



THE ECONOMIC IMPORTANCE OF FORESTRY IN THE SOUTHERN U.S.

THE PATH FORWARD FOR WOOD PRODUCTS:
A GLOBAL PERSPECTIVE
Belle of Baton Rouge
Baton Rouge, LA October 5th, 2016

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FOREST ECONOMIC IMPACT DATA



Forest Economic Contribution or
Forest Economic Impact Analysis

Information reported as:

- * Total Sales
- * Jobs
- * Value- Added
- * Wages and Salaries



Importance of Forestry and
Forest Products to the State's or
Region's Economy

Information valuable to:

- * State Forestry Agencies
- * University Forestry Programs
- * Forestry and Forest Products Advocacy Organizations



Information goes to Public and
Private Sectors

Political Decision-makers
Economic Decision Makers

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The Economics of Forestry



U.S. southern forests provide for over 18% of the world's pulpwood for paper and paper-related products and 7% of its industrial roundwood.



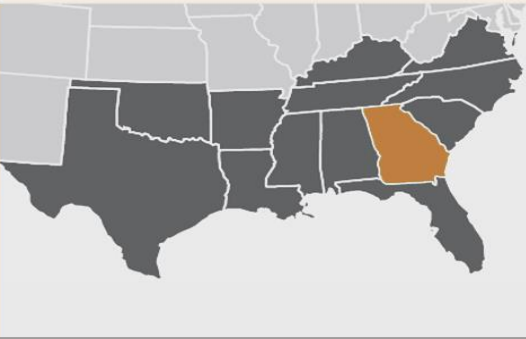
Promoting The Economic Importance of Forestry and Forest Products in the Southern Region

Here we provide links to both state level and regional level economic impact and contribution reports for the southern region. These reports include values such as employment numbers, employee compensation, total industry output, indirect and induced impacts, etc.

The Economics of Forestry

Georgia Forestry Facts

Total Land Area (ac): 37.1 million
Forest Land Area (ac): 24.7 million
Timberland Area (ac): 24.1 million
Private Ownership (%): 91% of timberland
Source: FIA 2014 Survey



STATE RESOURCES

- Alabama
- Arkansas
- Florida
- Georgia
- Kentucky
- Louisiana
- Mississippi
- North Carolina
- Oklahoma
- South Carolina
- Tennessee
- Texas
- Virginia

Southern Region

External Resources

Georgia Forestry Commission Publications
Economic Impacts of the Forest Industry in Georgia

Are we missing any publications? Let us know!

* As of 2015, no standard methodology exists for producing economic impact or economic contribution reports. Please exercise caution when viewing and comparing reports as each may vary significantly in terms of source data and analysis and reporting methodology.

FOREST ECONOMIC SUMMIT

LITTLE ROCK, AR MARCH 2015

- Comparing forest economic reports not an easy task!
- Summarizing forest economic data for the region...
Not an easy task!
- How do we compare apples to apples?



What are the issues that need to be resolved for better comparison of forest economic data?

ISSUES FOR COMPARING FOREST ECONOMIC DATA

4. Output vs. Gross Domestic Product (GDP)

- GDP includes the final cost of goods and services, *excludes* the value of intermediate goods
- Total output *includes* the value of intermediate goods

5. Definition of Forestry Industries



- Different analysts include different sectors when assessing the forest products industry
- Identify which sectors are being included as part of the direct effect

A STANDARD FOREST ECONOMIC ANALYSIS METHOD

- Survey sent to 60 identified Southern forest economists or those who may use the data- 48 responded!
- Survey results will guide development of the “standard”
- Next steps!
 - Analyze survey data
 - Write the standard

#	Question
1	15 Forestry, forest products, and timber tract production (1131-2)
2	16 Commercial logging (1133)
3	19 Support activities for agriculture and forestry (115)
4	47 Electric Power generation- Biomass (221117)
5	134 Sawmills (32113)
6	135 Wood preservation (32114)
7	136 Veneer and Plywood manufacturing 9321211-2)
8	137 Engineered wood member and truss manufacturing (321213-4)
9	138 Reconstituted Wood product manufacturing (321219)
10	139 Wood windows and door manufacturing (321911)
11	140 Cut stock, resawing lumber, and planing (321912)
12	141 Other millwork, including flooring (321918)
13	142 Wood container and pallet manufacturing (32192)
14	143 Manufactured home (mobile home) manufacturing (321991)
15	144 Prefabricated wood building manufacturing (321992)
16	145 All other miscellaneous wood product manufacturing (321999)
17	146 Pulp Mills (32211)
18	147 Paper Mills (32212)
19	148 Paperboard mills (32213)
20	149 Paperboard container manufacturing (32221)
21	150 Paper bag and coated and treated paper manufacturing (32222)
22	151 Stationary product manufacturing (32223)
23	152 Sanitary paper product manufacturing (322291)
24	153 All other converted paper product manufacturing (322299)
25	368 Wood kitchen cabinet and countertop manufacturing (33711)
26	369 Upholstered household furniture manufacturing (337121)
27	370 Nonupholstered wood household furniture manufacturing (337121)
28	371 Other household non-upholstered furniture manufacturing (337124-5)
29	372 Institutional furniture manufacturing (337127)
30	373 Wood office furniture manufacturing (337211)
31	374 Custom architectural woodwork and millwork (337212)
32	375 Office furniture, except wood, manufacturing (337214)
33	376 Showcase, partition, shelving, and locker manufacturing (337215)



Table 1. IMPLAN sectors included in the aggregated forest products sector

Aggregated forest products sectors	IMPLAN sectors (NAICS code*) contained in the aggregated sector
Lumber and wood products	Logging (1133); sawmills and wood preservation (3211); veneer and plywood manufacturing (321211, 321212); engineered wood members and truss manufacturing (321213, 321214); reconstituted wood products manufacturing (321219); wood container and pallet manufacturing (32192); prefabricated wood building manufacturing (321992); all other miscellaneous wood product manufacturing (321999)
Paper and allied products	Pulp mills (32211); paper mills (32212); paperboard mills (32213); paperboard container manufacturing (32221); coated and laminated paper, packaging paper manufacturing (322222, 322221); all other paper bag and coated and treated paper manufacturing (322223, 322226, 322224, 322225); stationary product manufacturing (32223); sanitary paper product manufacturing (322291); all other converted paper product manufacturing (322299)
Wood furniture	Wood windows and door and millwork manufacturing (32191), wood kitchen cabinet and counter top manufacturing (33711); upholstered household furniture manufacturing (337121); non-upholstered wood household furniture manufacturing (337122); institutional furniture manufacturing (337127); wood TV , radio and sewing machine housing (337129); wood office furniture manufacturing (337211); custom architectural woodwork and millwork (337212, 337214); showcase, partitions, shelving and lockers (337215)

*Numbers in the parenthesis are NAICS code.

PERCENTAGE CHANGES



Wages declining more quickly than employment from 2009-2014

Sector	Employment		Wages and salaries (\$MM)	
	2001-2009	2009-2014*	2001-2009	2009-2014*
L&VWP	-37%	4%	-28%	-9%
WF	-37%	-26%	-25%	-33%
P&AP	-26%	-4%	-15%	-12%
Total	-34%	-9%	-21%	-17%
South Total	5%	3%	15%	-12%

PERCENTAGE CHANGES



Total Output (\$MM)

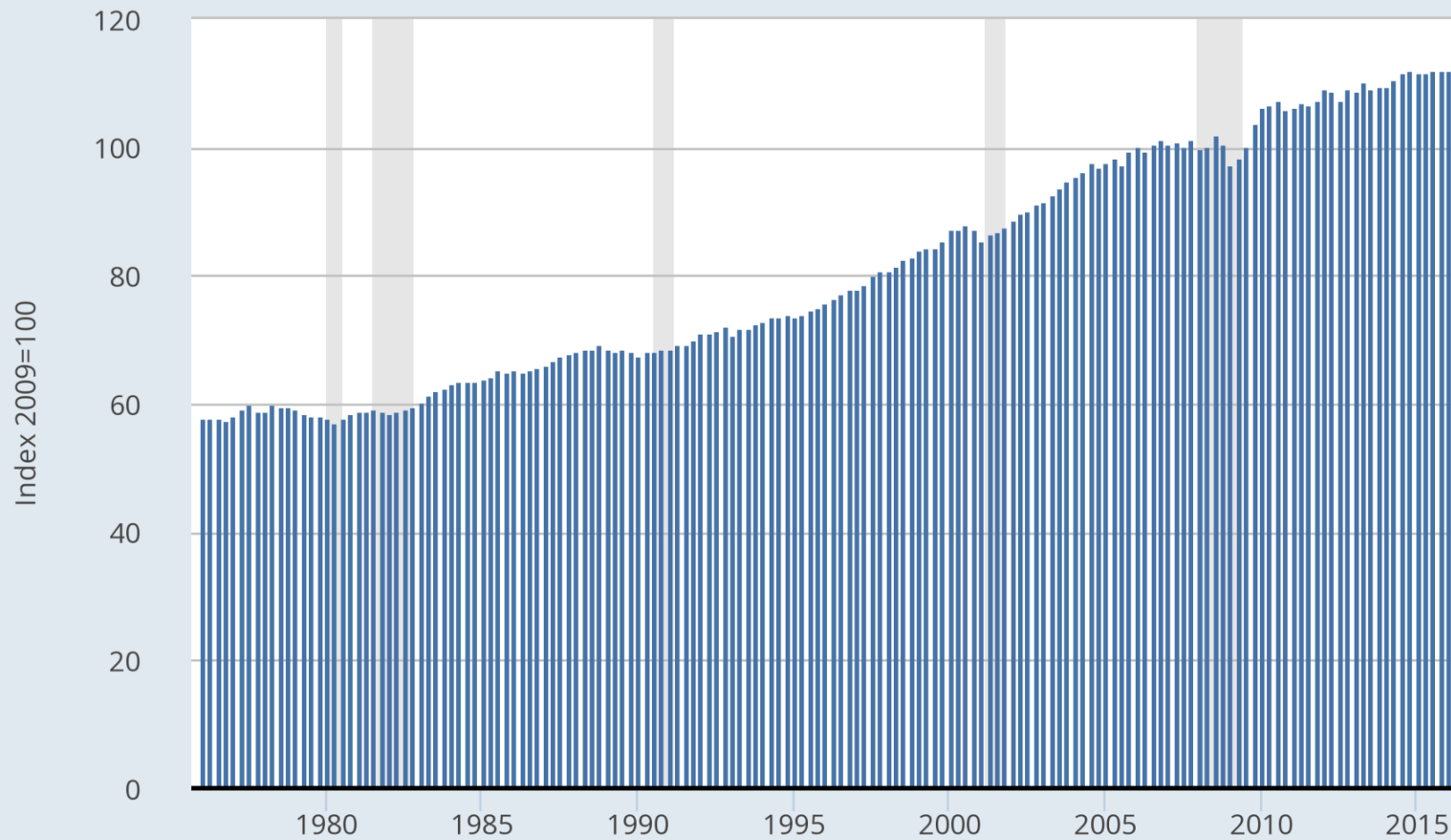
Total value-added (\$MM)

Sector	Total Output (\$MM)		Total value-added (\$MM)	
	2001-2009	2009-2014*	2001-2009	2009-2014*
L&WP	-36%	7%	-29%	-1%
WF	-15%	-28%	-19%	-31%
P&AP	16%	0%	3%	4%
Total	-7%	-4%	-12%	-5%
South Total	23%	6%	19%	8%



