HARDWOOD MARKET REPORT

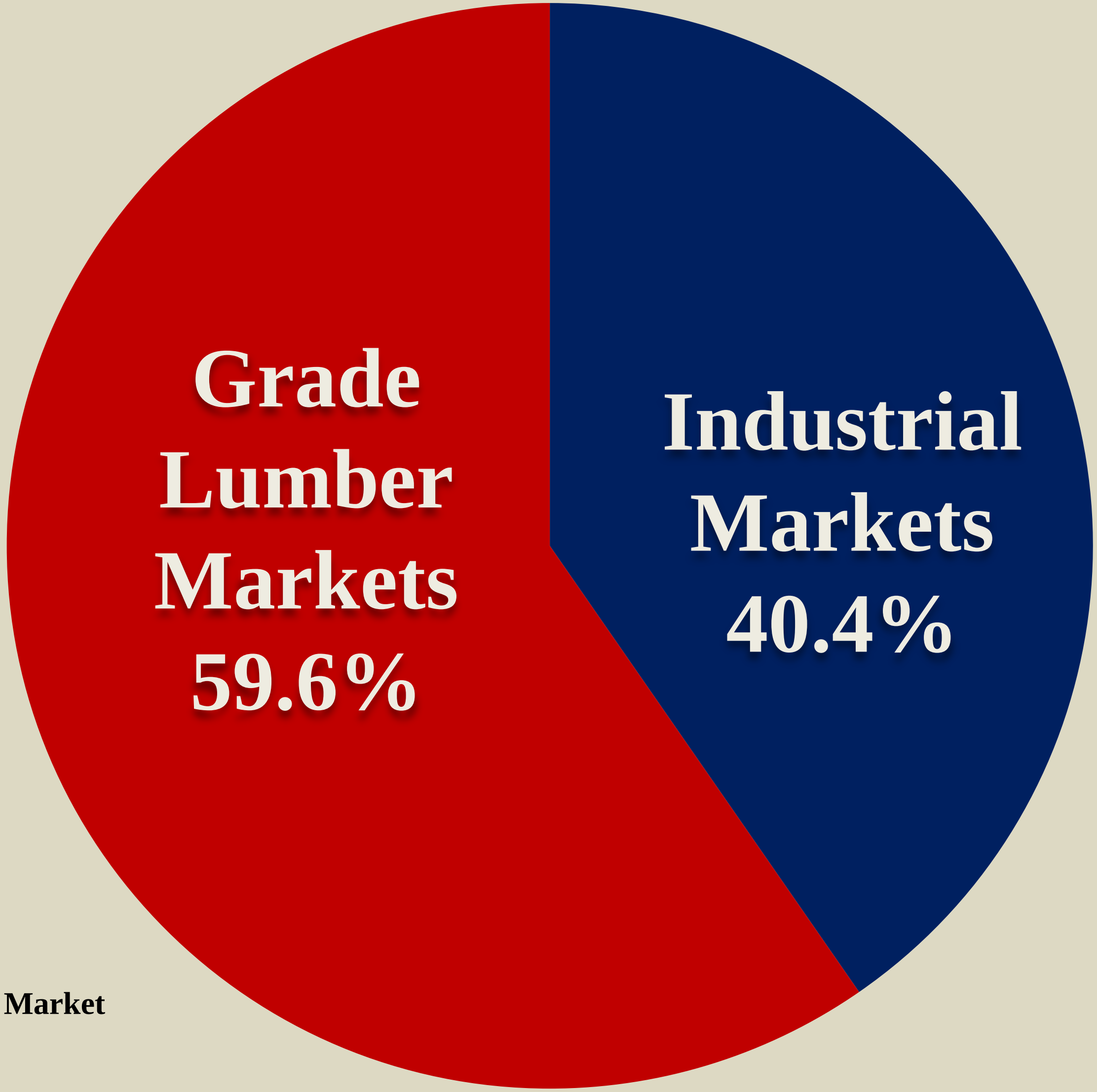
Industrial Lumber Products, Looking Ahead

HARDWOOD MANUFACTURERS ASSOCIATION
2014 National Conference and Expo
March 14, 2014

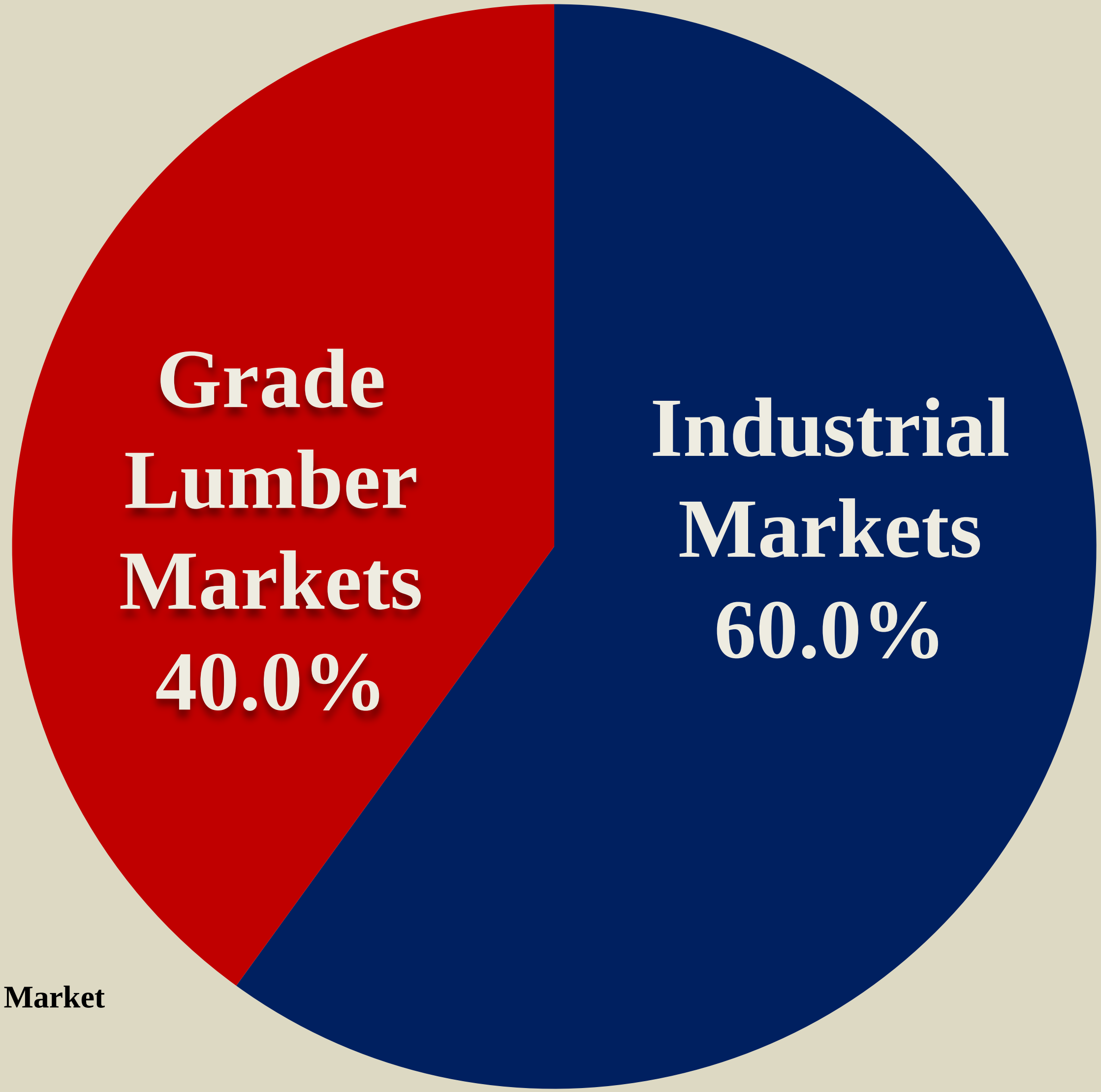
Take Care of the Low Grade Lumber. High Grade Lumber Will Take Care of Itself.

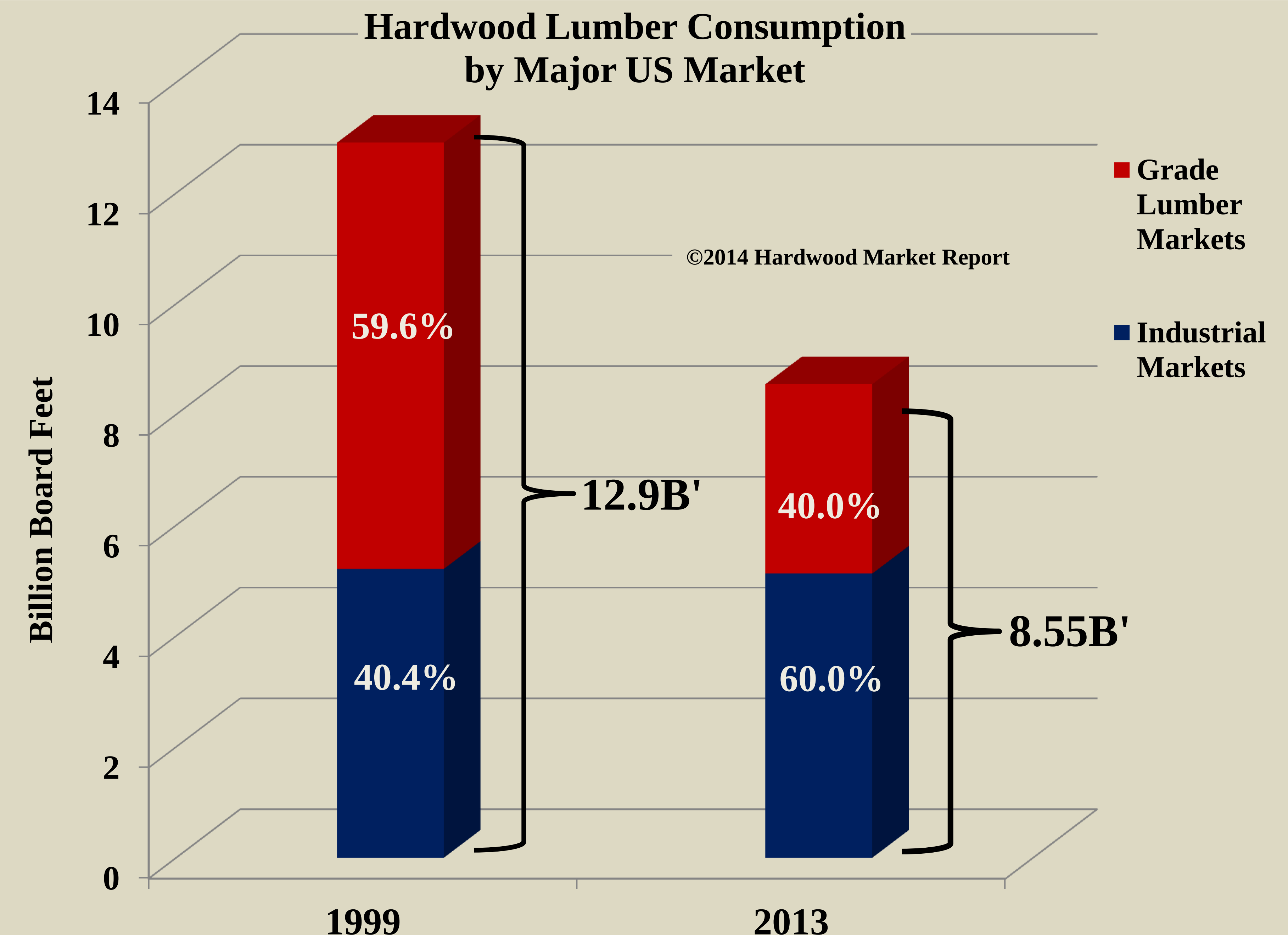
Low Grade
is
Doing Just Fine!

