



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



United States Department of Agriculture

USDA's  
93rd  
Annual

# Agricultural Outlook Forum

## A New Horizon: The Future of Agriculture

February 23-24, 2017 • Crystal Gateway Marriott Hotel, Arlington, Virginia

Presentation from the USDA Agricultural Outlook Forum 2017

United States Department of Agriculture  
93<sup>rd</sup> Annual Agricultural Outlook Forum  
“A New Horizon: The Future of Agriculture”

February 23-24, 2017  
Arlington, Virginia



United States Department of Agriculture

# U.S. Farm Income and Financial Outlook for 2017

Ag Outlook Forum  
February 23, 2017

Presented by  
Kevin Patrick



# Farm sector summary

2+

million farms

900+

million acres

6+

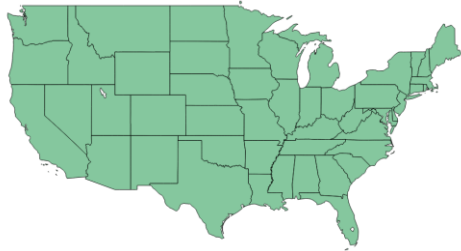
million people living  
in farm households

Source: Farm Income and Wealth Statistics Data Product & Agricultural Census

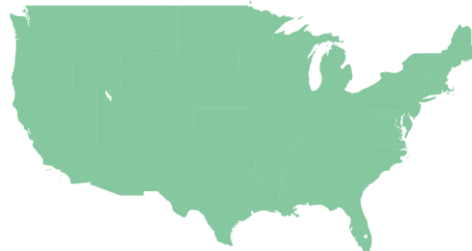


# Data and Analysis

## Farm Sector Income and Wealth Statistics



Historical State Estimates



Historical National Estimates

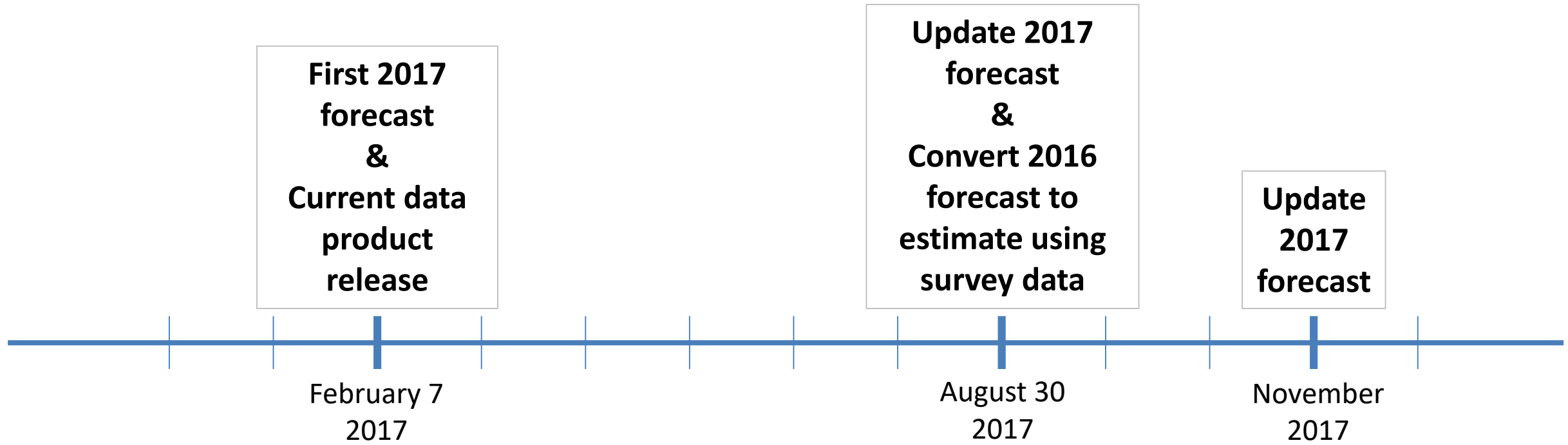


National Forecasts

Reports: <http://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics>



# Farm Sector Income and Wealth Statistics Timeline



Data product updated 3 times per year

Recent Release: **February 7, 2017**

Next Release: **August 30, 2017**



# Farm sector metrics

## Profitability

Net cash income and Net farm income

2017 forecast: Mixed

Prior 5-year trend: Weaken

Key insights:

- **Value of agricultural sector production** is forecast to fall for the third straight year but the rate of decline has slowed.
- **Total production expenses** are forecast to remain stable, after falling for two straight years.

## Solvency

Debt-to-asset ratio

2017 forecast: Weaken

Prior 5-year trend: Weaken

Key insights:

- Declining **farm sector assets** (down 1.1 percent) and rising **debt** (up 5.2 percent) are forecast to erode **equity** by 2.1 percent.

## Liquidity

Working capital and Current ratio

2017 forecast: Weaken

Prior 5-year trend: Weaken

Key insights:

- **Current assets** are forecast to decline by 6.7 percent, while **current debt** is expected to grow by 5.5 percent.





# Farm sector metrics

## Profitability

Net cash income and Net farm income

2017 forecast: Mixed

Prior 5-year trend: Weaken

Key insights:

- **Value of agricultural sector production** is forecast to fall for the third straight year but the rate of decline has slowed.
- **Total production expenses** are forecast to remain stable, after falling for two straight years.

## Solvency

Debt-to-asset ratio

2017 forecast: Weaken

Prior 5-year trend: Weaken

Key insights:

- Declining **farm sector assets** (down 1.1 percent) and rising **debt** (up 5.2 percent) are forecast to erode **equity** by 2.1 percent.

## Liquidity

Working capital and Current ratio

2017 forecast: Weaken

Prior 5-year trend: Weaken

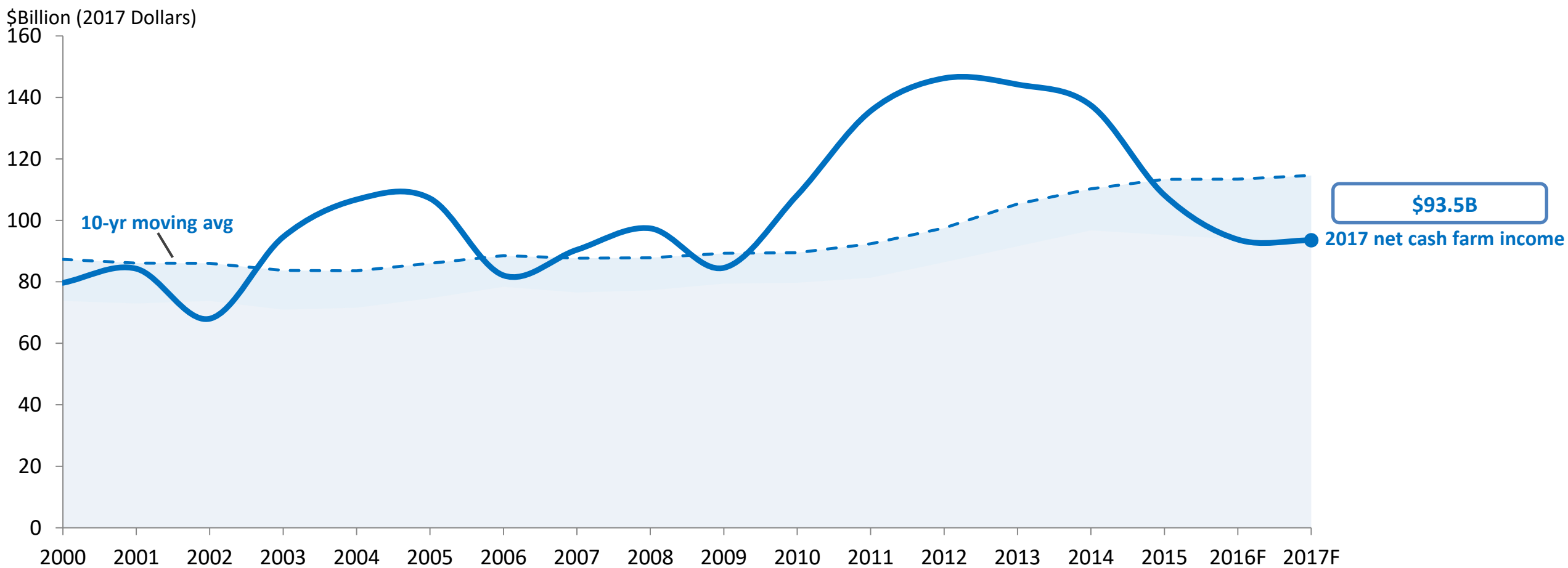
Key insights:

- **Current assets** are forecast to decline by 6.7 percent, while **current debt** is expected to grow by 5.5 percent.





# Net cash farm income forecast to fall below 10-year moving average



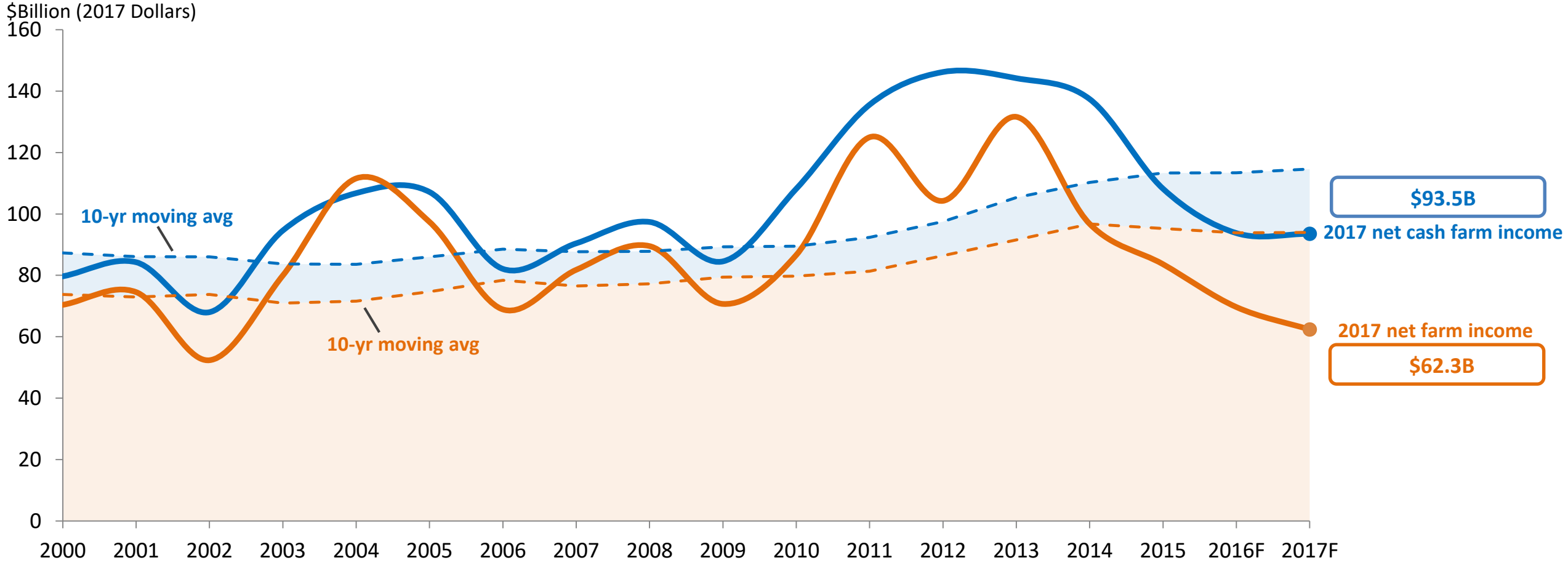
F=forecast

Values are adjusted using the chain-type GDP deflator, base year=2017.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 7, 2017.