A WEAK RECOVERY

UP TO THIS POINT.....SOME INDICATORS



Source: US. Bureau of Labor Statistics

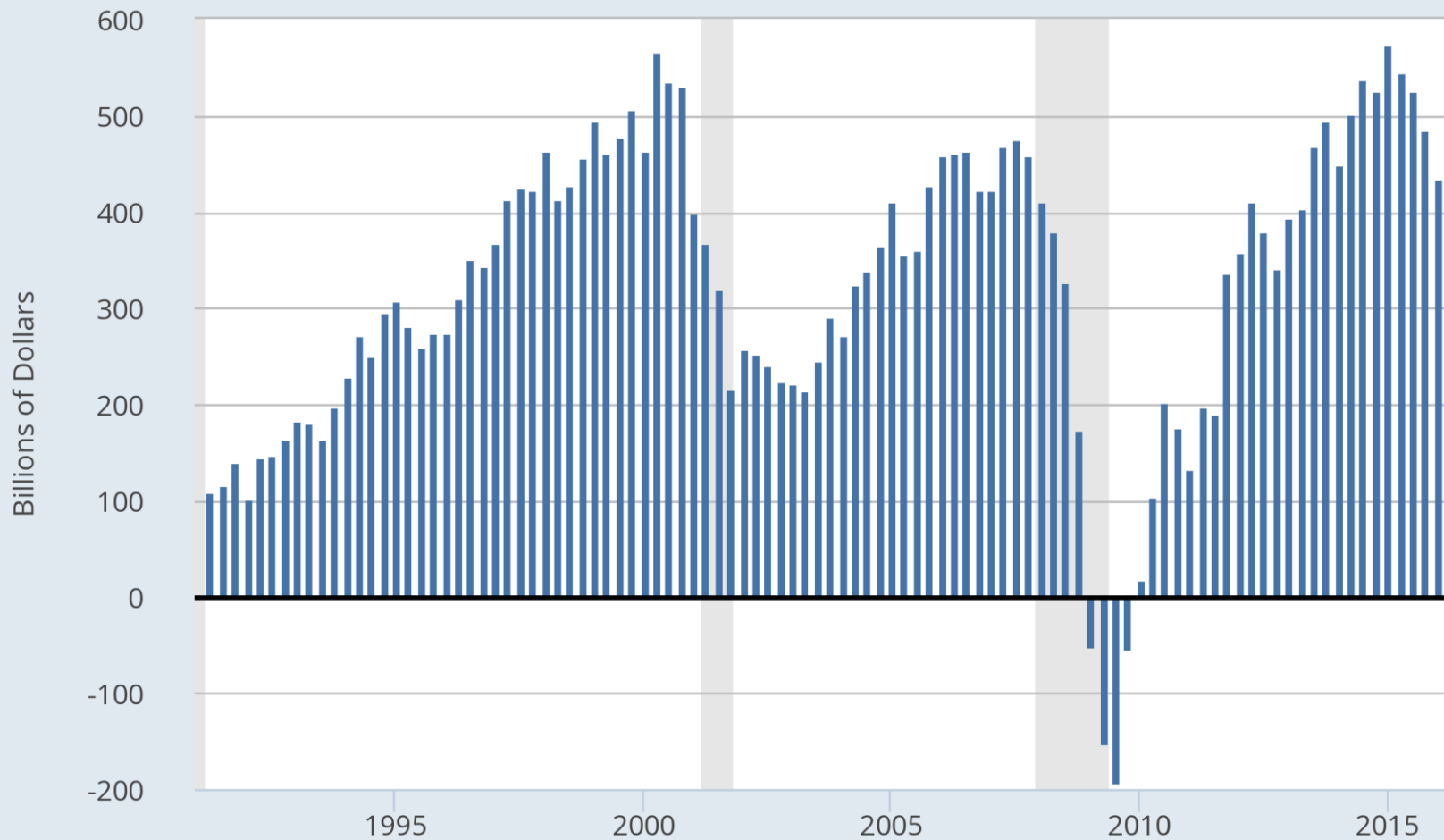
fred.stlouisfed.org

myf.red/g/7zZS

Net private domestic investment indicates the total amount of investment in capital by the business sector that is actually used to expand the capital stock. In general, capital depreciation is between 50 to 85 percent of gross investment.



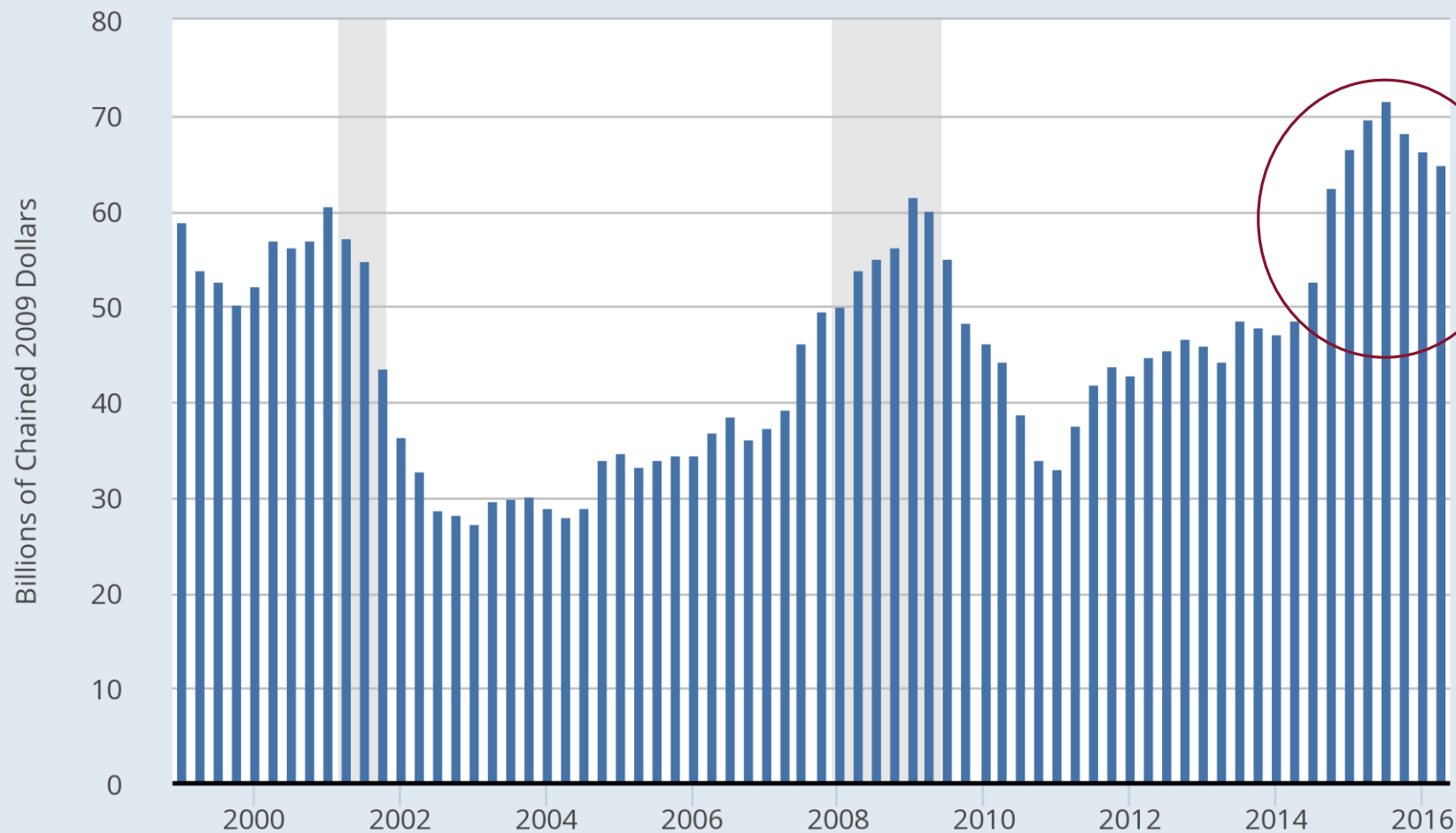
Net domestic investment: Private: Domestic business



Source: US. Bureau of Economic Analysis
fred.stlouisfed.org

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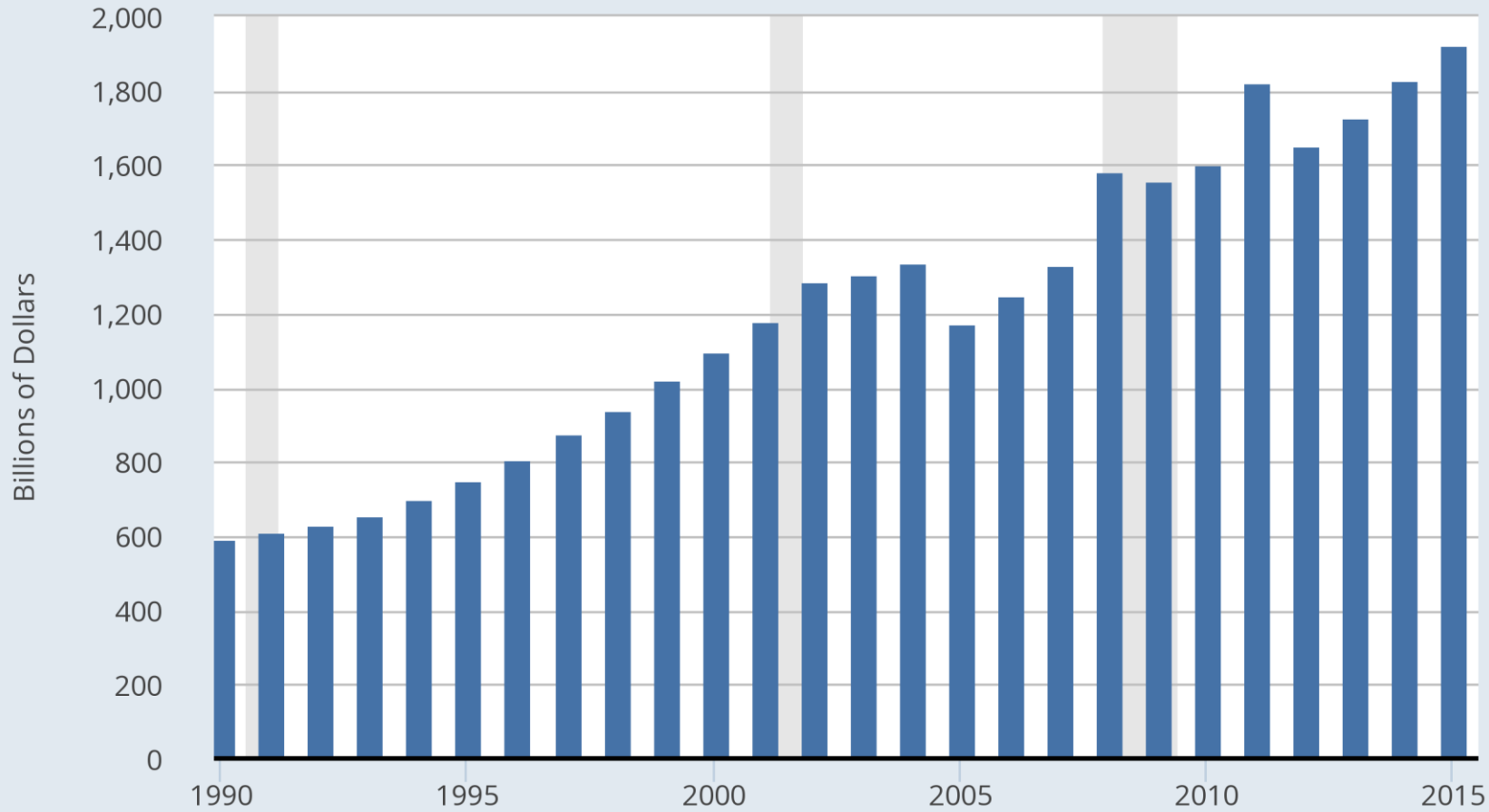


Source: US. Bureau of Economic Analysis
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refers to investment in fixed capital or to the replacement of depreciated fixed capital.

