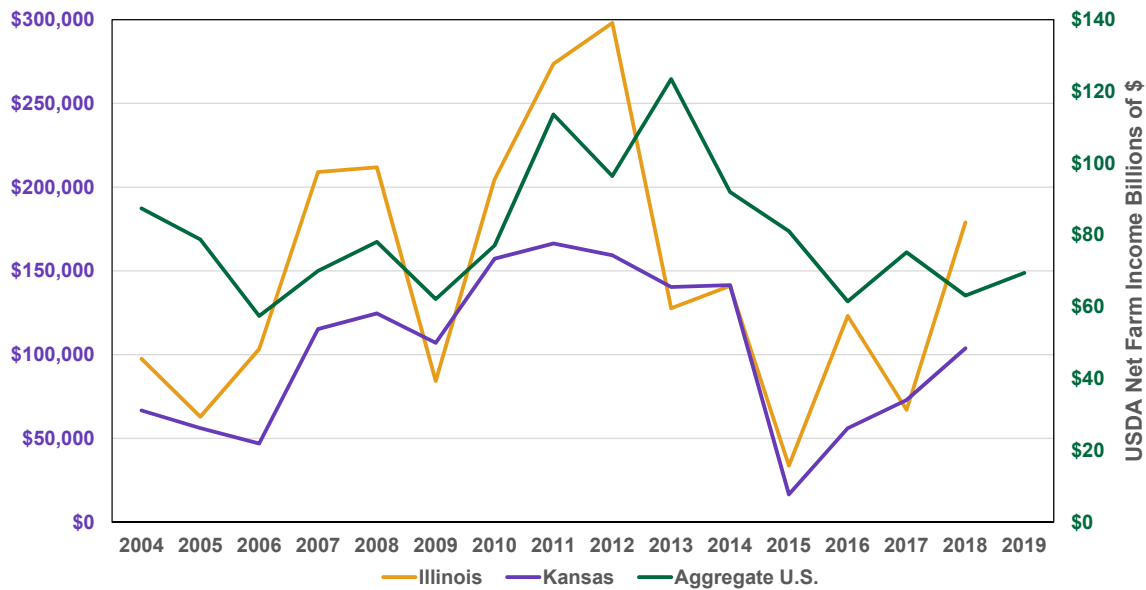Kansas State University

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Introduction

- An Improving Farm Economy?
- Kansas and Illinois Comparisons
  - Net Farm Income
  - Default Risk
  - Debt to Asset Ratios
  - Repayment Consideration
- Changing Crop Mix and 2019 projections
- Debt Considerations and Debt at Risk

Kansas, Illinois and U.S. Net Farm Income

Average Kansas Net Farm Income and Government Payments

	2014	2015	2016	2017	2018
Net Farm Income	$141,541	$16,541	$56,065	$72,918	$103,785
Government Payments	$28,229	$20,353	$25,307	$27,440	$41,206
Government Payments as a Percent of Income	19.9%	123.0%	45.1%	37.6%	39.7%

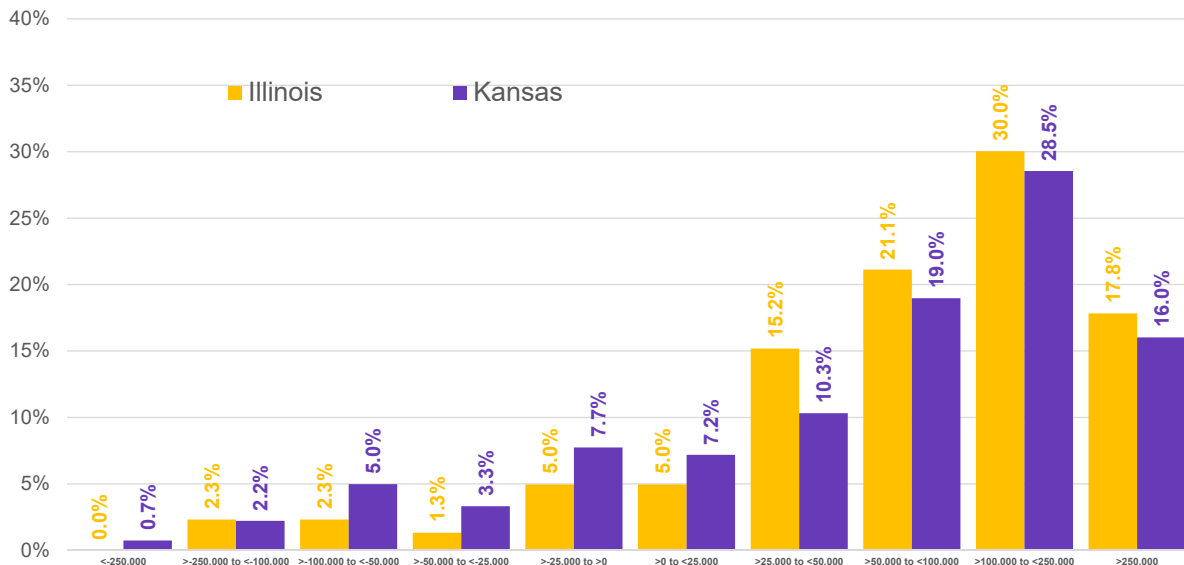**Government payments are important as a percentage of income.**

Average Illinois Net Farm Income and Government Payments

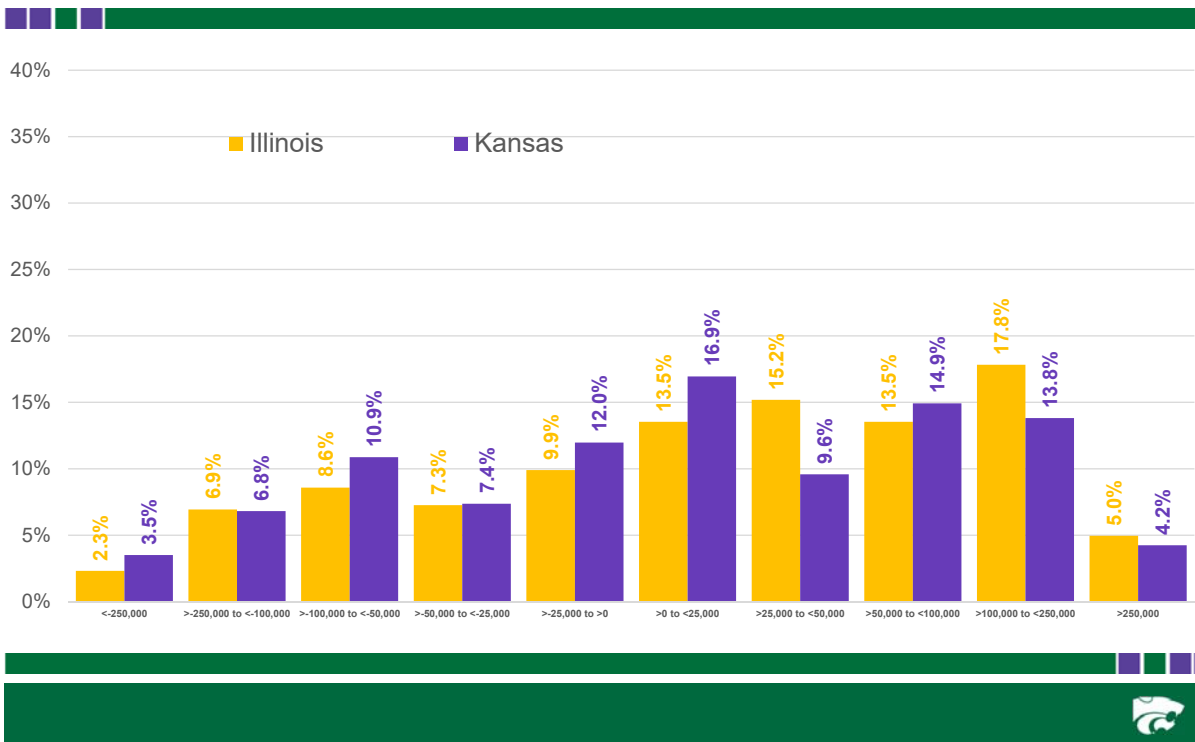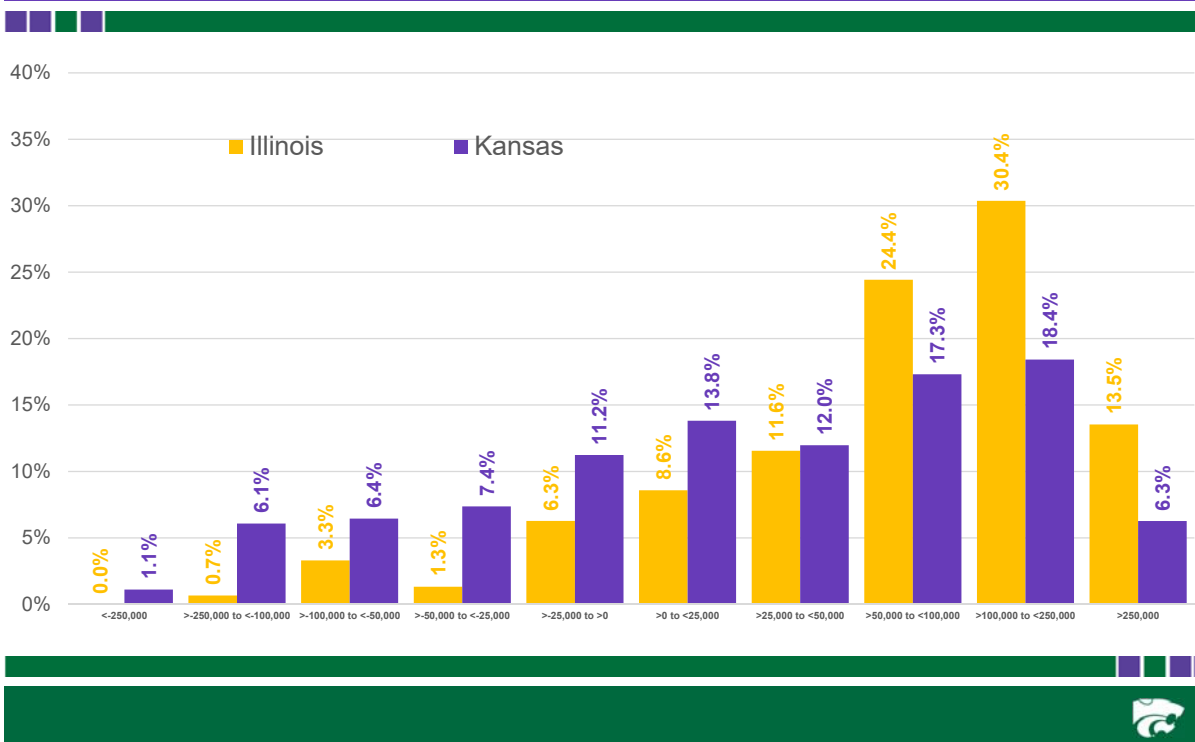|	2014	2015	2016	2017	2018
Net Farm Income	$141,020	$33,721	$123,112	$67,011	$178,950
Government Payments	$4,173	$17,599	$51,856	$19,126	$45,773
Government Payments as a Percent of Income	3.0%	52.2%	42.1%	28.5%	25.6%