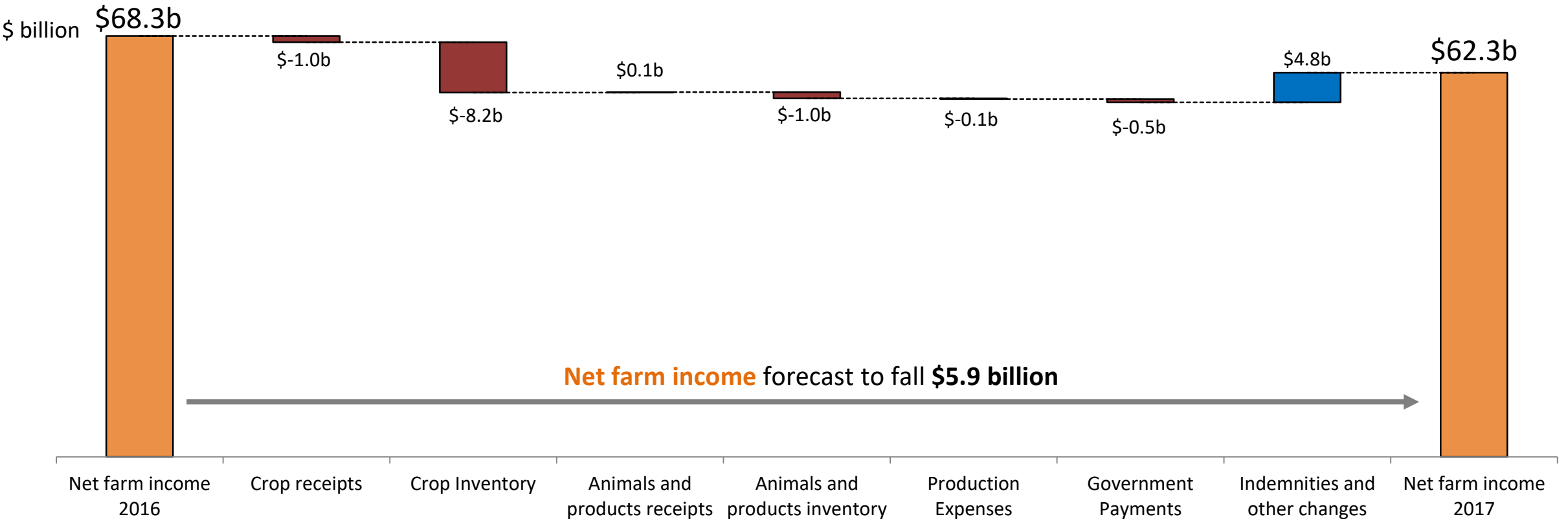
# Net cash farm income and net farm income forecast to fall below their 10-year moving averages



F=forecast  
 Values are adjusted using the chain-type GDP deflator, base year=2017.  
 Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 7, 2017.



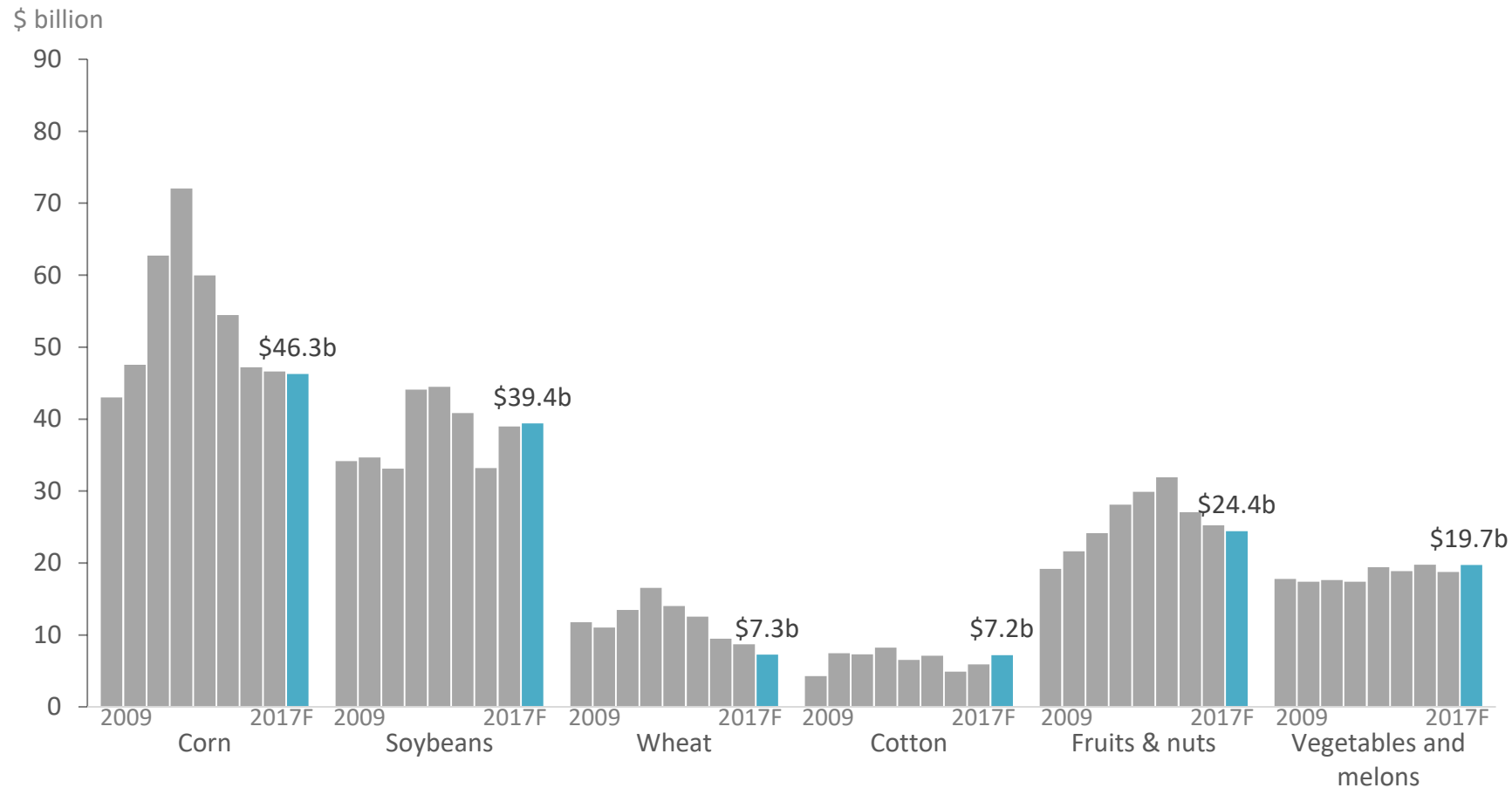
# Net farm income forecast driven lower by changes in crop inventory, partially offset by higher Federal indemnity payments, relative to 2016



Note: Data from 2016 and 2017 are forecasts.  
 Source: USDA, Economic Research Service, Farm Income & Wealth Statistics.  
 Data as of February 7, 2017



# Crop receipts forecast stable for most major crops in 2017



F= Forecast.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics

Data as of February 7, 2017

**Crop** cash receipts forecast **flat**.

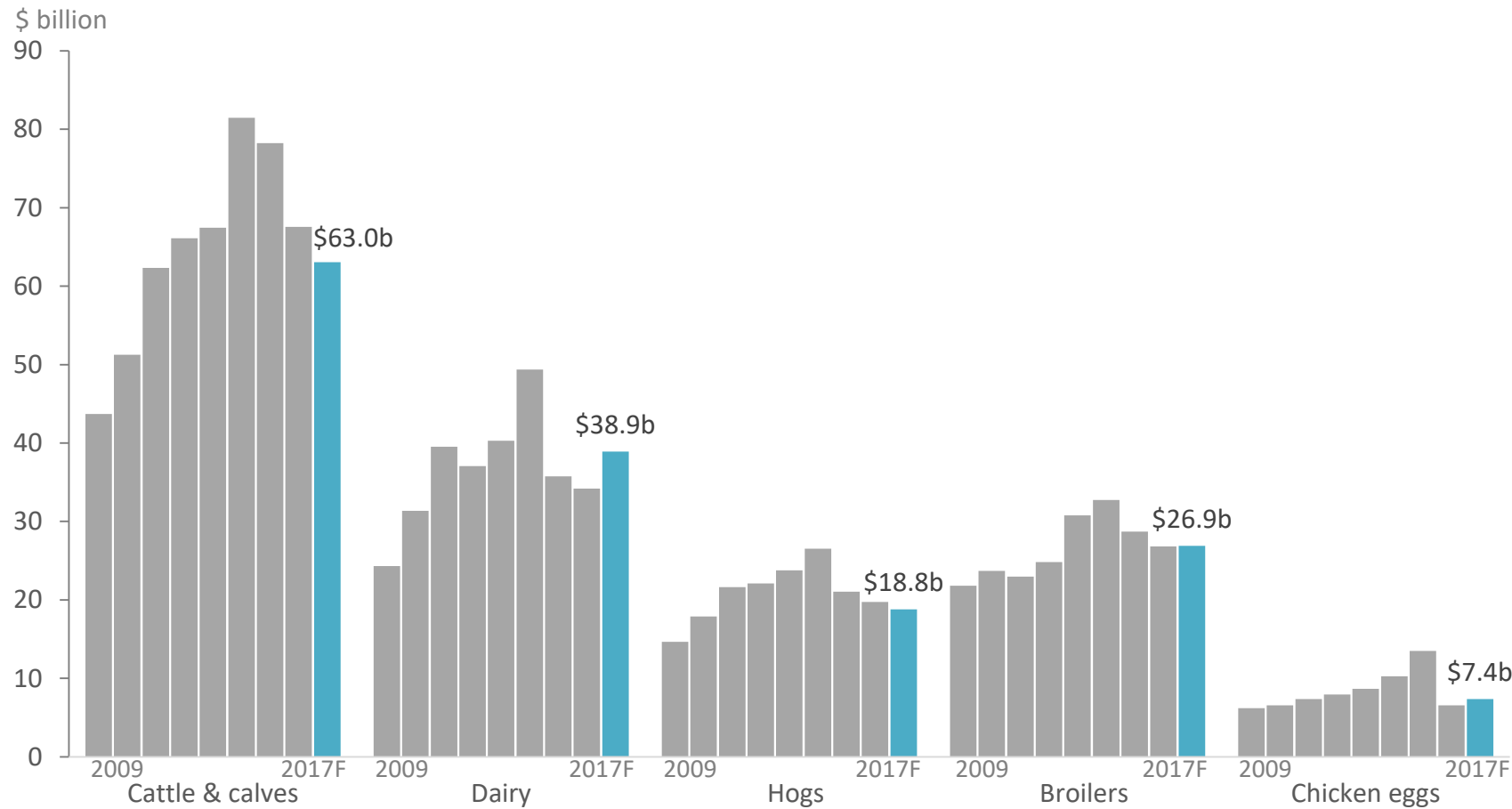
**Corn** and soybeans cash receipts also forecast steady.