Looks good right?



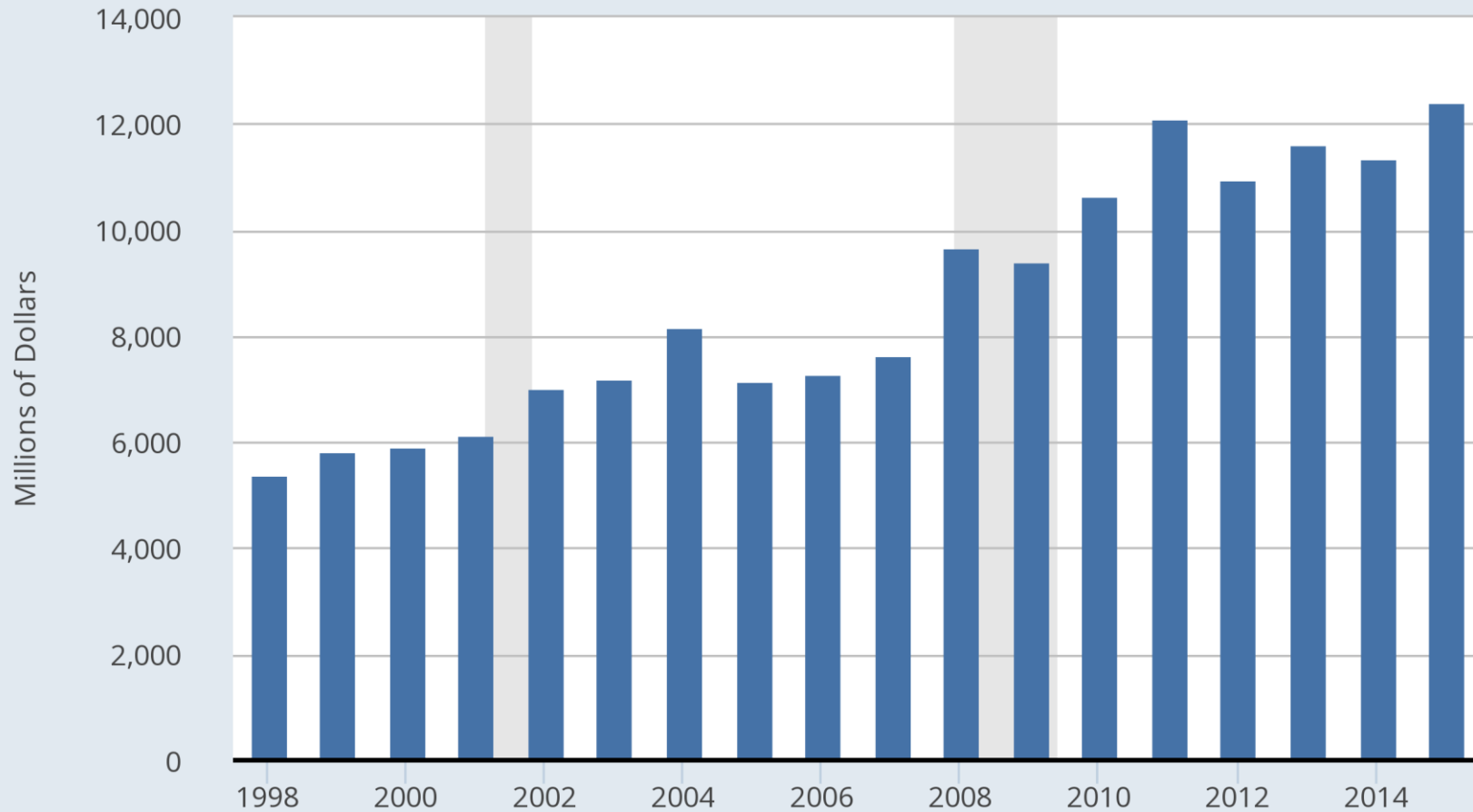
Source: US. Bureau of Economic Analysis
fred.stlouisfed.org

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The **Capital Consumption Allowance (CCA)** is the portion of the Gross Domestic Product (GDP) which is due to depreciation.

FRED 

■ Corporate capital consumption allowances: Agriculture, forestry, fishing, and hunting

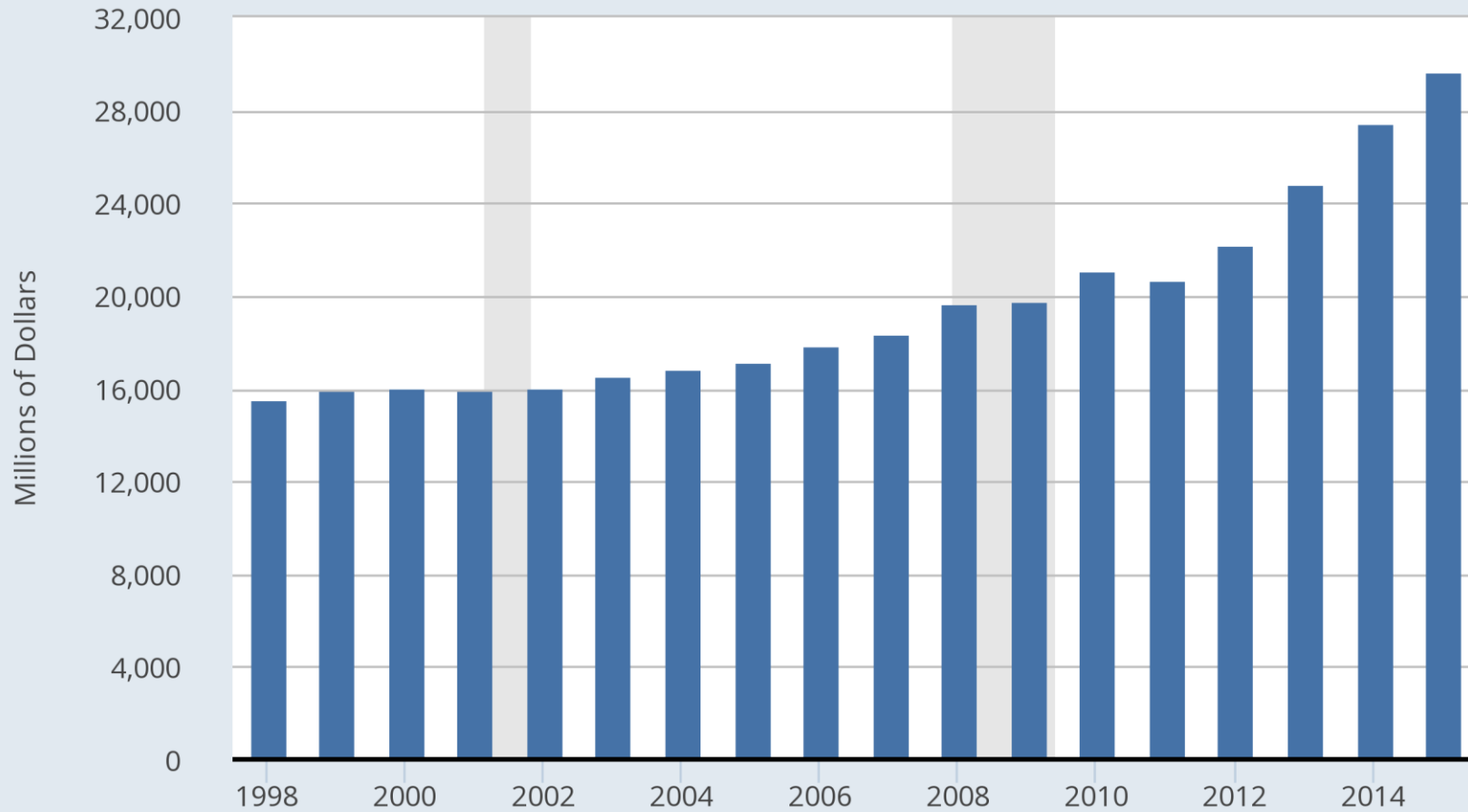


Source: US. Bureau of Economic Analysis
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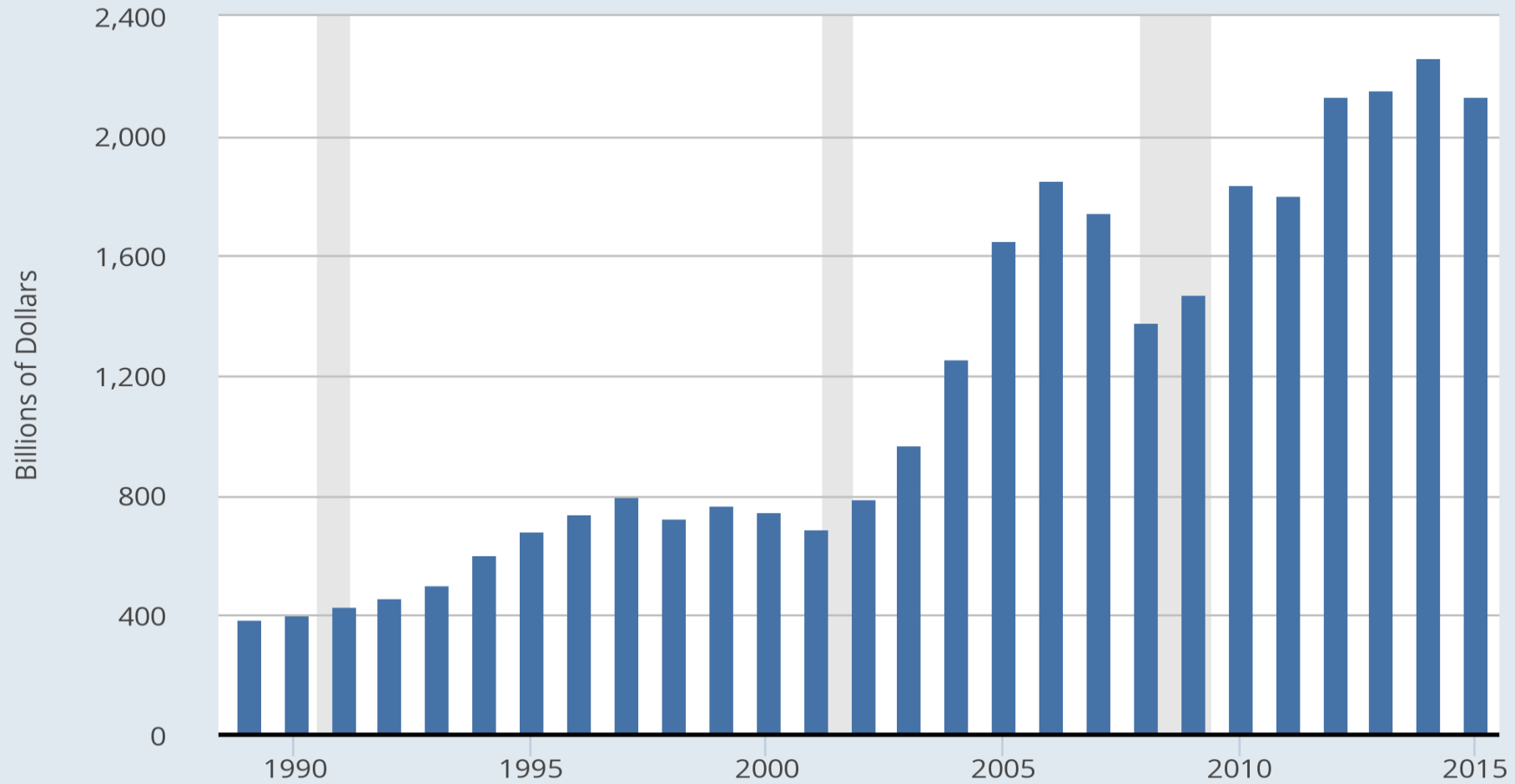


measures the amount of expenditure that a country needs to undertake in order to maintain, as opposed to grow, its productivity



