

RISI GPPC Paper Update

John Maine, VP World Graphic Paper
November, 2013

| RISI |



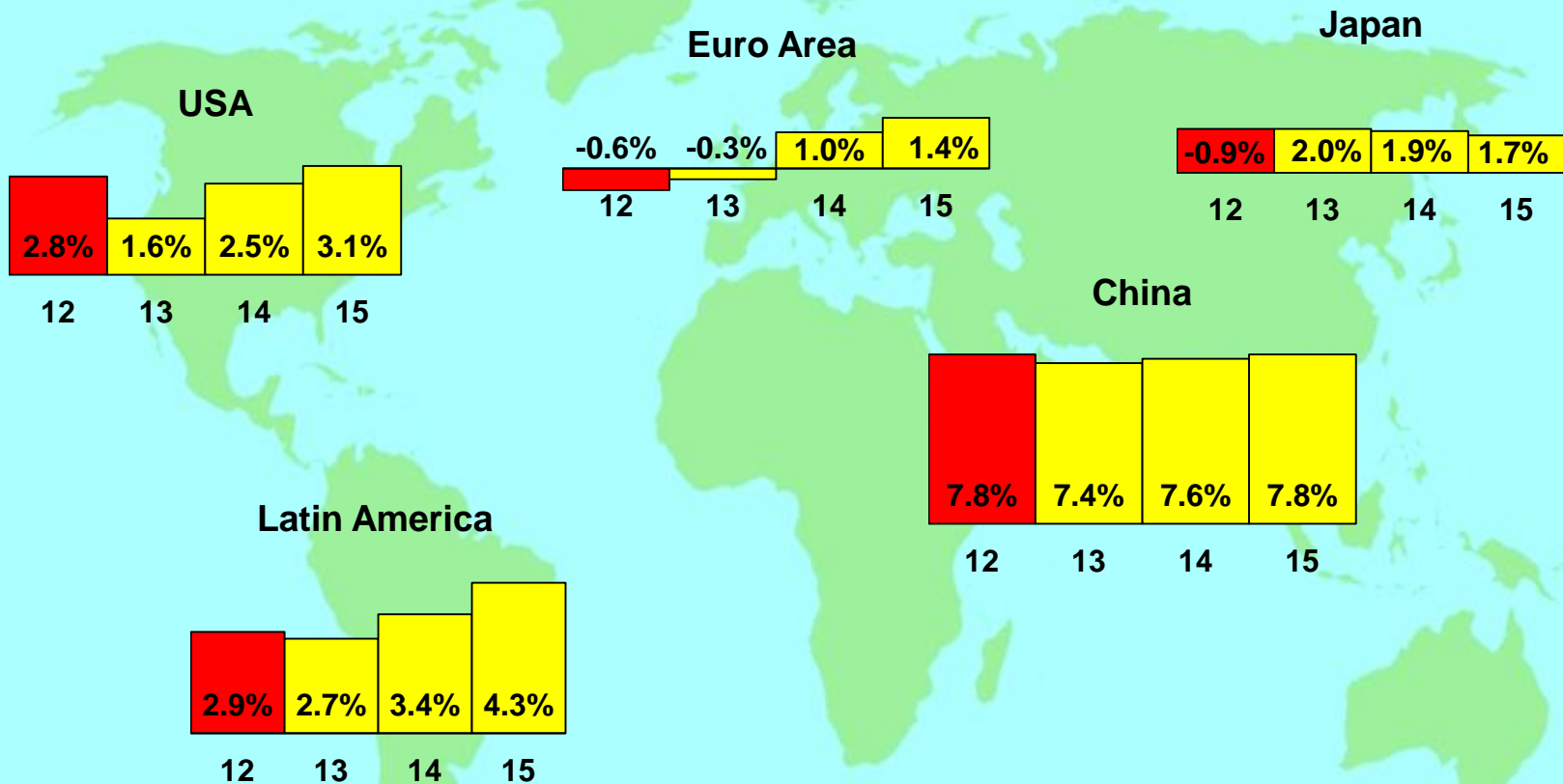
RISI Growth Projections for 2013

Presented to GPC Last Year (11/2012)