1999

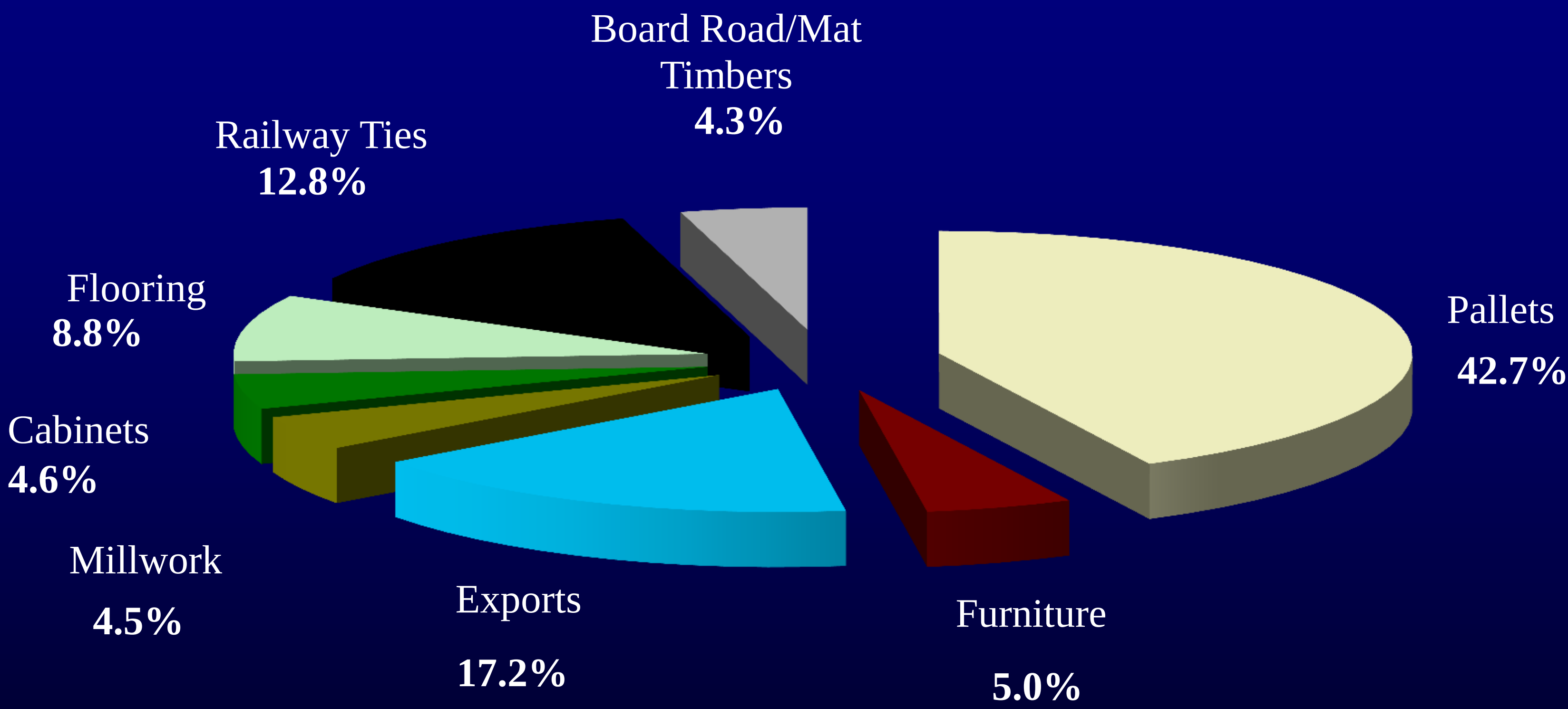


2013

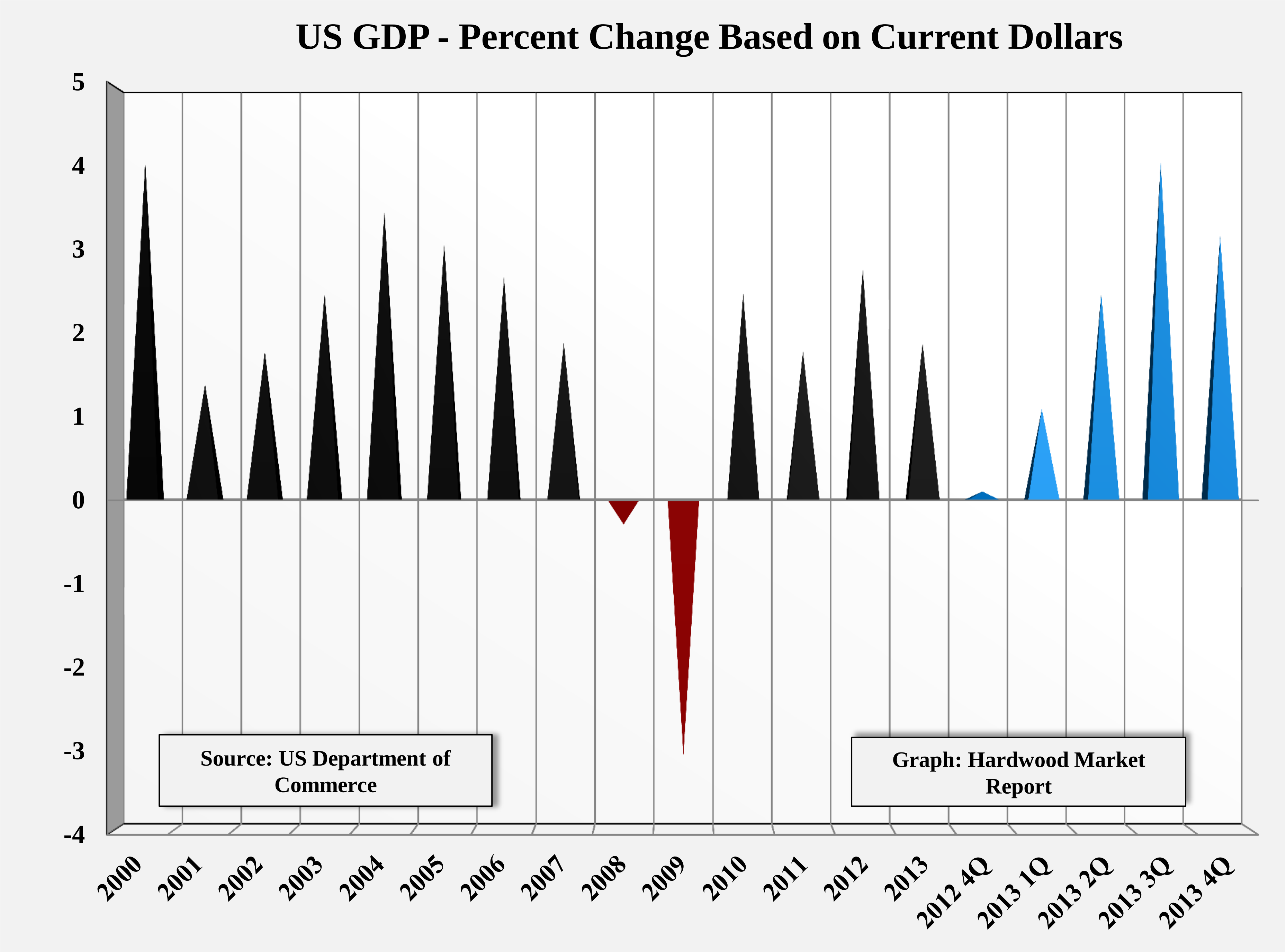



Hardwood Lumber Consumption
by Major US Market
©2014 Hardwood Market Report
Billion Board Feet
14
12
10
8
6
4
2
0
59.6%
40.4%
12.9B'
40.0%
60.0%
8.55B'
1999
2013
Grade Lumber Markets
Industrial Markets