Source: US. Bureau of Economic Analysis
fred.stlouisfed.org

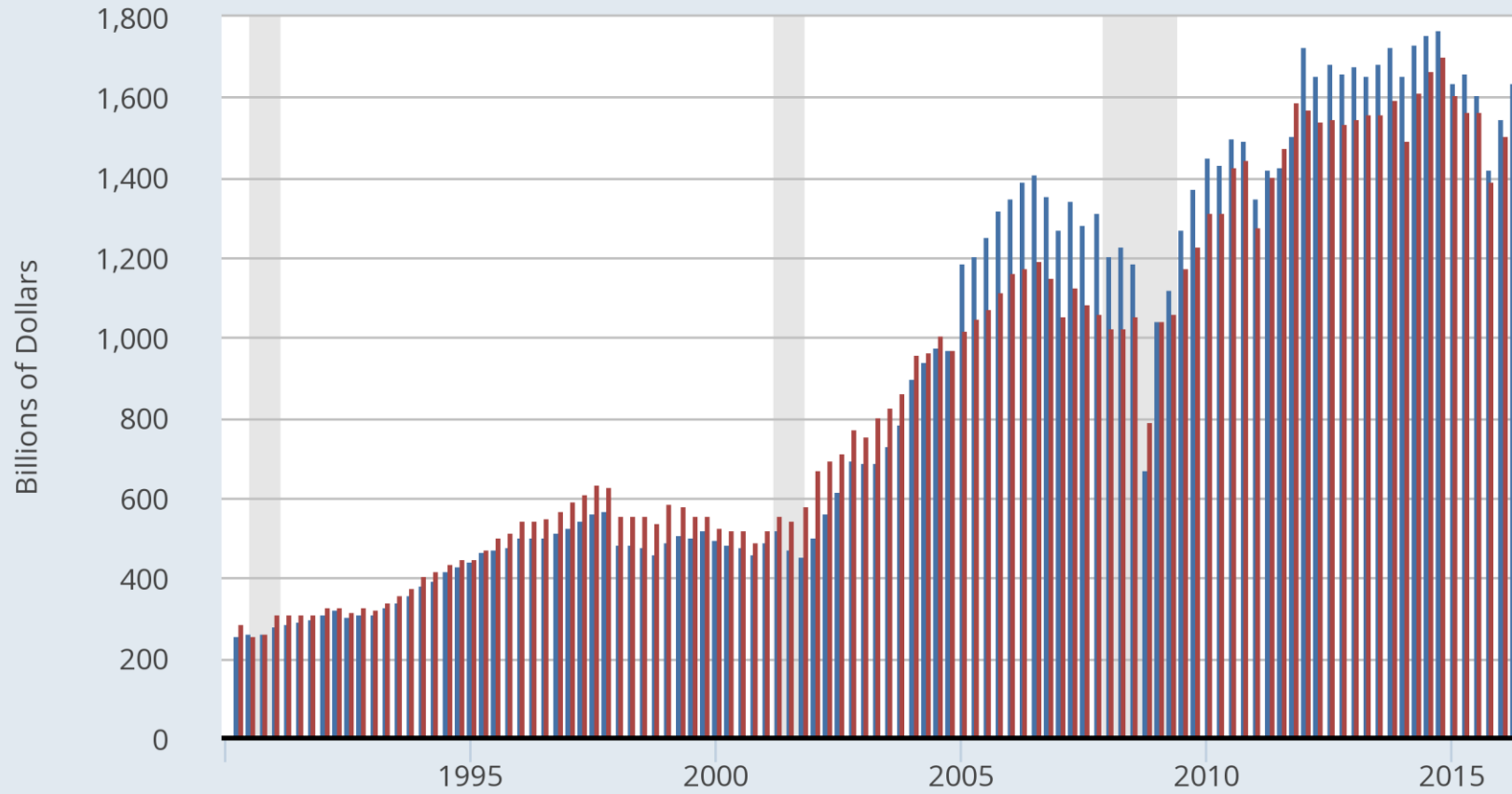
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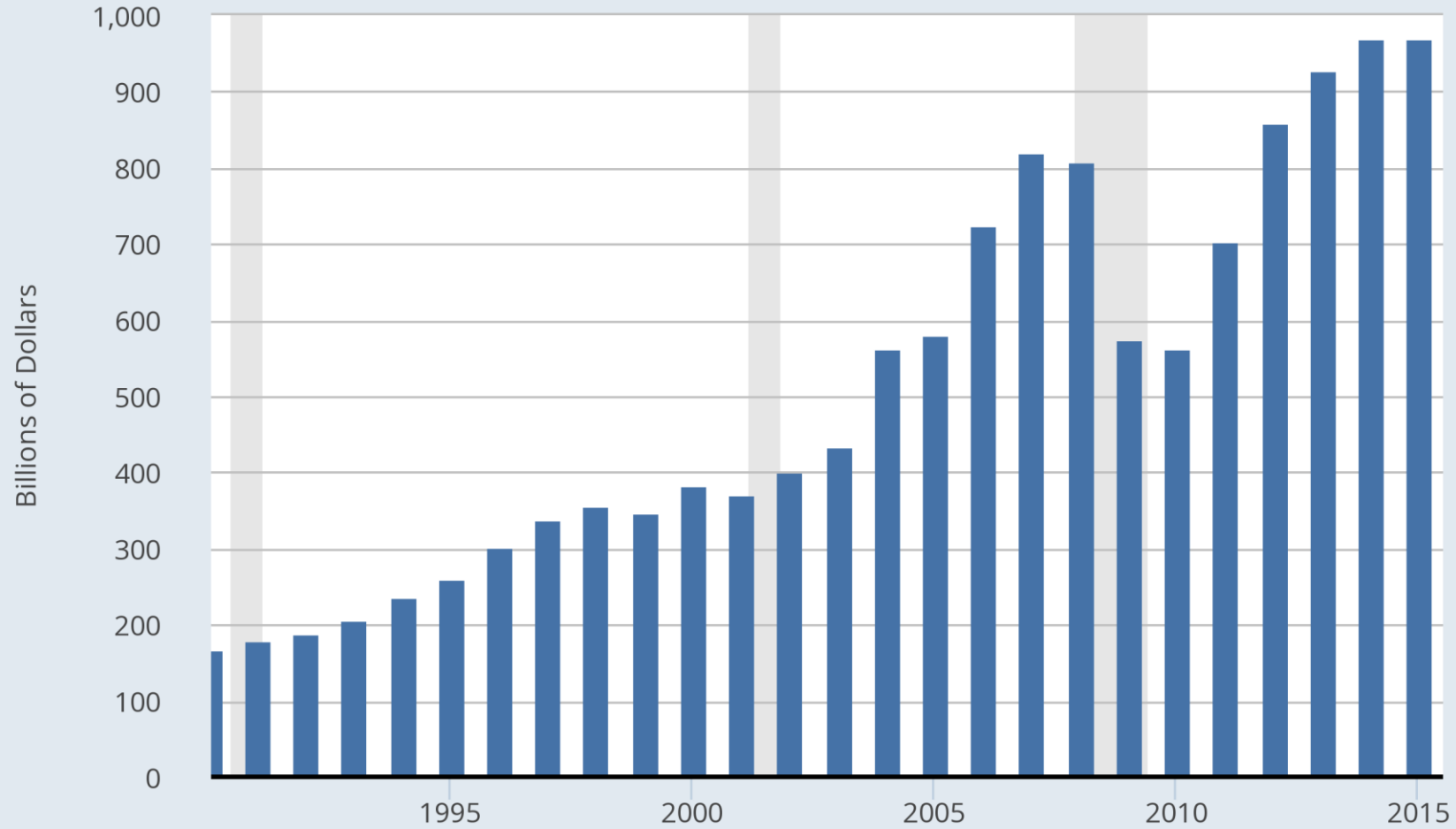


Source: US. Bureau of Economic Analysis
fred.stlouisfed.org

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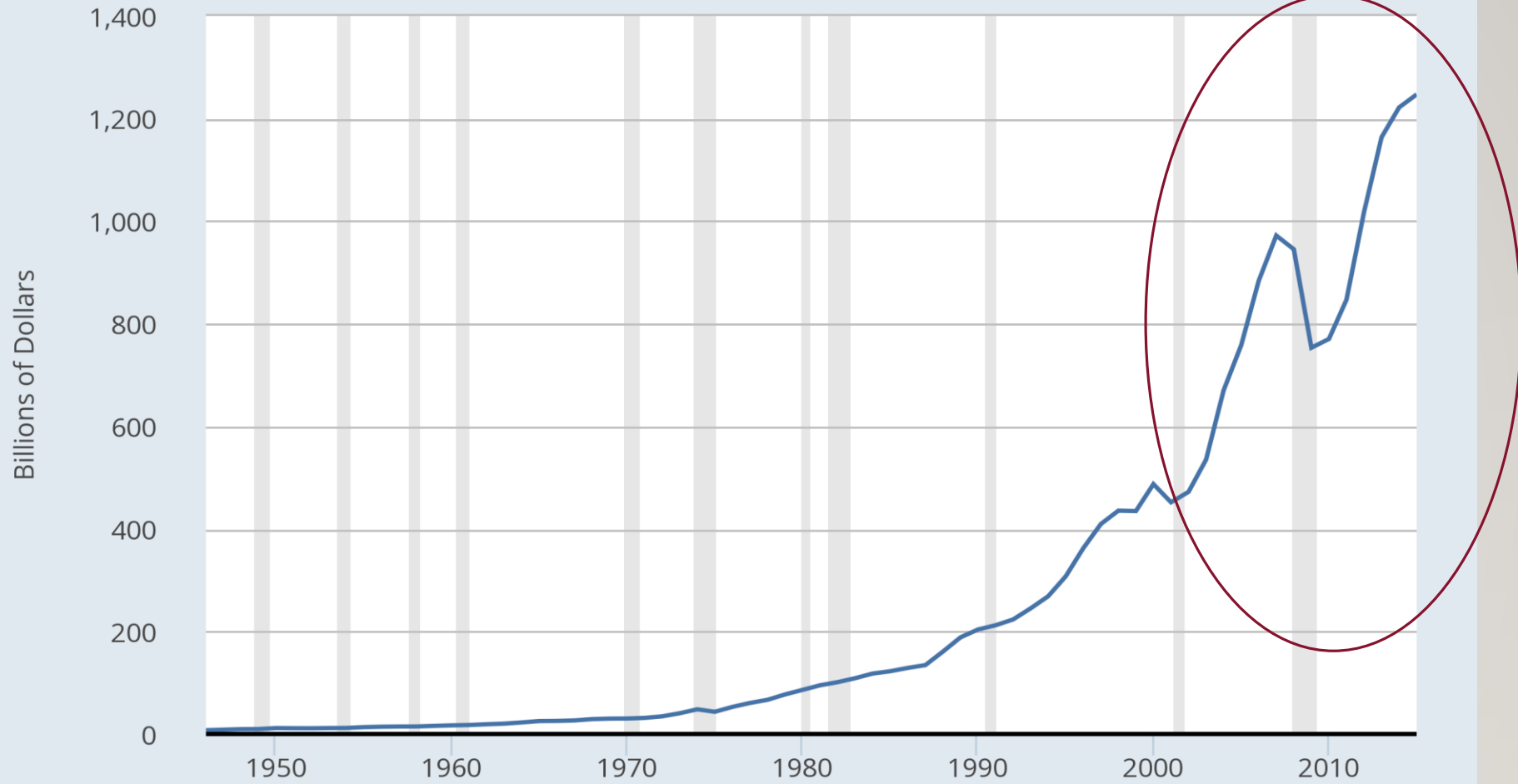
- Corporate Profits After Tax (without IVA and CCAdj)
- Corporate Profits After Tax with Inventory Valuation Adjustment (IVA) and Capital Consumption Adjustment (CCAdj)





