



Changing Dynamics in Farm Ownership and Ag Finance

Farmland Ownership: Trends and Impacts

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Advancing Farmland Markets through Research and Information

Goals: improve accuracy and understanding of asset class, and to provide unbiased research and useful tools for those involved with farmland investments.

Tools and articles at:

<http://farmland.illinois.edu/>

<http://farmdocdaily.illinois.edu/>

Outline

- Stage setting overview of US Farmland Markets
 - What – scale and scope of asset class
 - Who – ownership classes, demographics
 - How – form and distribution, trends
- Institutional and structural features that “matter”
- Headwinds, tailwinds, and future scenarios

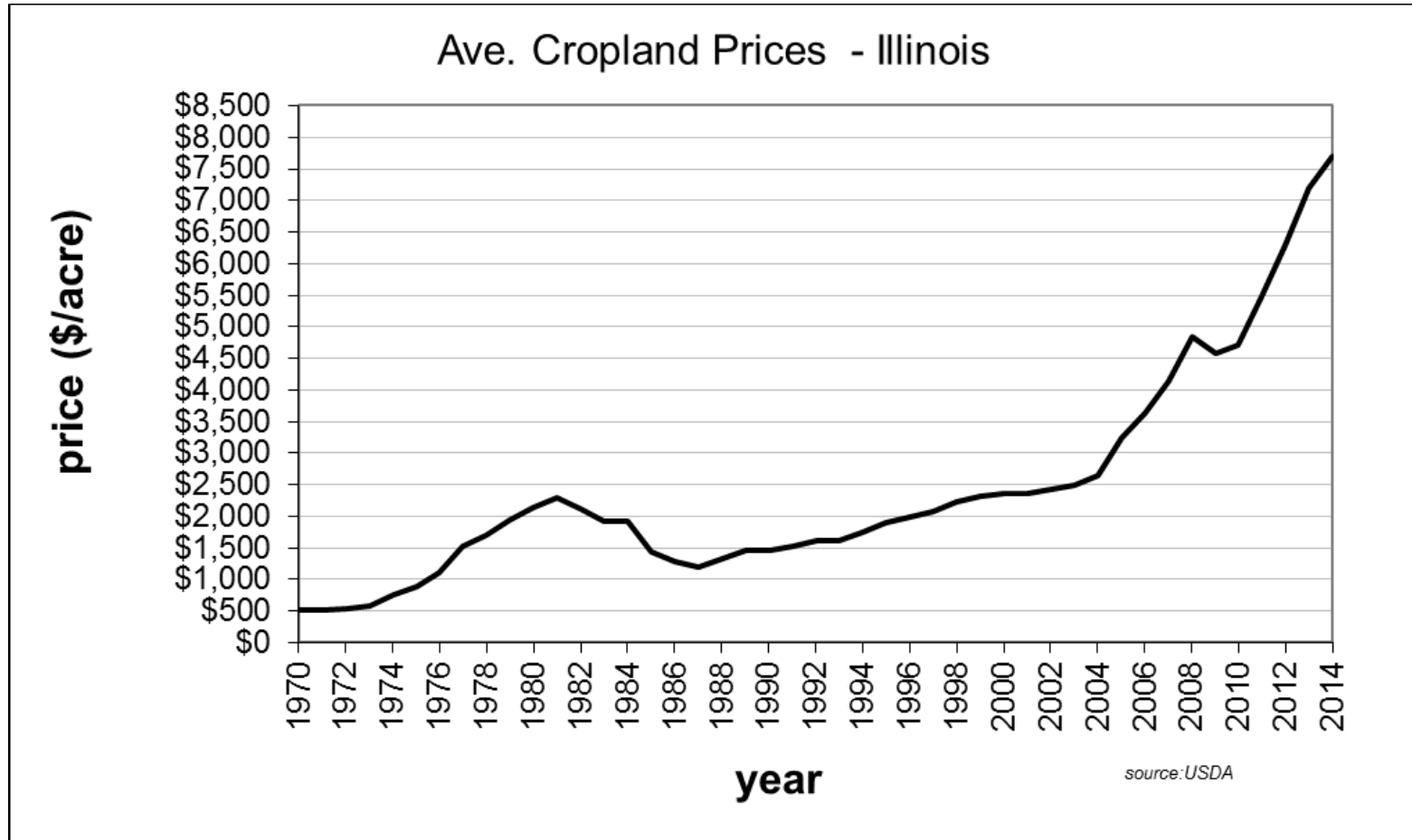
Balance Sheet of Ag Sector -- US

	1970	1980	1990	2000	2010	2013	2014	2015F
	(\$ millions, except ratios - source ERS-USDA)							
Farm Assets	278,823	1,000,422	840,609	1,203,215	2,313,228	2,886,548	2,994,014	3,005,140
Real Estate	202,418	782,820	619,149	946,428	1,823,264	2,384,831	2,444,811	2,426,022
Non Real Estate	76,405	217,602	221,459	256,787	489,964	501,717	549,203	579,118
Farm Debt	48,501	162,432	131,116	163,930	278,931	308,223	317,715	327,444
Real Estate	27,238	85,272	67,633	84,724	154,065	178,080	182,740	186,395
Non Real Estate	21,263	77,160	63,483	79,206	124,865	130,143	134,975	141,049
Equity	230,322	837,990	709,493	1,039,285	2,034,297	2,578,325	2,676,299	2,677,696
Selected Indicators								
Debt/Equity	21.1%	19.4%	18.5%	15.8%	13.7%	12.0%	11.9%	12.2%
Debt/Assets	17.4%	16.2%	15.6%	13.6%	12.1%	10.7%	10.6%	10.9%
Real Estate/Equity	87.9%	93.4%	87.3%	91.1%	89.6%	92.5%	91.4%	90.6%
Real Estate/Assets	72.6%	78.2%	73.7%	78.7%	78.8%	82.6%	81.7%	80.7%
Real Estate D/Totals	56.2%	52.5%	51.6%	51.7%	55.2%	57.8%	57.5%	56.9%

Ag Sector Balance Sheet -- US

- Farmland represents 80+% of farm assets
- Farm real estate debt only 57% of total farm debt
- Low aggregate leverage (approx. 11% D/A)
- Growth rates 1970-2015, continuous compounding:
 - Assets --5.3%
 - Real Estate -- 5.6%
 - Debt – 4.2%
 - Equity – 5.6%
- Absence of active equity market. Some key efforts underway.
- Ag Balance sheet compared to corporate sector vastly different, especially in financial structure. Early stage “financialization”.