Government payments are important as a percentage of income.

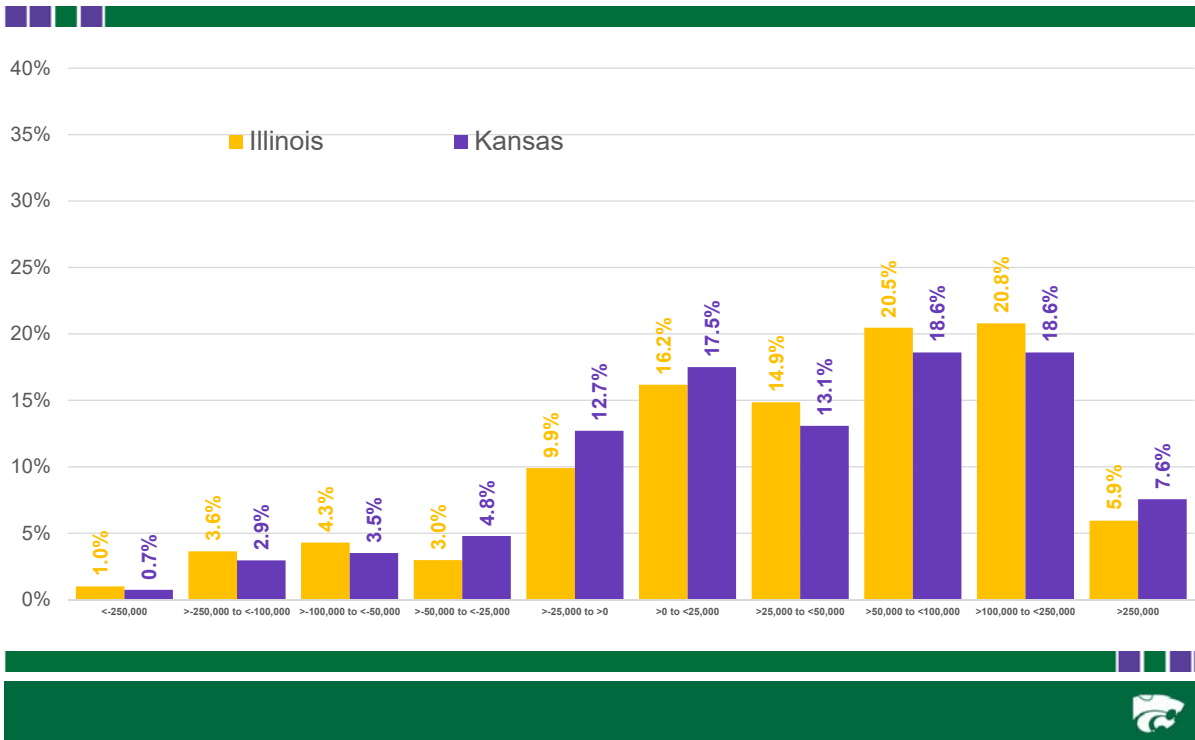# Distribution of Net Farm Income In Illinois and Kansas (2014)

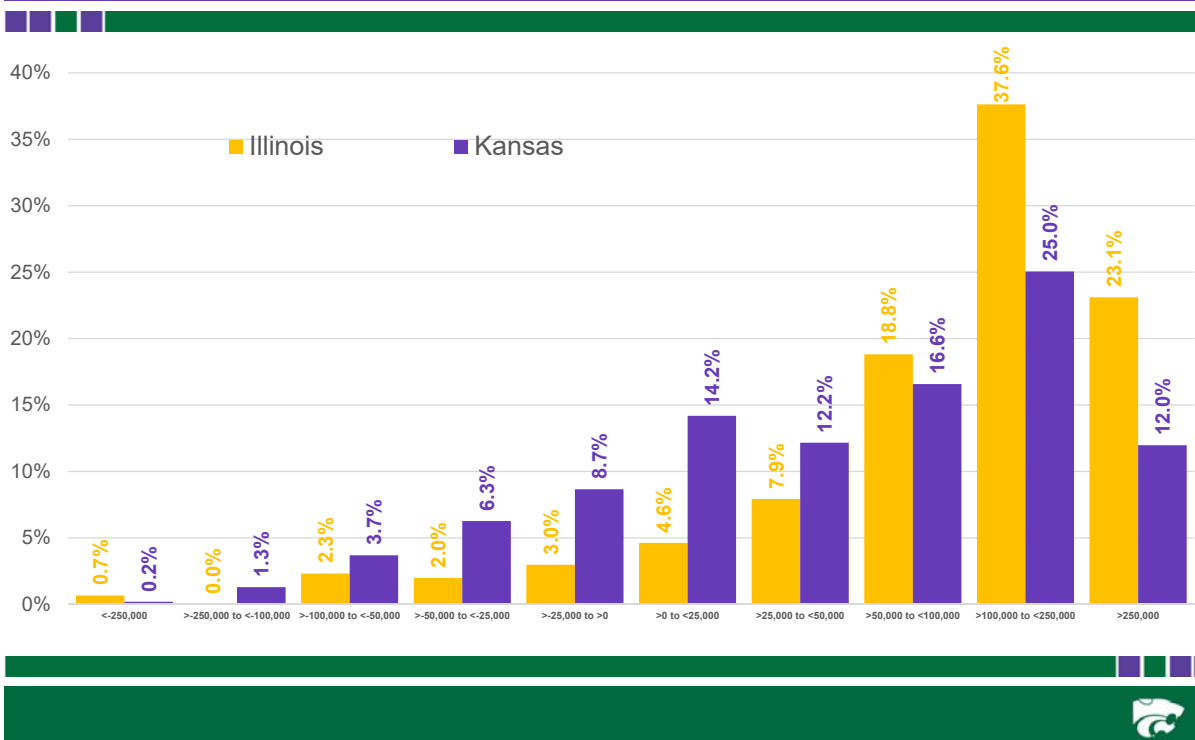# Distribution of Net Farm Income In Illinois and Kansas (2015)

Illinois ■ **Kansas**

Category	Illinois	Kansas
<-250,000	2.3%	3.5%
>-250,000 to <-100,000	6.9%	6.8%
>-100,000 to <-50,000	8.6%	10.9%
>-50,000 to <-25,000	7.3%	7.4%
>-25,000 to >0	9.9%	12.0%
>0 to <25,000	13.5%	16.9%
>25,000 to <50,000	15.2%	9.6%
>50,000 to <100,000	13.5%	14.9%
>100,000 to <250,000	17.8%	13.8%
>250,000	5.0%	4.2%

Distribution of Net Farm Income In Illinois and Kansas (2016)

Illinois ■ **Kansas**

Category	Illinois	Kansas
<-250,000	0.0%	1.1%
>-250,000 to <-100,000	0.7%	6.1%
>-100,000 to <-50,000	3.3%	6.4%
>-50,000 to <-25,000	1.3%	7.4%
>-25,000 to >0	6.3%	11.2%
>0 to <25,000	8.6%	13.8%
>25,000 to <50,000	11.6%	12.0%
>50,000 to <100,000	24.4%	17.3%
>100,000 to <250,000	30.4%	18.4%
>250,000	13.5%	6.3%

Distribution of Net Farm Income In Illinois and Kansas (2017)

Illinois | Kansas

Income Range	Illinois	Kansas
<-250,000	1.0%	0.7%
>-250,000 to <-100,000	3.6%	2.9%
>-100,000 to <-50,000	4.3%	3.5%
>-50,000 to <-25,000	3.0%	4.8%
>-25,000 to >0	9.9%	12.7%
>0 to <25,000	16.2%	17.5%
>25,000 to <50,000	14.9%	13.1%
>50,000 to <100,000	20.5%	18.6%
>100,000 to <250,000	20.8%	18.6%
>250,000	5.9%	7.6%