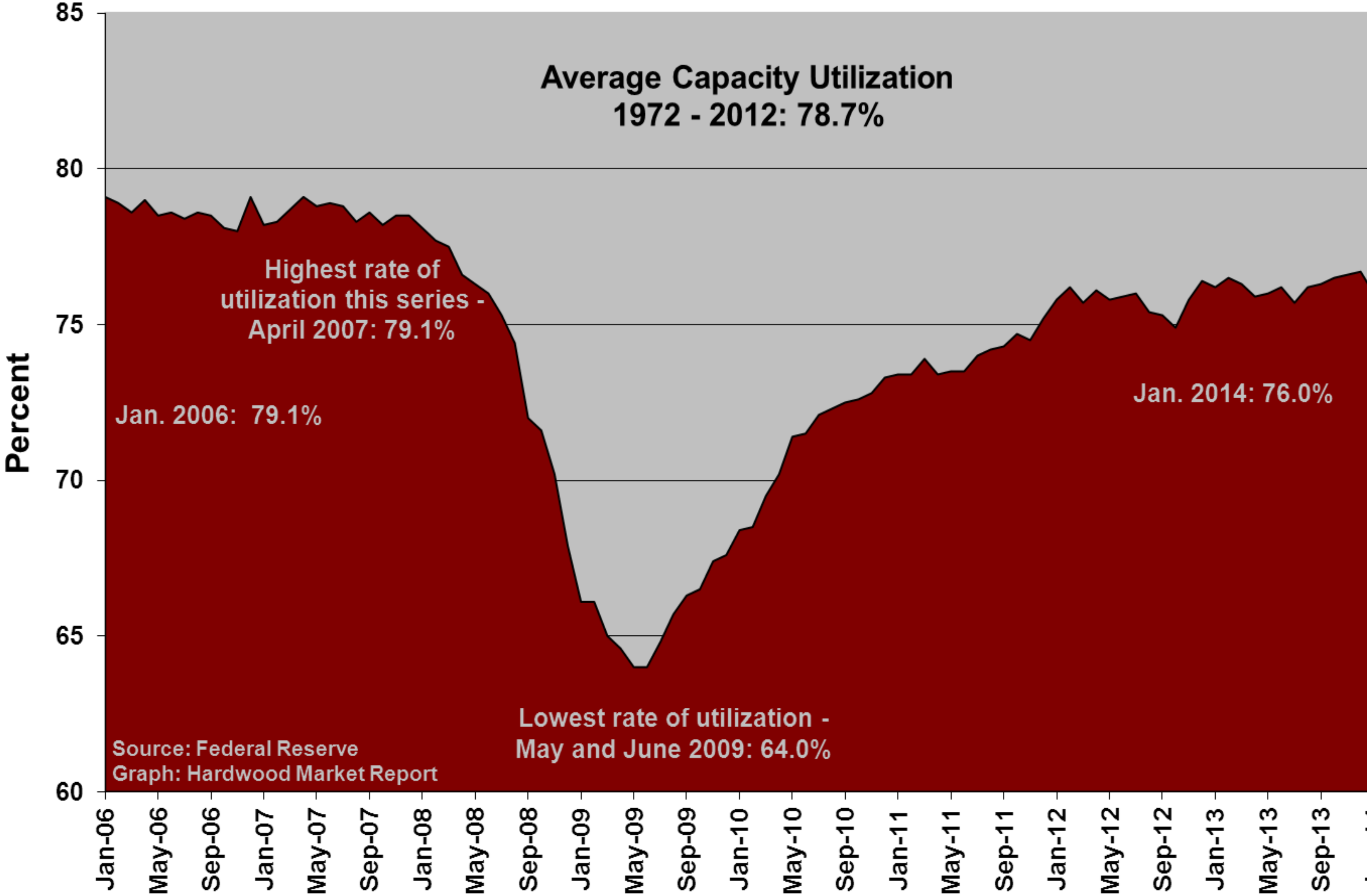
2013



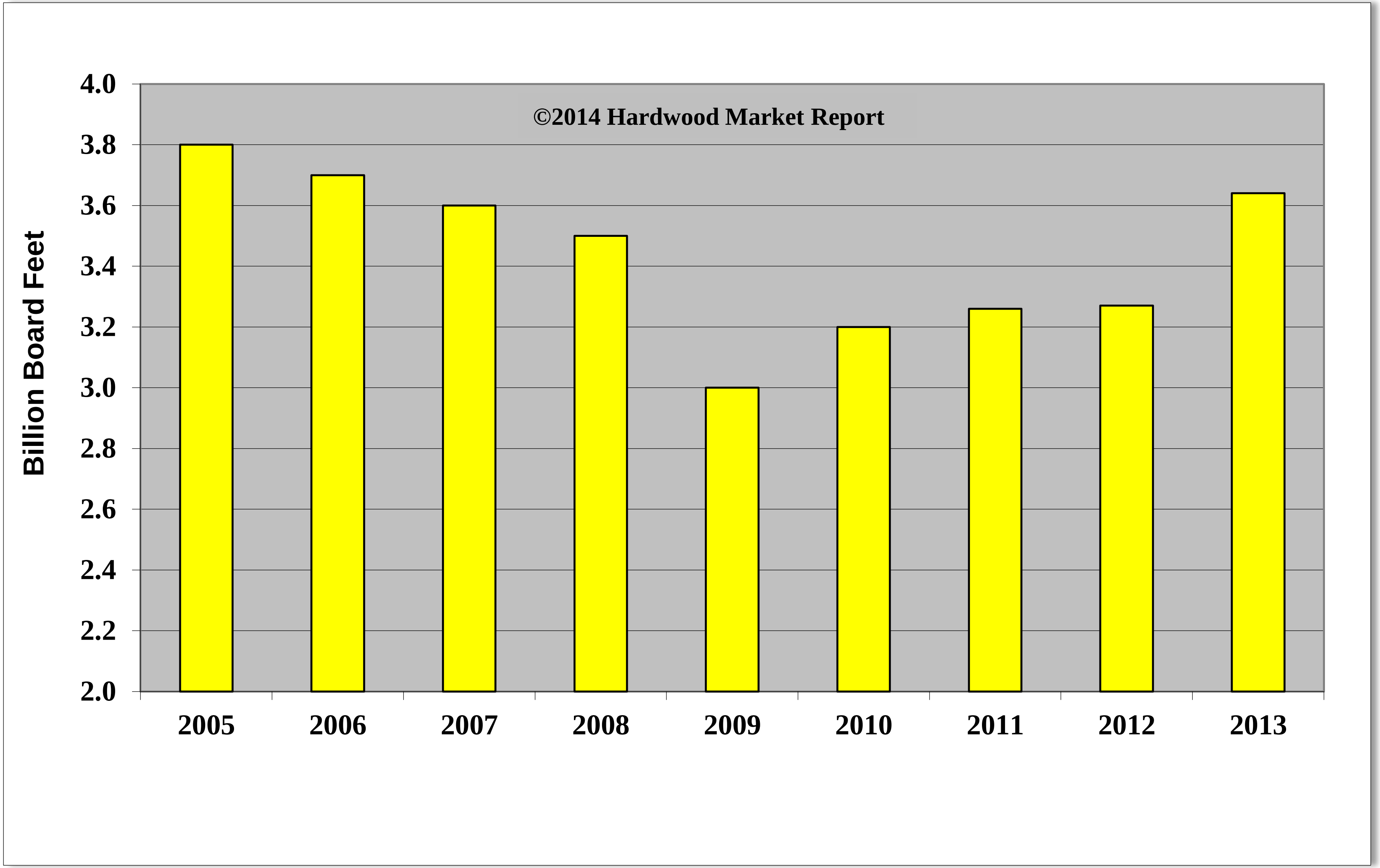
Exports = 17.2% of the volume of all Eastern US hardwood consumption, 42.8% of all grade lumber markets, and 54.9% of the volume of mid- to upper-grade markets.


US GDP - Percent Change Based on Current Dollars
5
4
3
2
1
0
-1
-2
-3
-4
Source: US Department of Commerce
Graph: Hardwood Market Report
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2012 4Q
2013 1Q
2013 2Q
2013 3Q
2013 4Q

Manufacturing Capacity Utilization



Pallets	2005	2006	2007	2008	2009	2010	2011	2012	2013
	3.8	3.7	3.6	3.5	3.0	3.2	3.26	3.27	3.64