	Last Yr's Fcst. For 2013	Current Est. For 2013	Current Fcst For 2014
GDP (U.S.)	2.0%	1.6%	2.5%
Paper Demand (N. America)	-2%	-2%	-3%
CFS	-2%	-1%	-2%
CGW	-8%	-8%	-4%
UFS	-3%	-3%	-4%
UGW	+4%	+2%	-2%
U.S. Catalog Circulation	-3%	-2%	-2%
Magazine Ad Pages	-7%	-4%	-4%
Print Magazine Circulation	-4%	-2%	-1%

Global Economy Improving Moderately

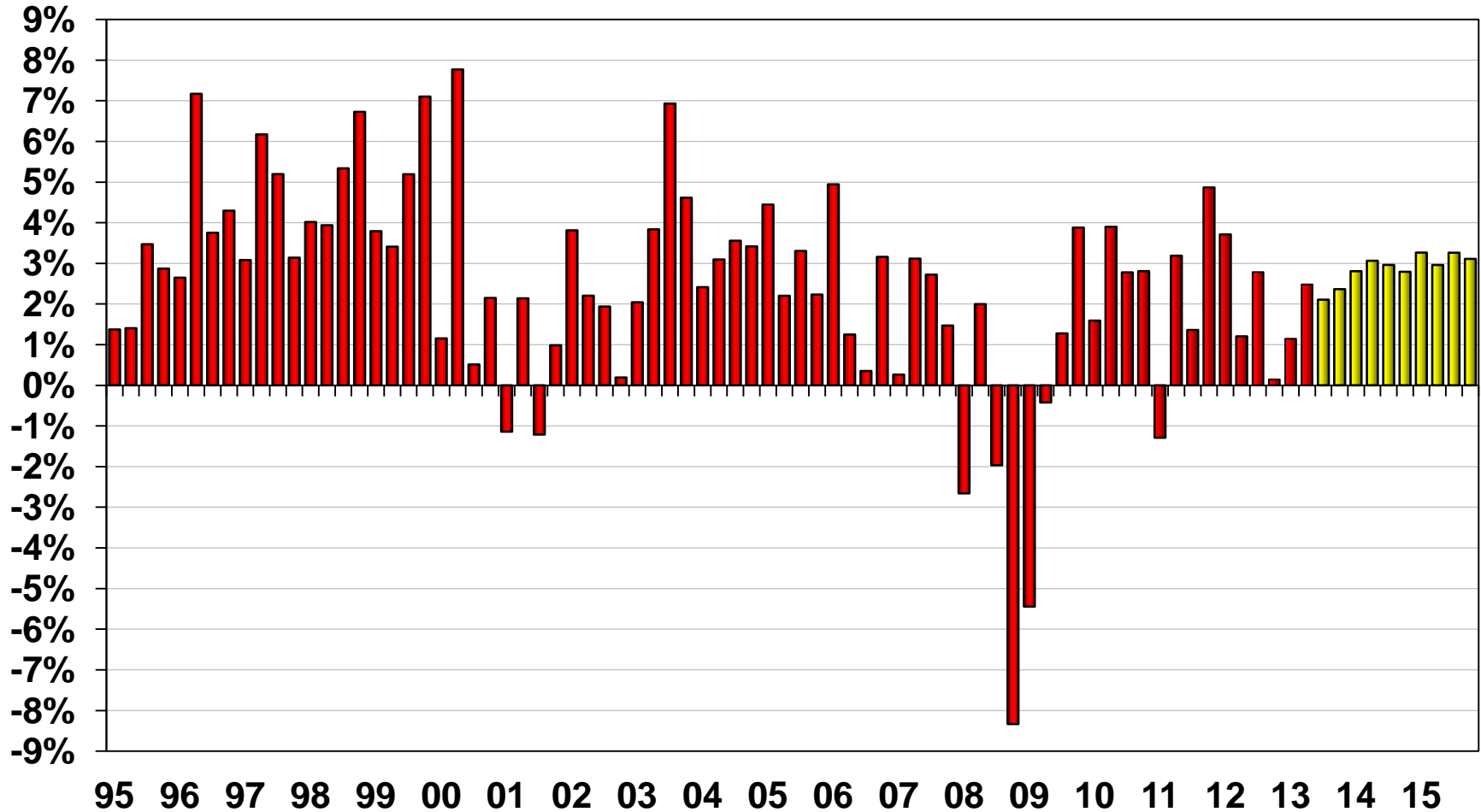
Annual Real GDP Growth



Source: IMF, RISI

US Economy Accelerating Modestly

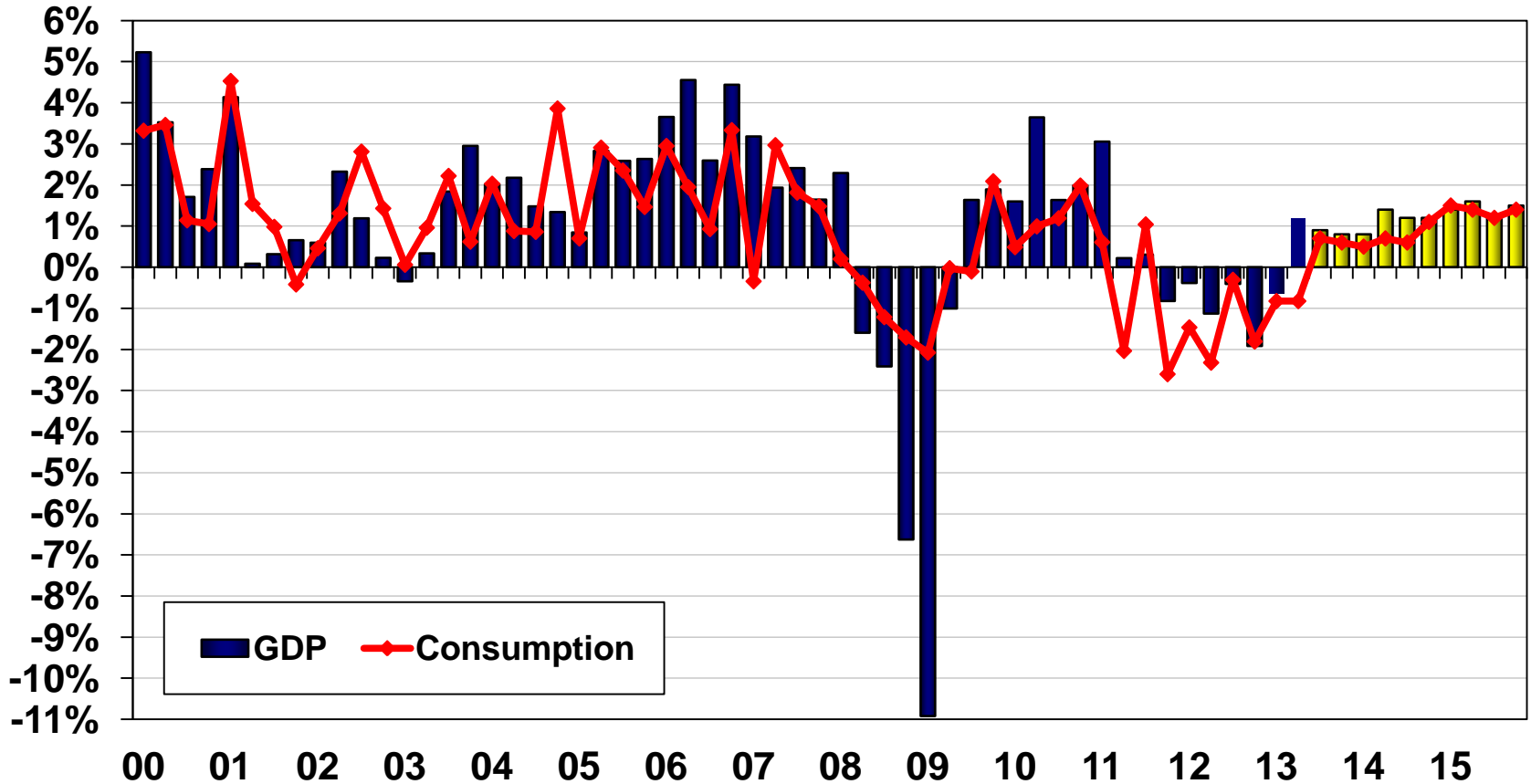
Real GDP Growth, Annualized Percent Change