Distribution of Net Farm Income In Illinois and Kansas (2018)

Illinois | Kansas

Income Range	Illinois	Kansas
<-250,000	0.7%	0.2%
>-250,000 to <-100,000	0.0%	1.3%
>-100,000 to <-50,000	2.3%	3.7%
>-50,000 to <-25,000	2.0%	6.3%
>-25,000 to >0	3.0%	8.7%
>0 to <25,000	4.6%	14.2%
>25,000 to <50,000	7.9%	12.2%
>50,000 to <100,000	18.8%	16.6%
>100,000 to <250,000	37.6%	25.0%
>250,000	23.1%	12.0%

Farms with Negative Net Farm Income

	2014	2015	2016	2017	2018
Illinois (303)	10.9%	35.0%	11.6%	21.8%	7.9%
Kansas (586)	18.8%	40.3%	32.8%	24.4%	20.1%

Farms with Net Farm Income less than $50,000

	2014	2015	2016	2017	2018
Illinois (303)	31.0%	63.7%	31.7%	52.8%	20.5%
Kansas (586)	36.7%	67.1%	58.7%	55.8%	46.1%

Farms with Consistent Profit and Losses

- Farms with negative income each year from 2014 through 2018
  - Kansas – 1.7%
  - Illinois – 2.3%
- Farms with positive income each year from 2014 through 2018
  - Kansas – 32.4%
  - Illinois – 57.4%

A number of farms are positioned for opportunity

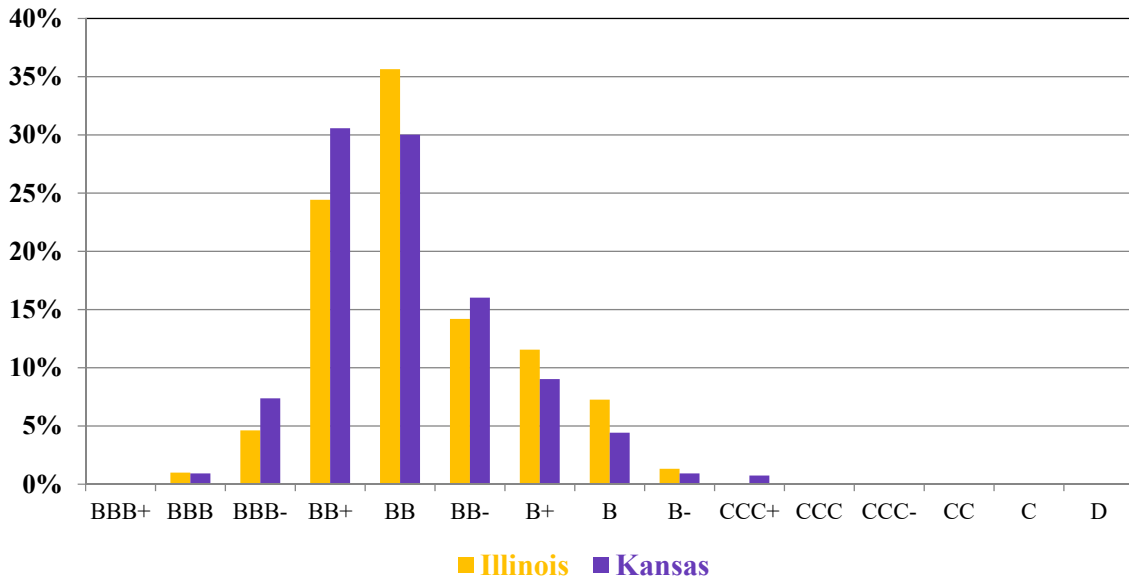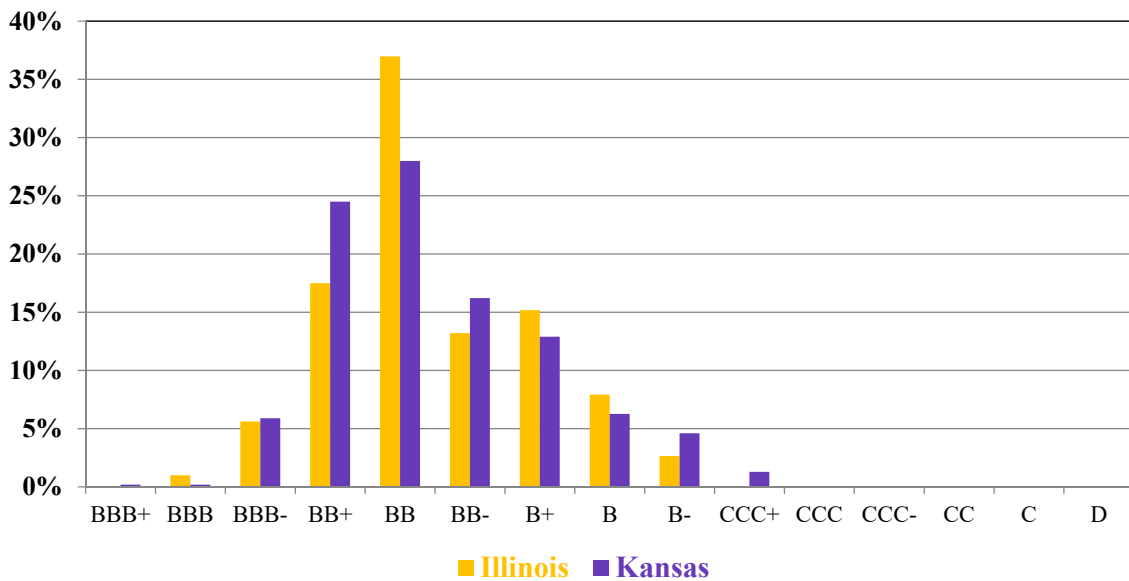# Default risk in Kansas is relatively low and it fell in 2018
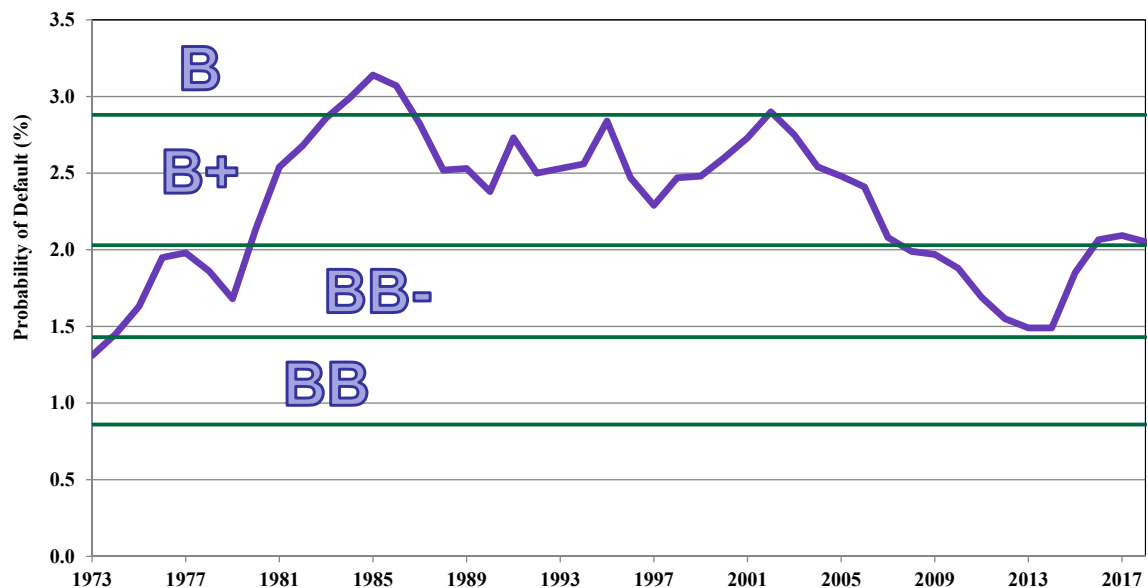
Change from 2017 to 2018