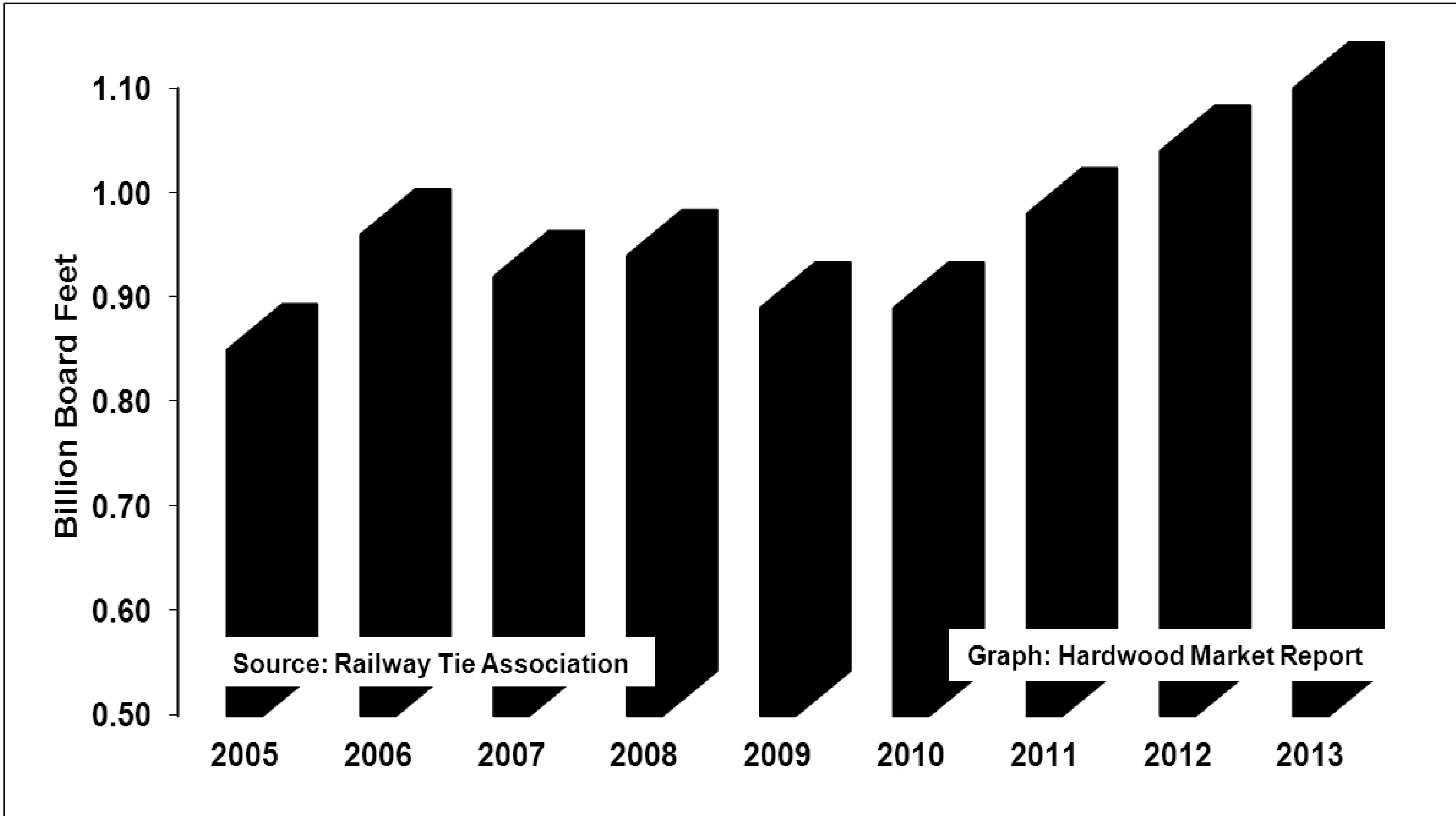


World Economic Outlook Updated Projections

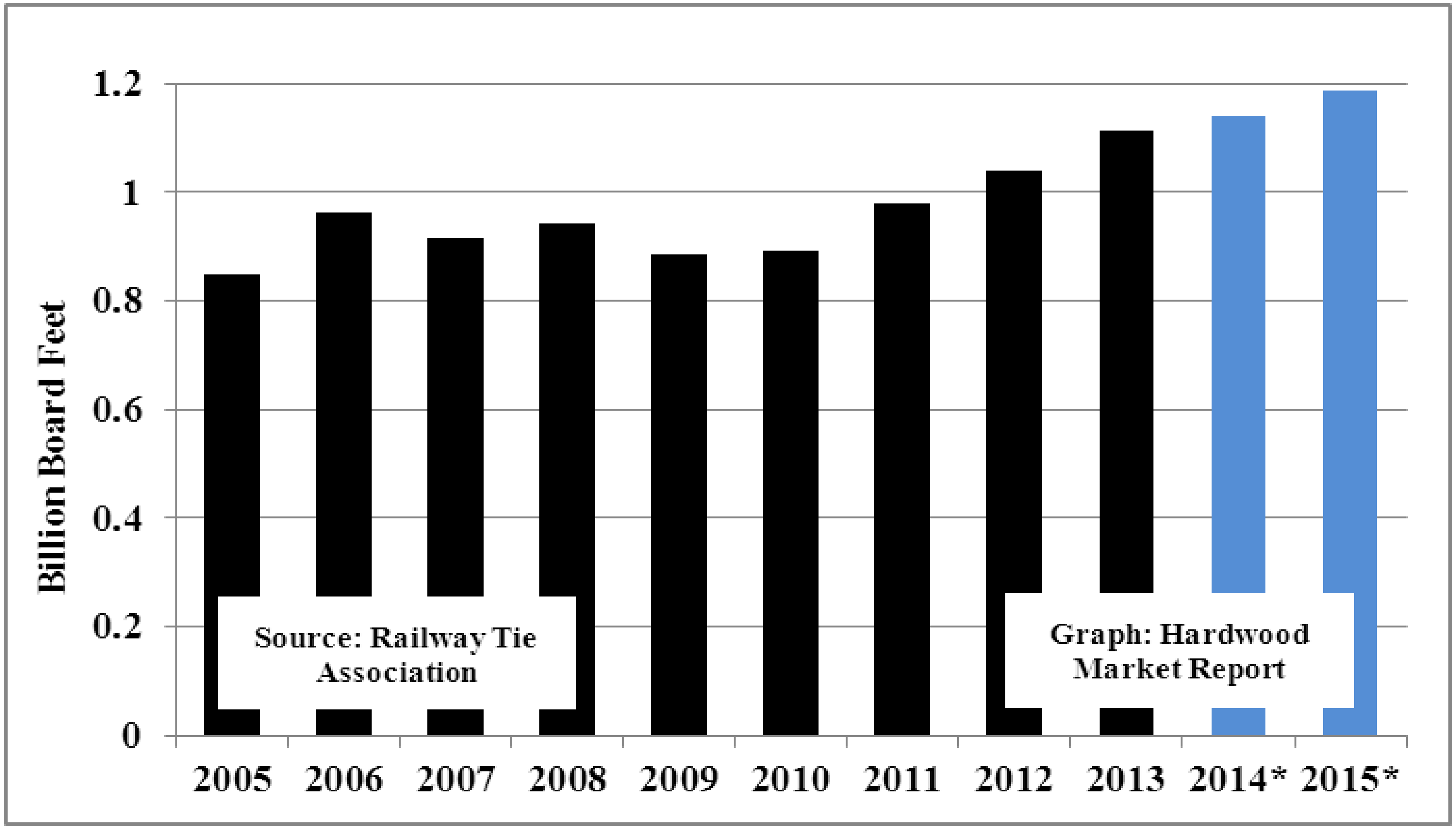
(% change unless otherwise noted)	2013	Year over Year Projections 2014	2015		2013	Year over Year Projections 2014	2015
World output	3.0	3.7	3.9	China	7.7	7.5	7.3
Advance economies	1.3	2.2	2.3	India	4.4	5.4	6.4
United States	1.9	2.8	3.0	ASEAN-5	5.0	5.1	5.6
Euro Area	-0.4	1.0	1.4	Latin America and the Caribbean	2.6	3.0	3.3
Germany	0.5	1.6	1.4	Brazil	2.3	2.3	2.8
France	0.2	0.9	1.5	Mexico	1.2	3.0	3.5
Italy	-1.8	0.6	1.1	Middle East and North Africa	2.4	3.3	4.8
Spain	-1.2	0.6	0.8	Sub-Saharan Africa	5.1	6.1	5.8
Japan	1.7	1.7	1.0	South Africa	1.8	2.8	3.3
United Kingdom	1.7	2.4	2.2				
Canada	1.7	2.2	2.4	**Commodity prices (US $)**			
Other advanced economies	2.2	3.0	3.2	Oil	-0.9	-0.3	-5.2
Emerging and developing economies	4.7	5.1	5.4	Nonfuel (avg. based on world			
Central and Eastern Europe	2.5	2.8	3.1	commodity export weights)	-1.5	-6.1	-2.4
Commonwealth of Independent States	2.1	2.6	3.1	**Consumer prices**			
Russia	1.5	2.0	2.5	Advanced economies	1.4	1.7	1.8
Developing Asia	6.5	6.7	6.8	Emerging and developing economies	6.1	5.6	5.3

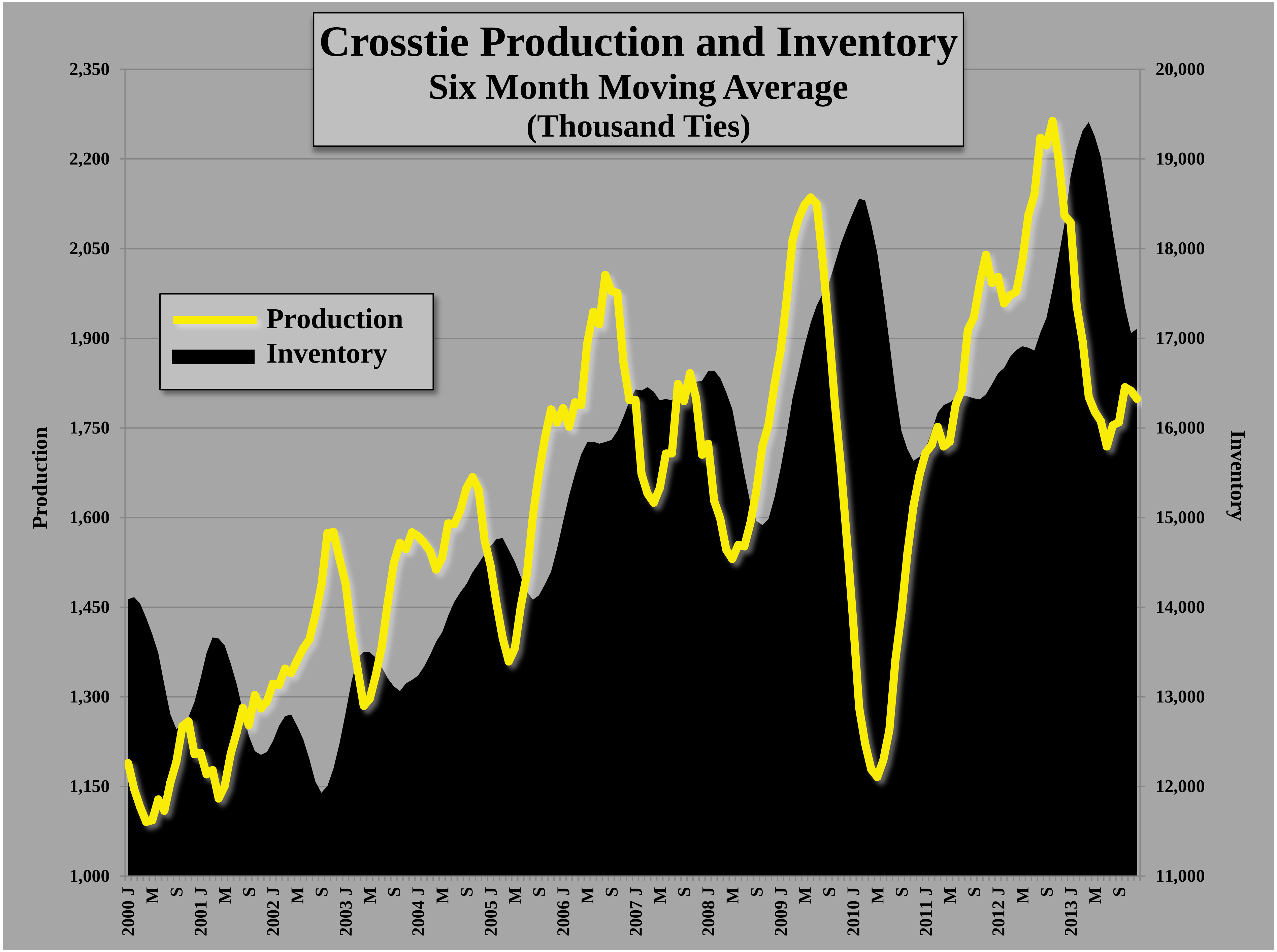
Source: International Monetary Fund | **Chart: Hardwood Market Report**

Railway	2005	2006	2007	2008	2009	2010	2011	2012	2013
Ties	0.85	0.96	0.92	0.94	0.89	0.89	0.98	1.04	1.11