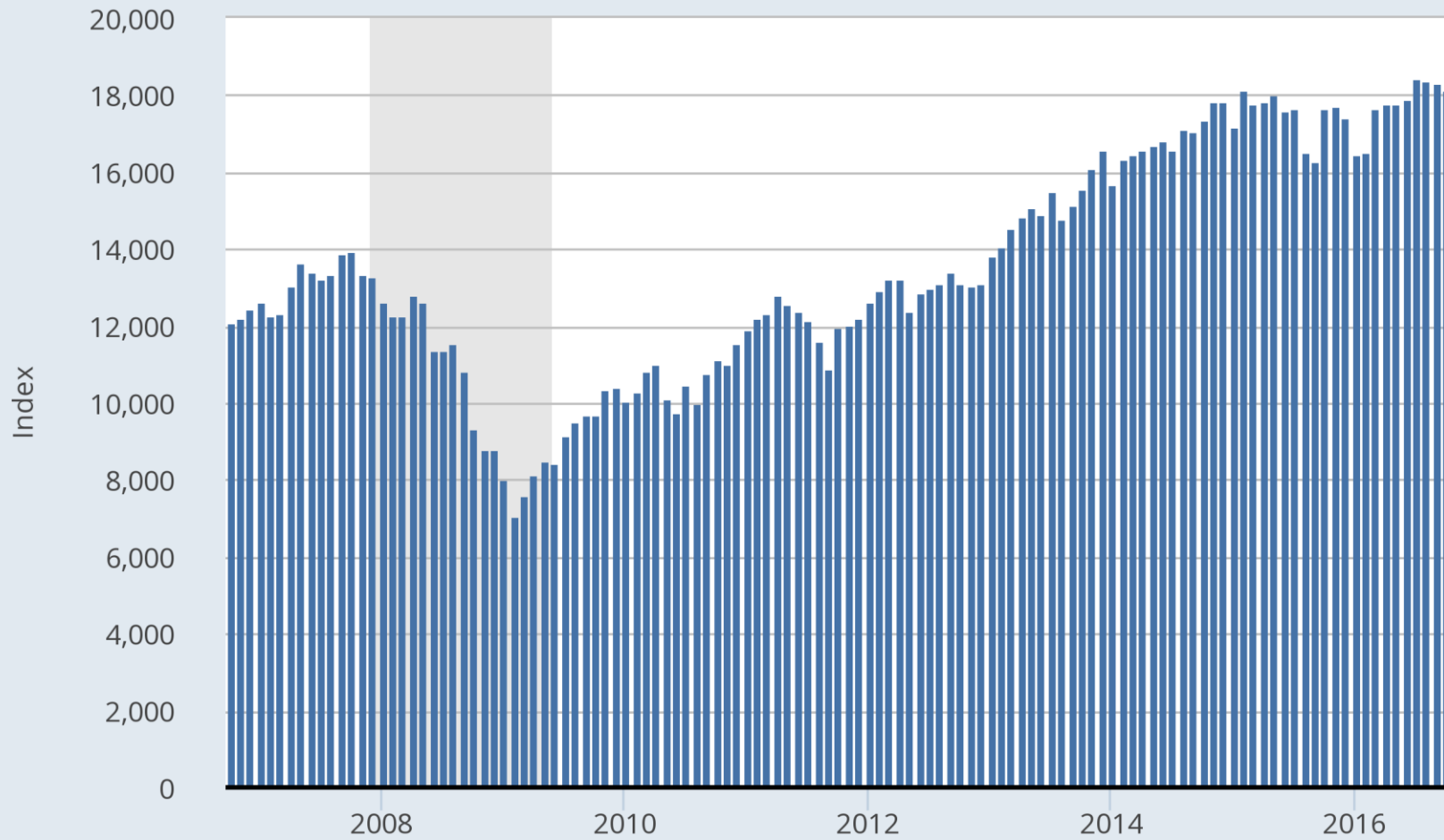
Source: US. Bureau of Economic Analysis
fred.stlouisfed.org

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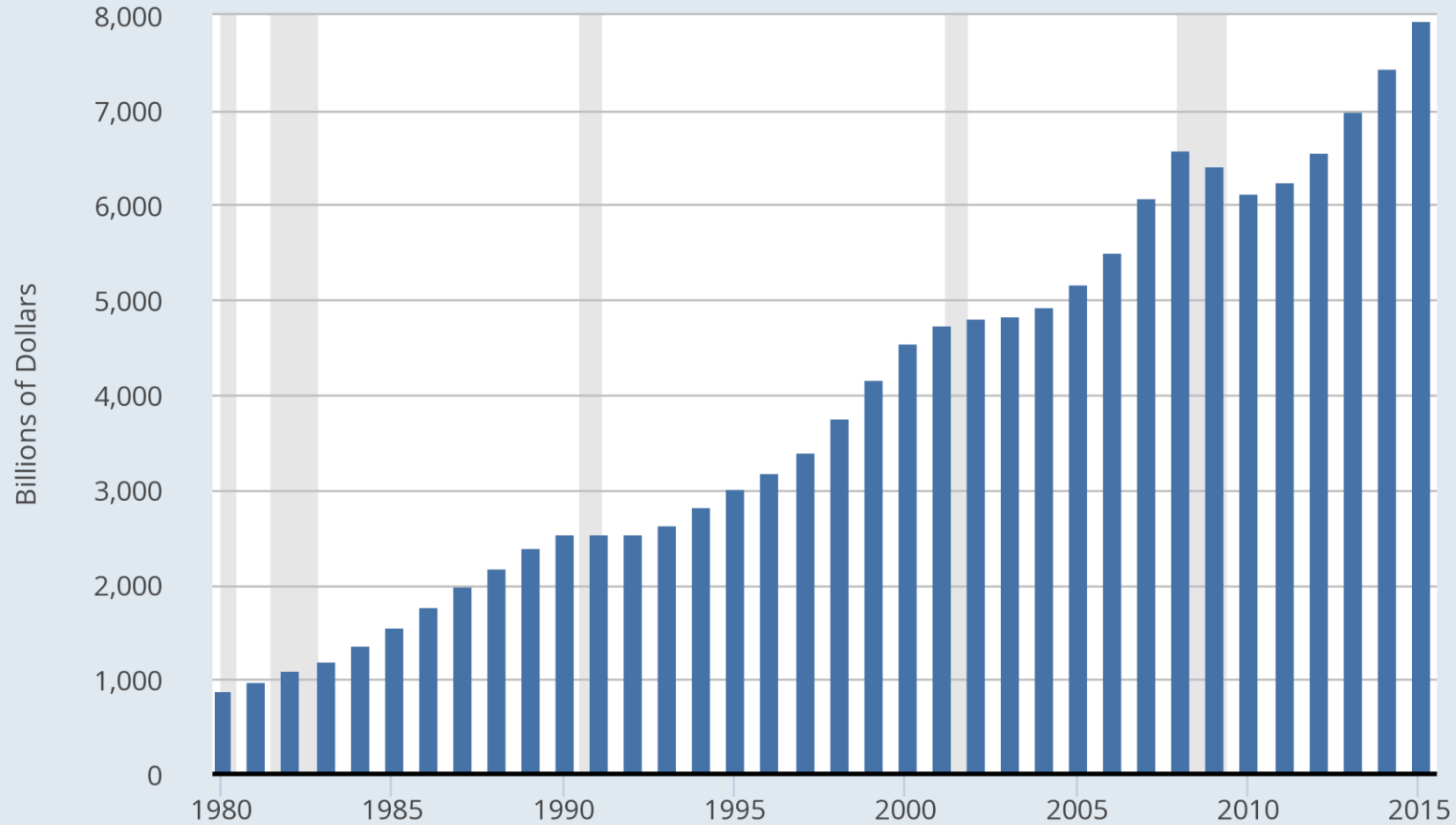
Source: US. Bureau of Economic Analysis
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Source: S&P Dow Jones Indices LLC
fred.stlouisfed.org

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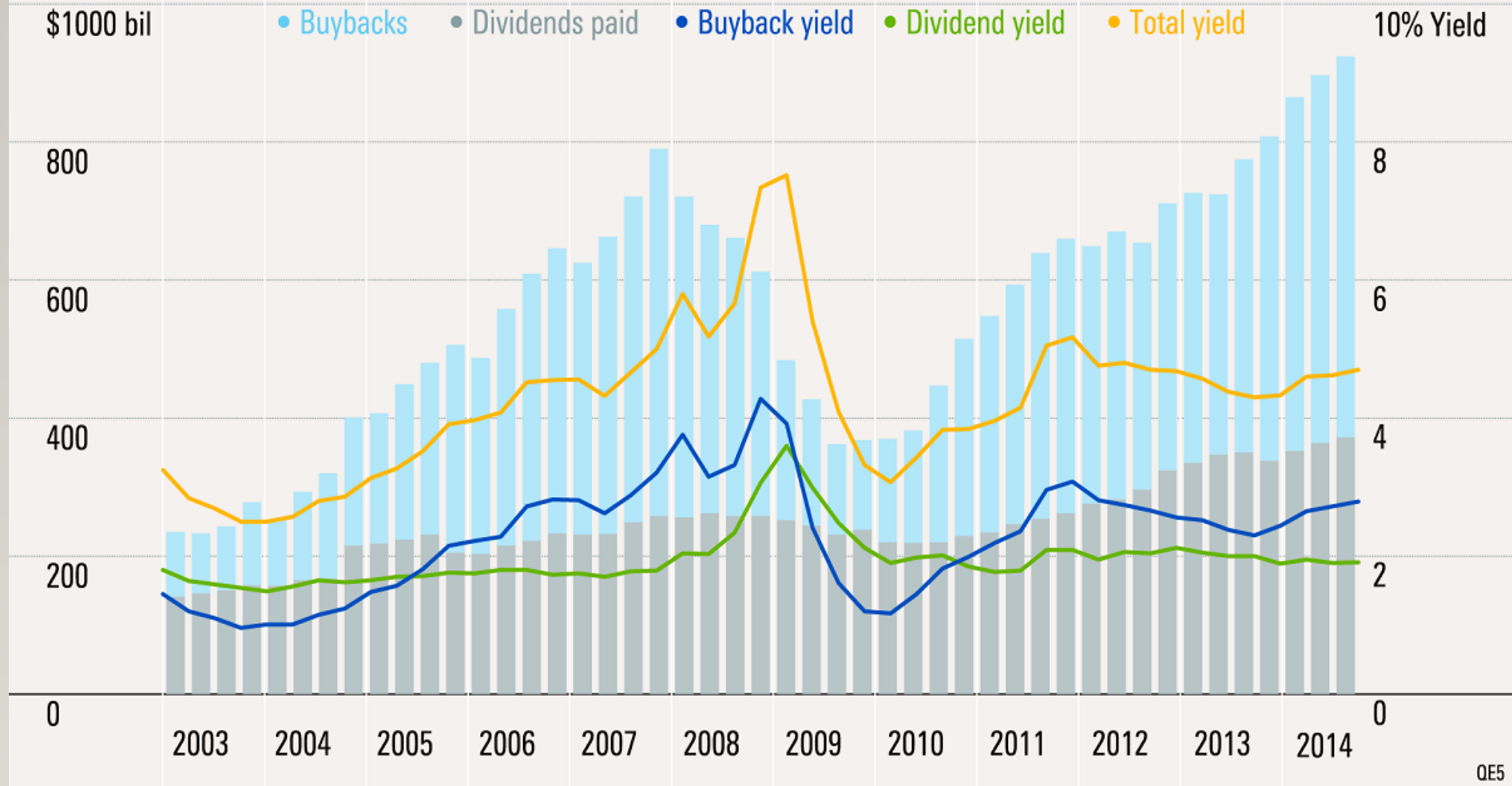