2017 ■ 2018
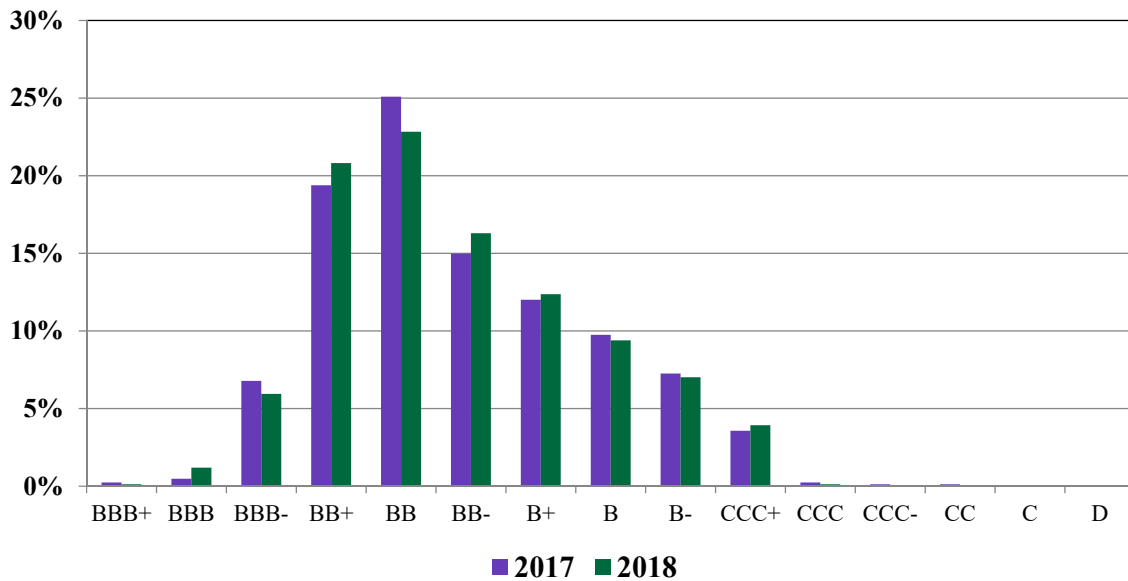
Average Default Probability – Illinois and Kansas
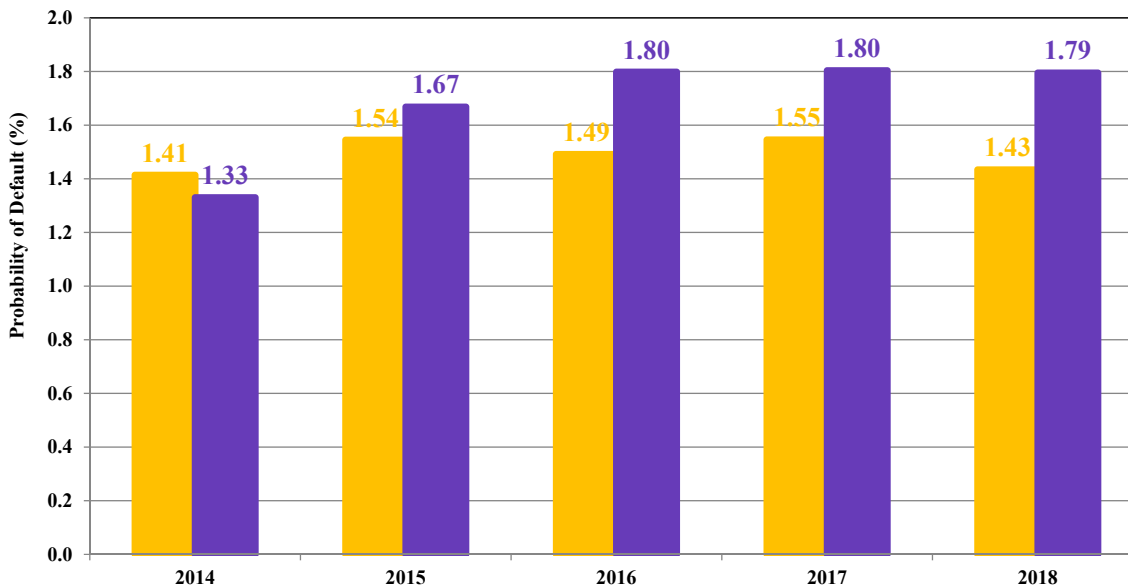
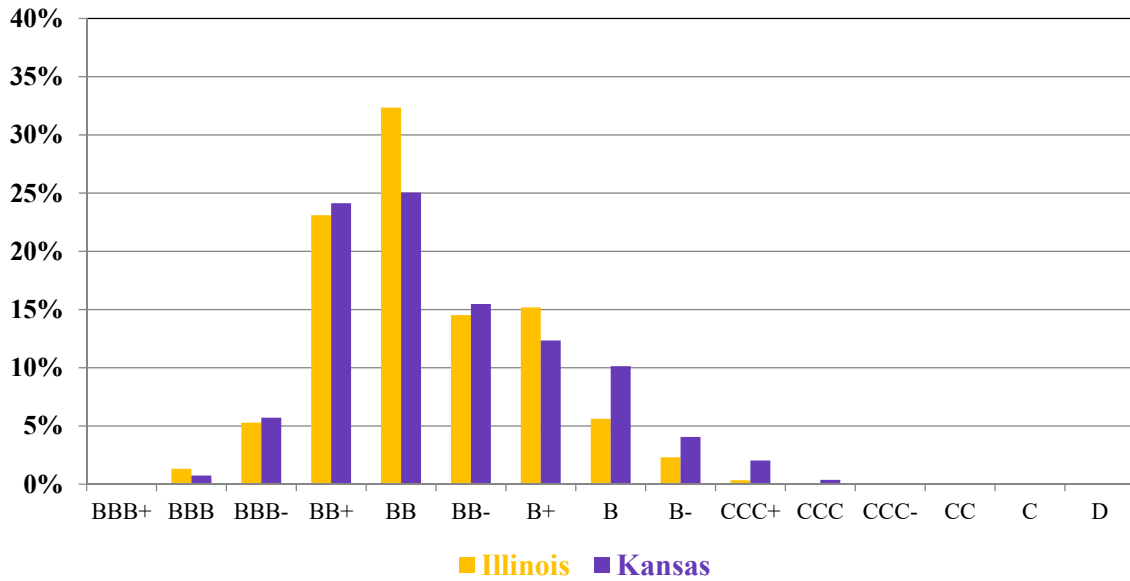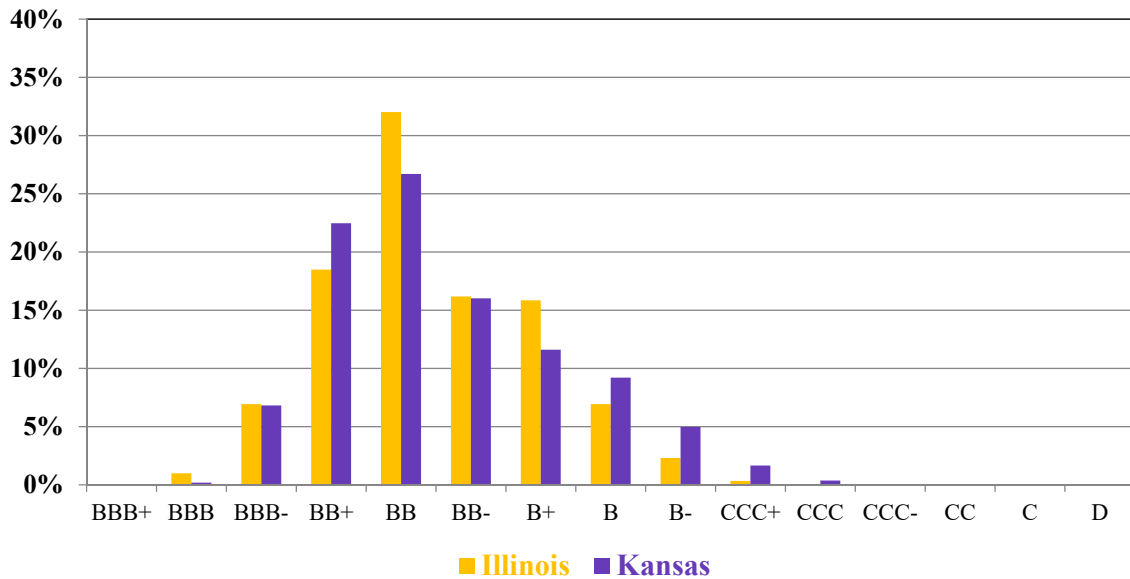# Distribution of Default 2014

Distribution of Default 2015

Distribution of Default 2016

Distribution of Default 2017

Distribution of Default 2018

Legend: Illinois (yellow), Kansas (purple)
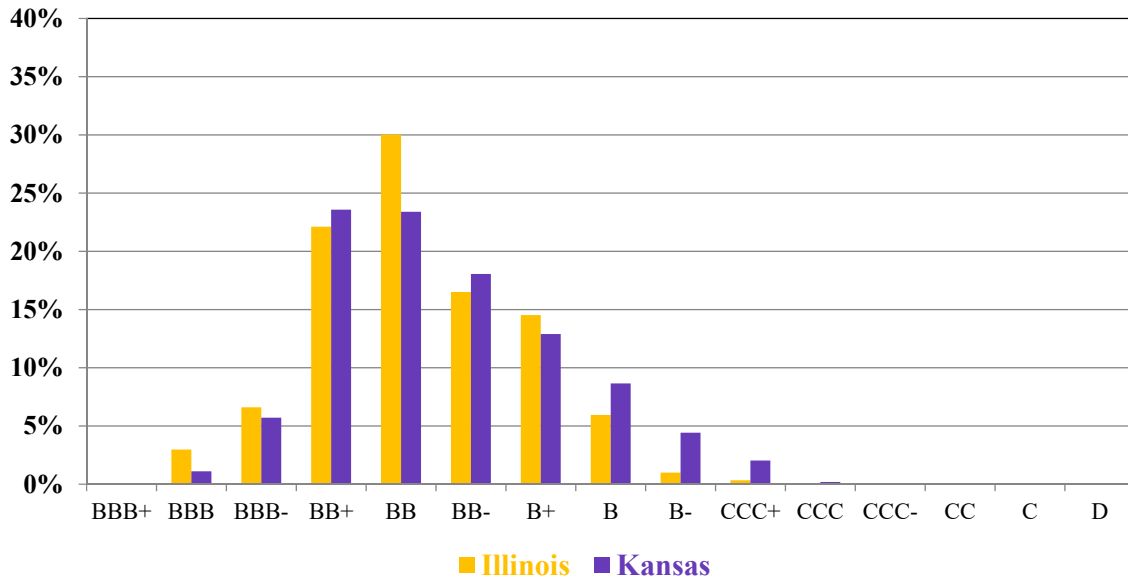
Non-Irrigated Cost of Production per Acre