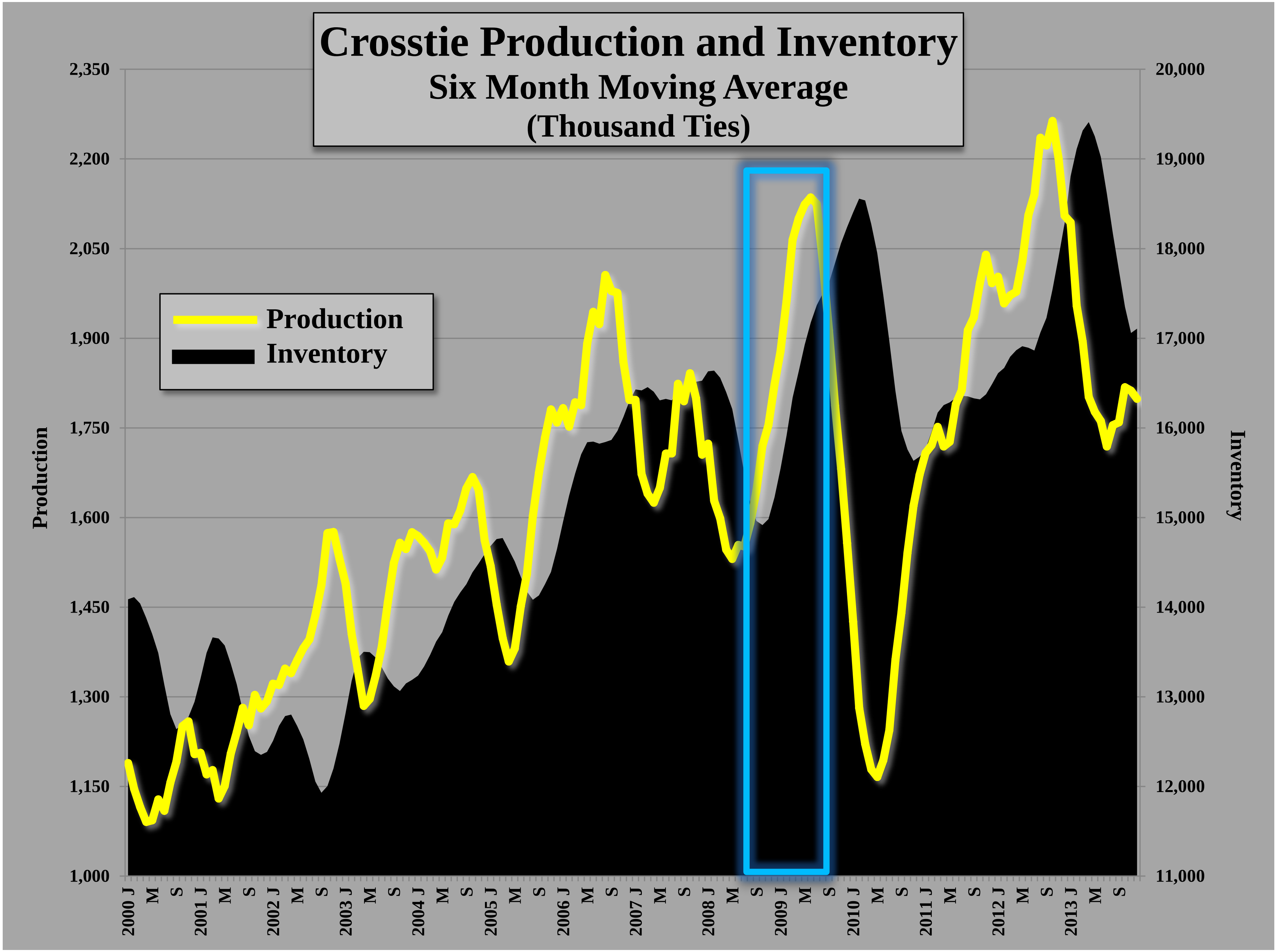


Railway	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Ties	0.85	0.96	0.92	0.94	0.89	0.89	0.98	1.04	1.114	1.139	1.186

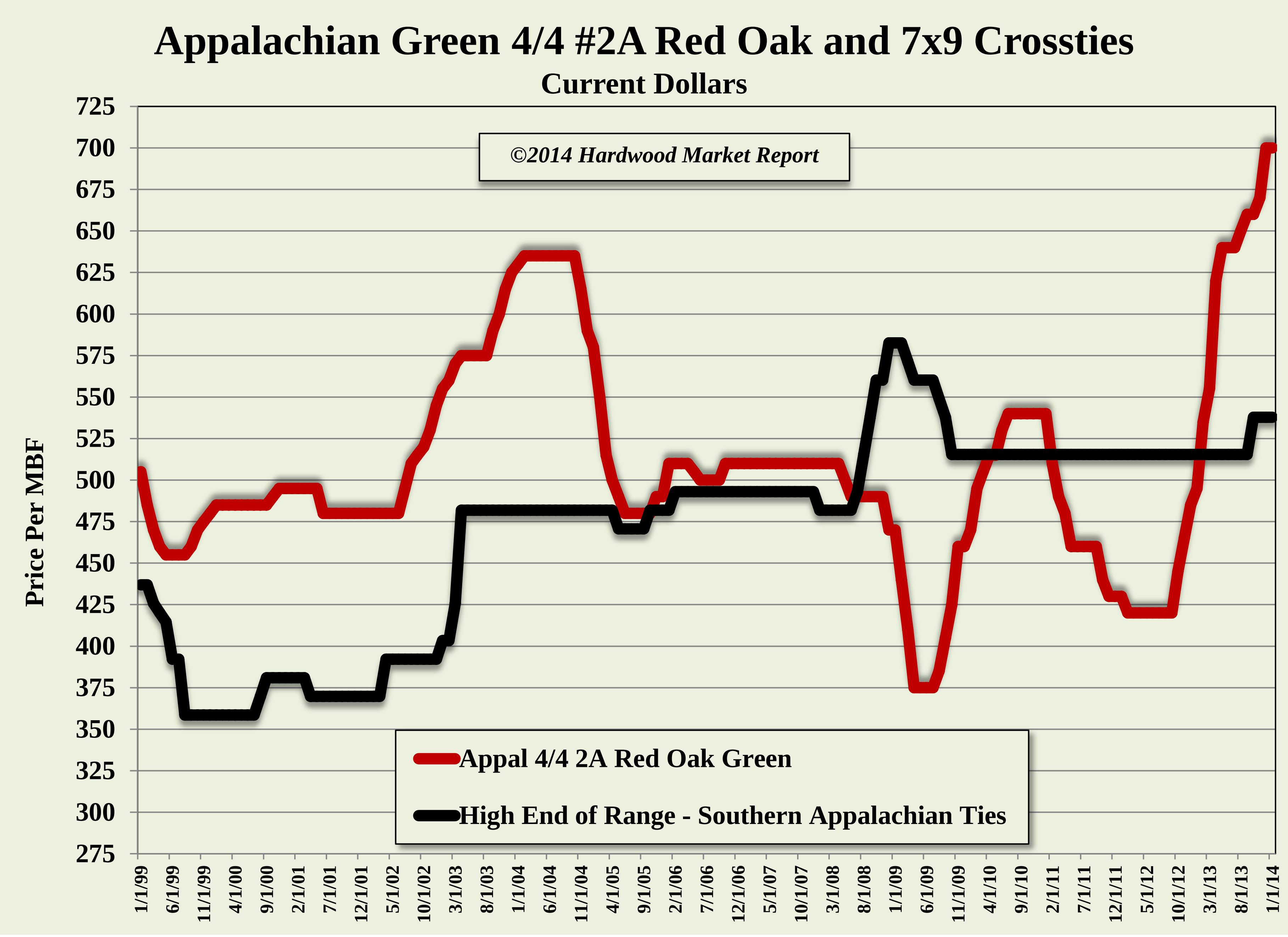




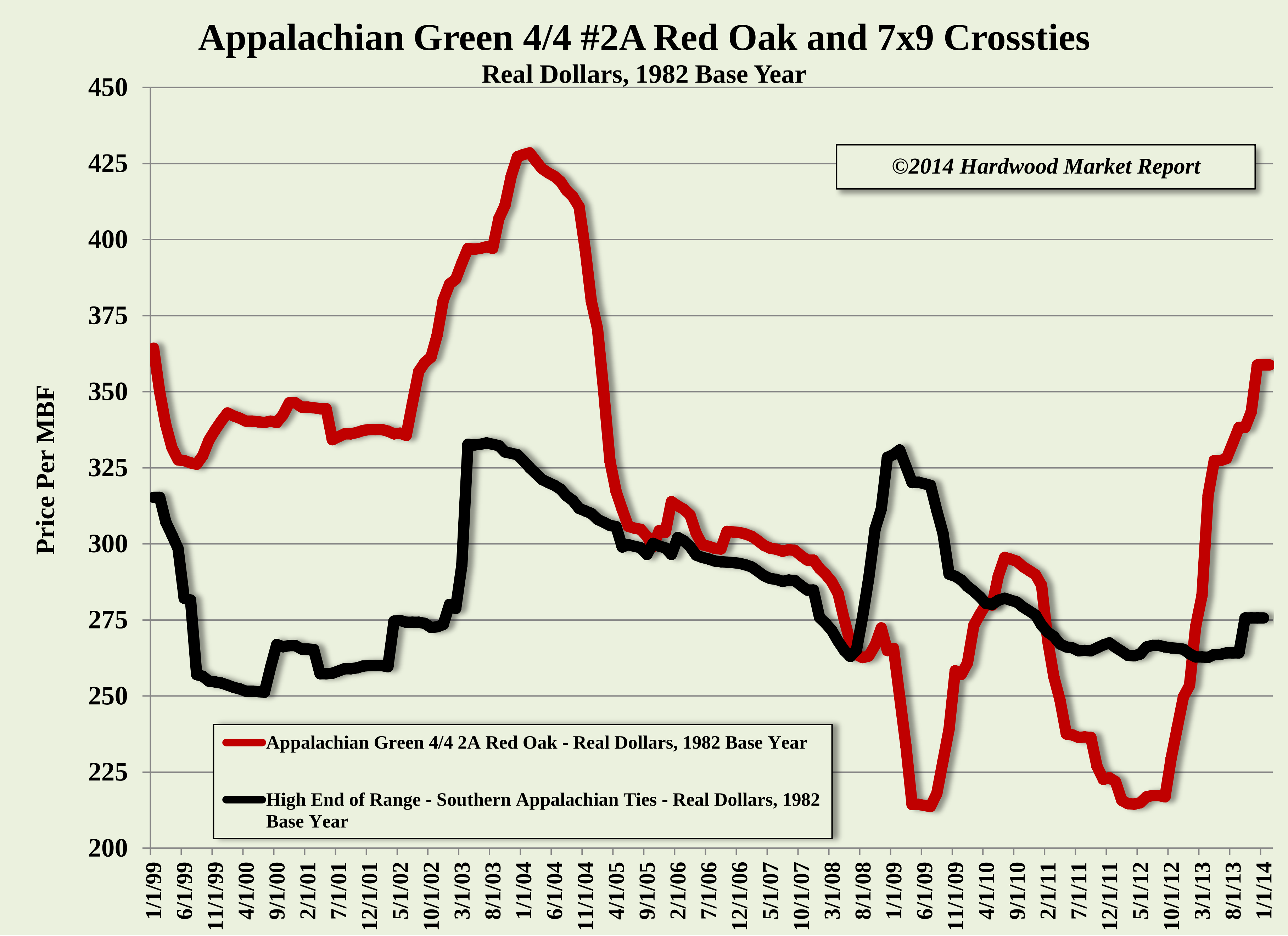
Crosstie Production and Inventory
Six Month Moving Average
(Thousand Ties)
Production
Inventory
2,350
2,200
2,050
1,900
1,750
1,600
1,450
1,300
1,150
1,000
20,000
19,000
18,000
17,000
16,000
15,000
14,000
13,000
12,000
11,000
Production
Inventory
2000 J
M
S
2001 J
2002 J
2003 J
2004 J
2005 J
2006 J
2007 J
2008 J
2009 J
2010 J
2011 J
2012 J
2013 J