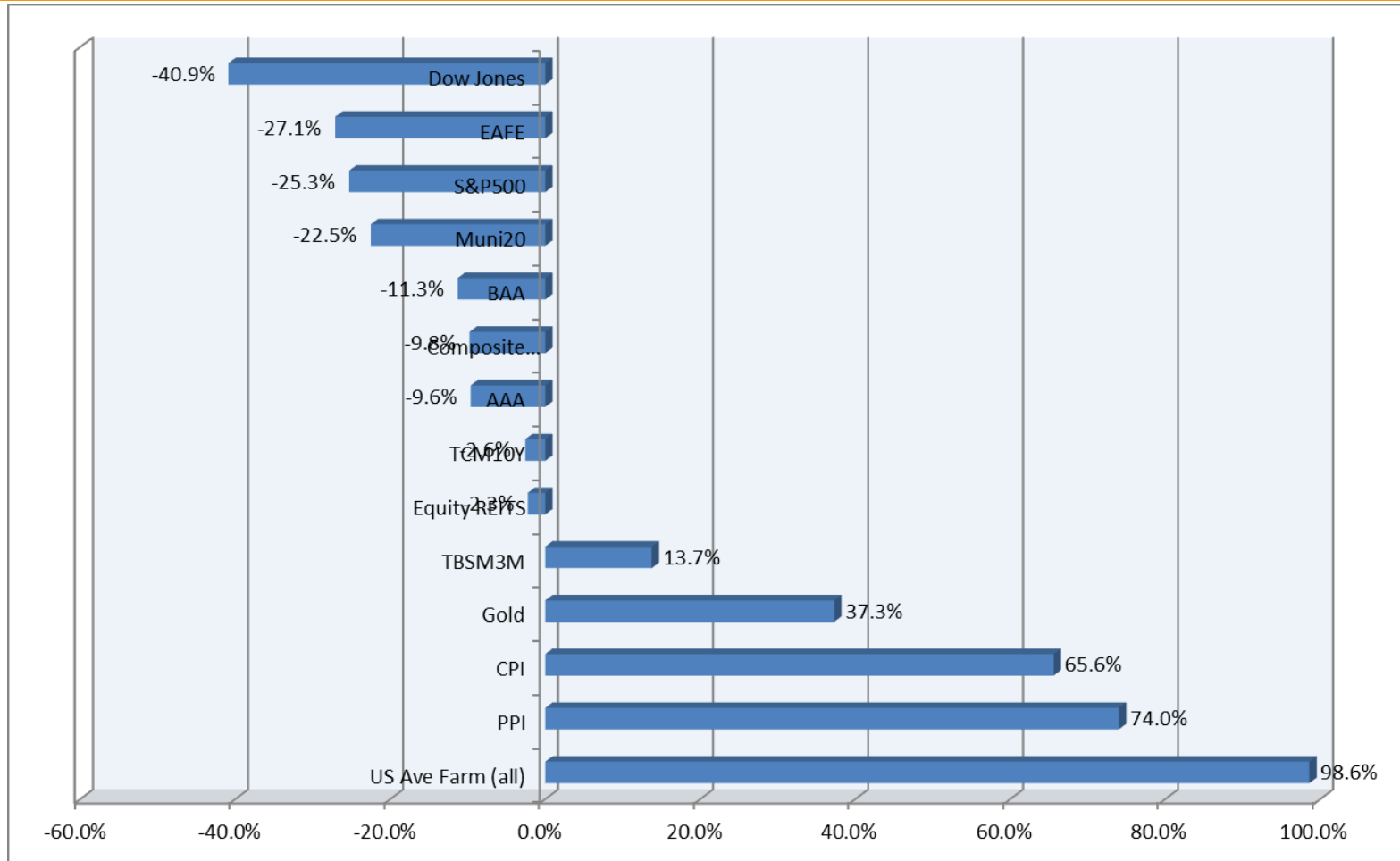
Farmland Prices – State Level



Farmland: Financial Performance

Asset/Index	Annual Ave. Return	Standard Deviation	Coefficient of Variation	Correlation
	----- 1980 - 2015-----			
Iowa	10.50%	10.57%	1.006	1
S&P500	8.17%	16.09%	1.969	-0.095
NASDAQ	9.71%	25.53%	2.631	-0.068
NCREIF Total Farmland	11.62%	6.03%	0.519	0.703
EAFE	6.33%	20.85%	3.294	-0.345
TCM10Y	6.44%	3.18%	0.494	-0.412
AAA	7.67%	2.79%	0.363	-0.444
BAA	8.77%	3.02%	0.344	-0.451
ED3M	5.32%	4.05%	0.762	-0.252
Muni20	6.19%	2.08%	0.335	-0.459
Mort30F	8.22%	3.36%	0.409	-0.419
Gold	2.02%	16.29%	8.057	-0.080
CPI	3.14%	2.11%	0.673	0.076
PPI	2.22%	4.05%	1.821	0.268
<i>US Ave Farm (all)</i>	8.53%	5.27%	0.618	0.756

Farmland: Low Equity correlation, positive CPI and Inflation effects



(US Farmland 26 State Returns 3-year rolling holding periods, 1970-2015)

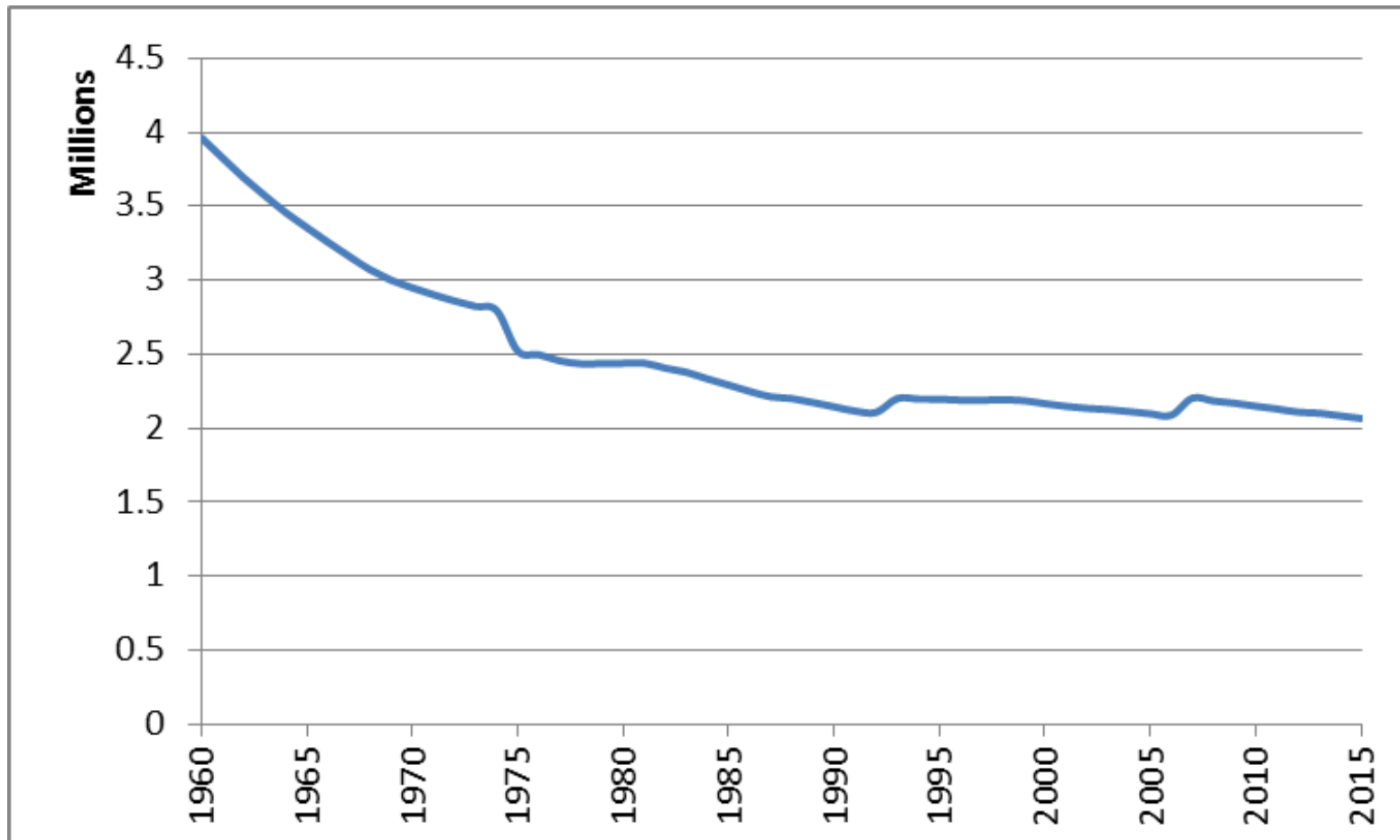
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Number of Farms 1960-present