Source: Board of Governors of the Federal Reserve System (US)
fred.stlouisfed.org

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S&P 500 Dividends and Buybacks, Trailing 12 months

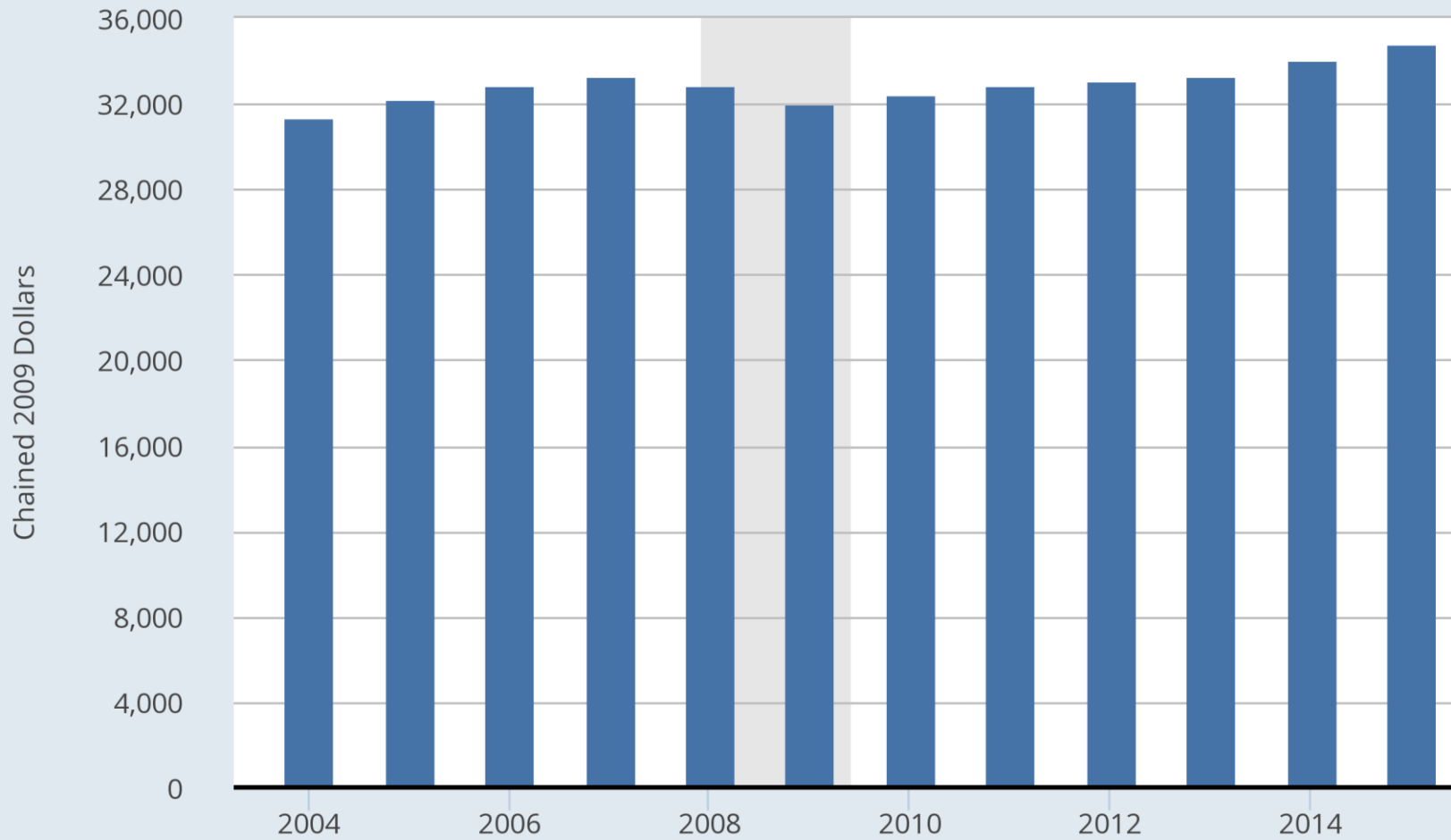


— All Federal Reserve Banks: Total Assets



Source: Board of Governors of the Federal Reserve System (US)
fred.stlouisfed.org

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Source: US. Bureau of Economic Analysis
fred.stlouisfed.org

[myf.fred/g/7AfK](https://myf.fred/stlouisfed.org/g/7AfK)

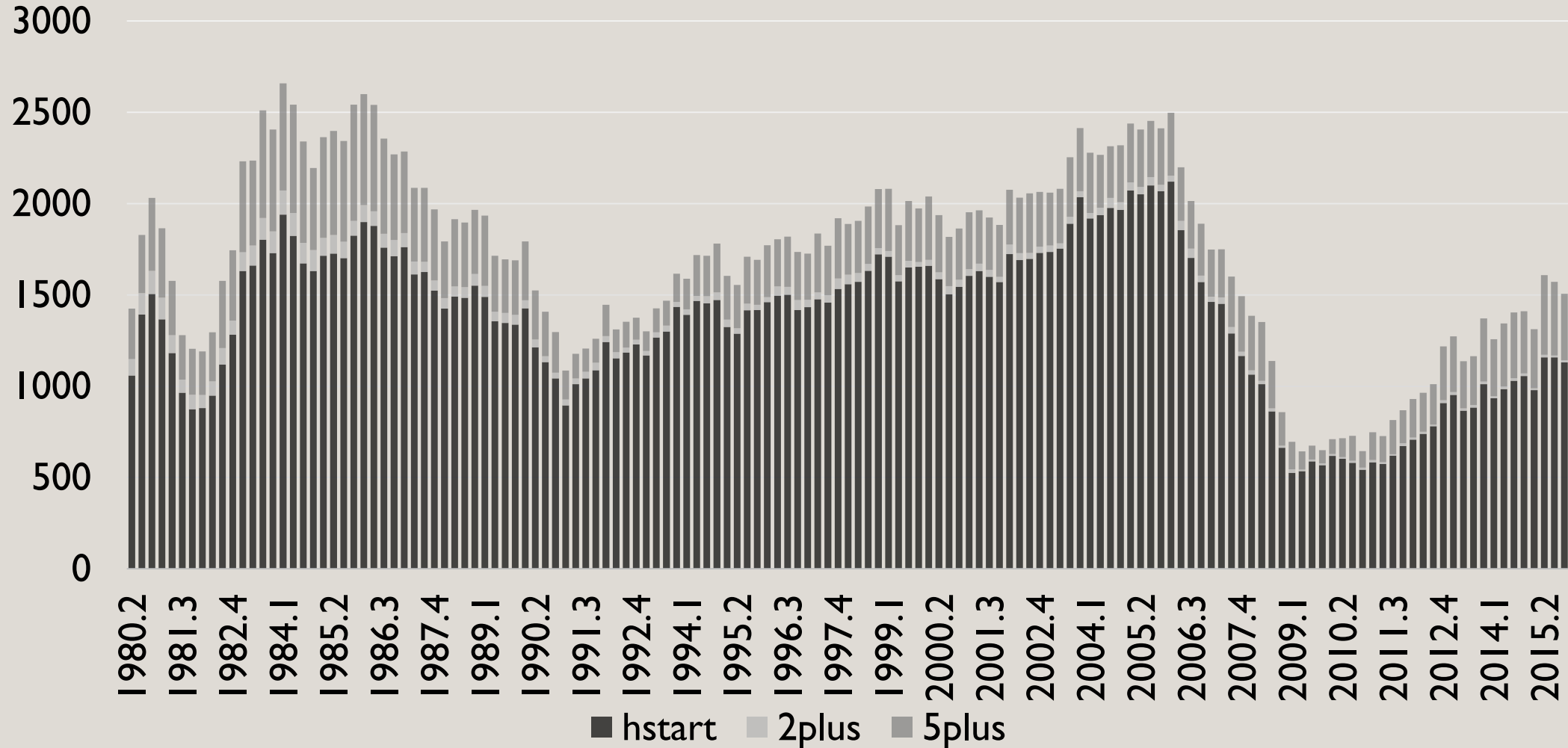
IMPORTANT NEXT STEP

- Test the IMPLAN models to see if corporate profits and *other property type payments** are increasing in share of overall tax contributions and in REAL (inflation adjusted) terms, while the rest of the sector has shrank over that same time period.
- It appears this is less prevalent in the forest products sector as compared to the economy generally.
- Also, if this is occurring we need to make policy prescriptions as to how to handle more leverage that has been taken on by companies in our sector.
- Ultimately, we need aggregate demand to increase so that we can move away from this behavior.

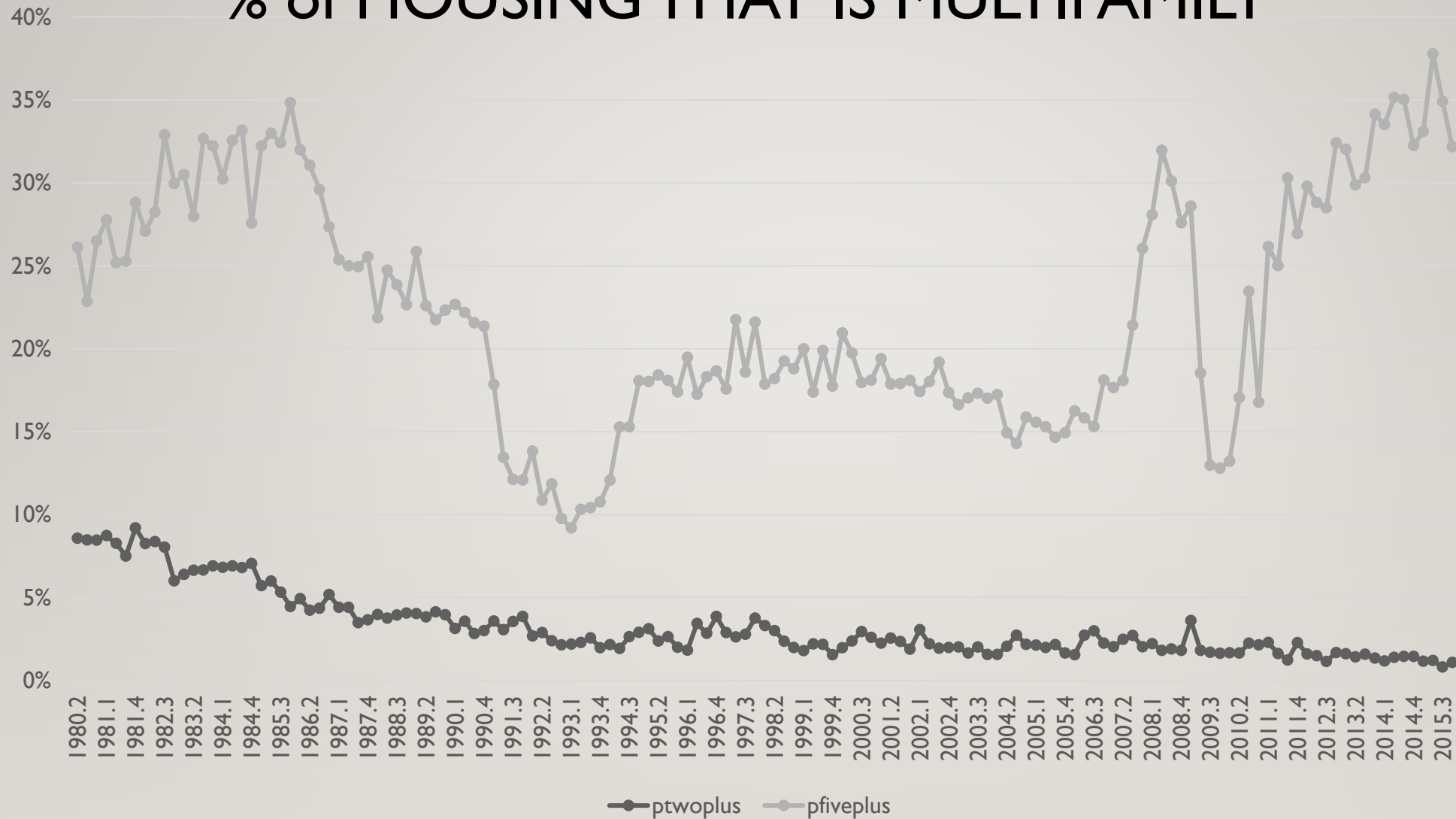
Other Property Type Income – payments for rents, royalties, and dividends