Crosstie Production and Inventory
Six Month Moving Average
(Thousand Ties)
Production
Inventory
2,350
2,200
2,050
1,900
1,750
1,600
1,450
1,300
1,150
1,000
20,000
19,000
18,000
17,000
16,000
15,000
14,000
13,000
12,000
11,000
2000 J
M
S
2001 J
2002 J
2003 J
2004 J
2005 J
2006 J
2007 J
2008 J
2009 J
2010 J
2011 J
2012 J
2013 J

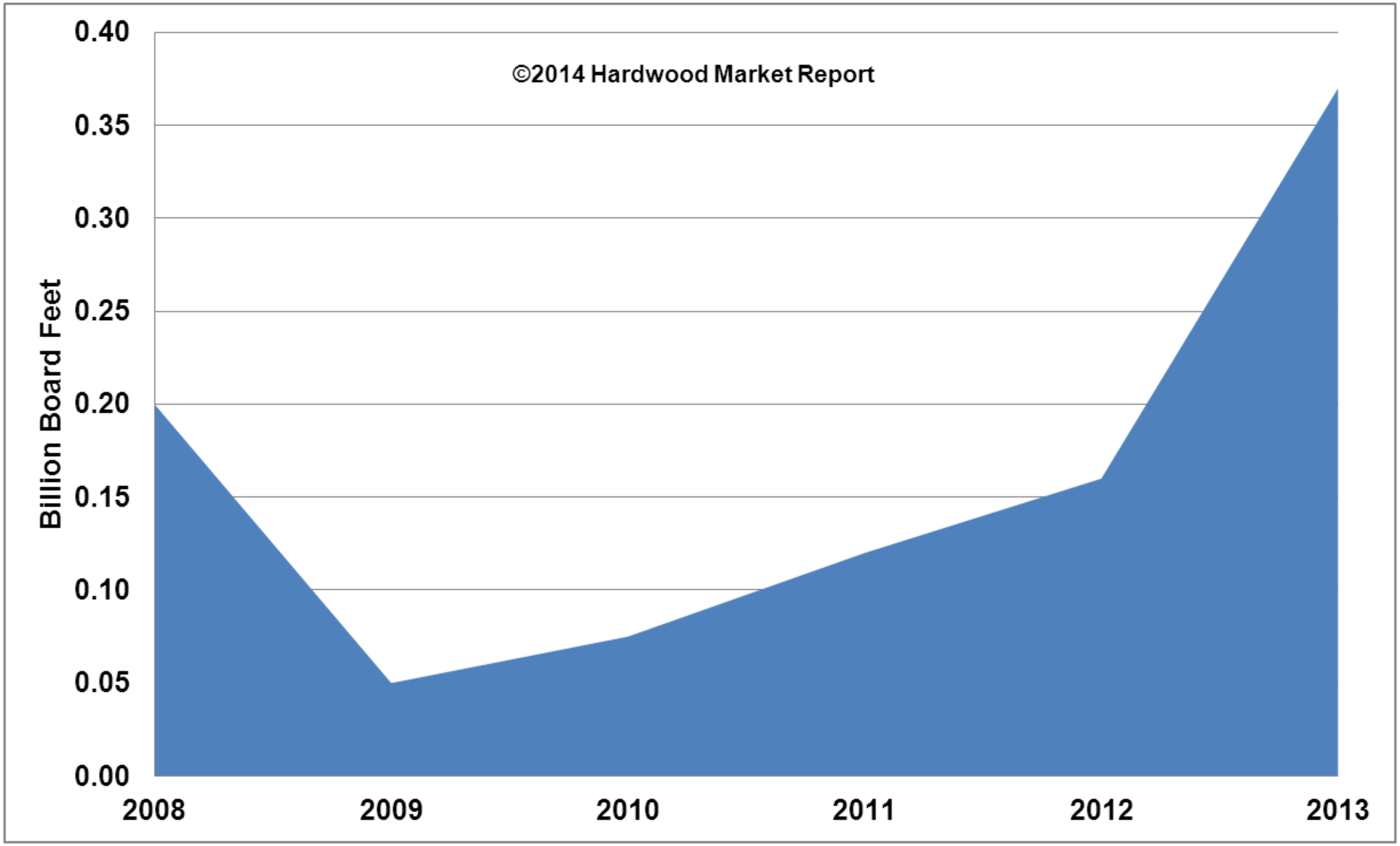


Appalachian Green 4/4 #2A Red Oak and 7x9 Crossties
Current Dollars
©2014 Hardwood Market Report
Price Per MBF
725
700
675
650
625
600
575
550
525
500
475
450
425
400
375
350
325
300
275
1/1/99
6/1/99
11/1/99
4/1/00
9/1/00
2/1/01
7/1/01
12/1/01
5/1/02
10/1/02
3/1/03
8/1/03
1/1/04
6/1/04
11/1/04
4/1/05
9/1/05
2/1/06
7/1/06
12/1/06
5/1/07
10/1/07
3/1/08
8/1/08
1/1/09
6/1/09
11/1/09
4/1/10
9/1/10
2/1/11
7/1/11
12/1/11
5/1/12
10/1/12
3/1/13
8/1/13
1/1/14
Appal 4/4 2A Red Oak Green
High End of Range - Southern Appalachian Ties



Appalachian Green 4/4 #2A Red Oak and 7x9 Crossties
Real Dollars, 1982 Base Year
©2014 Hardwood Market Report
Price Per MBF
450
425
400
375
350
325
300
275
250
225
200
Appalachian Green 4/4 2A Red Oak - Real Dollars, 1982 Base Year
High End of Range - Southern Appalachian Ties - Real Dollars, 1982 Base Year
1/1/99
6/1/99
11/1/99
4/1/00
9/1/00
2/1/01
7/1/01
12/1/01
5/1/02
10/1/02
3/1/03
8/1/03
1/1/04
6/1/04
11/1/04
4/1/05
9/1/05
2/1/06
7/1/06
12/1/06
5/1/07
10/1/07
3/1/08
8/1/08
1/1/09
6/1/09
11/1/09
4/1/10
9/1/10
2/1/11
7/1/11
12/1/11
5/1/12
10/1/12
3/1/13
8/1/13
1/1/14

Board Road/Mat Timbers	2005	2006	2007	2008	2009	2010	2011	2012	2013
	N/A	N/A	N/A	0.20	0.05	0.08	0.12	0.16	0.37



Board Road/Crane Mat Industry Overview

Market Sectors

- Oil and gas drilling sites
- Marine platforms and decking
- Pipelines
- Electric transmission/generation
- Bridges
- Excavation support

Board Road/Crane Mat Industry Overview

Product names

- Crane mats
- Bridge mats
- Pipeline mats
- Digging mats
- Road mats
- Swamp mats
- Timber mats
- Laminated mats (not for track equipment)

Board Road/Crane Mat Industry Overview

Material Use by Market Sector

Widely varied among manufacturers

1. Pipelines
2. Oil/petroleum extraction
3. Electric transmission/generation
4. Bridges
5. Ranking indistinguishable for all others

Board Road/Crane Mat Industry Overview

Supply Stream –
Raw materials for mat construction

- Large sawmills, vertically integrated in producing raw materials and assembling mats
- Mat builders that purchase lumber and timbers. These mat builders may or may not be sawmills.
- Sawmills that sell lumber and timbers to mat builders – directly or indirectly
- Brokers that purchase and resell lumber and timbers to mat builders and refurbishers.

Board Road/Crane Mat Industry Overview

Supply Stream –
Sales and distribution of board road and mats

- Direct shipments from builder to job site
- Shipments to warehouse or trans-load facility
- Delivery destination may or may not be that of the customer who place the order

Board Road/Crane Mat Industry Overview

Distribution Stream – Types of customers

- Construction contractor
- Engineering firm
- Utility company
- Distributor
- Broker
- Competitor mat builder

Board Road/Crane Mat Industry Overview

Distribution Stream –

Who is the customer?

Specifically, who is the person that determines the exact needs for mat products, quantities, and timing of delivery?

Is it the person who calls to place the order?

Does the manufacturer know who to call to solicit business or gauge the marketplace?

Board Road/Crane Mat Industry Overview

"There is no defined matrix for projecting demand, except to monitor oil and gas field construction and extraction."

Board Road/Crane Mat Industry Overview

There is also no method to monitor total inventory combined of mats in the field, at distribution locations, and at the manufacturer.

Source: U.S. Energy Information Administration based on data from various published studies. Canada and Mexico plays from ARI.
Updated: May 9, 2011