**Cotton** receipts expected to grow **21.5%** on higher prices and production.

**Wheat** receipts forecast to **16.6%** decline on lower prices and production.



# Cattle/calves and dairy cash receipts expected to move in opposite directions in 2017



**Animal/product** cash receipts **forecast stable** in 2017.

**Cattle/calf** receipts down **6.7%** on lower price forecast.

**Dairy cash** receipts forecast **13.7%** higher on milk prices and production.

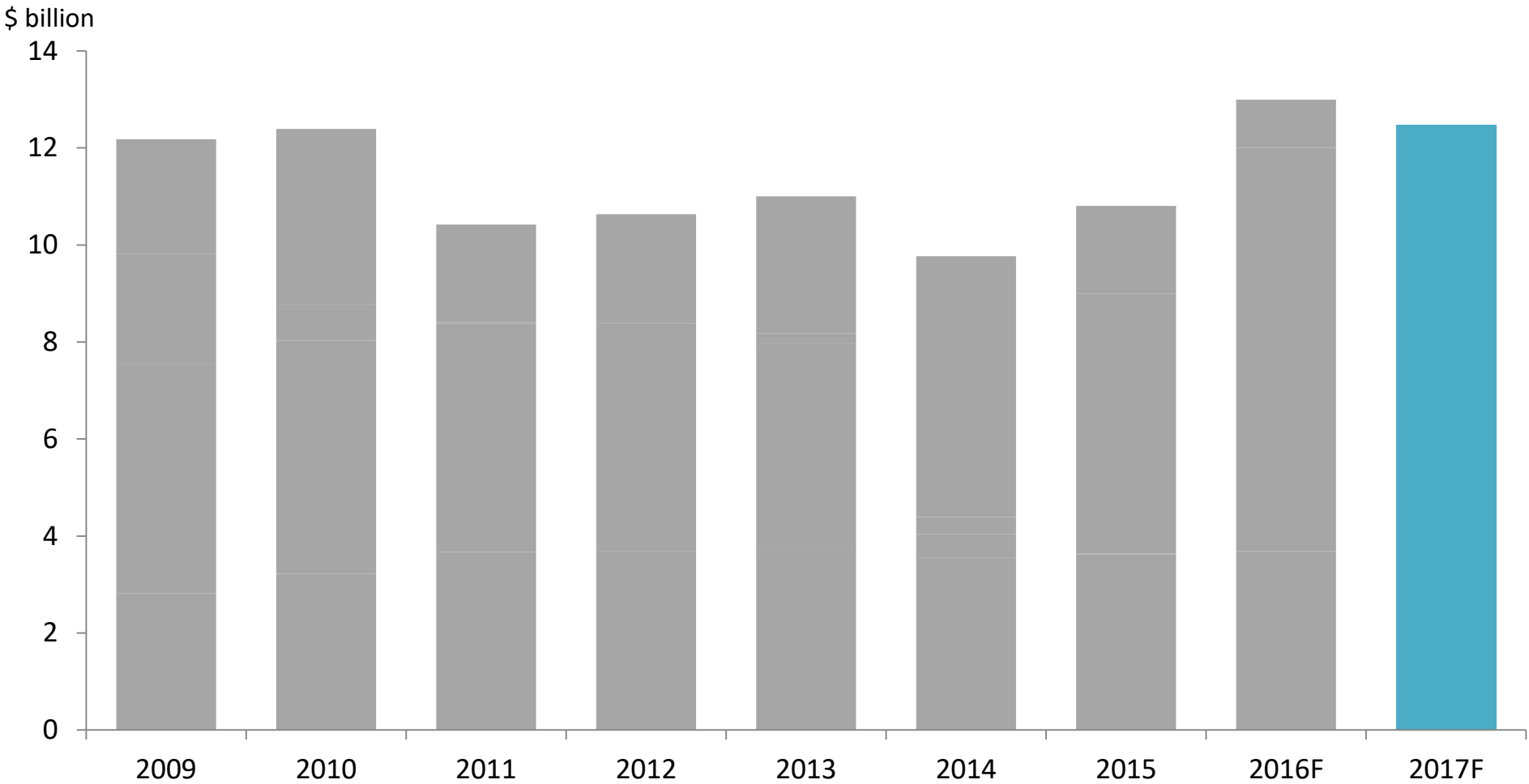
F= Forecast.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics

Data as of February 7, 2017



# Federal Government payments forecast to decrease 4 percent to \$12.5 billion in 2017



This would be the second highest **Federal Government payments** to farmers in **10** years.

Federal Government payments include Agricultural Risk Coverage (ARC), Price Loss Coverage (PLC), Conservation, and other payments.

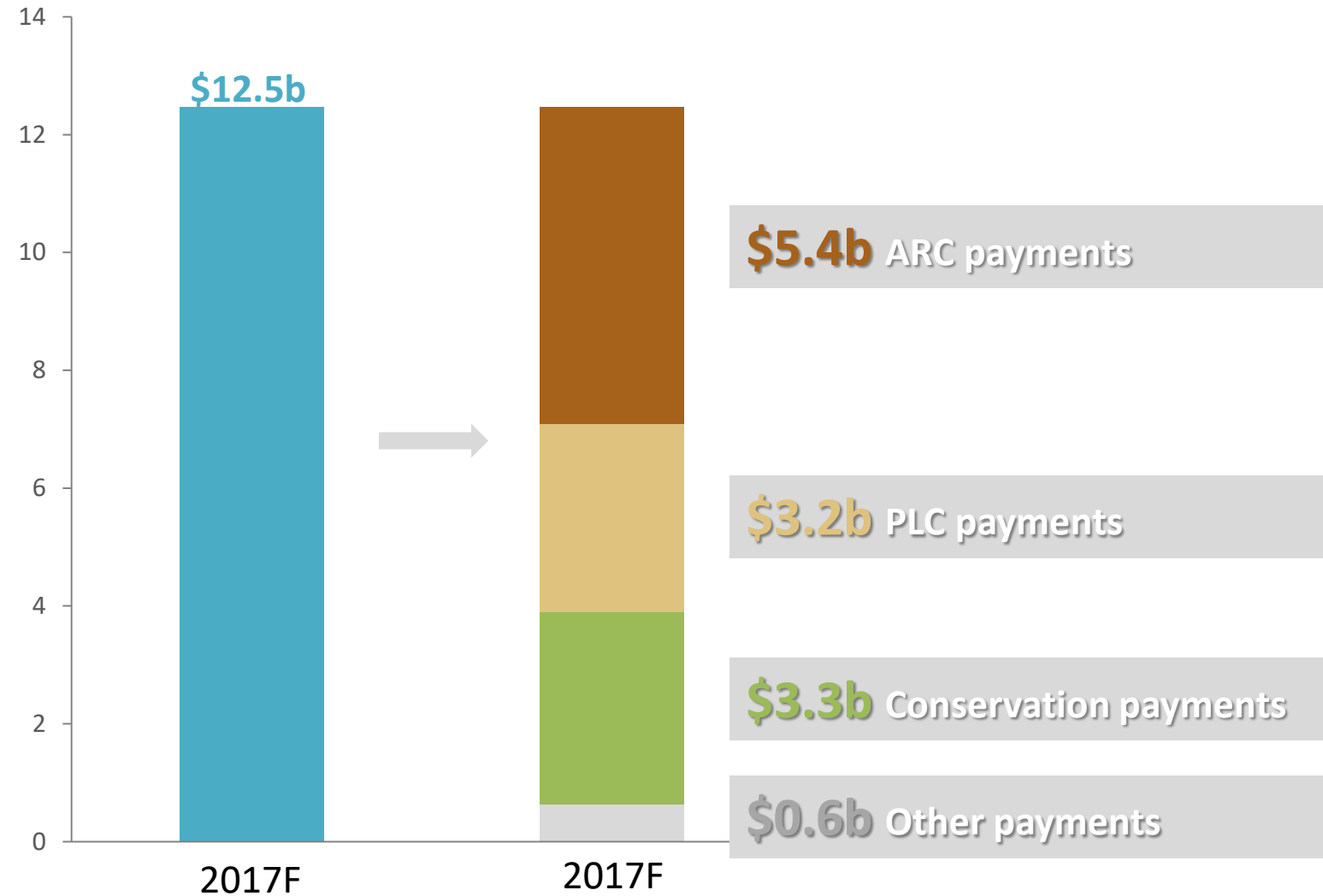
F= Forecast.  
 Source: USDA, Economic Research Service, Farm Income and Wealth Statistics using FSA, NRCS, and CCC data. Data as of February 7, 2017.





# Agriculture Risk Coverage payments forecast to makeup largest share of payments in 2017

\$ billion



Majority of **ARC** payments expected for:  
Corn

Majority of **PLC** payments expected for:  
Wheat  
Long-grain rice  
Peanuts

F= Forecast.

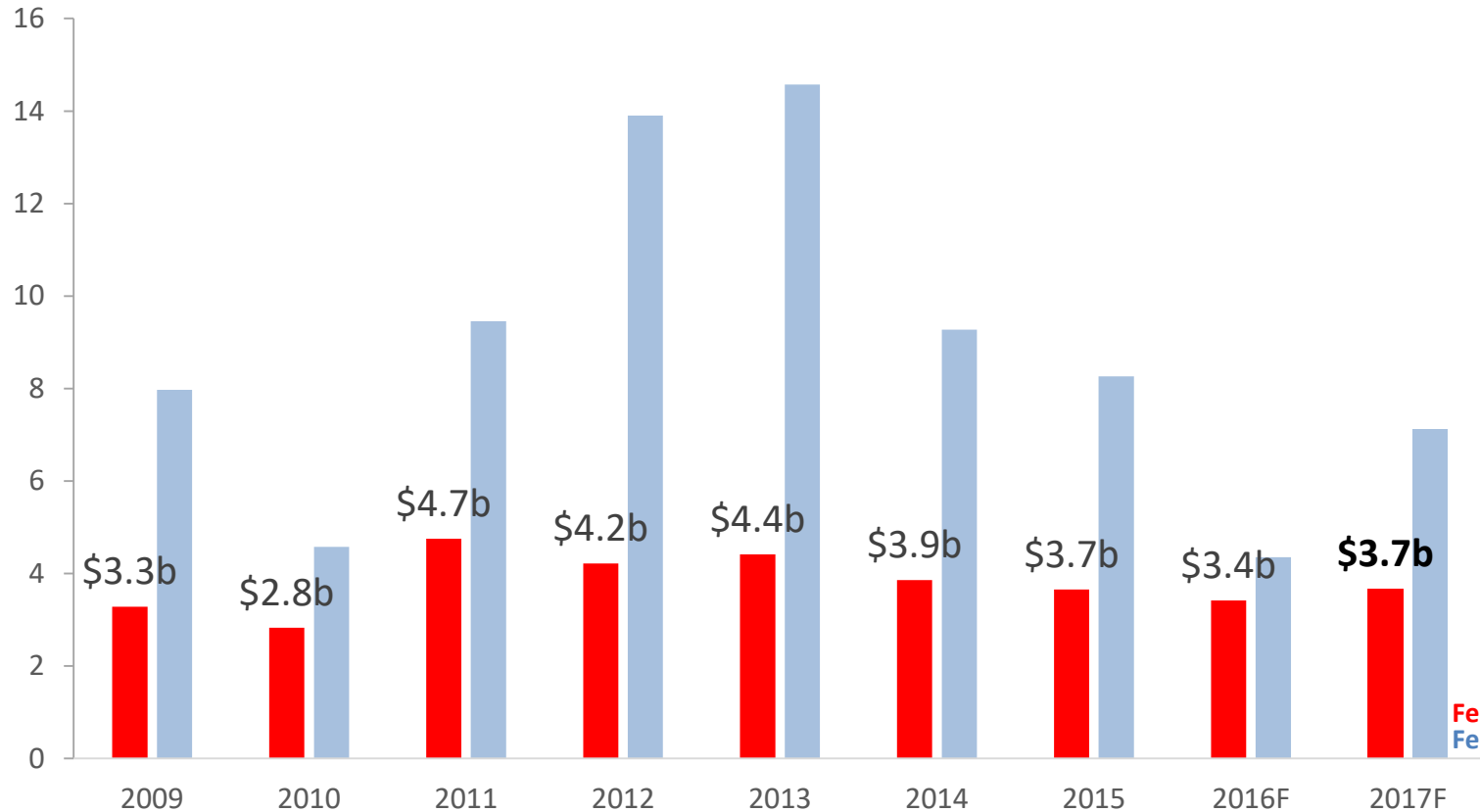
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics using FSA, NRCS, and CCC data. Data as of February 7, 2017.





# Federal commodity insurance premiums relatively stable over time and forecast stable in 2017

\$ billion



The farmers' share of **Federal commodity insurance premiums** forecast up \$0.3 billion.