Source: BEA, RISI

Euro Area Emerges From Recession

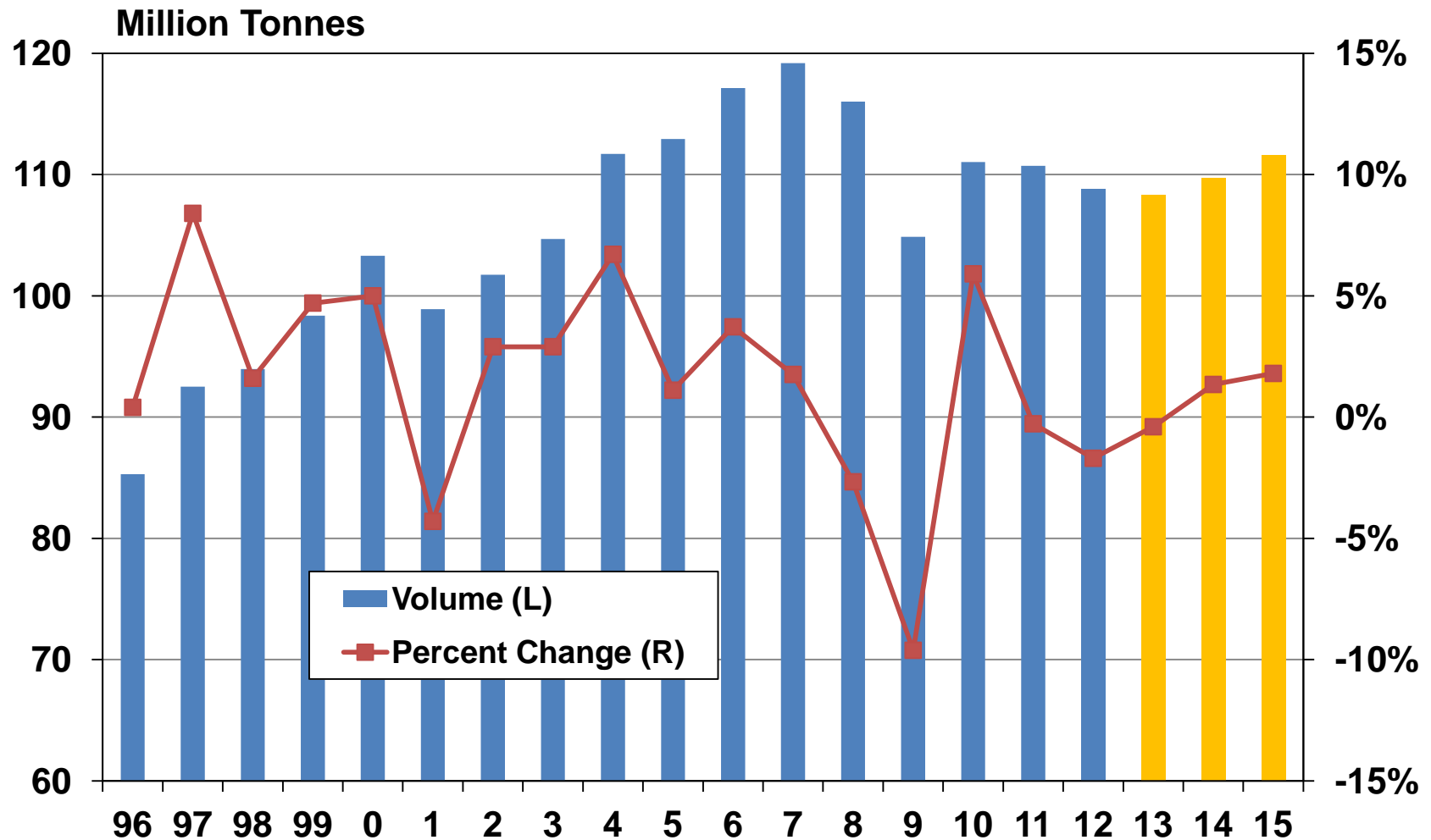
Real Growth, Annualized Percent Change