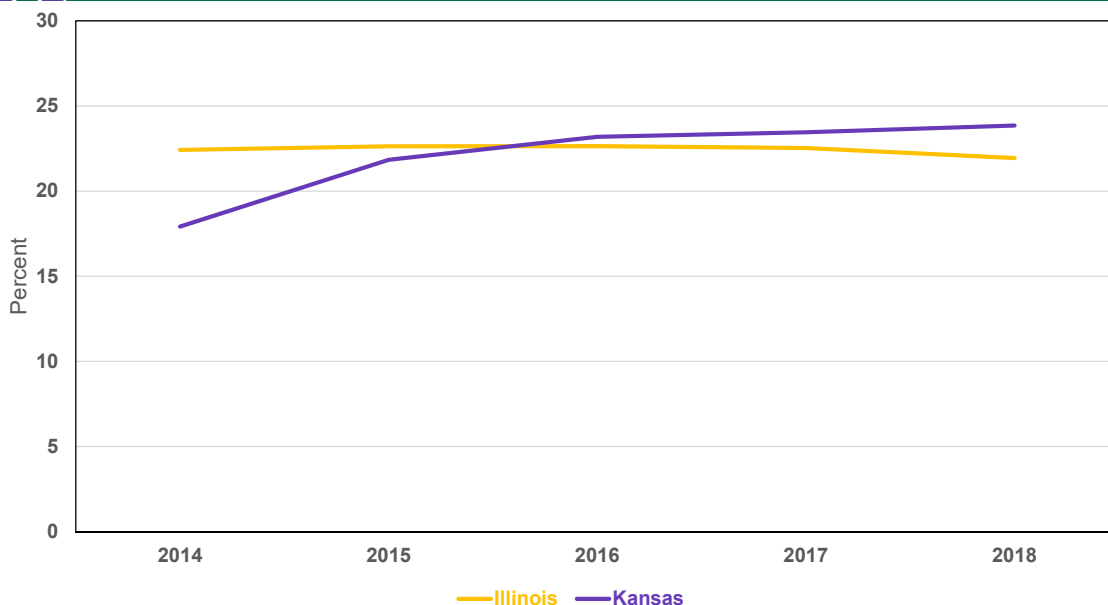| Year	Corn	Soybean	Wheat
2018	$291	$234	$156
2017	$276	$236	$149
2016	$279	$232	$176
2015	$312	$225	$180
2014	$322	$229	$172
2013	$308	$224	$182
2012	$325	$202	$183
2011	$281	$192	$158
2010	$268	$176	$148
2009	$267	$173	$160
2008	$265	$167	$153
2007	$231	$145	$117
2006	$191	$125	$98
2005	$188	$118	$95

2018 Enterprise Information – Crop Mix Shift?

- Kansas Corn – 2018 Yield at the previous 5 year average
  - Revenue - $367 per acre
  - Variable Cost - $291 per acre
  - Total Cost - $405 per acre
- Kansas Soybeans – 2018 Yield 2% above previous 5 year average
  - Revenue - $412 per acre
  - Variable Cost - $234 per acre
  - Total Cost - $341 per acre
- Kansas Wheat – 2018 Yield 15% above the previous 5 year average
  - Revenue - $196 per acre
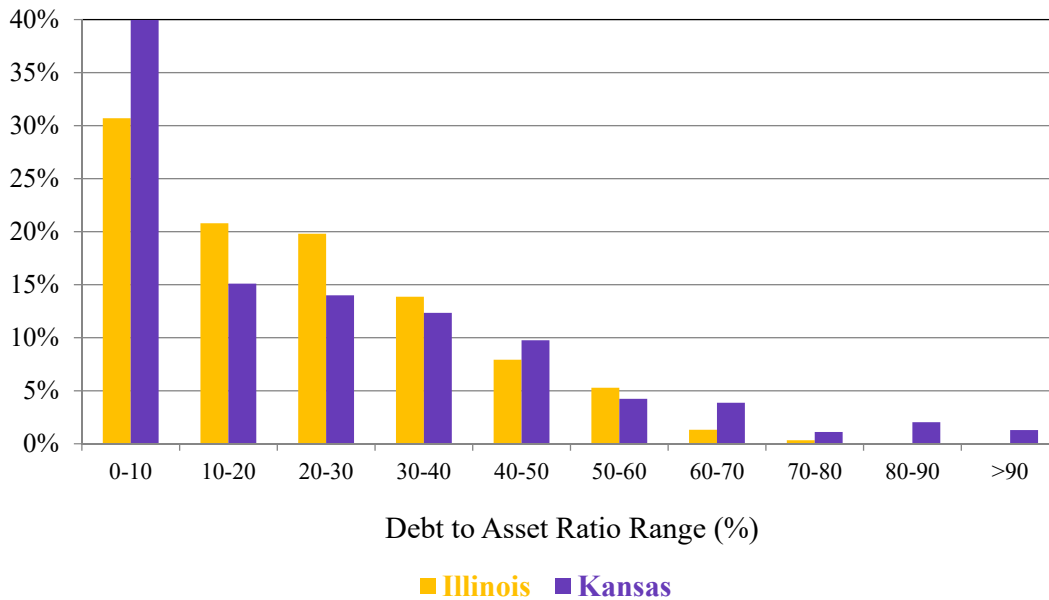 - Variable Cost - $156 per acre
 - Total Cost - $232 per acre

Soybeans regained profitability

Illinois and Kansas Debt to Asset Ratio

Line chart titled "Illinois and Kansas Debt to Asset Ratio" with y-axis labeled "Percent" ranging from 0 to 30, and x-axis years 2014 to 2018. Illinois line (yellow) around 22–23%, Kansas line (purple) rising from about 18% in 2014 to about 24% in 2018.

Legend: Illinois, Kansas

Debt to Asset Distribution (2014)

Debt to Asset Ratio Range (%)

■ Illinois   ■ Kansas

Debt to Asset Distribution (2015)

Debt to Asset Ratio Range (%)
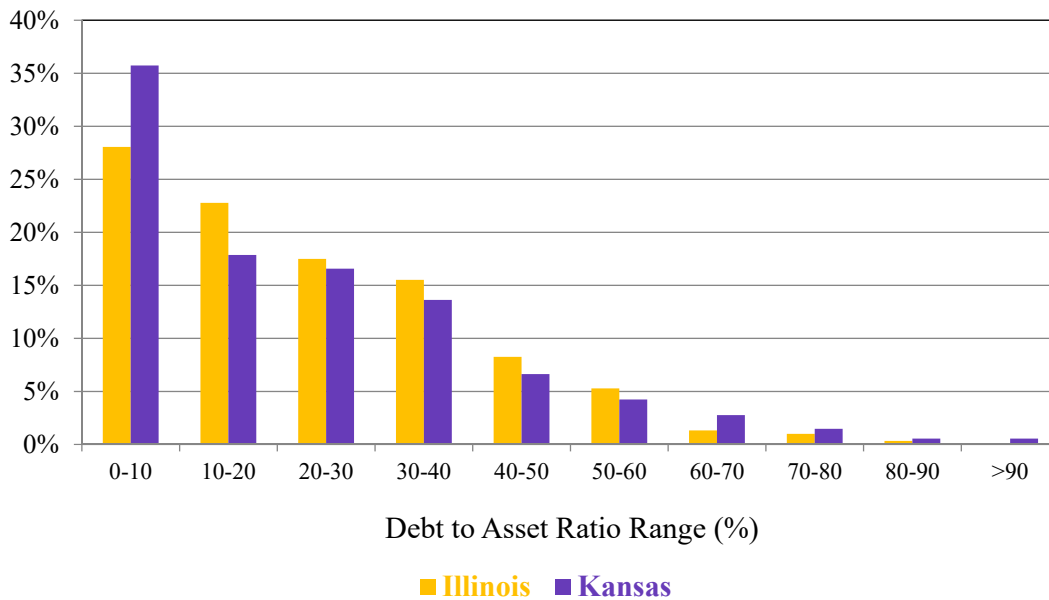
■ Illinois   ■ Kansas

Debt to Asset Distribution (2016)

Debt to Asset Ratio Range (%)
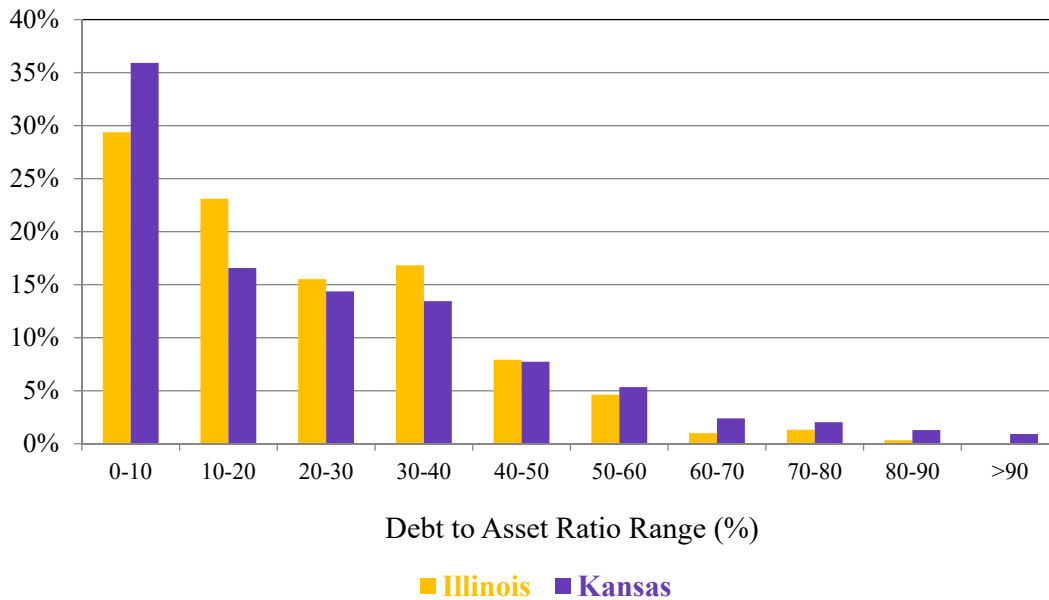
■ Illinois ■ Kansas