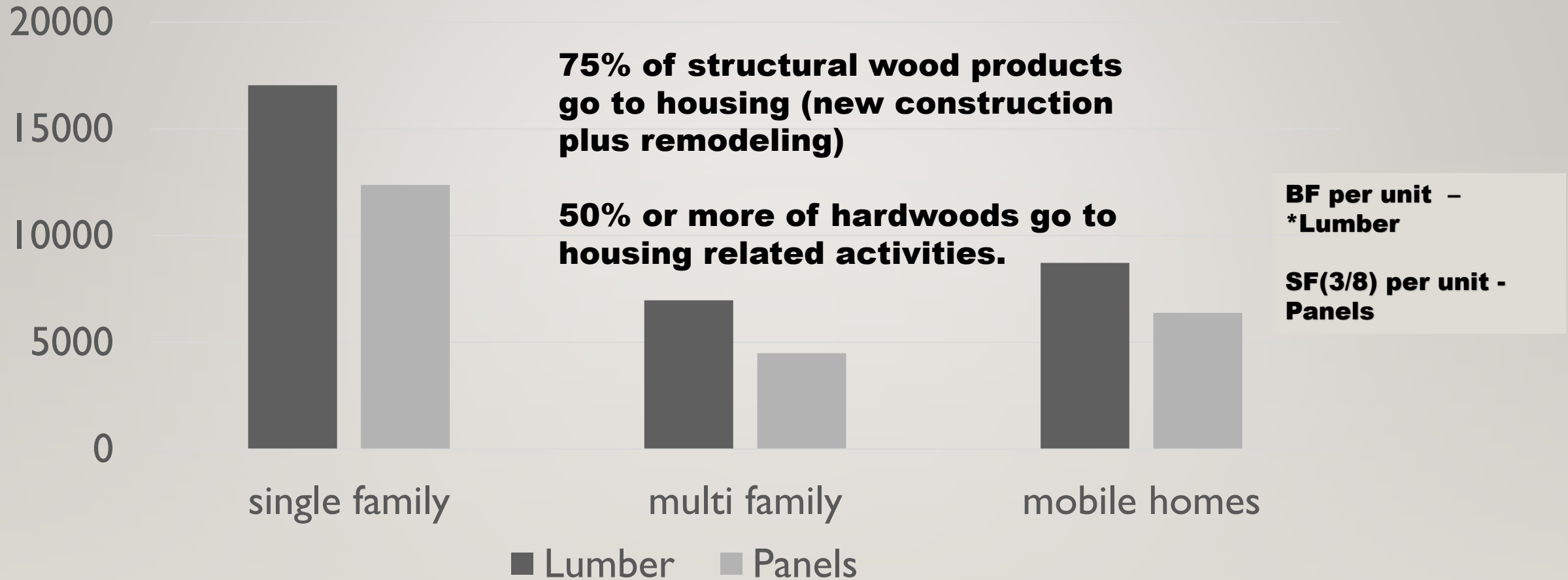
HOUSING STARTS (SAAR)



% of HOUSING THAT IS MULTIFAMILY



WOOD PRODUCTS USE (per UNIT)

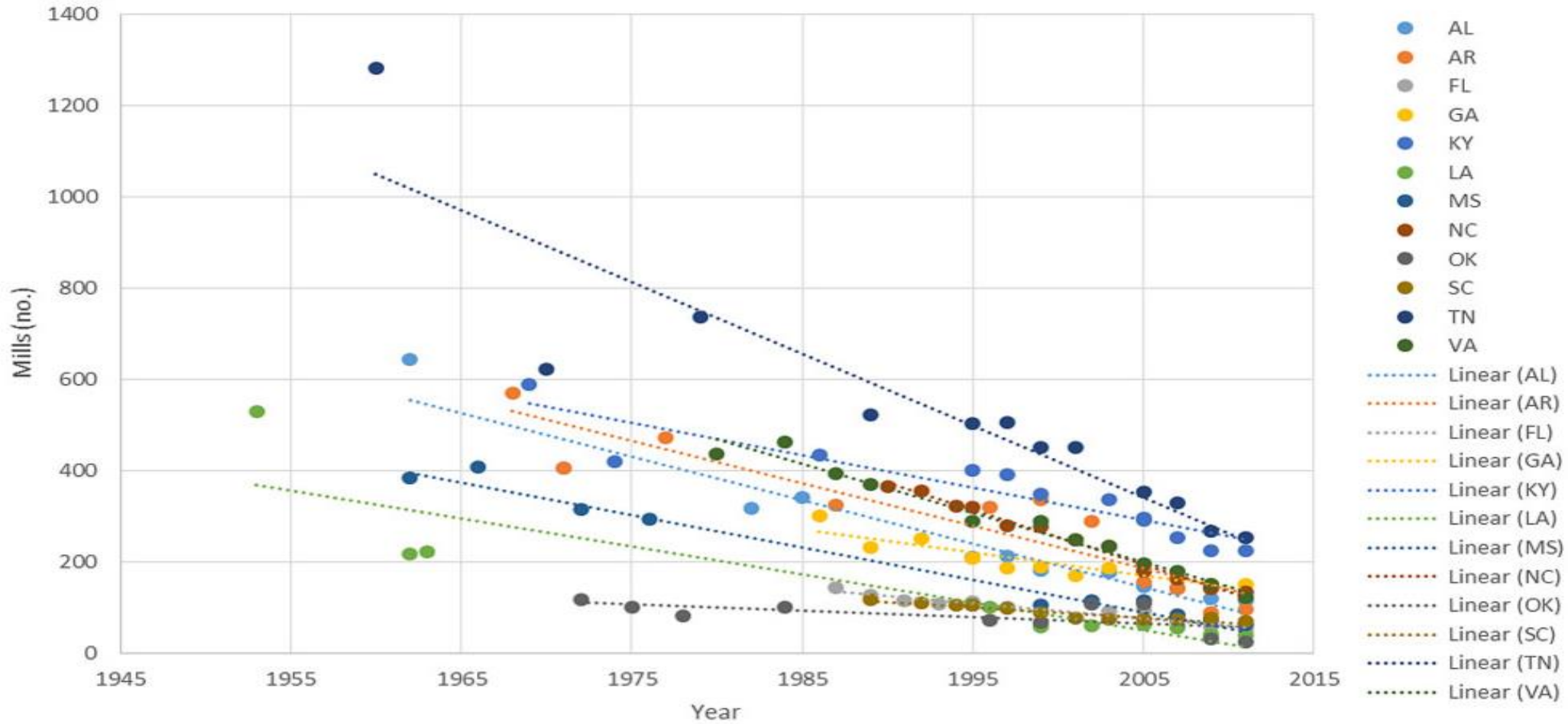


Source: Wood Products Council Table #7 and #13, ES4, 2006

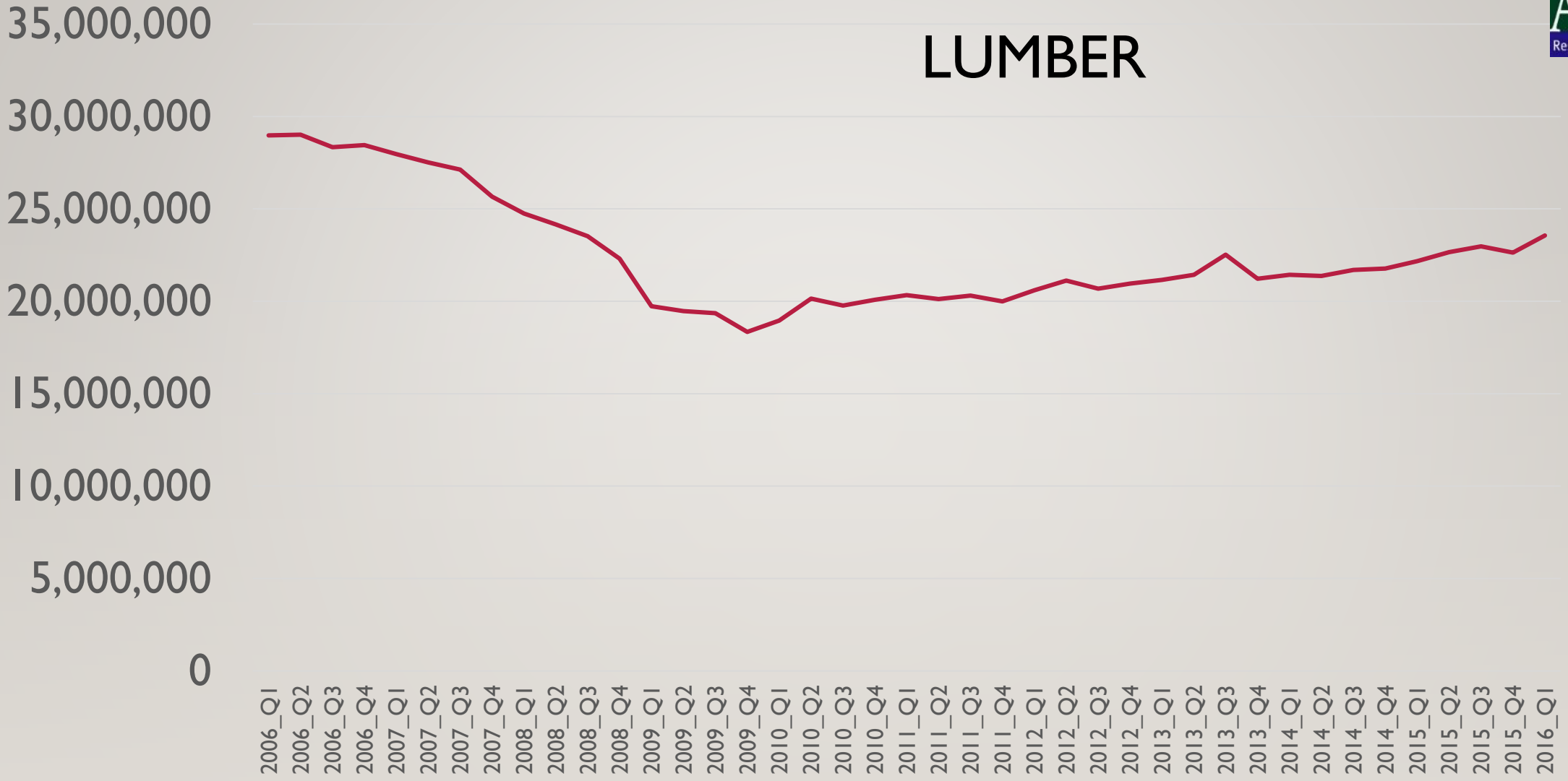
(*Lumber includes BFE of engineered wood per unit)