Source: Eurostat, RISI

World Printing & Writing Demand...

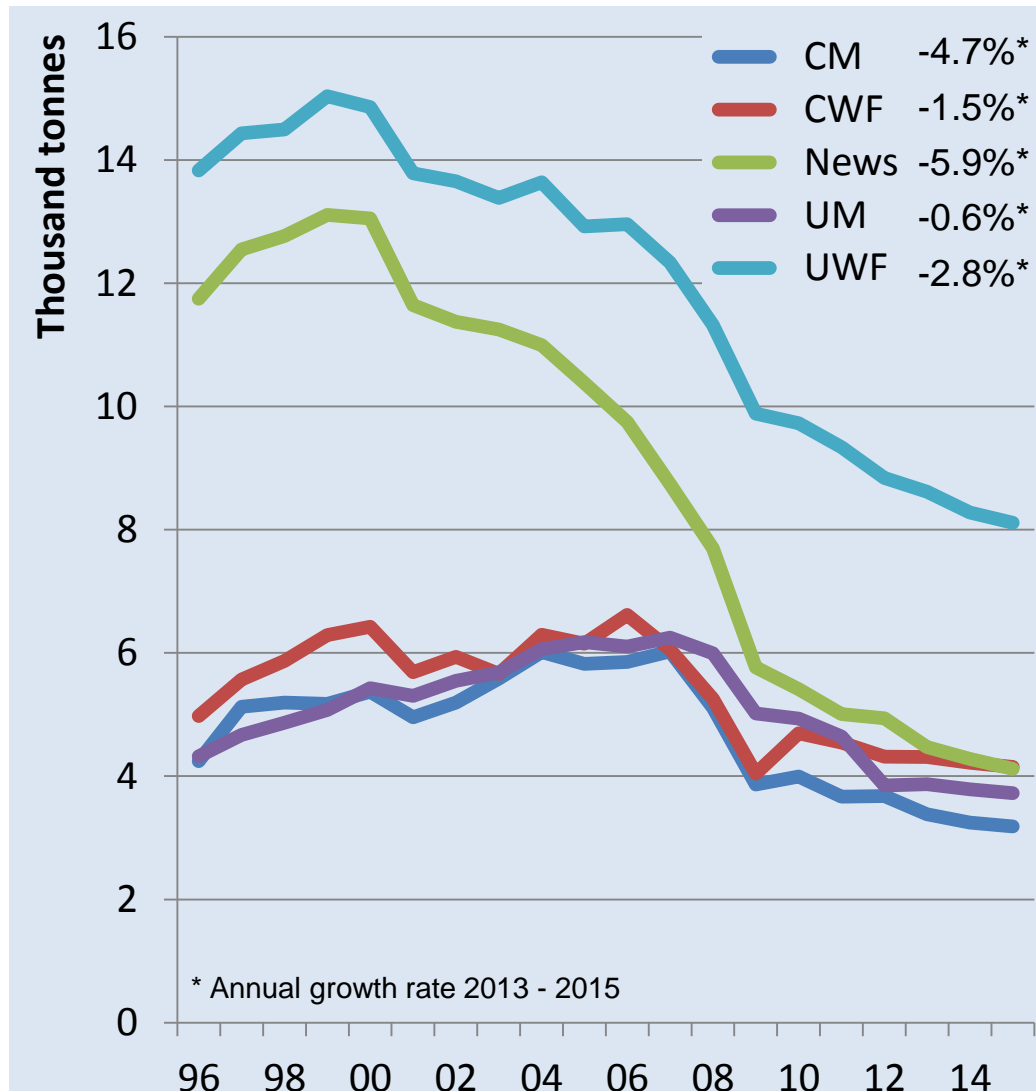
Is the Global Market in Decline?