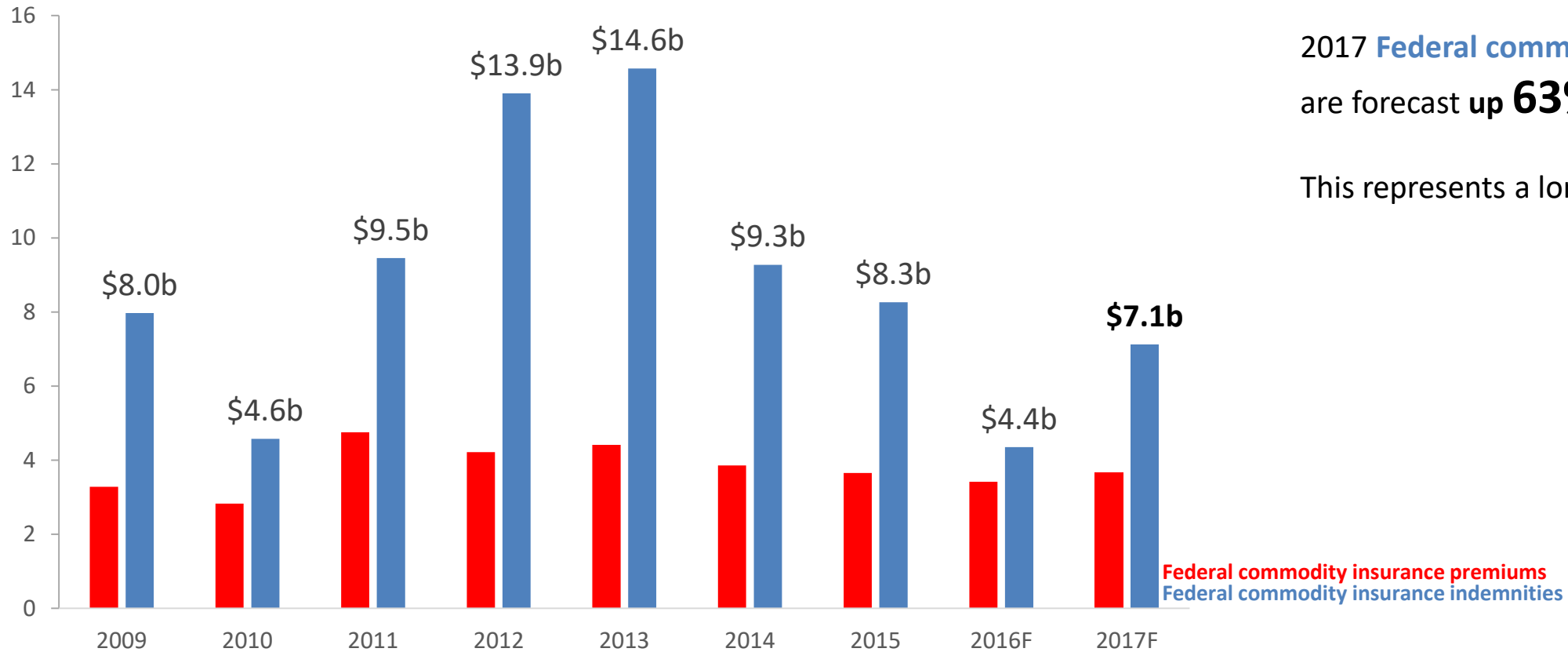
Federal commodity insurance premiums  
Federal commodity insurance indemnities

F= Forecast.  
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics  
Data as of February 7, 2017



# Federal commodity insurance indemnities much more volatile, forecast up in 2017

\$ billion



2017 Federal commodity insurance indemnities are forecast up **63%** (\$2.8 billion) from 2016.

This represents a long-run 20-year average.

F= Forecast.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics

Data as of February 7, 2017

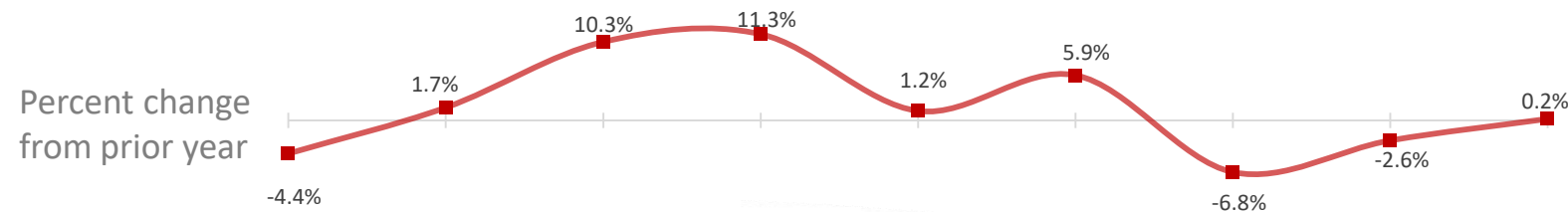


# Total **cash expenses** forecast to flatten in 2017



**Cash expenses** grew annually by **6.0%** on average from 2009 to 2014.

Forecast to shrink by **3.1%** on average from 2014 to 2017.

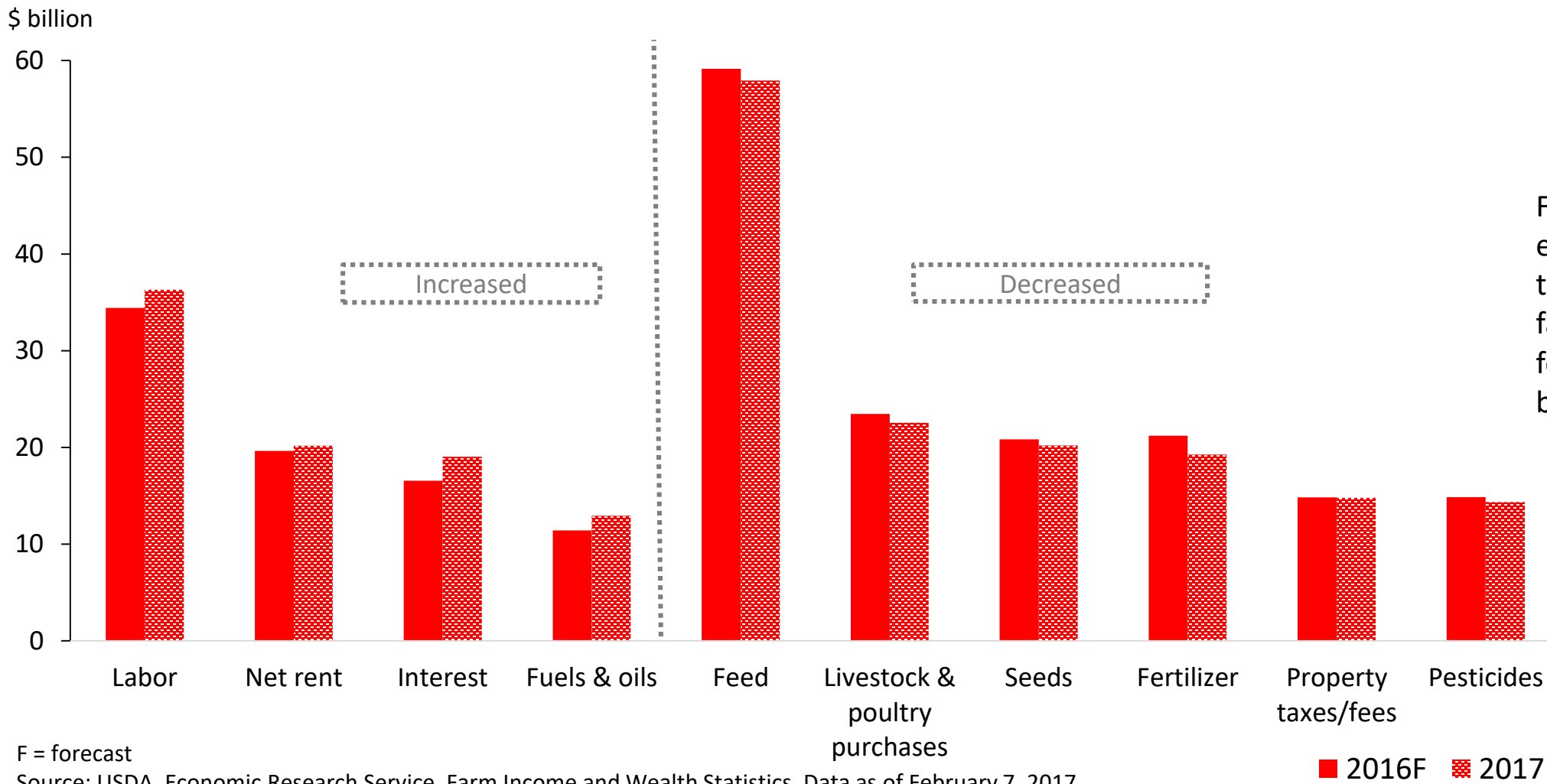


F= Forecast.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics Data as of February 7, 2017



# Reduced spending on livestock purchases and fertilizer projected to lead cash expenses lower



Forecast indicates a drop in expenses for inputs that traditionally come from the farm sector, including feed, feeder cattle, and barrows/gilts.



# Farm sector metrics

## Profitability

Net cash income and Net farm income

2017 forecast: Mixed

Prior 5-year trend: Weaken

Key insights:

- **Value of agricultural sector production** is forecast to fall for the third straight year but the rate of decline has slowed.
- **Total production expenses** are forecast to remain stable, after falling for two straight years.

## Solvency

Debt-to-asset ratio

2017 forecast: Weaken

Prior 5-year trend: Weaken

Key insights:

- Declining **farm sector assets** (down 1.1 percent) and rising **debt** (up 5.2 percent) are forecast to erode **equity** by 2.1 percent.

## Liquidity

Working capital and Current ratio

2017 forecast: Weaken

Prior 5-year trend: Weaken

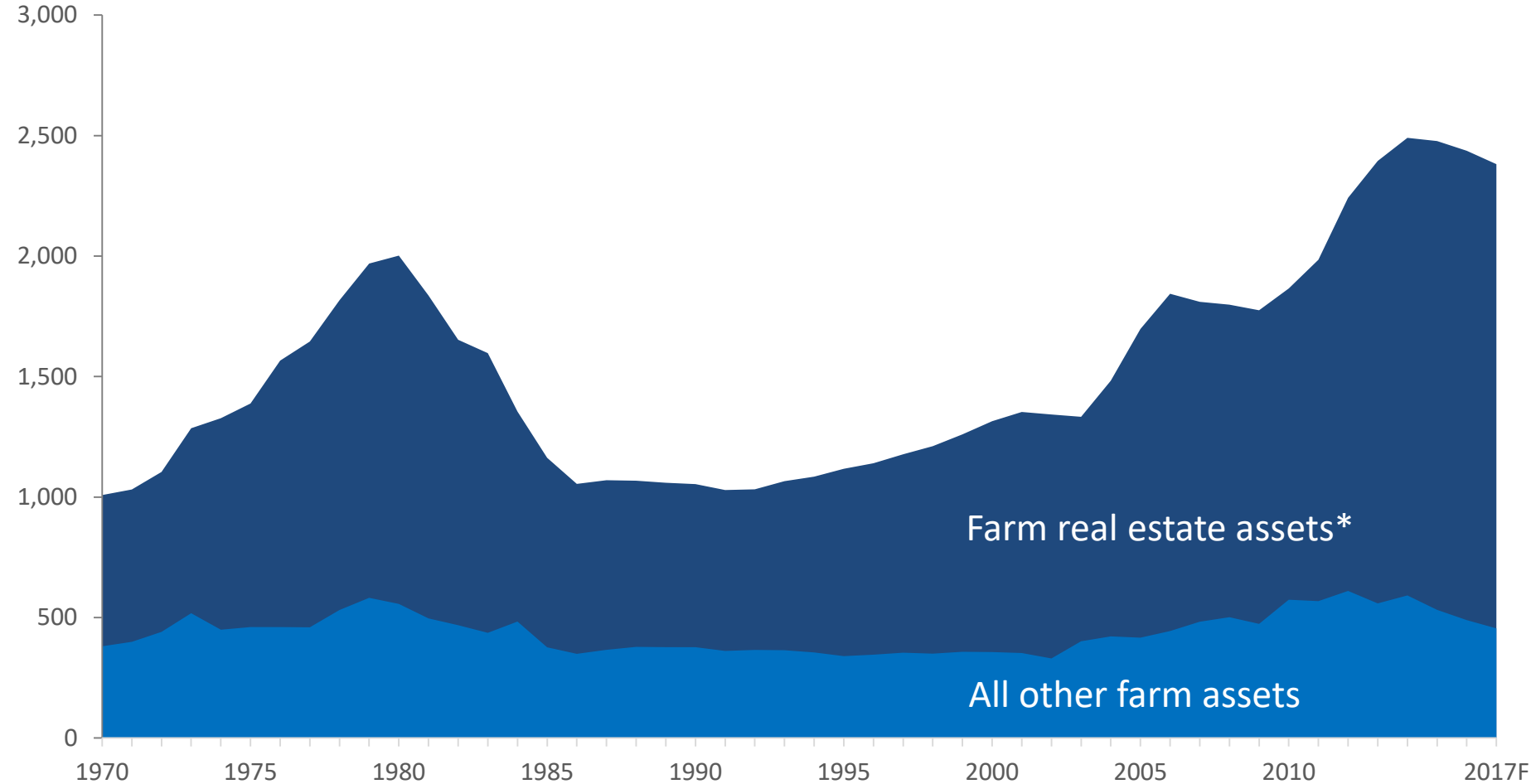
Key insights:

- **Current assets** are forecast to decline by 6.7 percent, while **current debt** is expected to grow by 5.5 percent.