ERS-USDA

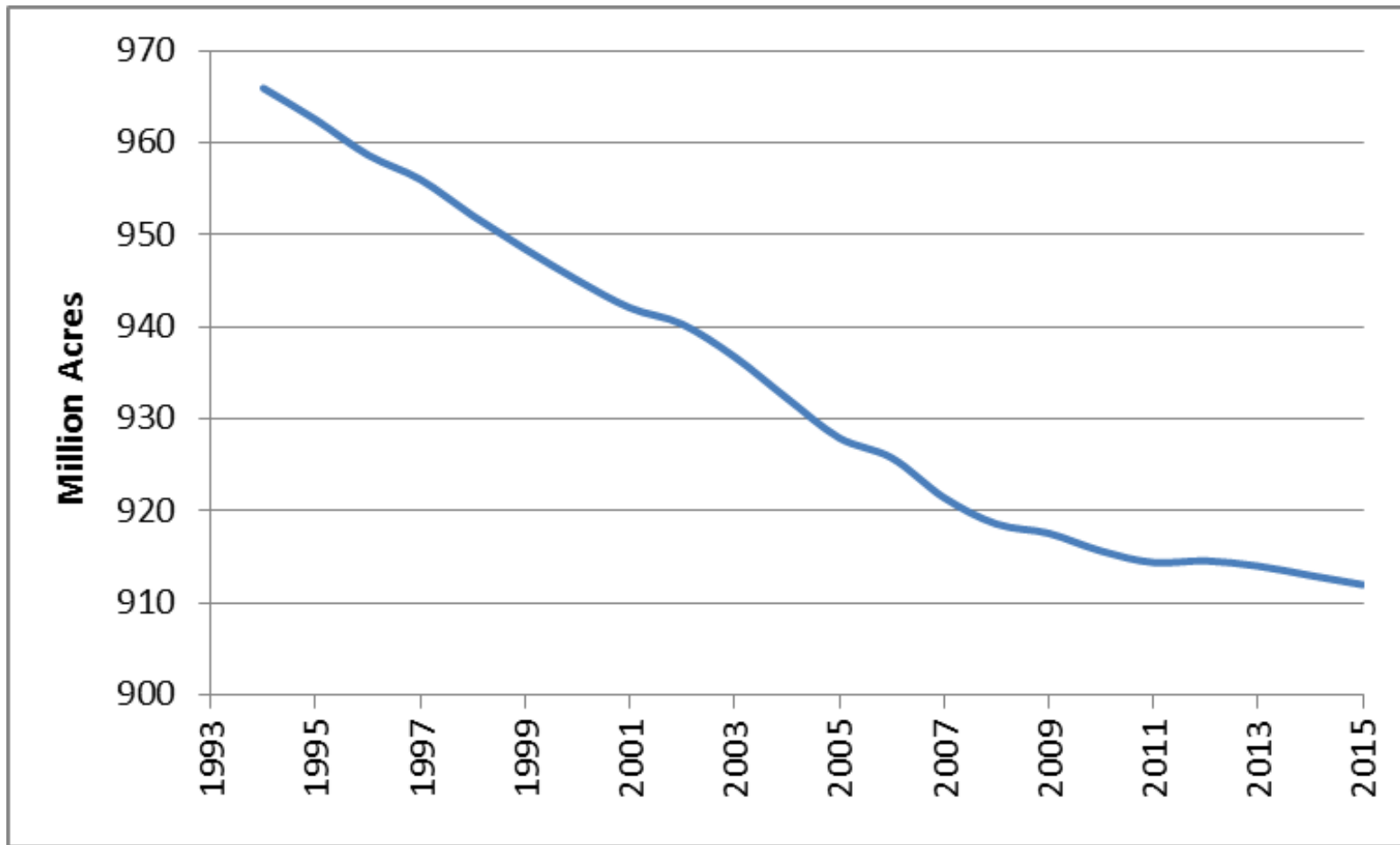
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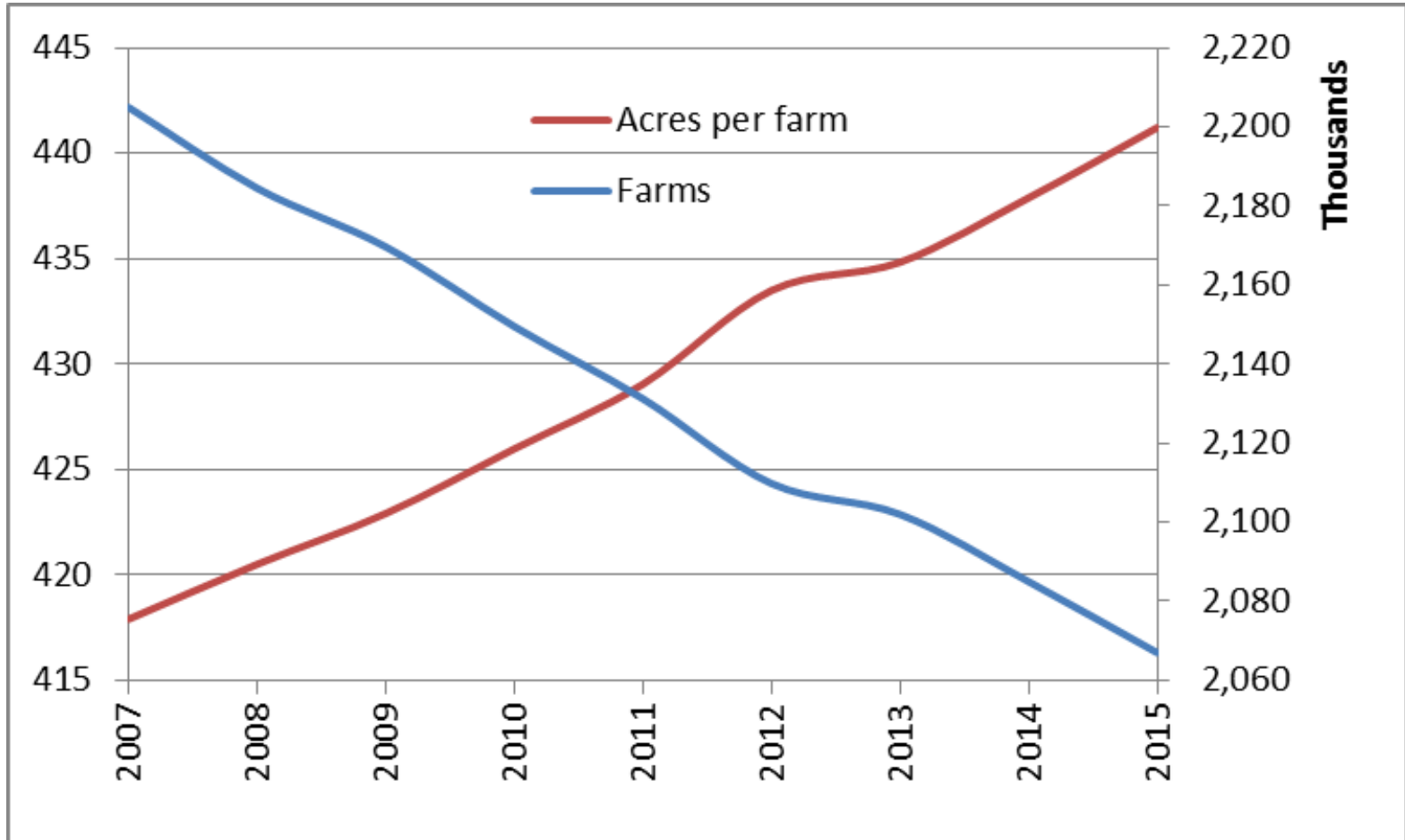
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Acres farmed in US declining