Figure 10. Total energy production and consumption, 1980-2040

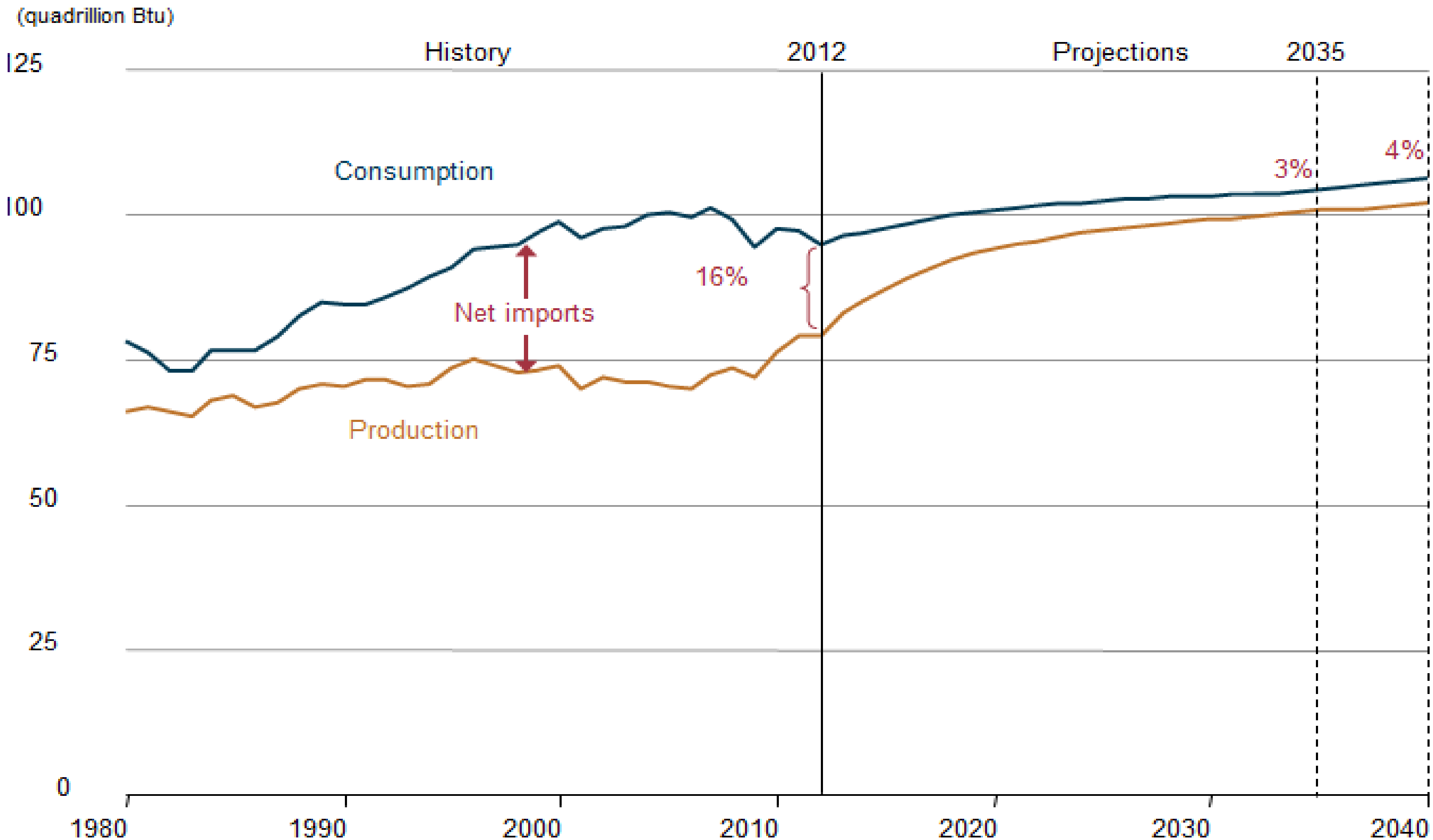


Figure 12. U.S. petroleum and other liquid fuels supply, 1970-2040

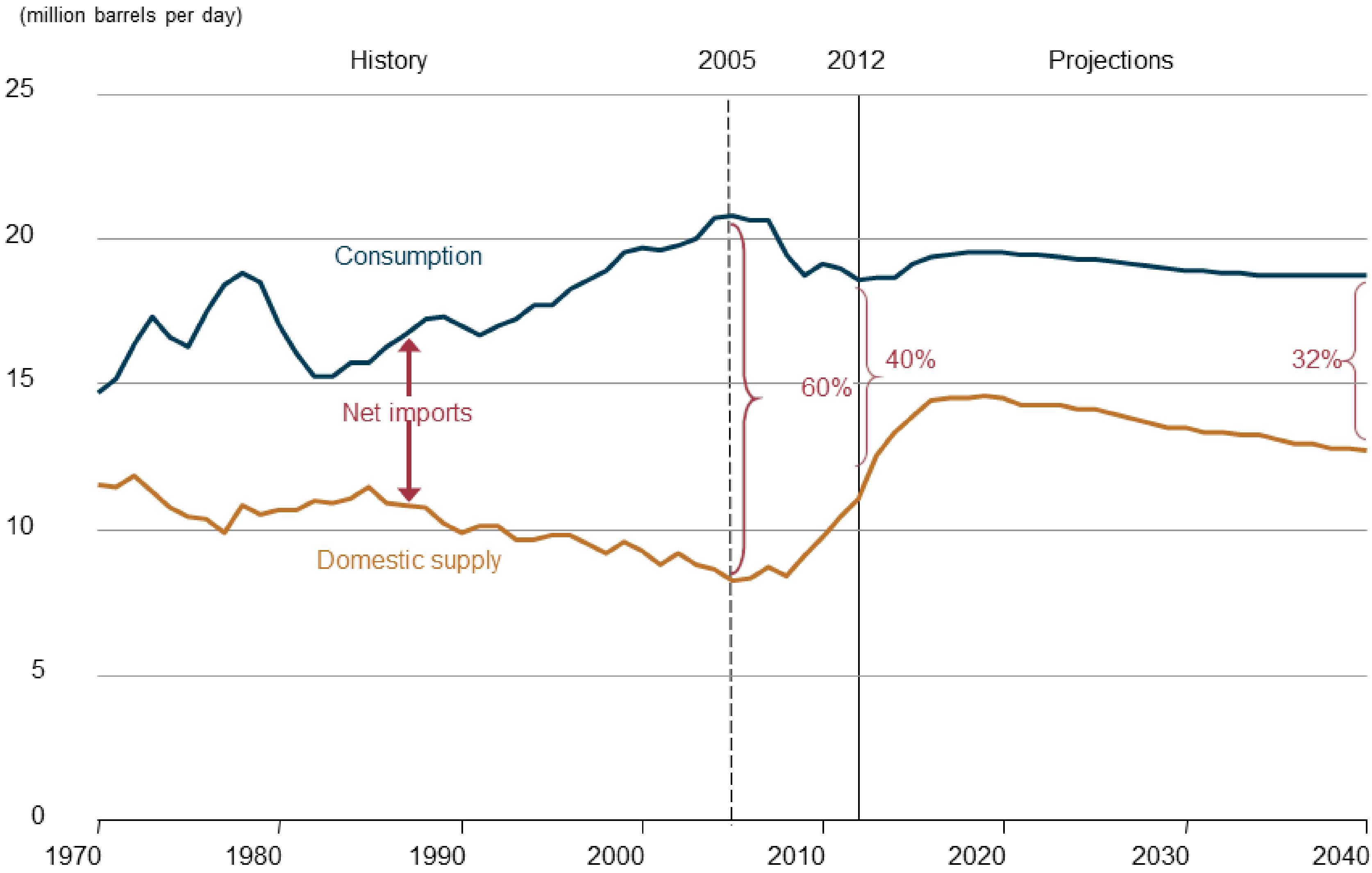
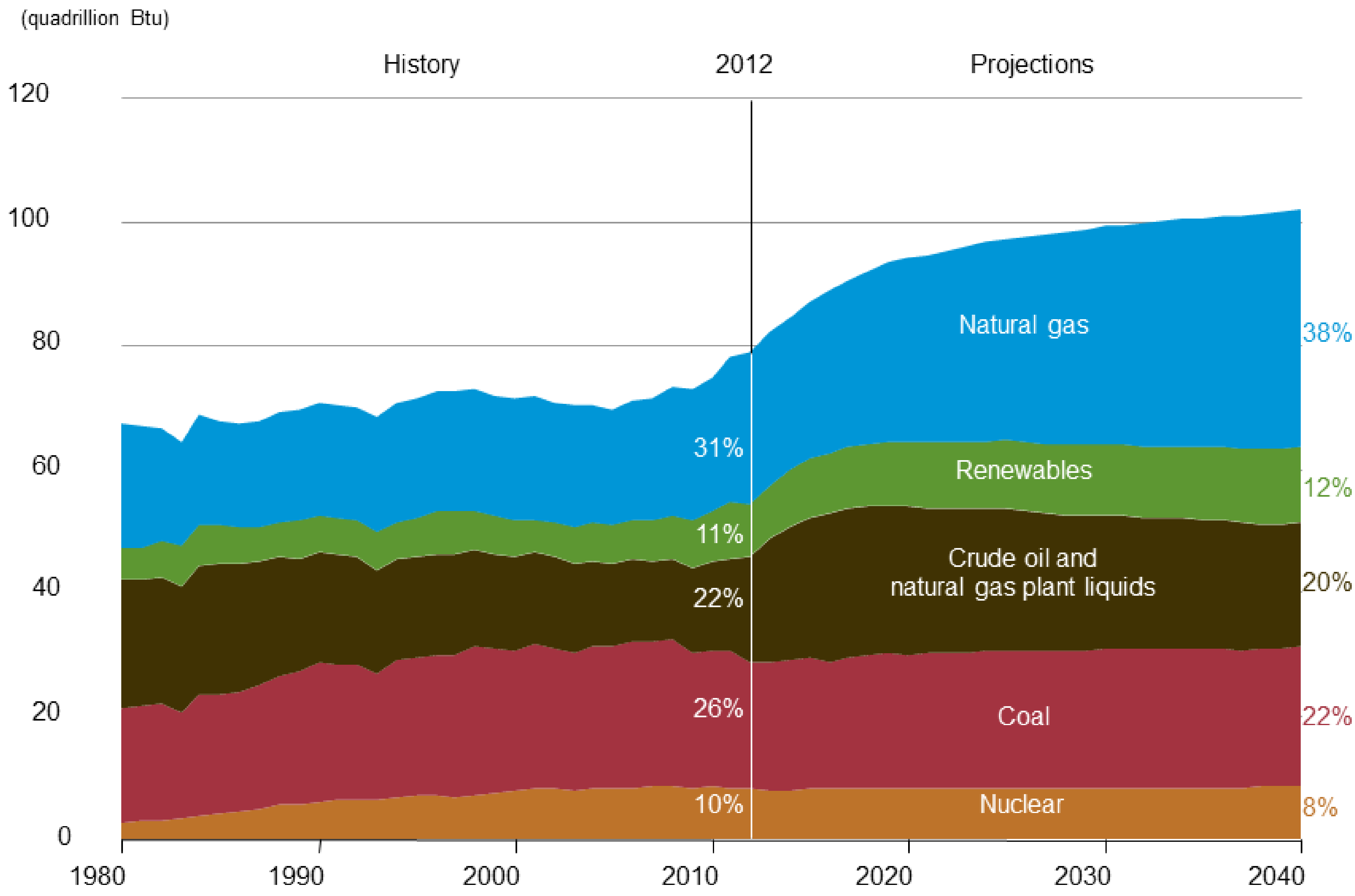
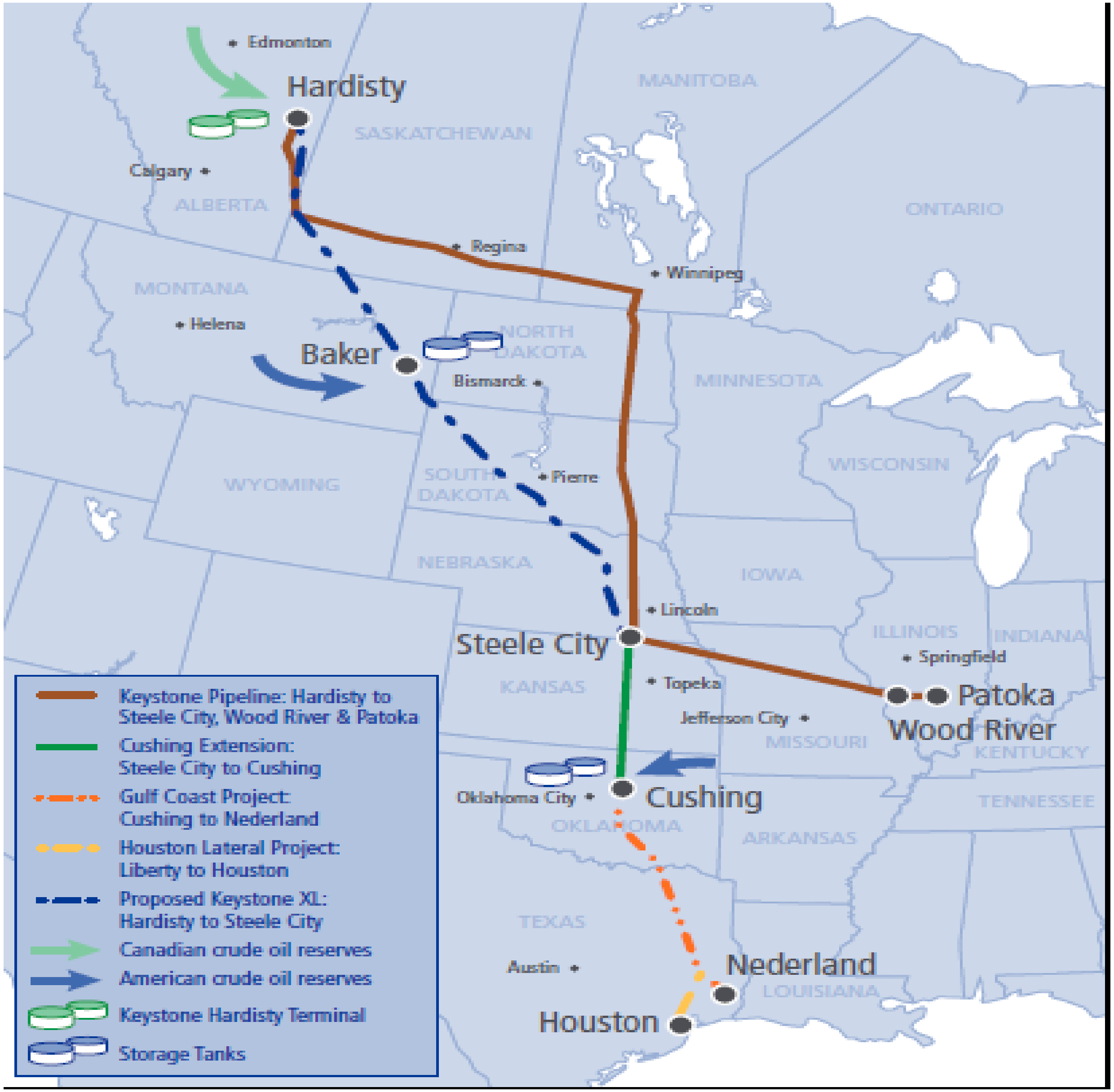