# Farm real estate assets\* represent the majority of the sector's assets

\$ Billion (2017 Dollars)



Inflation-adjusted value of farm assets forecast **down 2.1%** relative to 2015, including real estate (**down 1.8%**)

F= Forecast. Values are adjusted using the chain-type GDP deflator, base year=2017.

\*Real estate includes the value of land and buildings

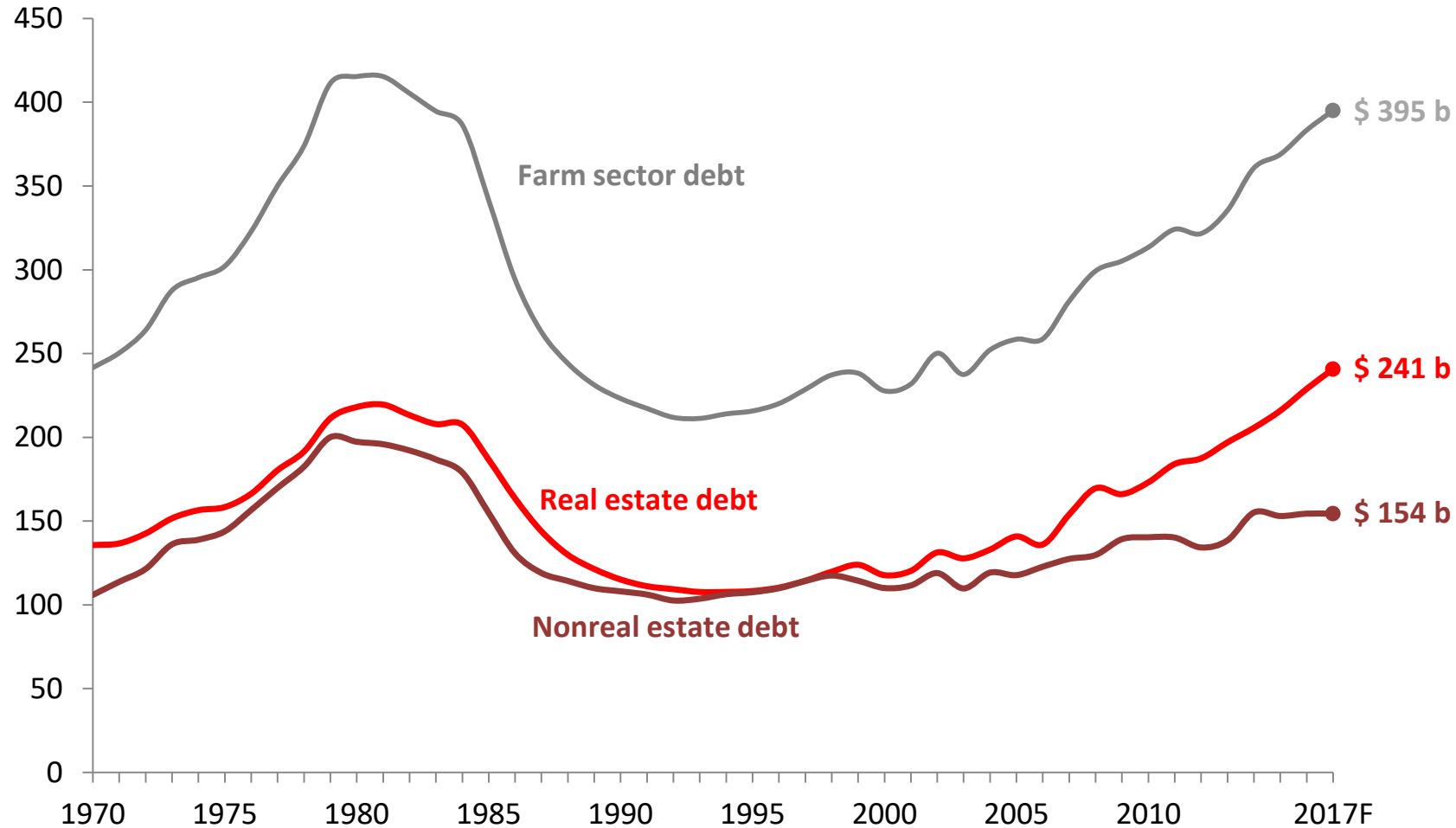
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 7, 2017.





# Farm sector debt forecast to increase in 2017 driven by **real estate debt**

\$ billion (2017 Dollars)



**Nonreal estate debt** peaked in 2014 and remained stable since.

F= Forecast. Values are adjusted using the chain-type GDP deflator, base year=2017.

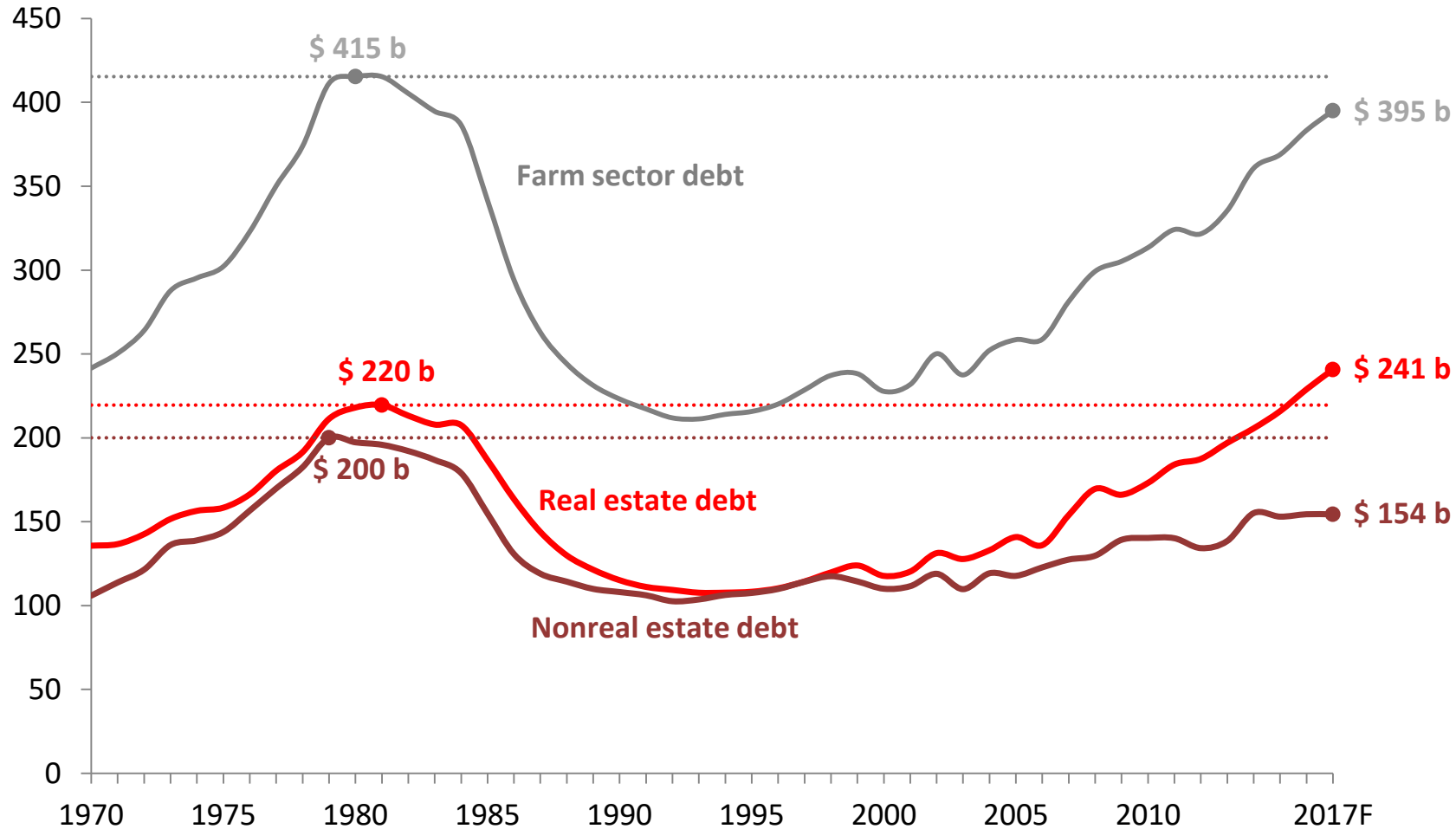
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 7, 2017.





# Farm **real estate debt** forecast above 1980's peak

\$ billion (2017 Dollars)



**Nonreal estate debt** peaked in 2014 and remained stable since.

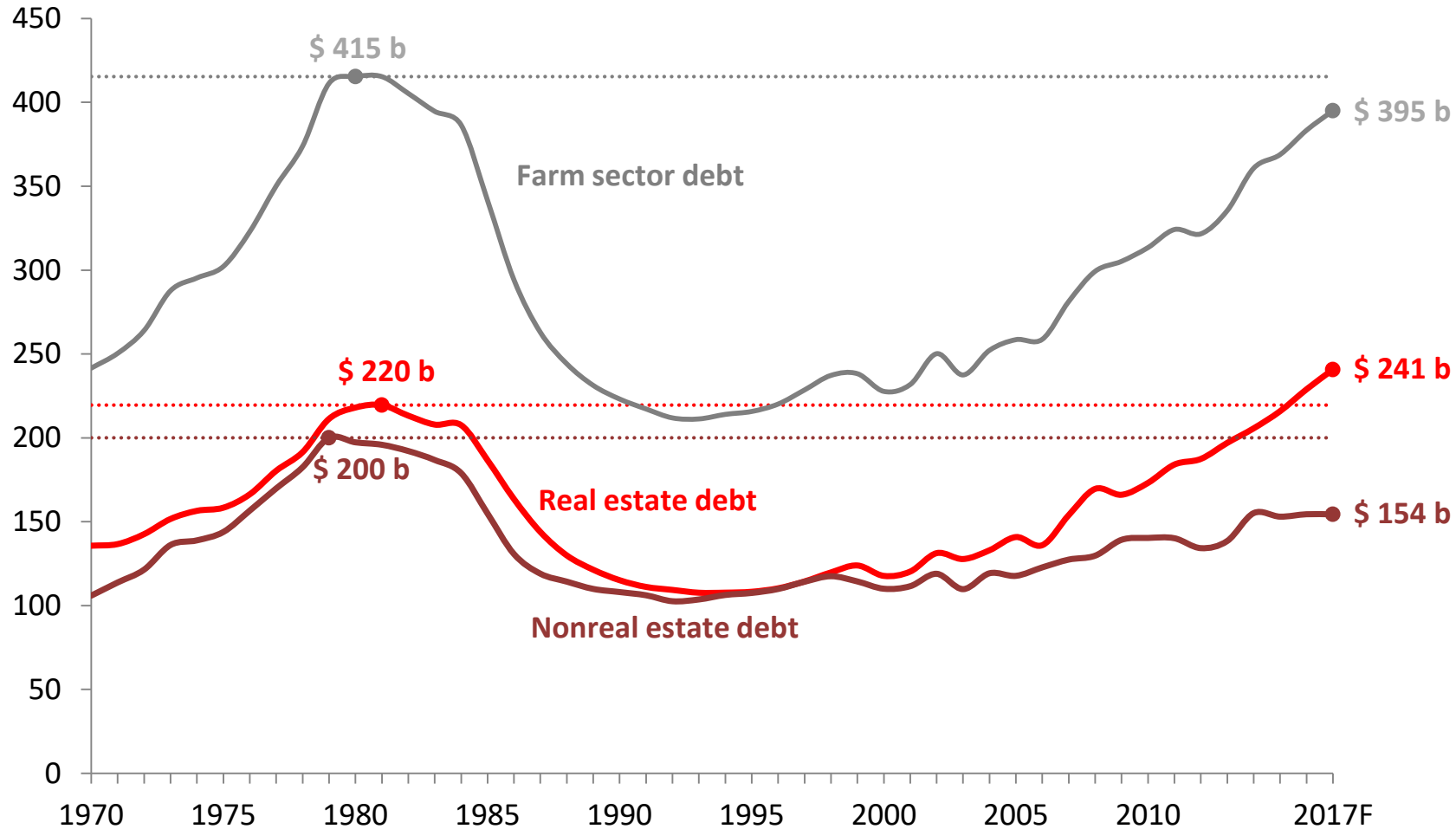
F= Forecast. Values are adjusted using the chain-type GDP deflator, 2009=100.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 7, 2017.