ERS-USDA

Acres per farm increasing



Distribution by Sales Class

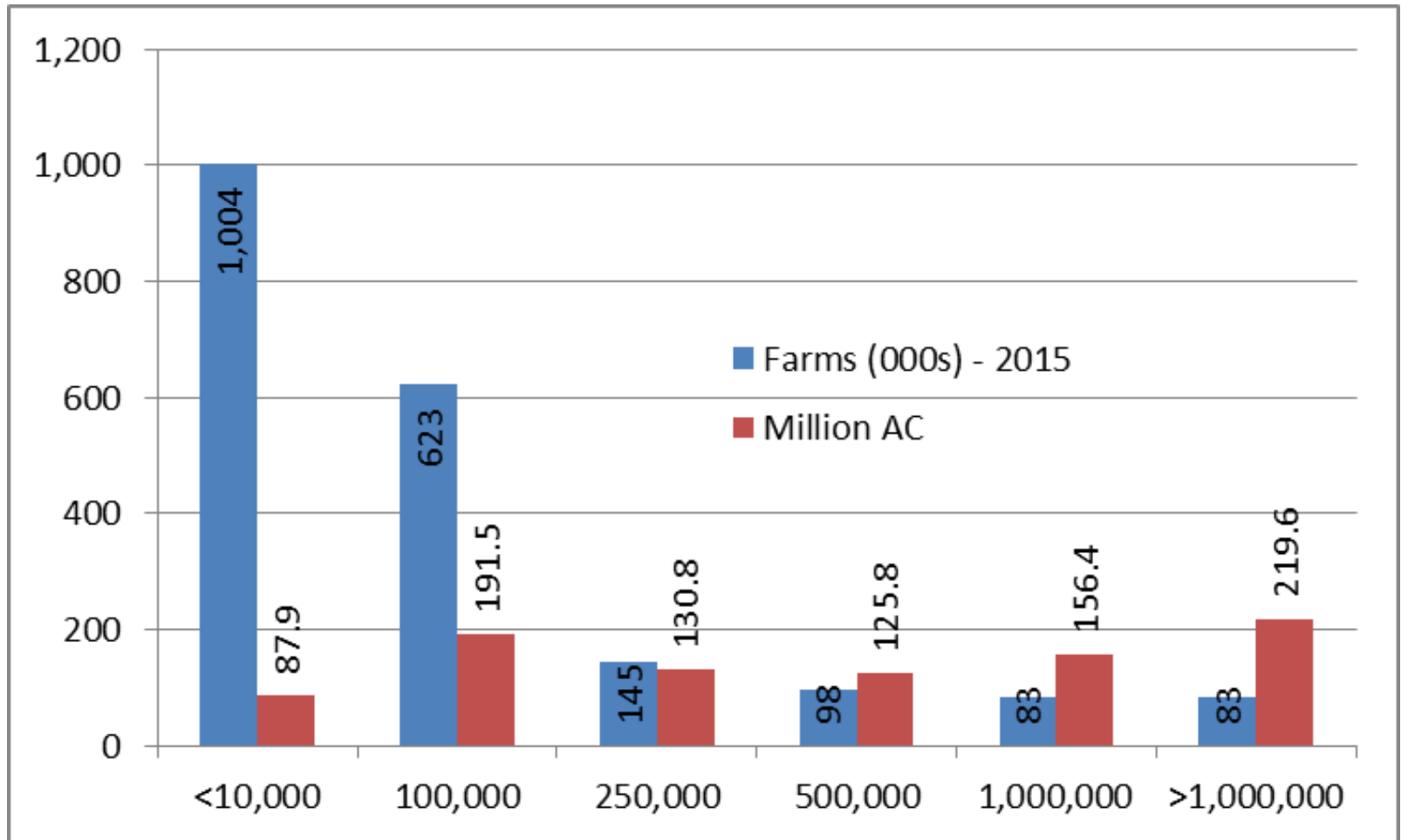
Sales from	up to	2015 Farms (000s)	Change from 2014	% Farms
1,000	10,000	1,004	-20,000	50.1%
10,000	100,000	623	400	30.1%
100,000	250,000	145	300	7.0%
250,000	500,000	98	800	4.7%
500,000	1,000,000	83	300	4.0%
1,000,000	>1,000,000	83	300	4.0%
Total		2,036	-17,900	1

ERS-USDA

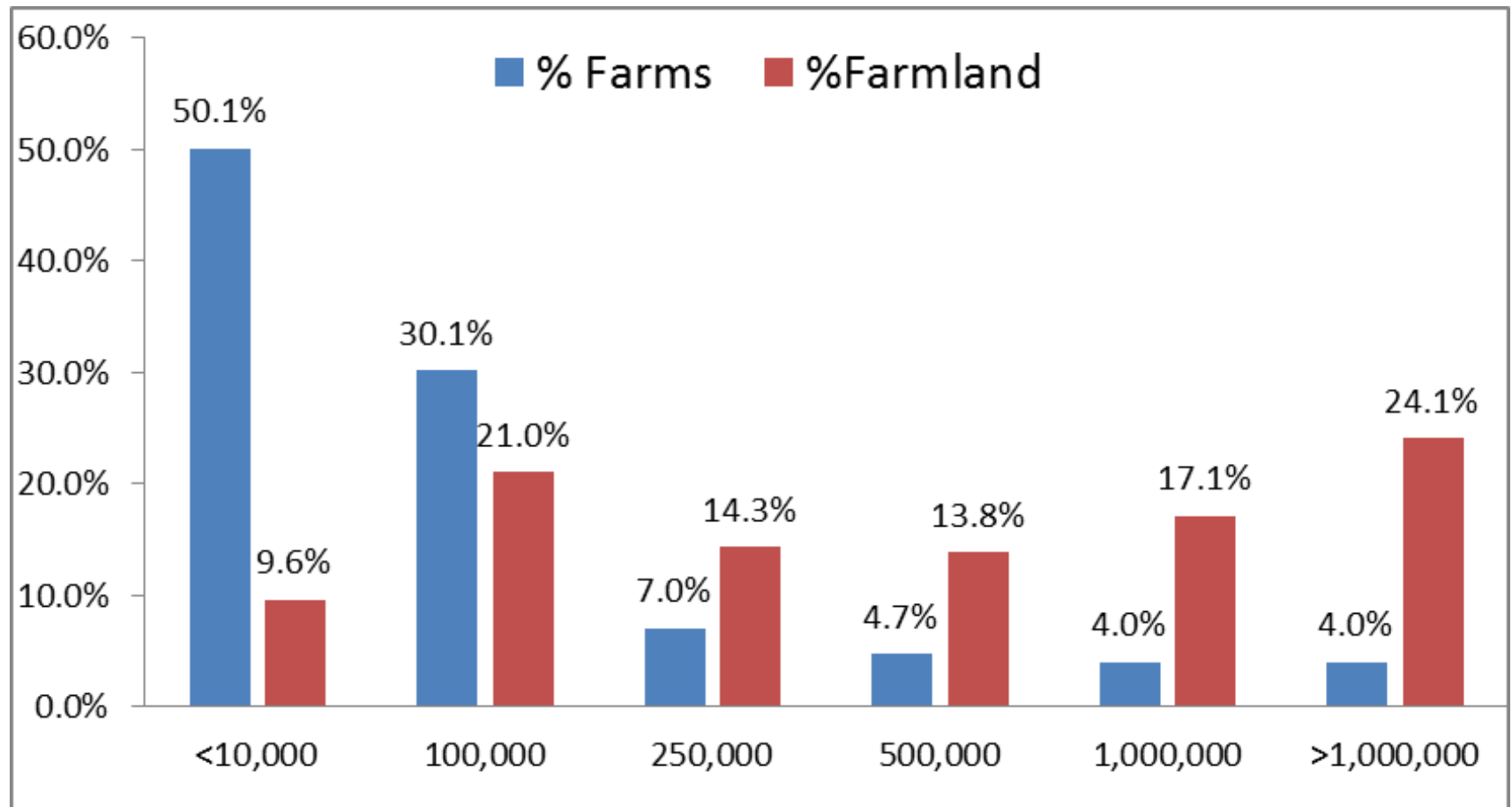
Distribution by Sales Class

Sales from	up to	-- Million Acres --		Ave Farm	
		Farmland	Δ'15-'14	Size Ac.	% Farmland
1,000	10,000	87.9	-2.92	85	9.6%
10,000	100,000	191.5	-2.35	307	21.0%
100,000	250,000	130.8	1.85	901	14.3%
250,000	500,000	125.8	0.52	1,285	13.8%
500,000	1,000,000	156.4	0.33	1,882	17.1%
1,000,000	>1,000,000	219.6	1.57	2,662	24.1%
Total or ave.		912	-1 million	441	1.0%