Debt to Asset Distribution (2017)

Debt to Asset Ratio Range (%)

■ Illinois ■ Kansas

Debt to Asset Distribution (2018)
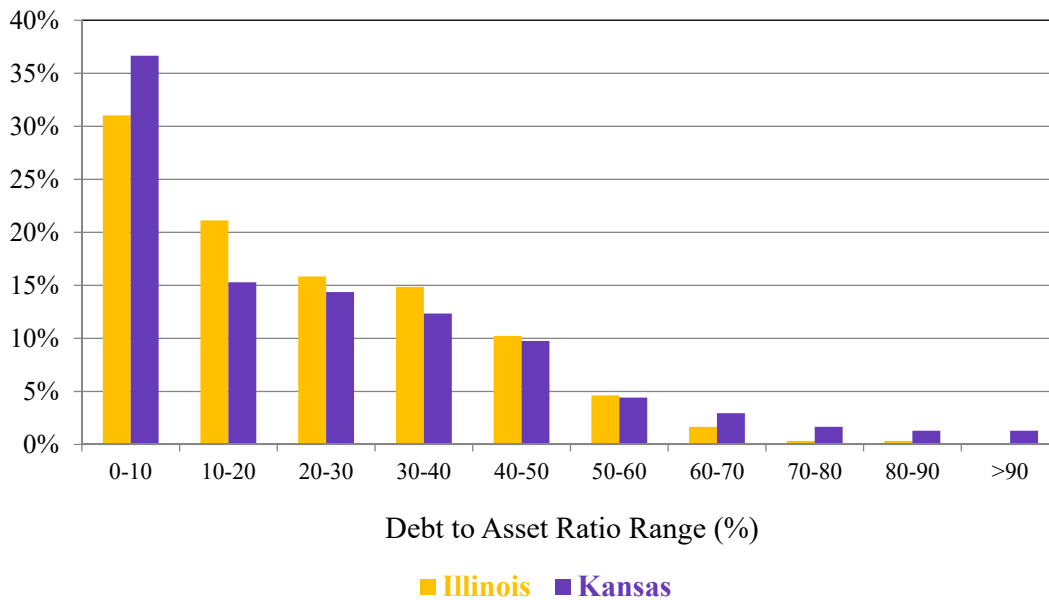
Debt to Asset Ratio Range (%)
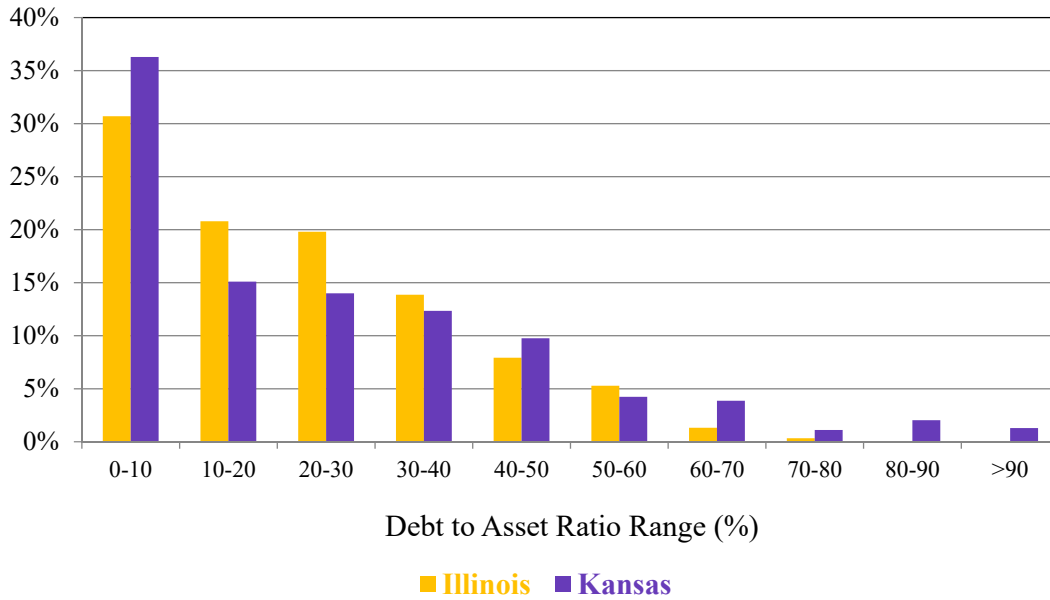
■ Illinois ■ Kansas

Illinois and Kansas Working Capital to Asset Ratio

Percent
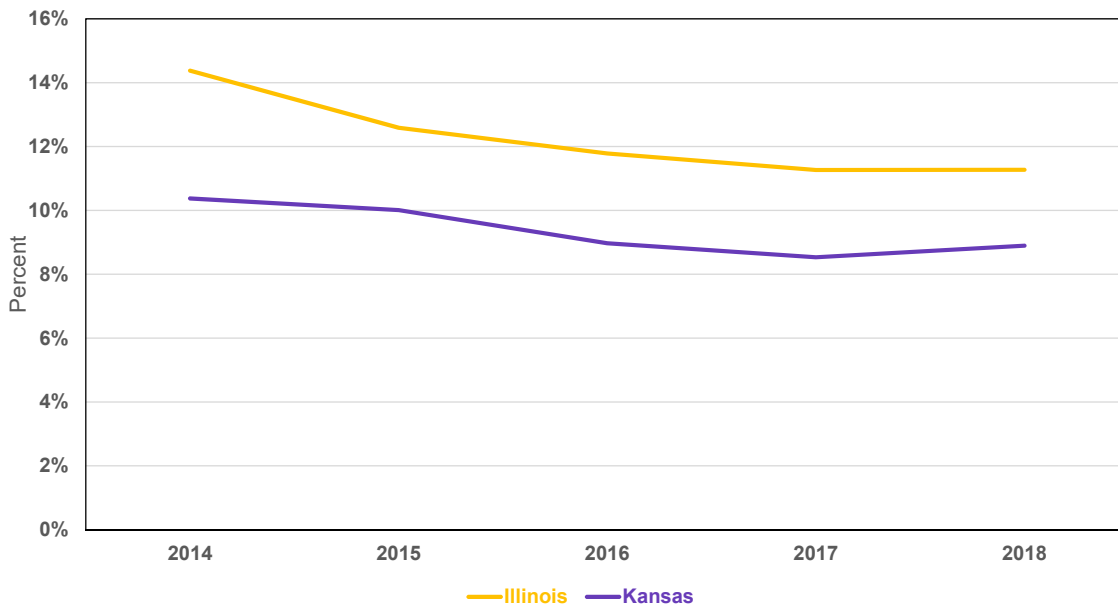
Illinois ── Kansas

Illinois and Kansas Debt Repayment Capacity
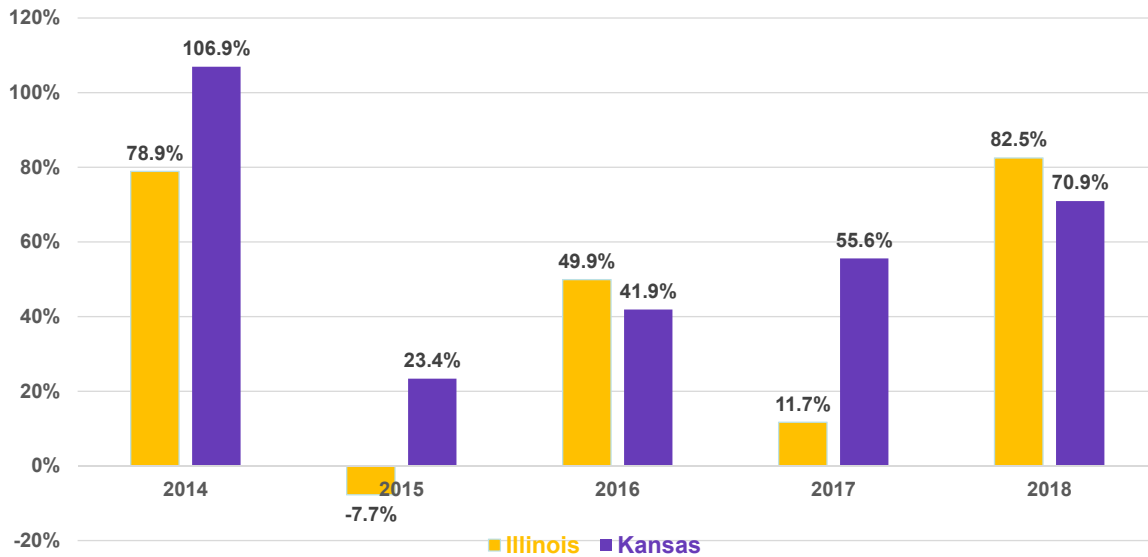
Capital Debt Repayment Capacity Distribution (2014)

Capital Debt Repayment Capacity Ratio Range (%)