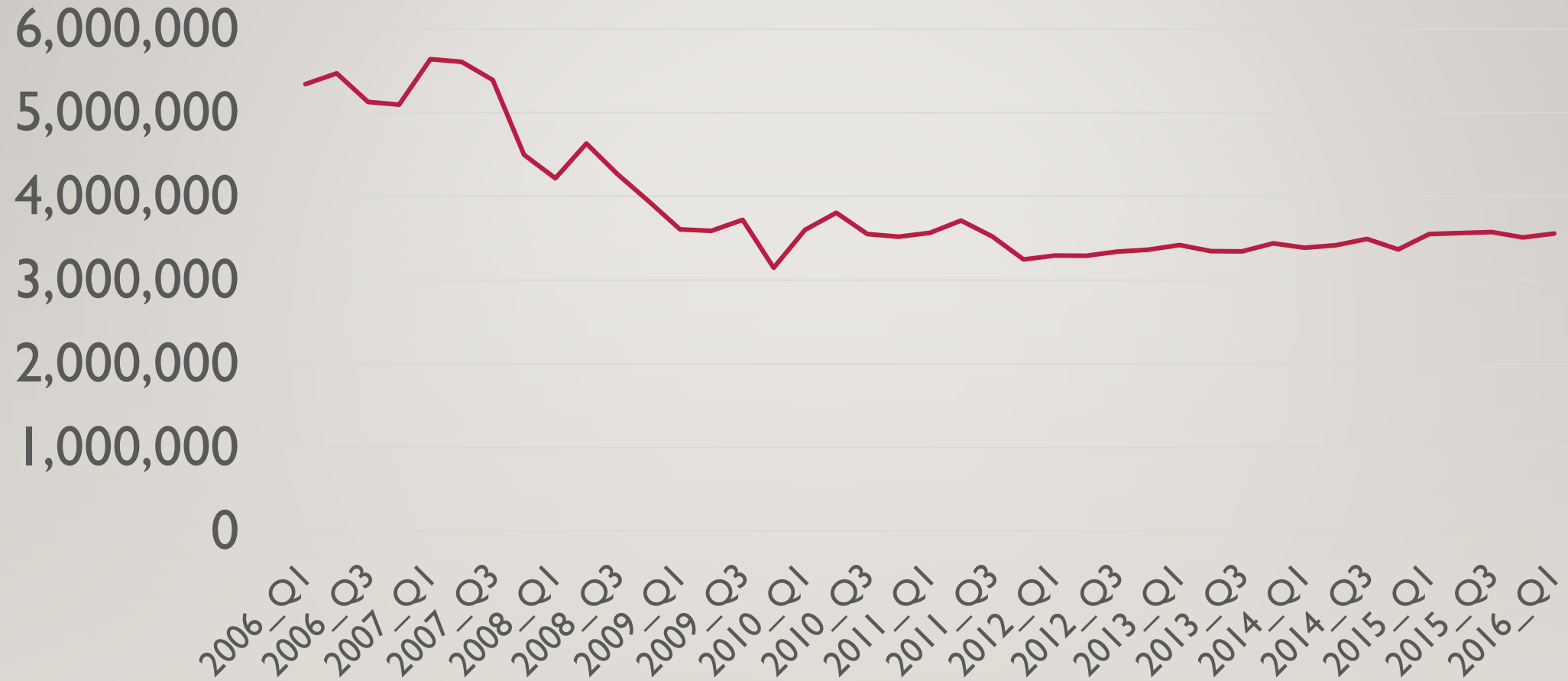
Declines in primary product mills for the southern region states



LUMBER



Plywood and Vaneers



TOTAL NORTH AMERICAN SOFTWOOD LUMBER CAPACITY ^{BBF}

	2005	2013	%Ch	2016	%Ch
USA					
West	20.0	17.9	-11.0%	18.2	1.6%
South	19.4	18.6	-3.9%	19.6	5.4%
Other	3.9	3.8	-3.8%	3.9	2.6%
Total	43.3	40.3	-6.9%	41.6	3.2%
Canada					
BC	18.6	16.1	-13.2%	15.3	-5.4%
EOR	20.1	14.6	-27.4%	14.9	2.5%
Total	38.7	30.7	-20.6%	30.2	-1.7%
North America	82.0	71.0	-13.4%	71.8	1.1%

OSB



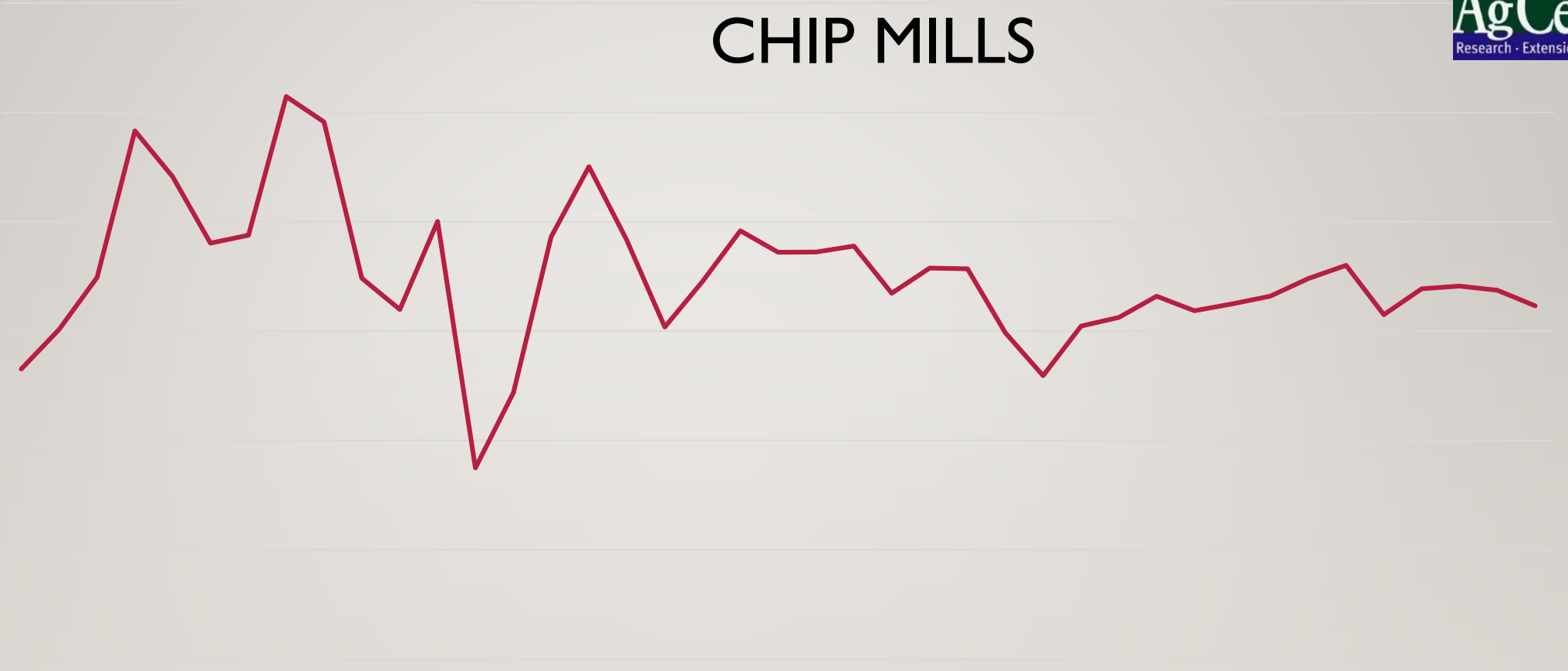
PULP AND PAPER



CHIP MILLS

7,400,000
7,200,000
7,000,000
6,800,000
6,600,000
6,400,000
6,200,000

2006_Q1 2006_Q2 2006_Q3 2006_Q4 2007_Q1 2007_Q2 2007_Q3 2007_Q4 2008_Q1 2008_Q2 2008_Q3 2008_Q4 2009_Q1 2009_Q2 2009_Q3 2009_Q4 2010_Q1 2010_Q2 2010_Q3 2010_Q4 2011_Q1 2011_Q2 2011_Q3 2011_Q4 2012_Q1 2012_Q2 2012_Q3 2012_Q4 2013_Q1 2013_Q2 2013_Q3 2013_Q4 2014_Q1 2014_Q2 2014_Q3 2014_Q4 2015_Q1 2015_Q2 2015_Q3 2015_Q4 2016_Q1



NORTH AMERICAN TISSUE SUPPLY WILL SURGE



About 400,000 tons of new capacity will be built in 2016 and 2017 (about 4% of market) while annual demand will grow 1%.

Company	Location	Capacity (000Tons)	Start-up Date
DoubleTree	Arizona, USA	32	2015
Cascades	Oregon, USA	55	2015
Orchids Paper	Mexicali, Mexico	33	2015
von Drehle	Mississippi, USA	35	2015
First Quality	South Carolina, USA	70	2015
St. Croix Tissue	Maine, USA	66	2015
First Quality	Pennsylvania, USA	70	2016
St. Croix Tissue	Maine, USA	66	2016
Resolute Forest Products	Tennessee, USA	66	2017
Procter & Gamble	Utah, USA	80	2017
Orchids Paper	South Carolina, USA	35	2017
Sofidel America	Ohio, USA	77	2017

Source: RISI, Company Reports

MARKET PULP SUPPLY WILL CONTINUE TO GROW



Company	Location	Capacity (000 Tonnes)	Grade	Start-up
CMPC	Rio Grande do Sul, Brazil	1300	hardwood	2015
Paper Excellence	Chetwynd, Canada	240	BCTMP	2015
Klabin	Paraná, Brazil	1500	hardwood / softwood	2016
RayonierAM	Jesup, GA	220	softwood/fluff	2016
International Paper	Riegelwood, NC	400	softwood/fluff	2016
Domtar	Ashdown, AR	500	softwood/fluff	2016
Fibria (Tres Lagoas II)	Tres Lagoas, Brazil	1850	hardwood	2017
Eldorado	Tres Lagoas, Brazil	2000	hardwood	2019

Approximately 1 million tonnes of BEK (4% of capacity) and 2 million tonnes of fluff/softwood pulp capacity (9% of capacity) will ramp up in 2016 versus annual demand growth of 1%-2%

CONTAINERBOARD SUPPLY WILL SURGE



About 1.9 million tons of new and converted containerboard capacity will ramp up in North America (about 5% of market) over the next two years. Demand will grow 1%-2% annually.

Company	Location	Capacity (000Tons)	Start-up Date
Smurfit Kappa Group	Townsend Hook, UK	260	Q1 2015
Klabin	Goiania, Brazil	110	Q1 2015
International Paper	Valliant, Oklahoma	360	Q3 2015
SP Fiber	Newberg, Oregon	300	Q4 2015
Pratt Industries	Valparaiso, Indiana	370	Q4 2015
Kruger	Trois-Rivières, Quebec	360	2017
Corrugated Supplies*	Bedford Park, Illinois	540	2017

QUESTIONS?