Farm Numbers and Acreage

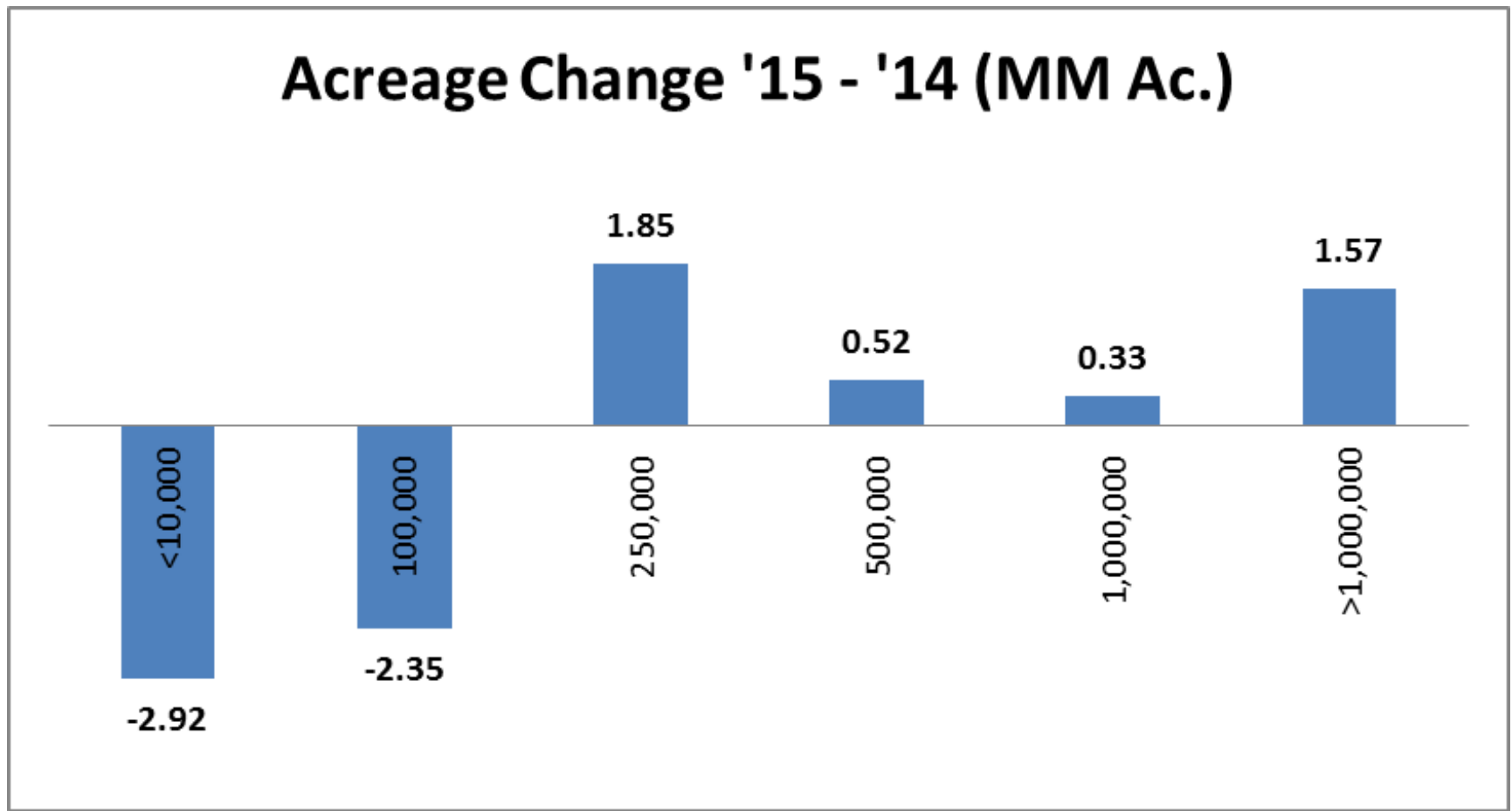


Distribution by Sales Class

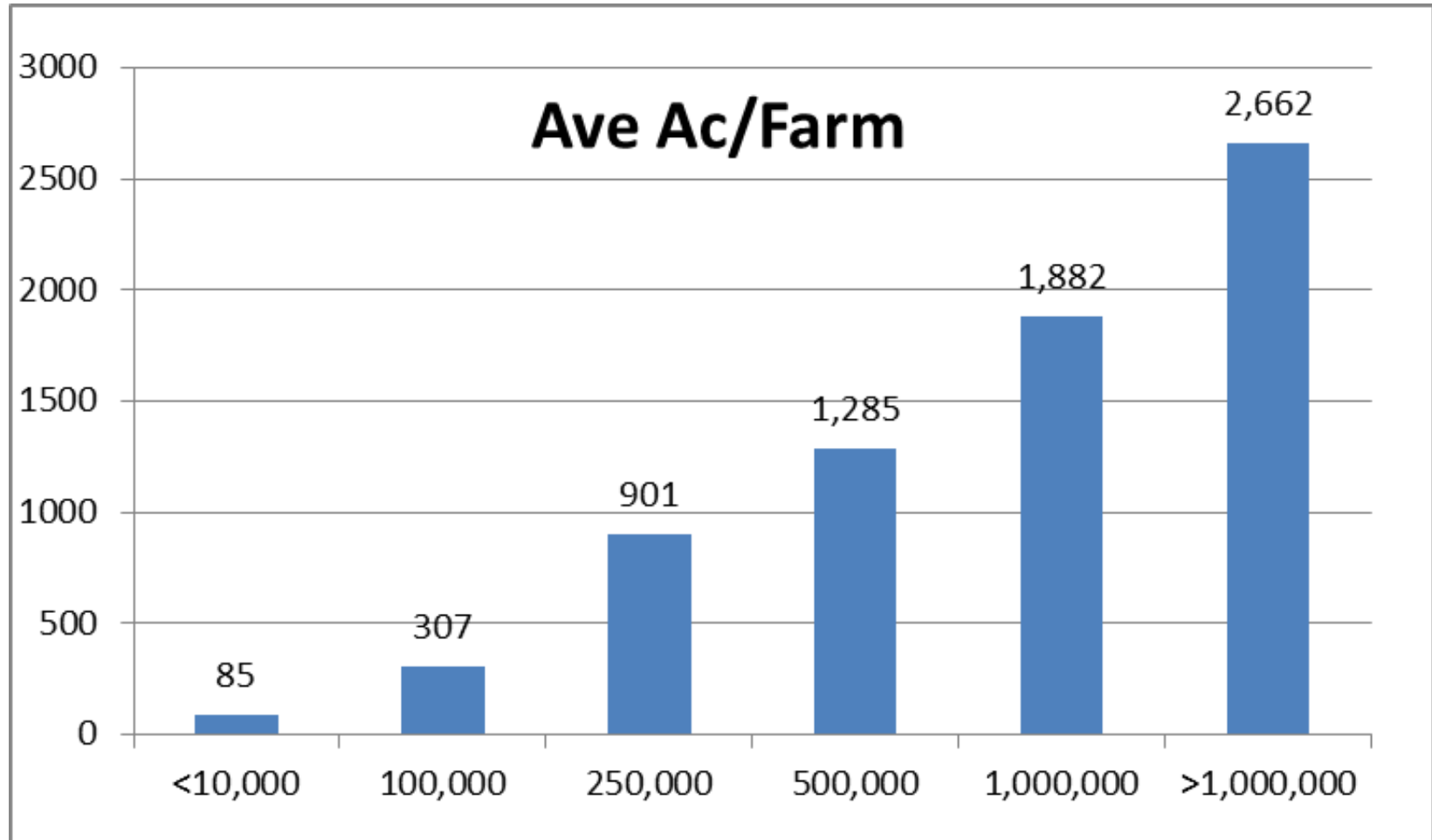


ERS-USDA

Further Concentrating in larger



Size concentration and movement



Distribution by farm type and size

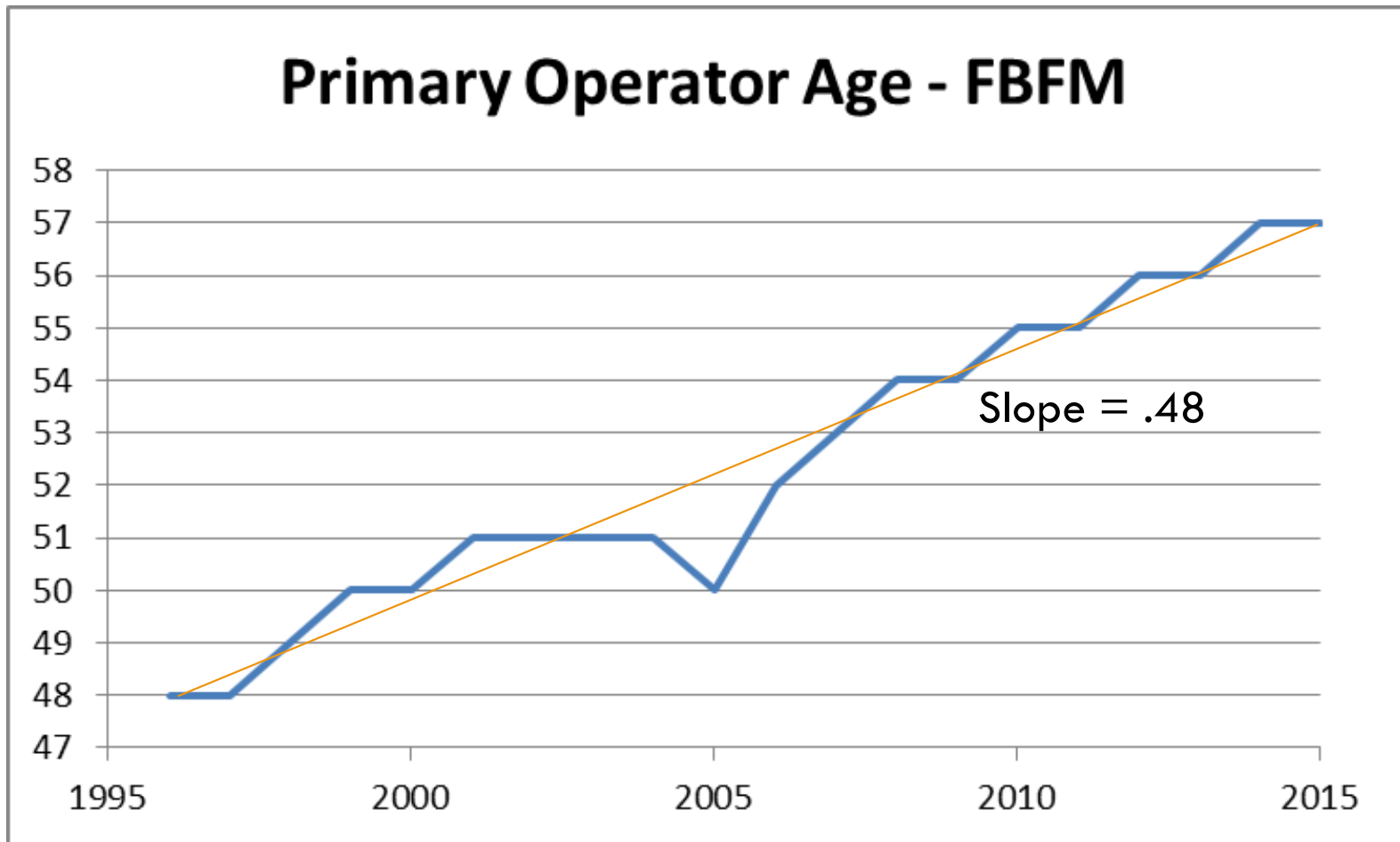
	% of farms	% acres	% Production	# Farms
Small Family	89.4%	45.3%	21.5%	1,856,318
MidSize Family	6.1%	23.4%	20.5%	125,760
Large Scale Family	3.4%	27.5%	47.6%	70,930
Non-Family	1.1%	3.8%	10.4%	23,266

Small Type	# Farms	% farms
Retirement	281,622	13.6
Off-Farm	942,978	45.4
Farming low sales	522,080	25.1
Farming med. sales	109,638	5.3
Total Small	1,856,318	89.4

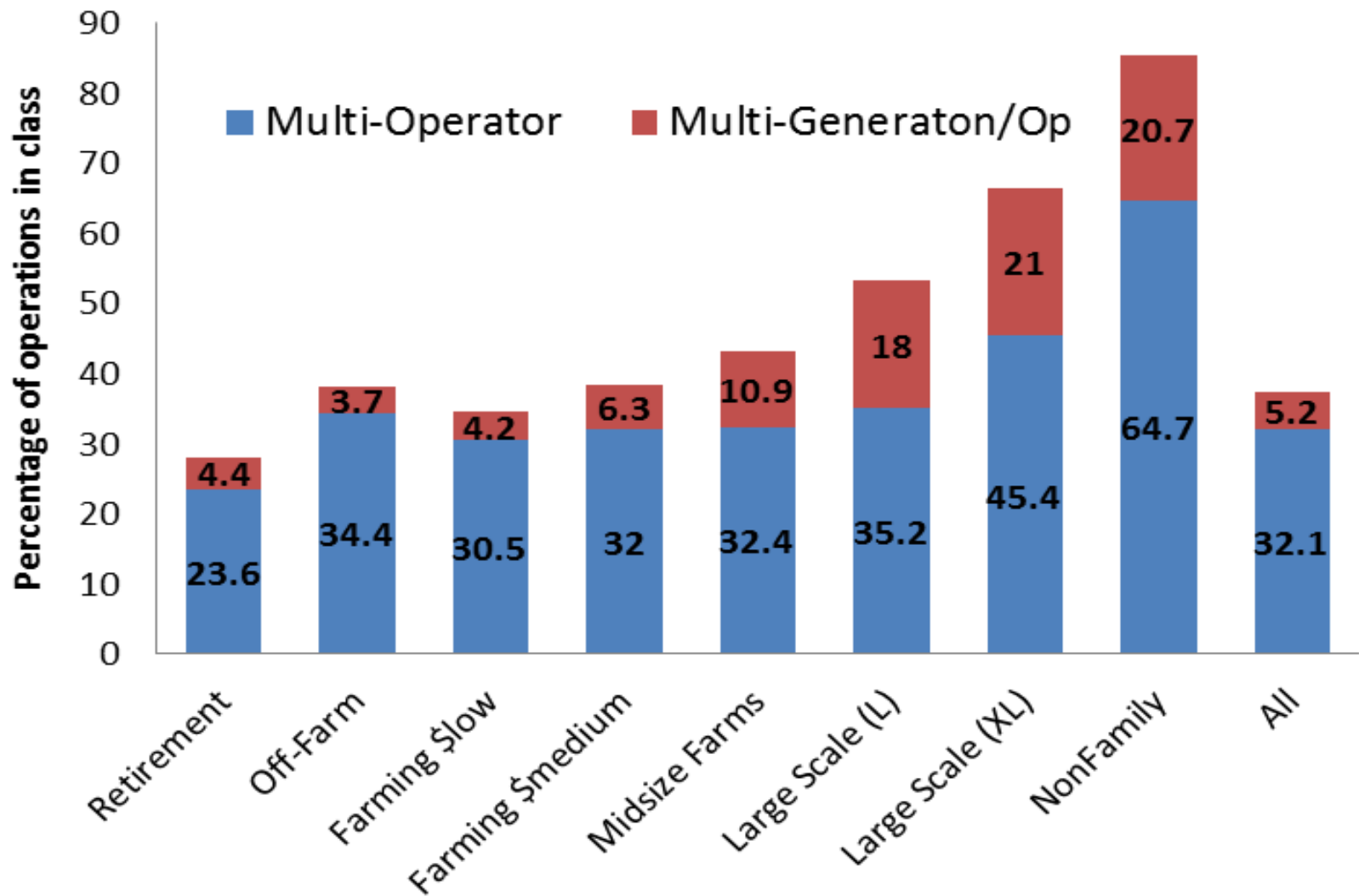
- Family Farms comprise 99% of farms and 90% of production.
- Nearly 90% of farms produce less than \$350k per year (*Small*)
- Non-family farms only 1% of farms but over 10% of production

Source: USDA EIB, Hoppe McDonald (HM)

Age – (it's complicated...)



More complex ops than ownership



Ownership and Operations

- Increasingly separable, but risk profile changes
- Tax advantaged asset to own into estate
- Crop Insurance and farm program incentives – mixed and increasingly targeted
- Most corporate farms are family farms – age of “stockholders” may not be meaningful number
- 2032a and 1031 – not ag-specific
- Fairly concentrated relative to most other sectors
- Commercial real estate may provide lessons