# Farm **real estate debt** forecast above 1980's peak

\$ billion (2017 Dollars)



However, interest rates farmers face are much different than in the 1980's.

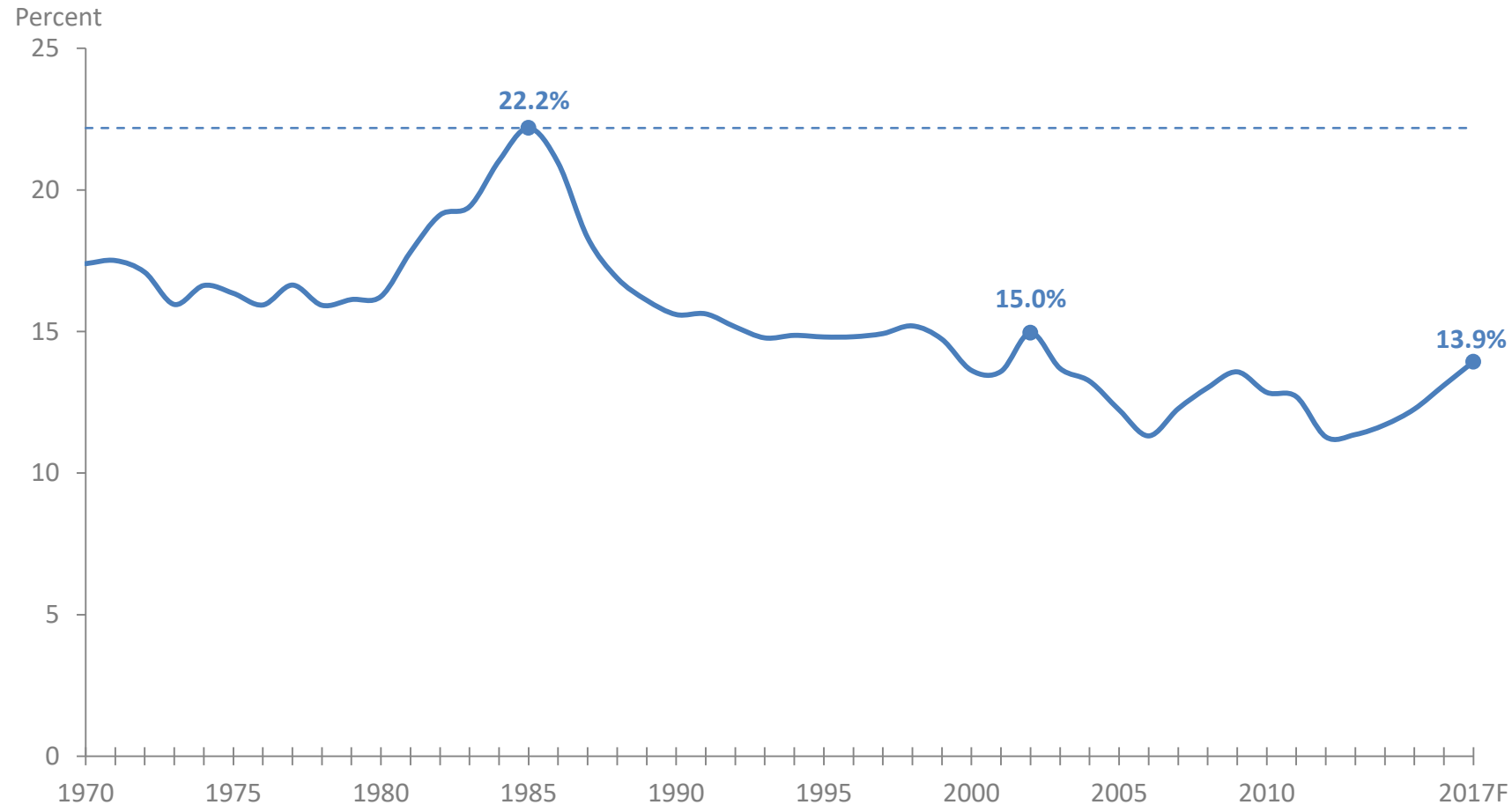
	1981	2017F
Total debt	11.2%	4.8%
Real estate	9.4%	4.9%
Nonreal estate	13.3%	4.6%

F= Forecast. Values are adjusted using the chain-type GDP deflator, 2009=100.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 7, 2017.



# The farm sector **debt-to-asset** ratio expected to continue upward trend in 2017



The **Debt-to-asset (D/A)** is a solvency ratio. Higher values indicate higher likelihood of default and decreased ability to overcome adverse financial events.

If realized, this would be the highest **D/A** since 2002 when it reached 15%

For the fifth straight year, the farm sector **D/A** ratio is forecast to rise, but remain low by historical standards (since 1970).

F= Forecast.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 7, 2017



# Farm sector metrics

## Profitability

Net cash income and Net farm income

2017 forecast: Mixed

Prior 5-year trend: Weaken

Key insights:

- **Value of agricultural sector production** is forecast to fall for the third straight year but the rate of decline has slowed.
- **Total production expenses** are forecast to remain stable, after falling for two straight years.

## Solvency

Debt-to-asset ratio

2017 forecast: Weaken

Prior 5-year trend: Weaken

Key insights:

- Declining **farm sector assets** (down 1.1 percent) and rising **debt** (up 5.2 percent) are forecast to erode **equity** by 2.1 percent.

## Liquidity

Working capital and Current ratio

2017 forecast: Weaken

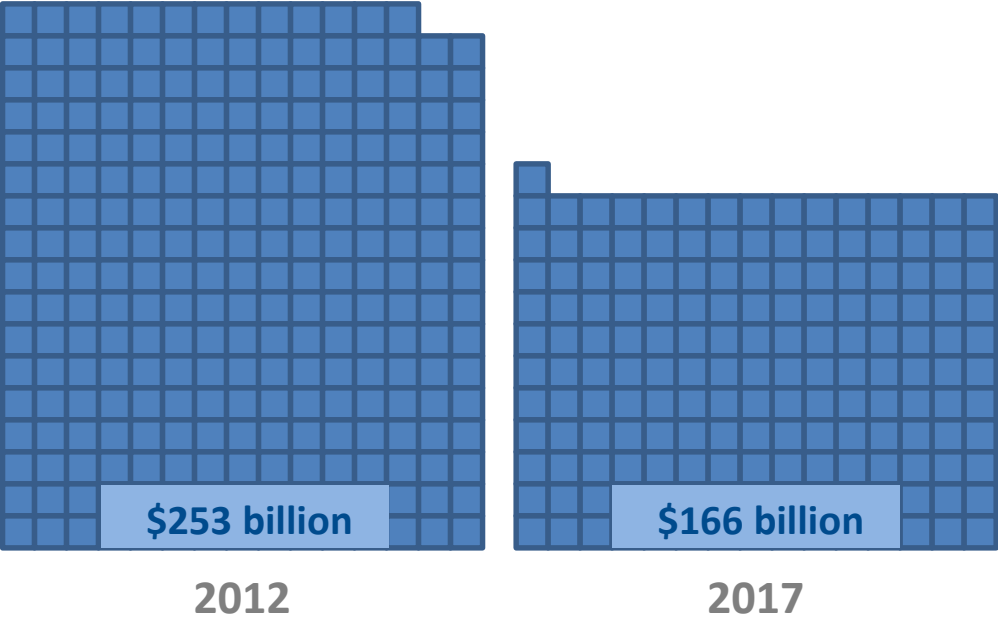
Prior 5-year trend: Weaken

Key insights:

- **Current assets** are forecast to decline by 6.7 percent, while **current debt** is expected to grow by 5.5 percent.



# Current assets forecast down \$87 billion between 2012 and 2017



### Current assets includes:

- Financial assets
- Net accounts receivable
- Crop and non-breeding animal inventory
- Purchased input inventory

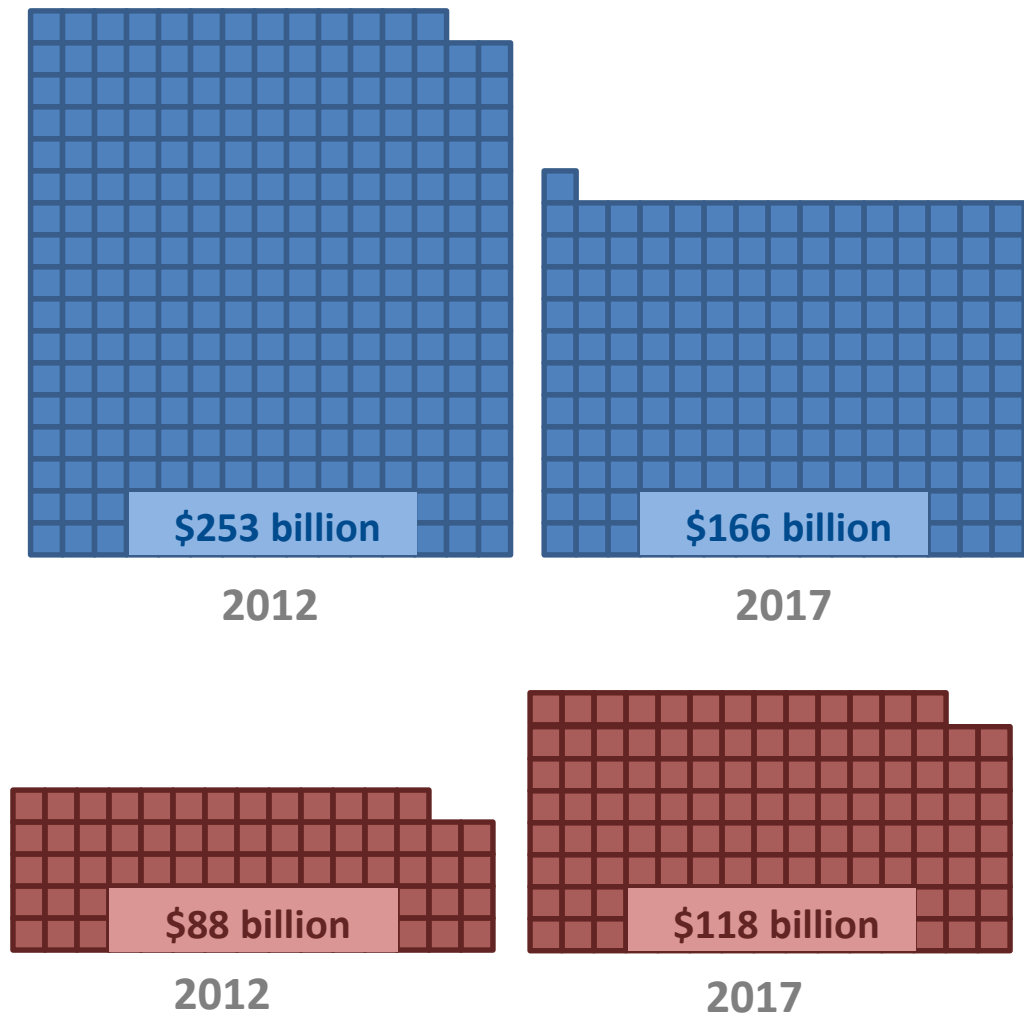
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 7, 2017.