Illinois   Kansas
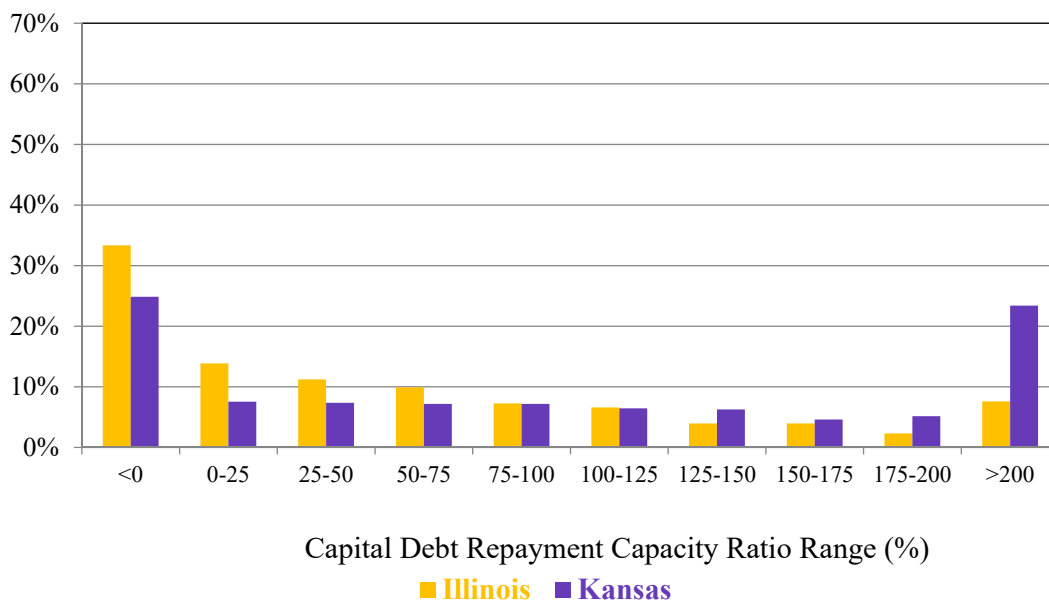
Capital Debt Repayment Capacity Distribution (2015)

Capital Debt Repayment Capacity Ratio Range (%)

■ Illinois ■ Kansas
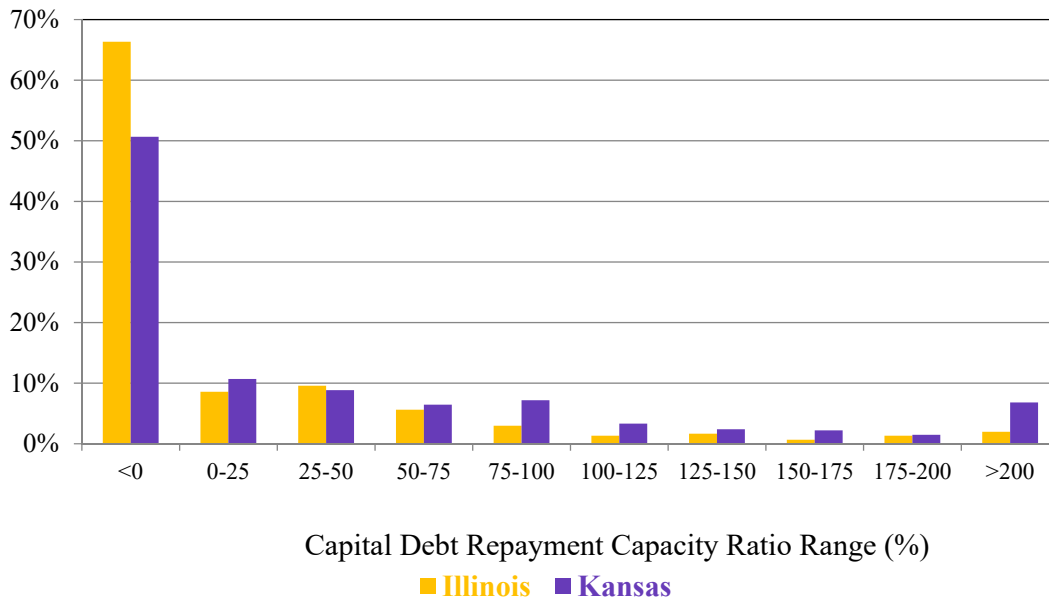
Capital Debt Repayment Capacity Distribution (2016)

Capital Debt Repayment Capacity Ratio Range (%)

■ Illinois ■ Kansas
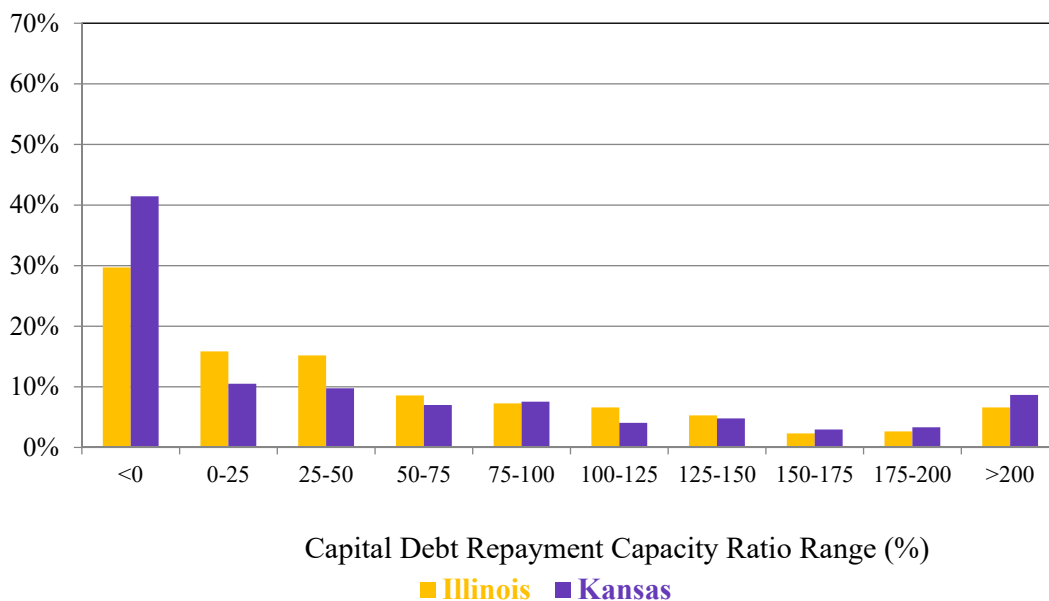
Capital Debt Repayment Capacity Distribution (2017)

Capital Debt Repayment Capacity Ratio Range (%)

■ Illinois ■ Kansas

Capital Debt Repayment Capacity Distribution (2018)

Capital Debt Repayment Capacity Ratio Range (%)

■ Illinois ■ Kansas
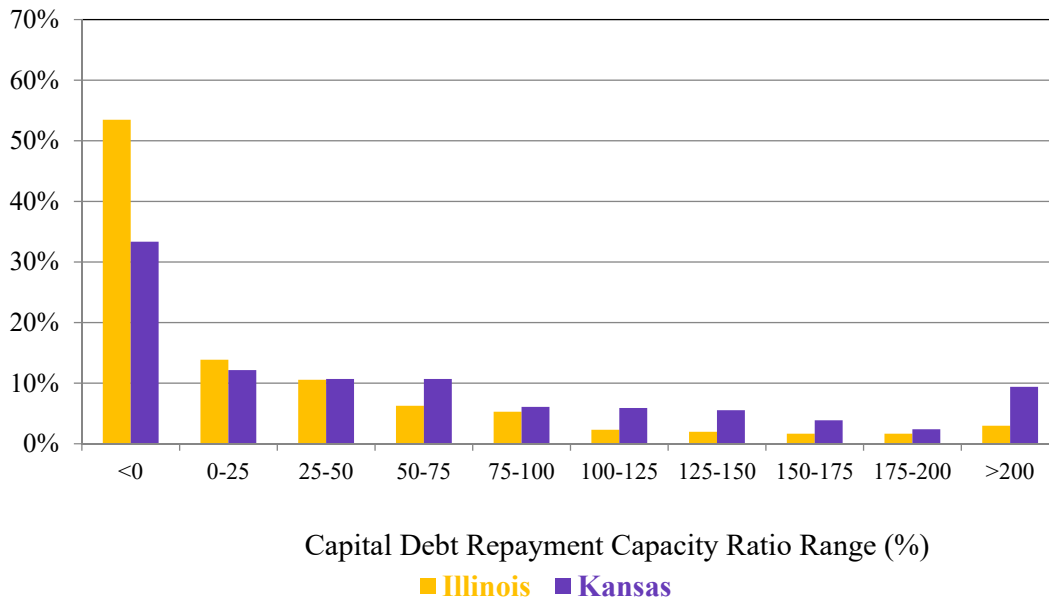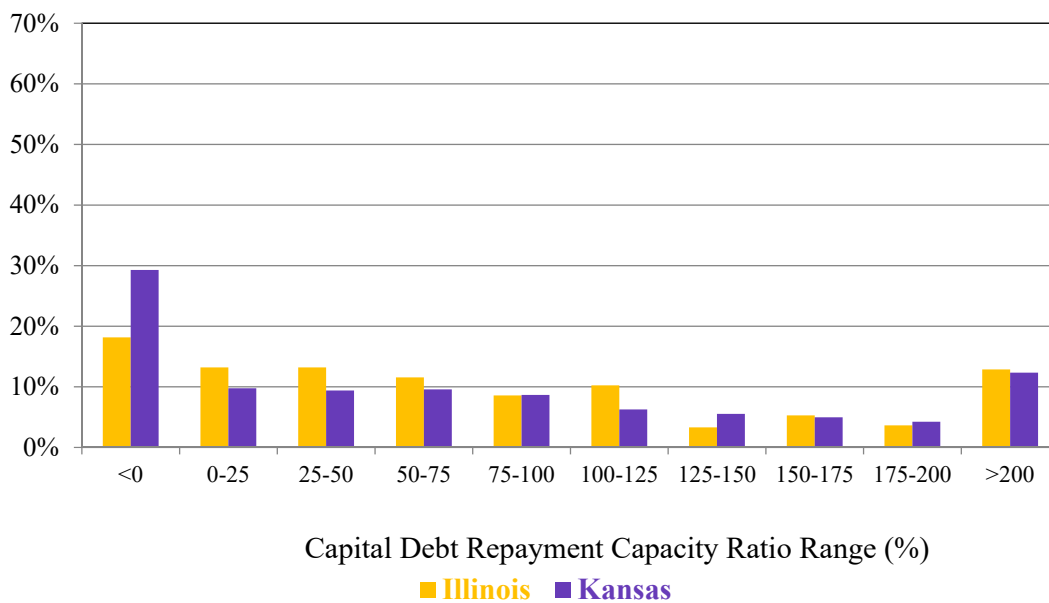
Shifting Crop Mix