Income and Wealth

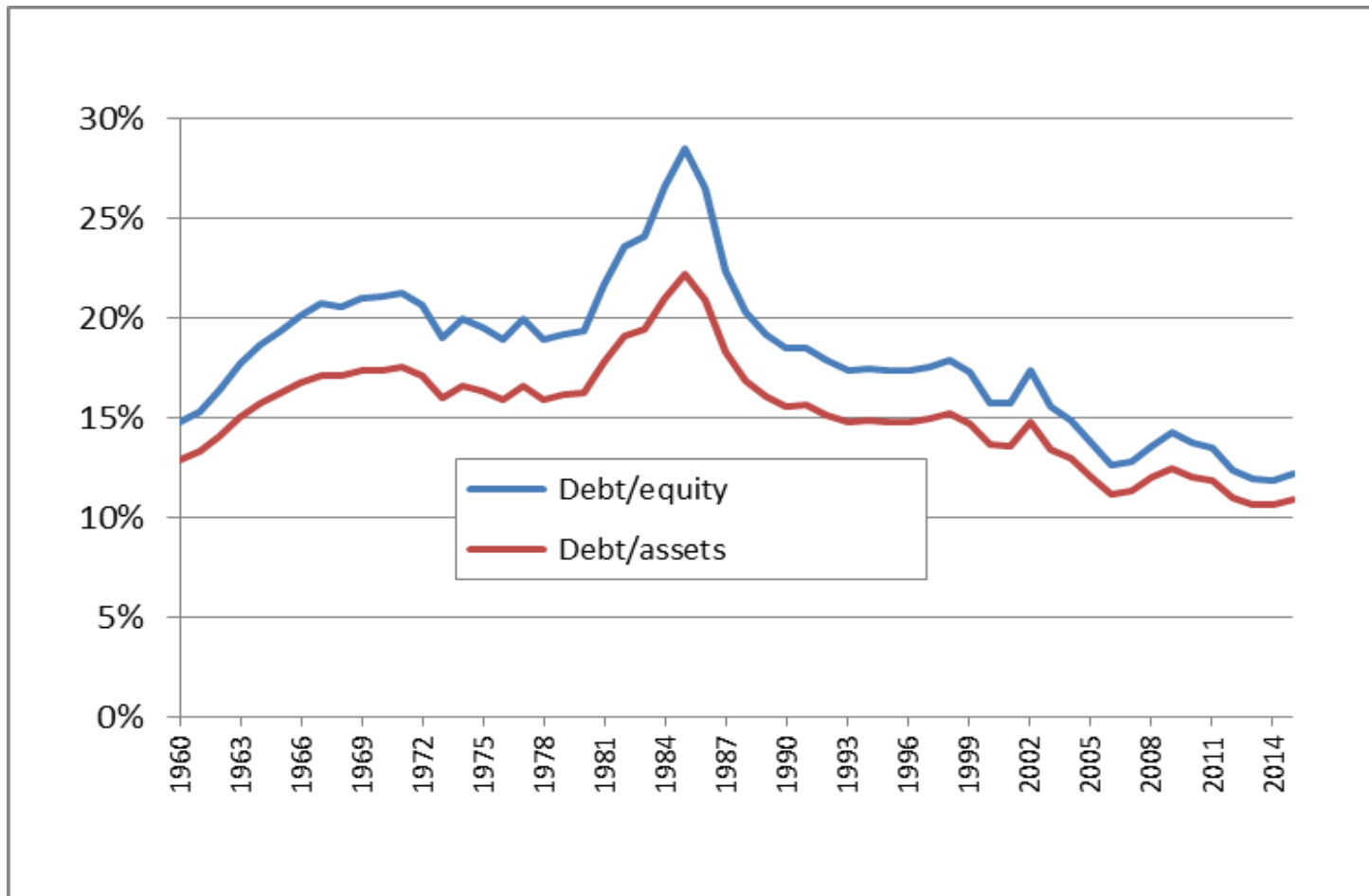
- Much of wealth accumulation through asset appreciation
 - ▣ 69% of farms have income above US median (\$54k)
 - ▣ 97% of farms have wealth above US median (\$83k)
- Strong dependence on off-farm income
 - ▣ 75% of total farm family income from off-farm
Higher for smaller farms, lower for larger

Common to be asked about future path

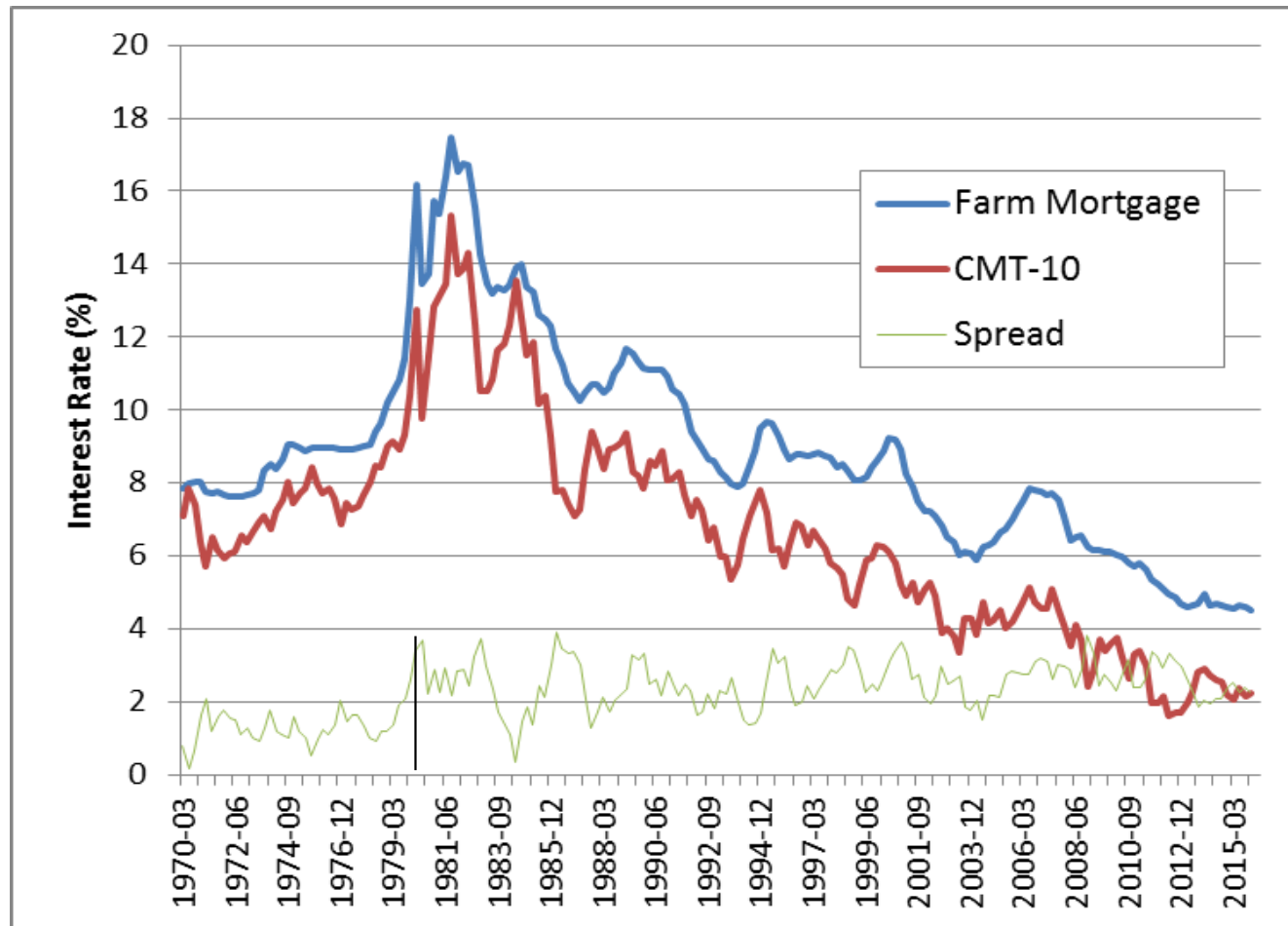
“Is this time different?”