□ = \$1 billion

Liquidity



# Current debt forecast up \$30 billion between 2012 and 2017



## Current assets includes:

- Financial assets
- Net accounts receivable
- Crop and non-breeding animal inventory
- Purchased input inventory

## Current debt includes:

- Real estate debt due within 12 months
- Nonreal estate debt due within 12 months

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 7, 2017.

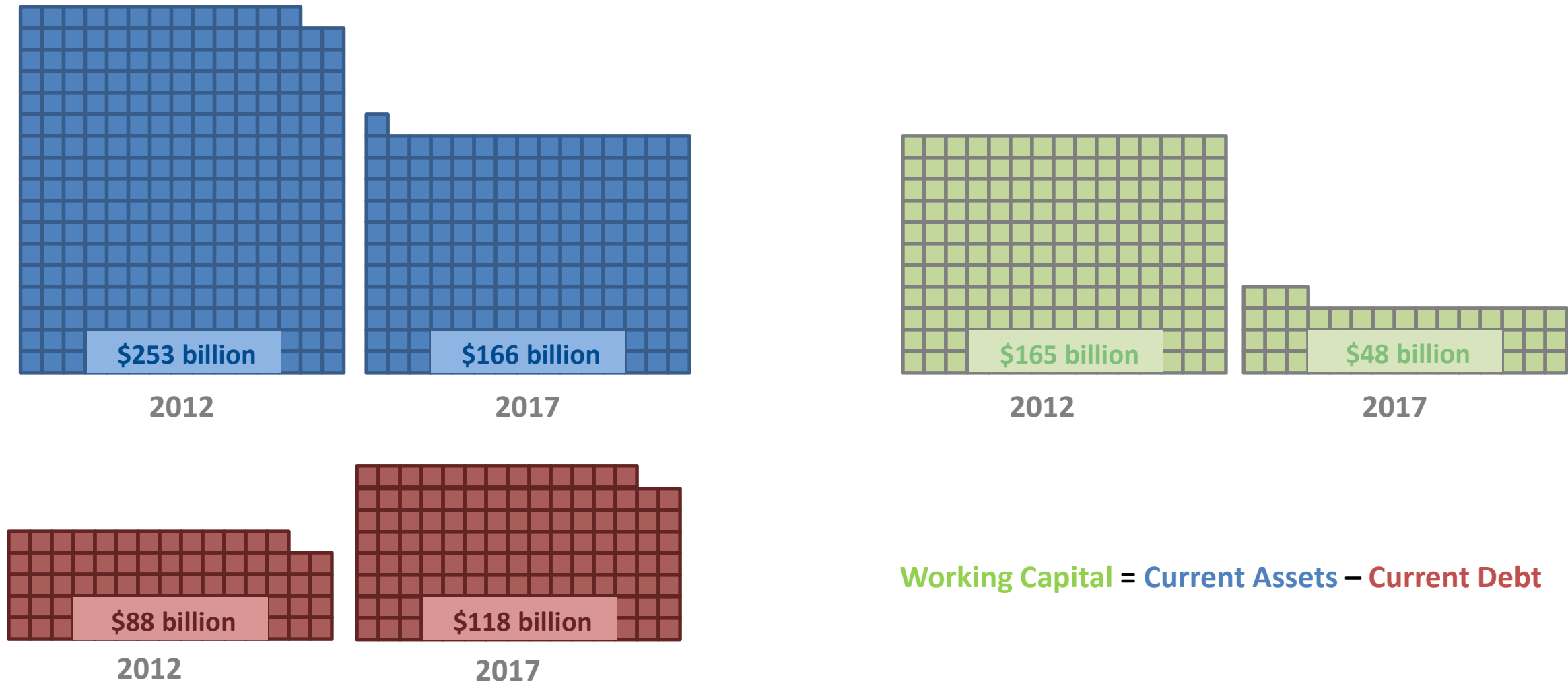
□ = \$1 billion

Liquidity





# Working capital forecast to shrink between 2012 and 2017



**Working Capital = Current Assets – Current Debt**

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 7, 2017.

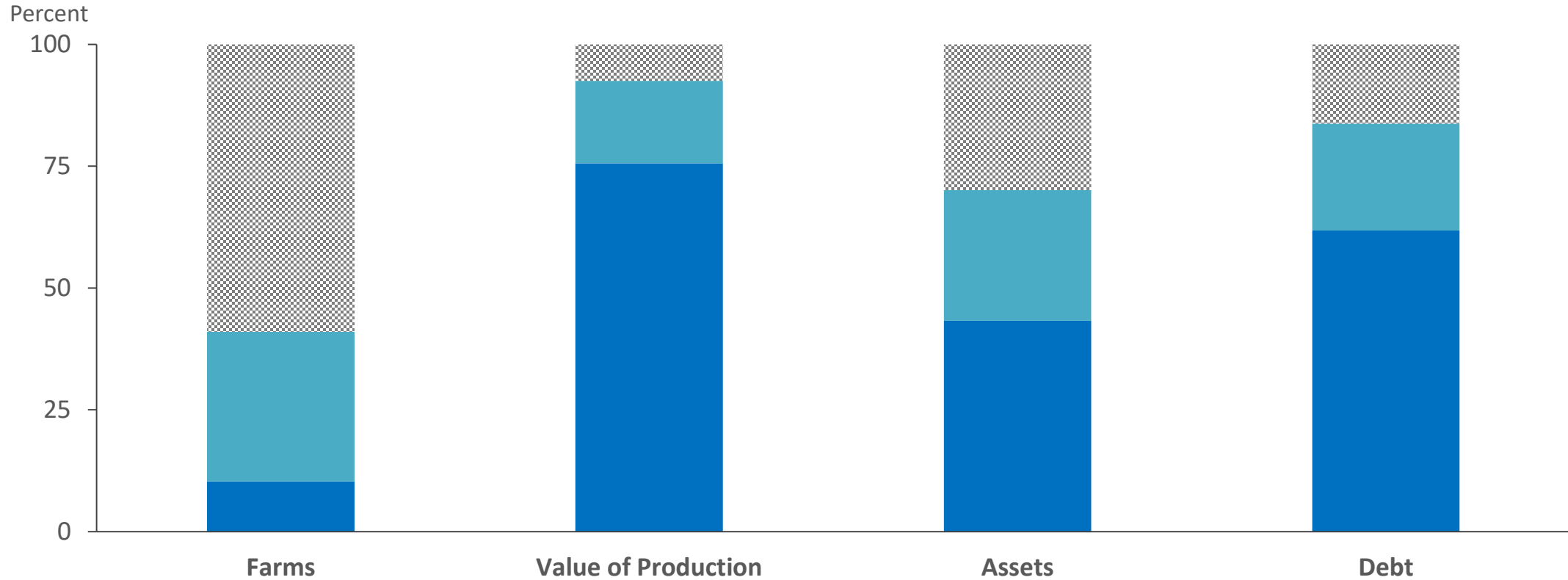
□ = \$1 billion

Liquidity





# Farm businesses account for 41% of farms, but over 90% of value of production

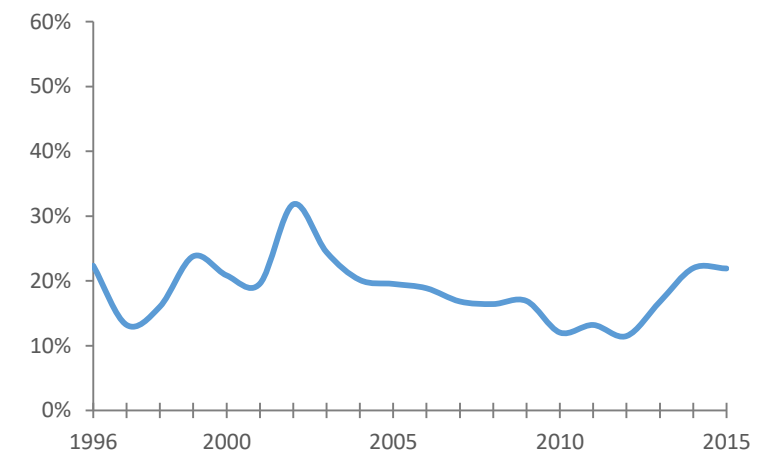
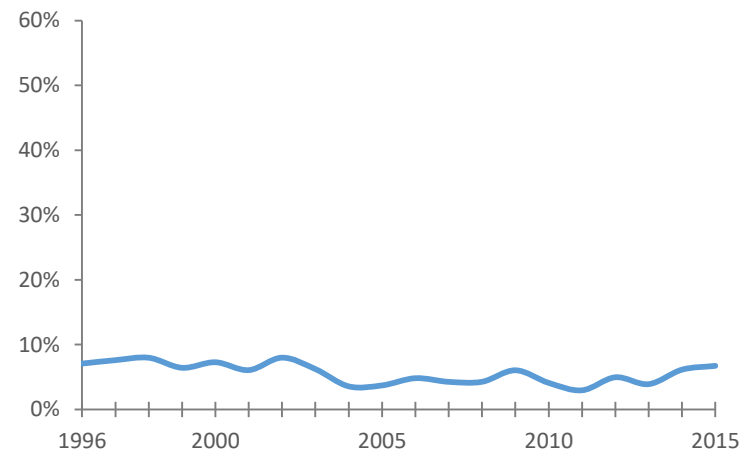
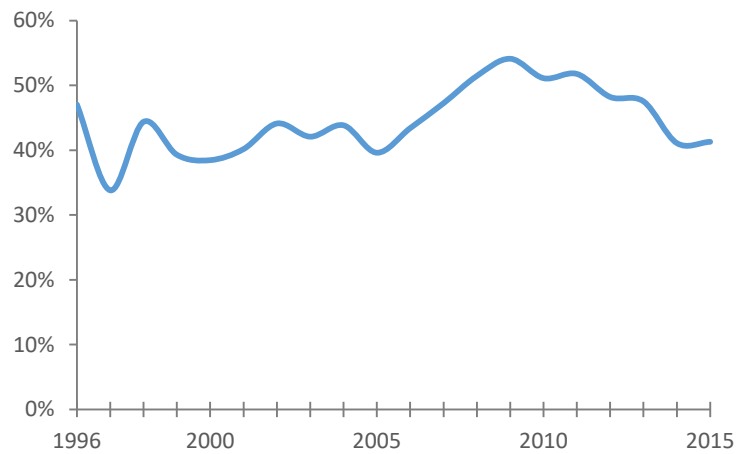
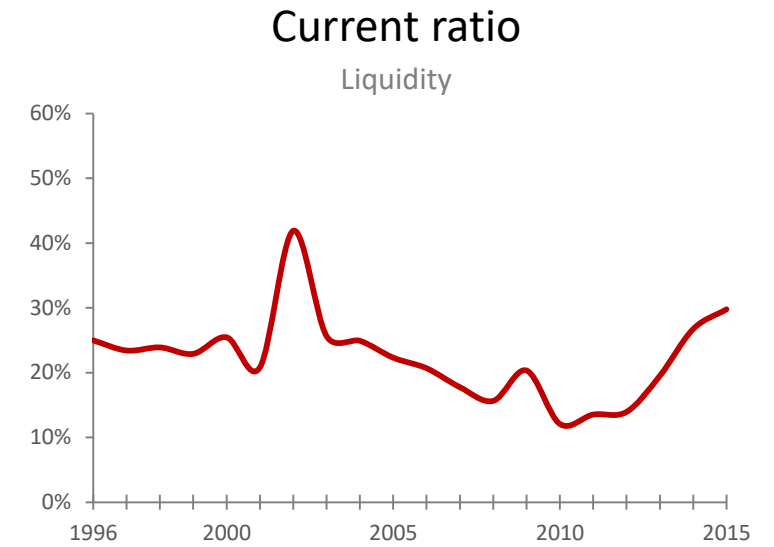
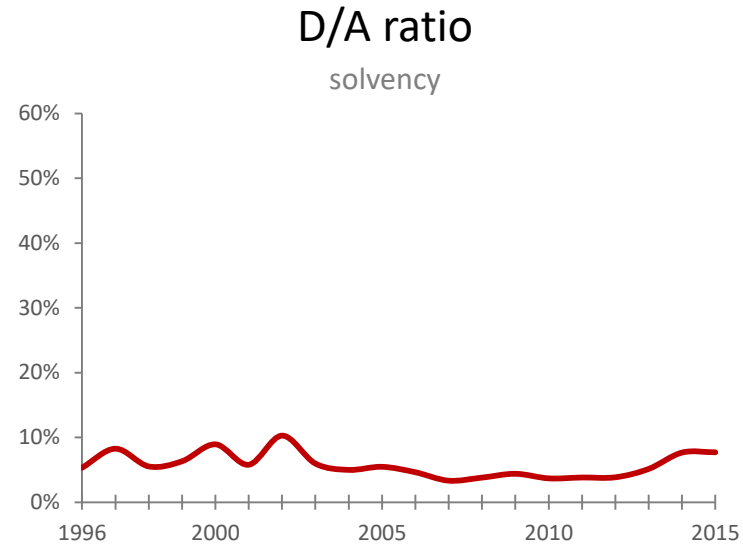
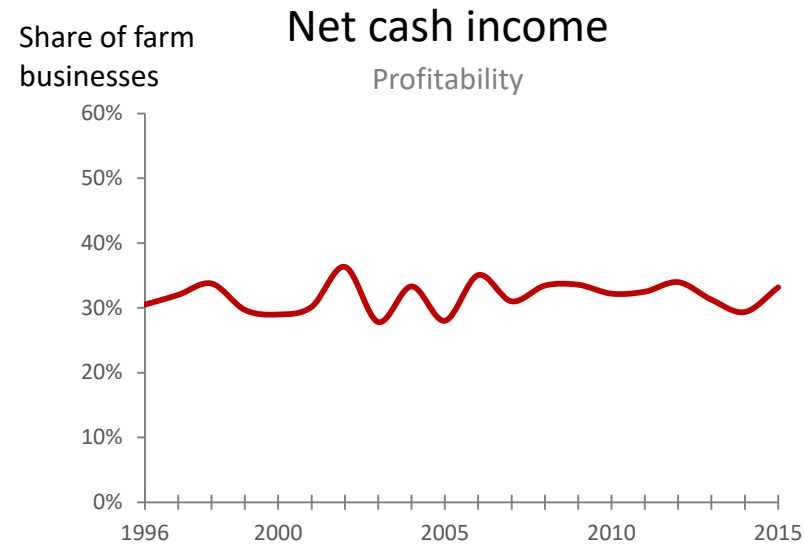