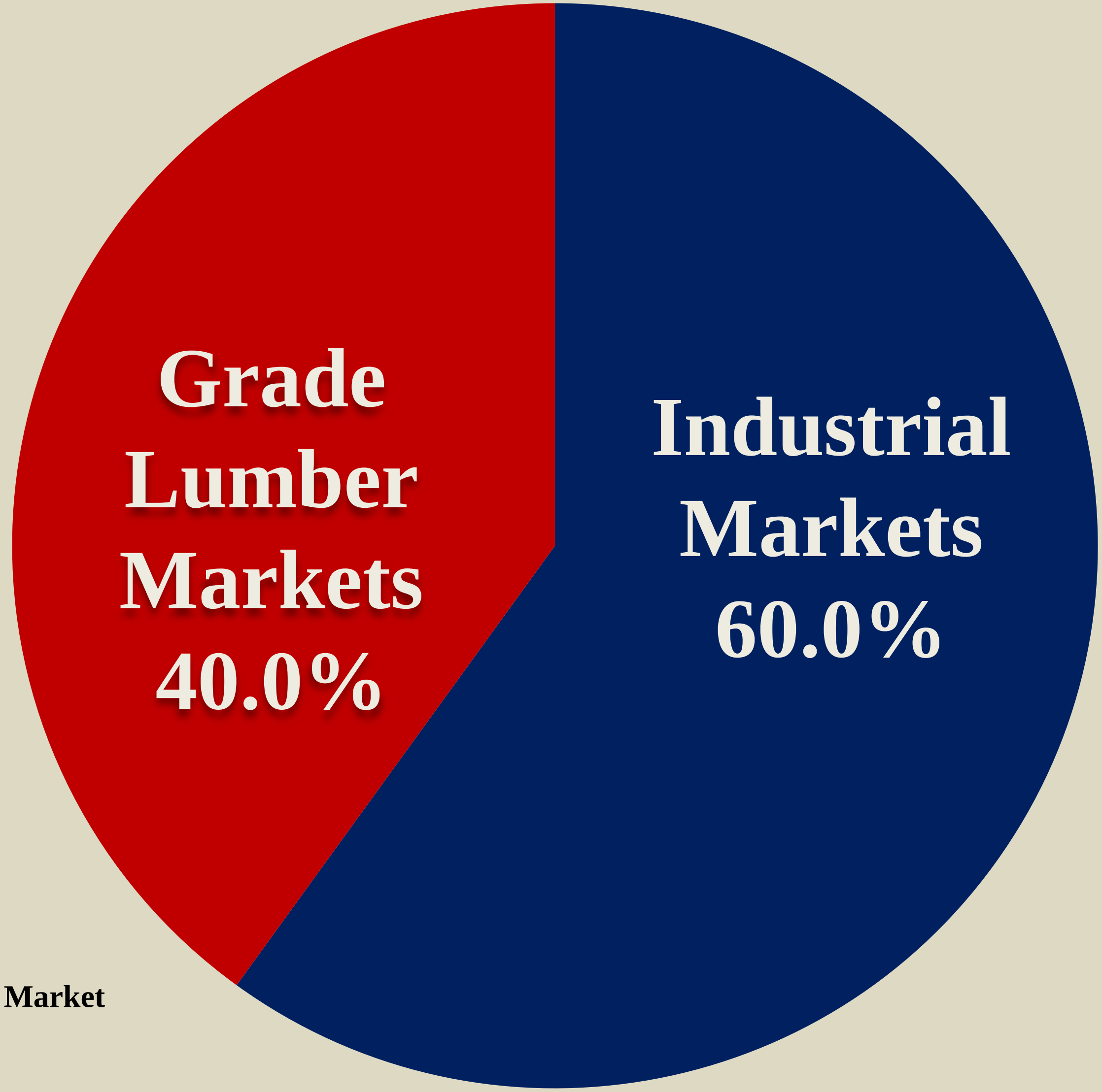
Figure 11. U.S. energy production by fuel, 1980-2040

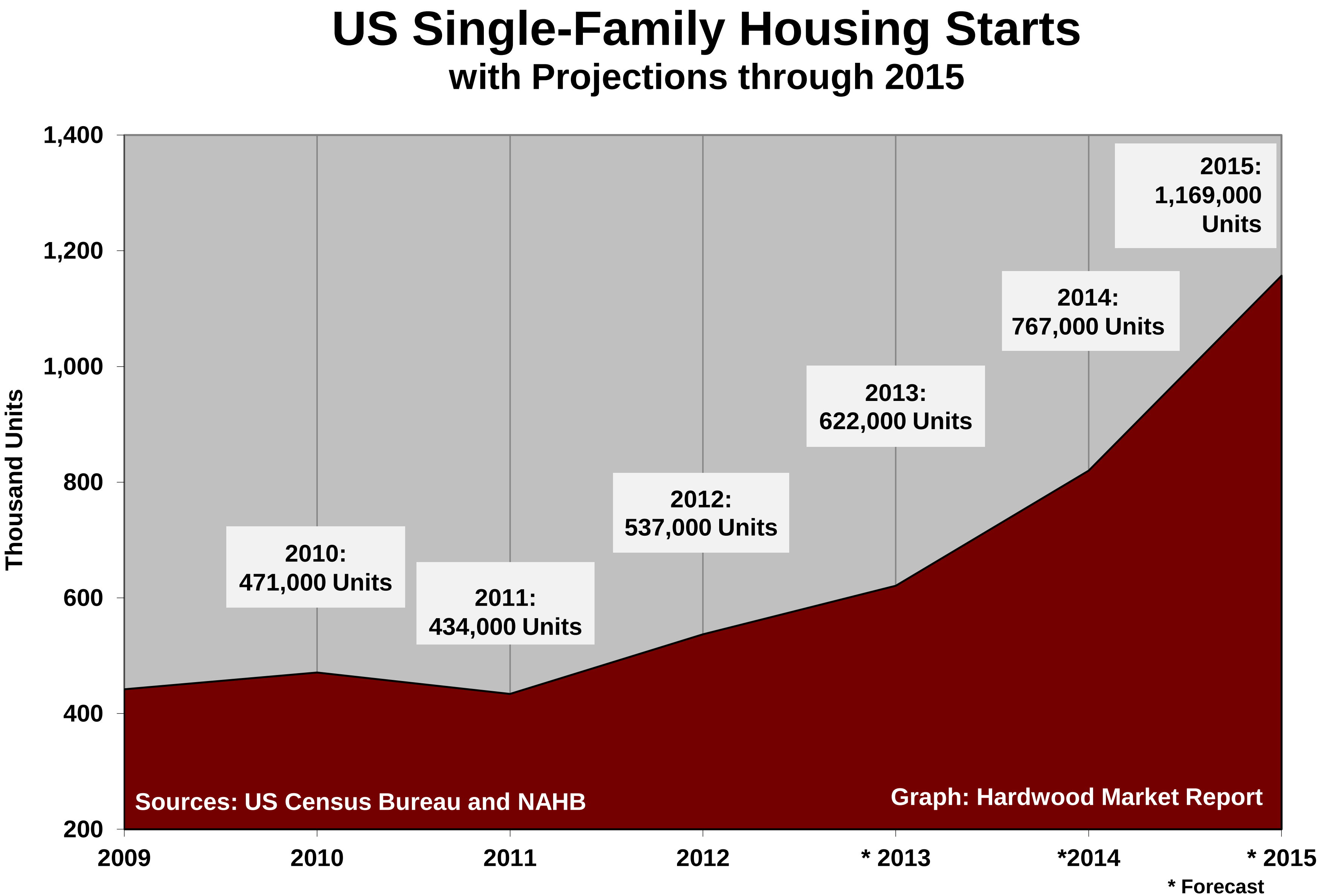


Keystone XL Pipeline – Overall Route Map



2013




US Single-Family Housing Starts
with Projections through 2015
Thousand Units
1,400
1,200
1,000
800
600
400
200
2009
2010
2011
2012
* 2013
*2014
* 2015
2010:
471,000 Units
2011:
434,000 Units
2012:
537,000 Units
2013:
622,000 Units
2014:
767,000 Units
2015:
1,169,000
Units
Sources: US Census Bureau and NAHB
Graph: Hardwood Market Report
* Forecast

Thank You

Hardwood Market Report

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