...yes, I think

Aggregate US Debt Ratios, US Ag Sector



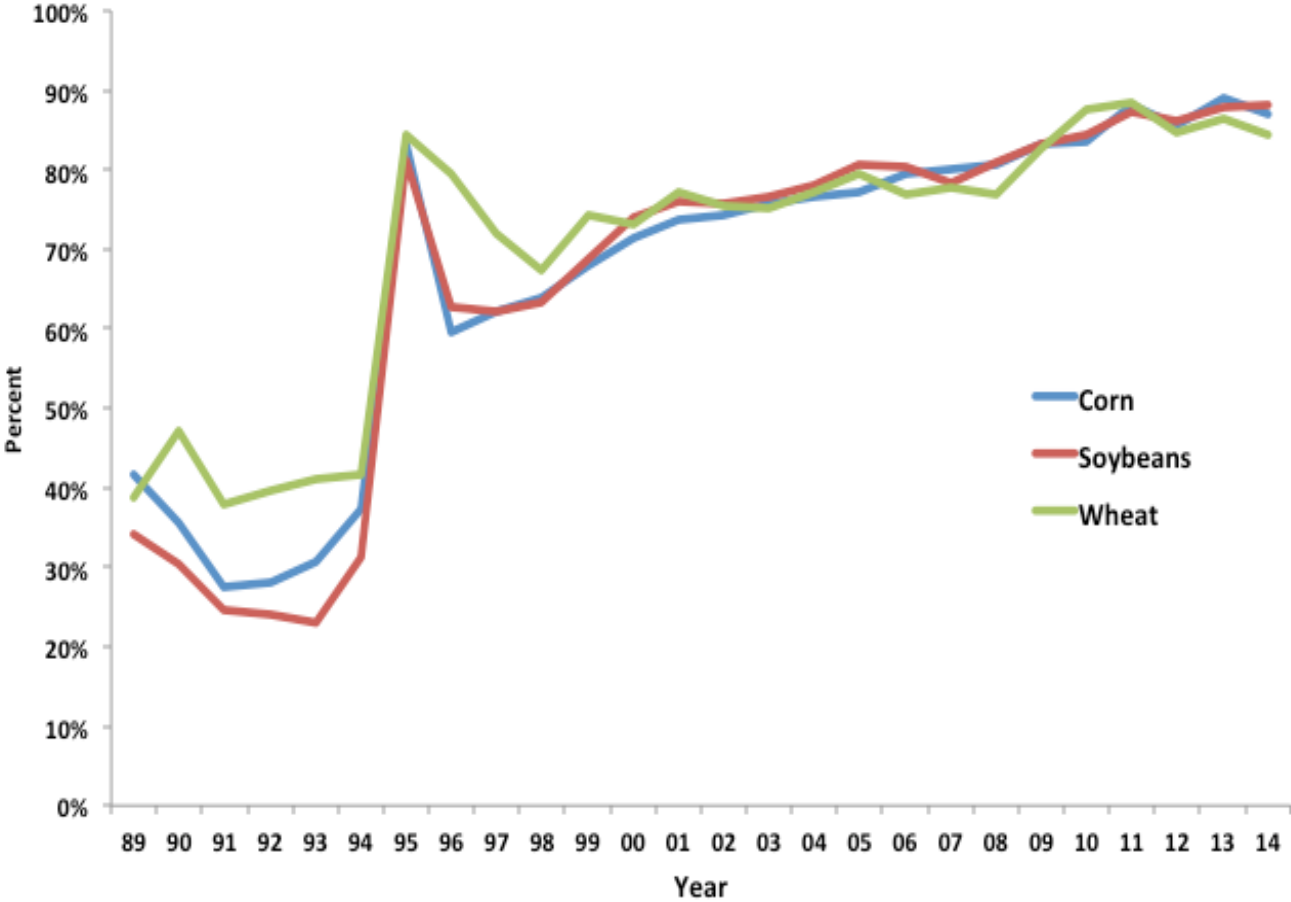
Farm mortgage interest rates and funding relationships



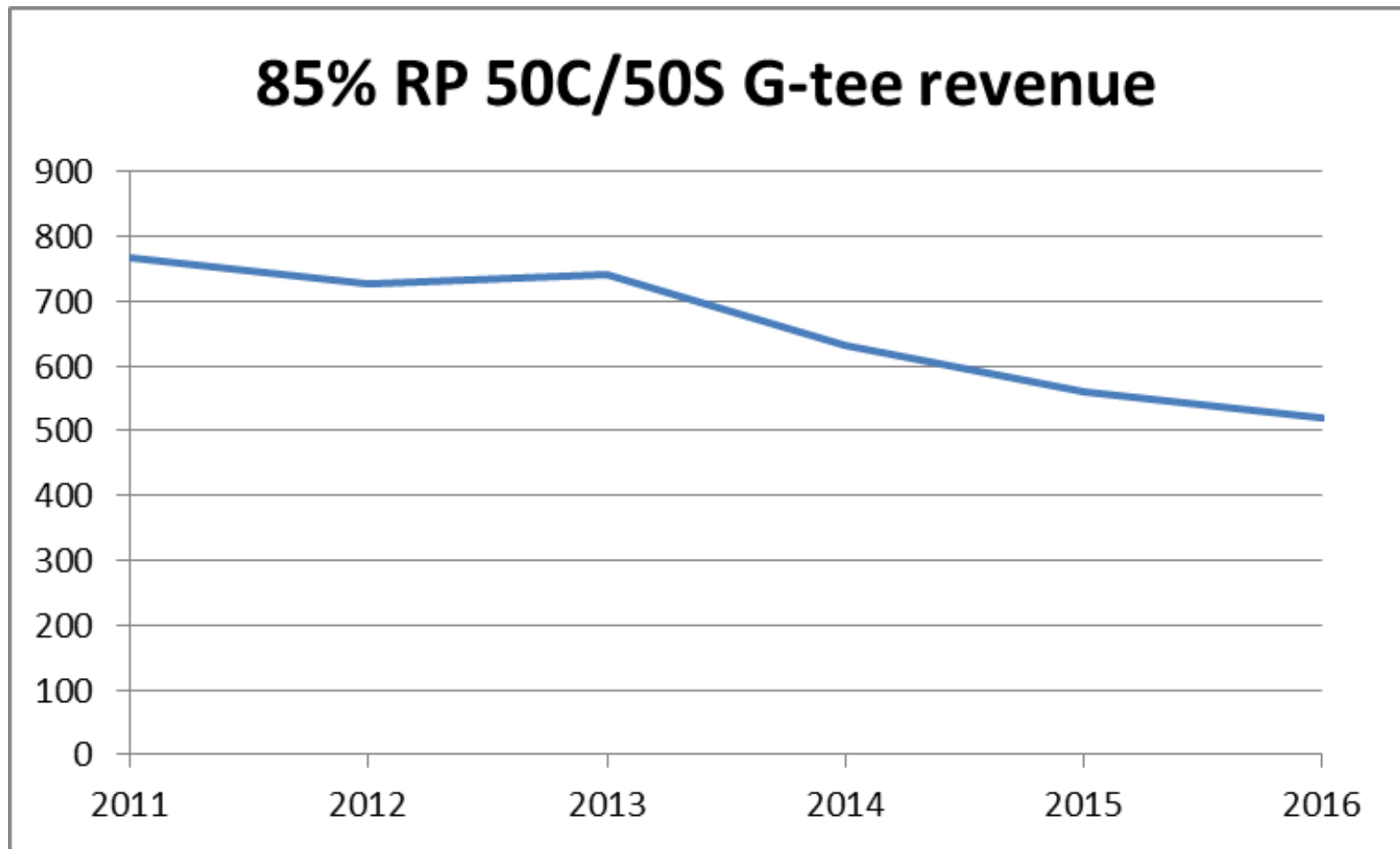
1980s loans could include:
80% LTV,
40-year
amortization

Ave Spread
1970-79 = 1.29%
1980-2015 = 2.52%

Percent Acres Insured, U.S.



Substantial Decline in Guarantees



Structural Issues in changing ownership

- Very low turnover – about 1% per year at arm's length in row crop regions
- Restrictive Farmland Ownership Laws still exist
- Scale of equipment base and tenure issues
- Increasing technical dependence
- Role of commodity title programs
- Institutional interest – fits extremely well, but still de minimus

Near term Farmland Market Issues

- 5-15% further reductions in top half of cash rents seems possible
- Working capital crunches, stress for low tenure operations, some sales as a result. ISPFARMA – buyers are still farmers, cash is still king, -- or at least rock
- Continued movement toward cash and flex cash rent – separation of ownership and operational returns becomes more accepted/understood.
- Debt levels could become more efficient – perhaps not the worst time to add fixed-rate debt under real estate.
- Low Cap Rate “norming” – farmland still makes sense

Near term Farmland Market Issues

- No major impacts on total acreage transacted – aging population arguments have been difficult to confirm, low turnover remains norm.
- Big Data issues – information and decision systems that rely on high resolution or high frequency information increasingly matter as an “input”
- International diversification likely to be attractive as well as across types of assets for investors

Futurecasting

- “Financialization” is likely for the sector.
- Equity or indexing vehicles very positive developments for sector
- Rationalization of recent incomes, reduced importance of Commodity programs
- Attribute Demand (e.g., non-GMO) becomes more direct signal, marginally impacts production
- Some positive outcomes for capital providers likely, balance sheet effects unlikely to trigger “bubble”

Contact and info. sources

<http://farmdocdaily.illinois.edu/>

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<http://farmdoc.illinois.edu/cropins/>

Questions/Discussion

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