			Farm Businesses	
Residence		Intermediate	Commercial	
Operators report they are retired or have a major occupation other than farming.		Gross cash farm income less than \$350,000 and operators report farming as their major occupation.	Gross cash farm income greater than \$350,000 or farms organized as nonfamily corporations or cooperatives.	

Source: 2015 Agricultural Resource Management Survey (ARMS)



# Financial ratios weaken for an increasing share of **crop** and **livestock** farm businesses



— Negative net cash income

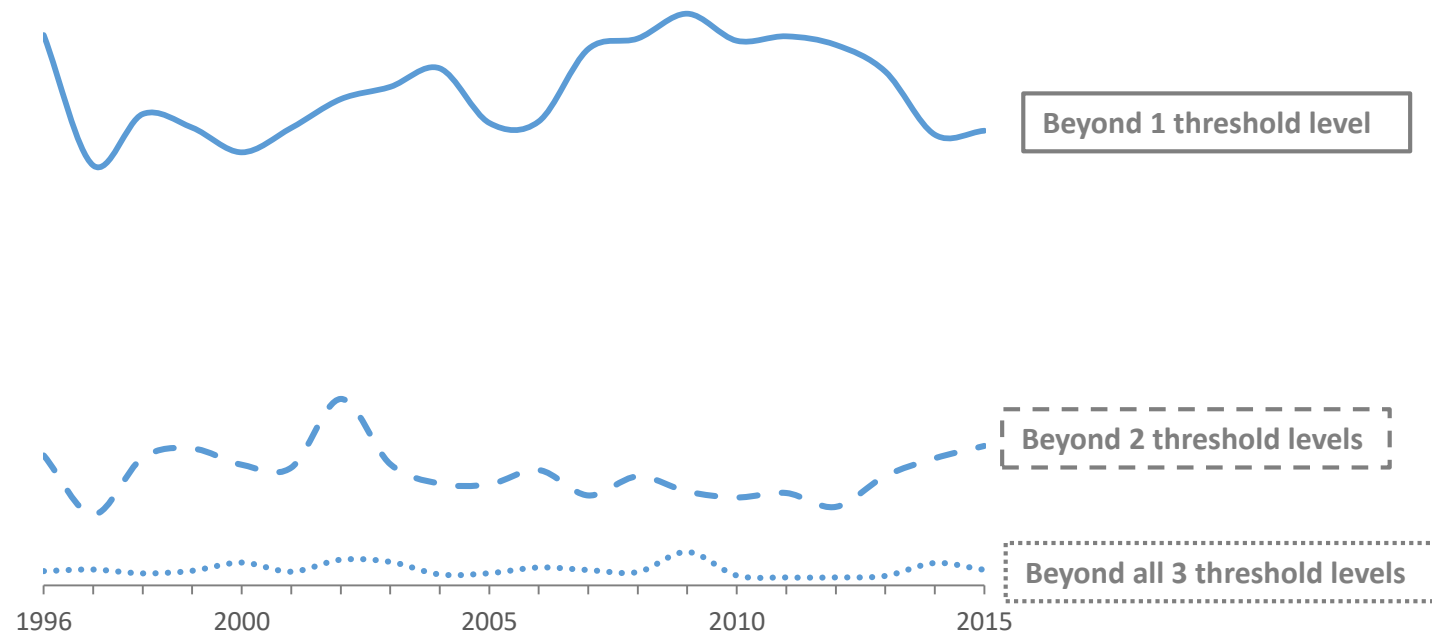
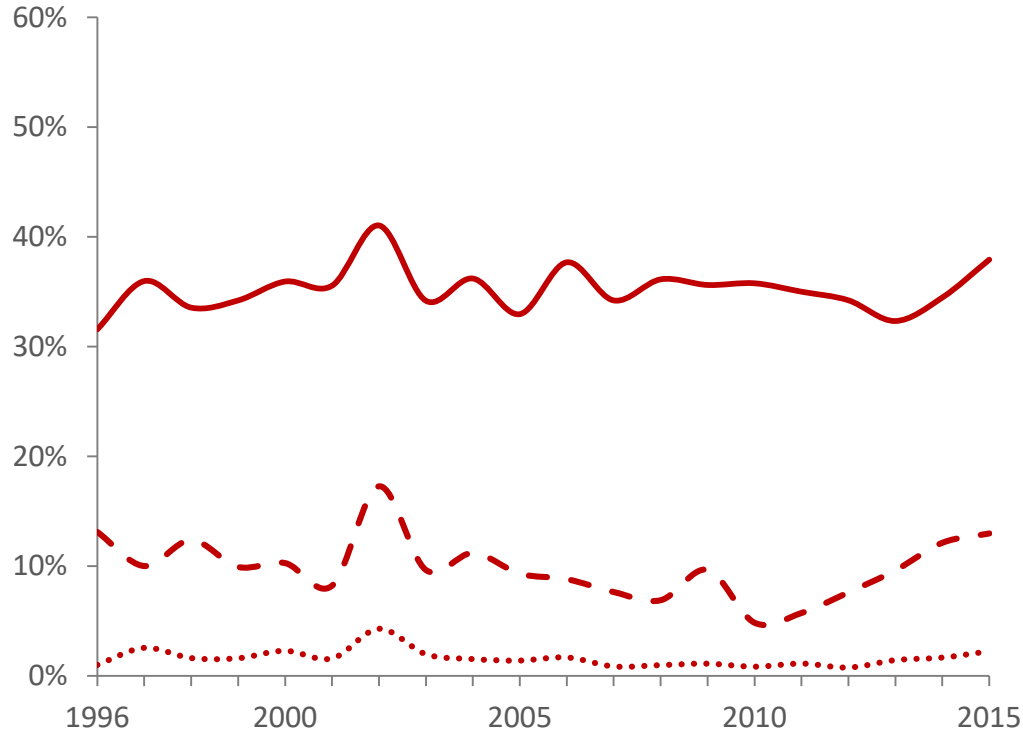
— D/A greater than 50%

— Current ratio less than 1



# Financial ratios weaken for an increasing share of **crop** and **livestock** farm businesses

Share of farm businesses



D/A ratio  
solvency

Current ratio  
Liquidity

Net cash income  
Profitability

Threshold level:

**Greater than 0.5**

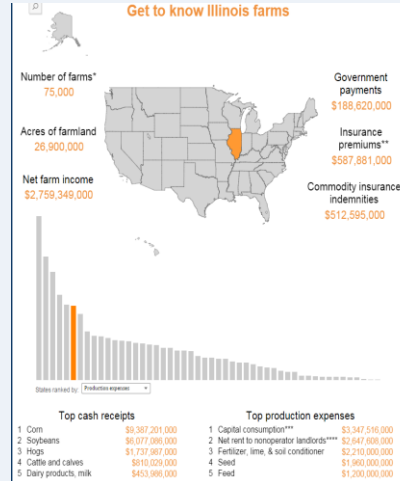
**Less than 1**

**negative**

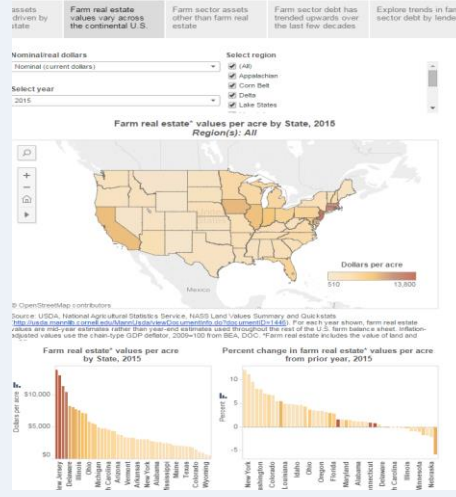


# Many Ways to Explore the Data

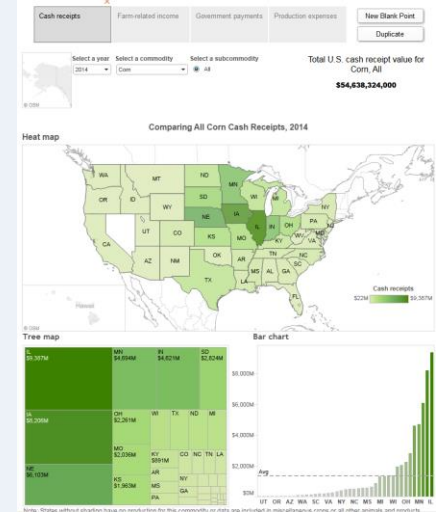
## Visualizations let you dive into the financials of the farm sector



### Digging Into the U.S. Farm Balance Sheet



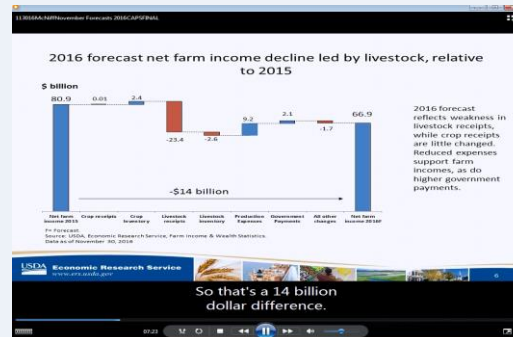
### The Farm Income Atlas



## Tailored financial reports

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Value added in the U.S. economy by the agriculture sector, 2010-2019	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900
Value added in the U.S. economy by the agriculture sector, 2010-2019	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900
Value added in the U.S. economy by the agriculture sector, 2010-2019	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900

## Forecast analysis webinars



## Current and archived comprehensive datasets

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Value added in the U.S. economy by the agriculture sector, 2010-2019	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900
Value added in the U.S. economy by the agriculture sector, 2010-2019	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900

QUESTIONS?

## Farm Income Team

[FarmIncomeTeam@ers.usda.gov](mailto:FarmIncomeTeam@ers.usda.gov)

Kevin Patrick

[KtPatrick@ers.usda.gov](mailto:KtPatrick@ers.usda.gov)