Crop	2015	2016	2017	2018	2019	4-Year % Change
		Acres Harvested (Thousand)				
Corn	3,920	4,920	5,200	5,000	6,000	53%
Sorghum	3,200	2,950	2,360	2,650	2,450	-23%
Soybean	3,860	4,010	5,100	4,700	4,550	18%
Wheat	8,700	8,200	6,950	7,300	6,600	-24%
Total	19,680	20,080	19,560	19,760	19,600	-0.4%

Shifting Crop Mix to Find Profitability?

Kansas Farm Economy

- The financial situation in the agricultural economy has changed considerably over the last 5 years
- 2015 farm income in Kansas was the lowest since 1985 but has rebounded since
- What about 2019?

Kansas Farm Economy 2019 Projections

Crop	2018	2019	2018	2019
	Yield (Bushel per Acre)		Acres Harvest (Thousand)	
Corn	129	135	5,000	6,000
Sorghum	88	79	2,650	2,450
Soybean	43.5	42	4,700	4,550
Wheat	38	53	7,300	6,600

Kansas Farm Economy 2019 Projections

Crop	2018	2019
	Price ($ per Bushel)	
Corn	3.60	3.63
Sorghum	3.06	3.09
Soybean	8.85	8.73
Wheat	5.27	4.63

Kansas Revenue $6.31 billion $6.83 billion

Illinois Revenue $14.58 billion $11.82 billion

Expected Change in Gross Revenue in Kansas of 8.2%

Expected Change in Gross Revenue in Illinois of -19.0%

Recent and Projected Farm-Level Crop Prices

Legend: Corn, Soybean, Wheat
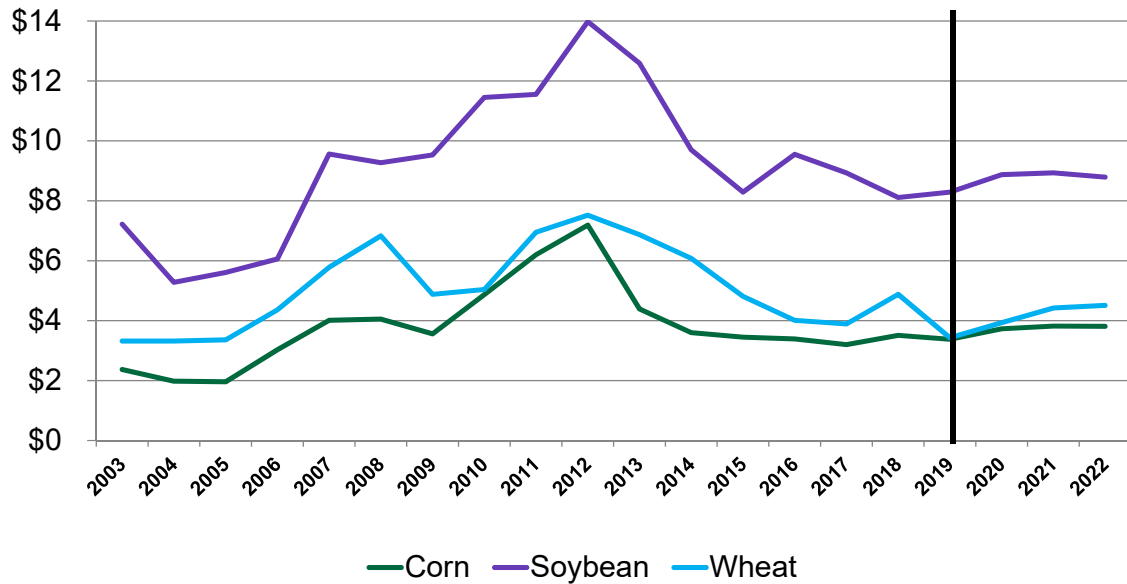
Kansas Farm Management Association Debt Levels

Year	Debt Level
2005	$359,115
2006	$368,413
2007	$377,196
2008	$397,728
2009	$411,067
2010	$440,996
2011	$470,288
2012	$491,032
2013	$530,893
2014	$578,587
2015	$613,975
2016	$604,491
2017	$618,262
2018	$640,266
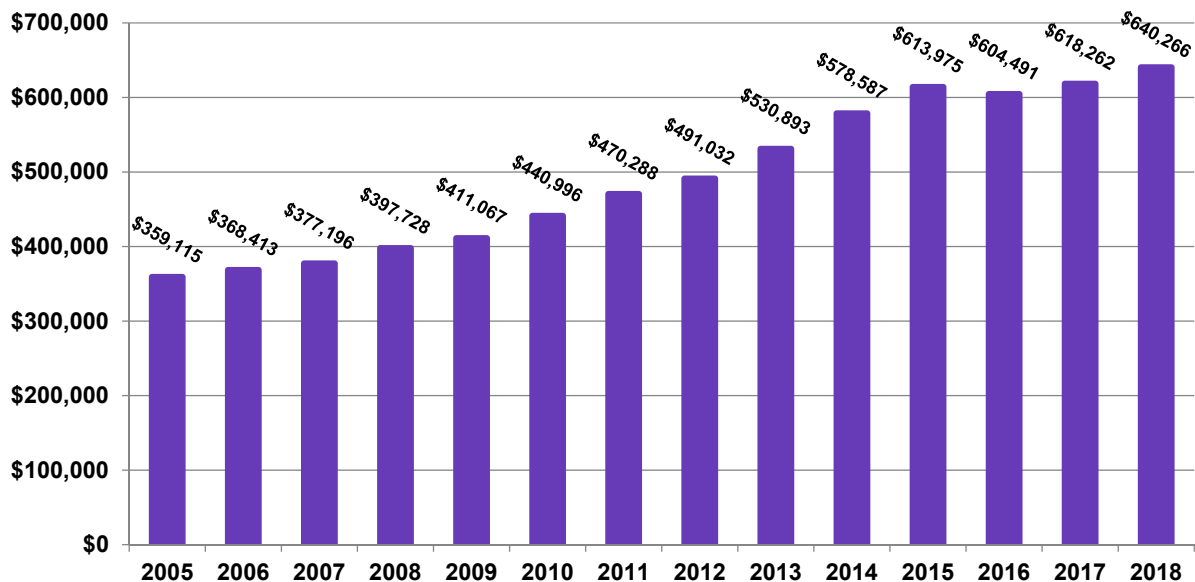
Kansas Farm Economy

- Debt Levels
  - Current Liabilities – ($13,009)
  - Intermediate Liabilities – (-$5,745)
  - Long-term Liabilities – ($14,741)
- Working Capital
  - Increased from $222,487 in 2017 to $233,074 in 2018
  - A change of $10,587

Debt at Risk for Kansas and Illinois Farms

Year	---------------- Average	Continuous Minimum	---------------- Maximum	---------------- Average	------All------ Minimum	---------------- Maximum
Illinois						
2014	$14,484	$28	$187,220	$16,041	$0	$428,603
2015	$16,997	$31	$259,834	$19,241	$0	$362,842
2016	$16,987	$32	$327,790	$20,176	$0	$536,854
2017	$18,419	$29	$393,025	$21,539	$0	$561,836
2018	$17,443	$19	$352,298	$20,359	$0	$604,662
Kansas						
2014	$9,013	$0	$152,409	$10,774	$0	$196,655
2015	$12,674	$0	$187,237	$15,604	$0	$284,011
2016	$13,759	$0	$241,476	$17,384	$0	$408,923
2017	$14,583	$0	$229,774	$20,593	$0	$427,559
2018	$15,481	$0	$244,569	$19,402	$0	$327,054

Conclusions

- Since 2014, debt on Illinois farms has increased by more than 25% and the increase for Kansas farms is as high as 80%
- Debt at risk is held by relatively few farms
  - In Kansas, farms with greater than $50,000 in debt at risk in 2018 constituted 8% of farms and held 48.2% of debt at risk
  - In Illinois, 8% of farms had more than $50,000 debt at risk and held 43.9% of all debt at risk in Illinois in 2018

Conclusions

- While the farm sector is relatively strong in Illinois and Kansas, there are several farms that are at risk
- Due to the deterioration in working capital and the ability to pay debt out of earnings, the ability to withstand additional downward shocks in income has been reduced
- Income prospects are excellent for 2019
- 2019 in Kansas is a year where many farms should be able to improve their financial situation