North America defined by declining trends overall

- ✓ Newsprint and UWF are the most impacted grades
- ✓ Other grades struggling to bottom out after 2008-09 crisis
- ✓ Main threats causing decline are new technologies and economic developments
- ✓ Migration to new technologies accelerated thanks to economic slowdown

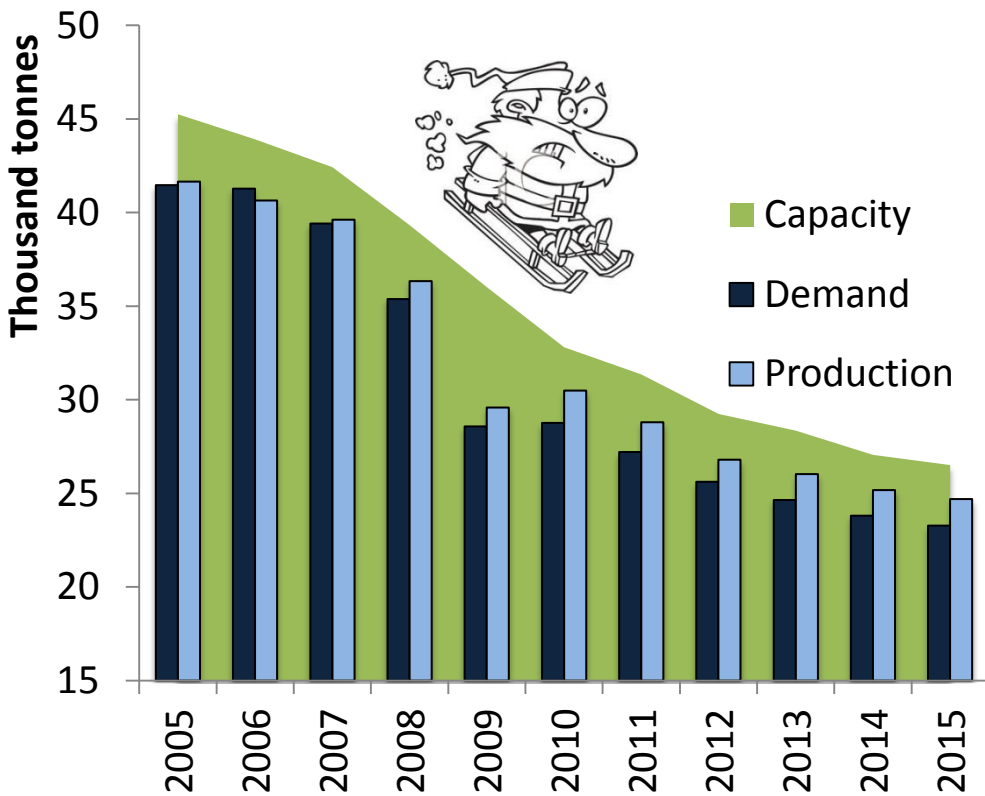


...although market is reacting



✓ P&W Demand decline moderating from -5% to -6% in the last two years to -2.5% per year for 2013 to 2015

- **Improving economy, job growth, advertising**

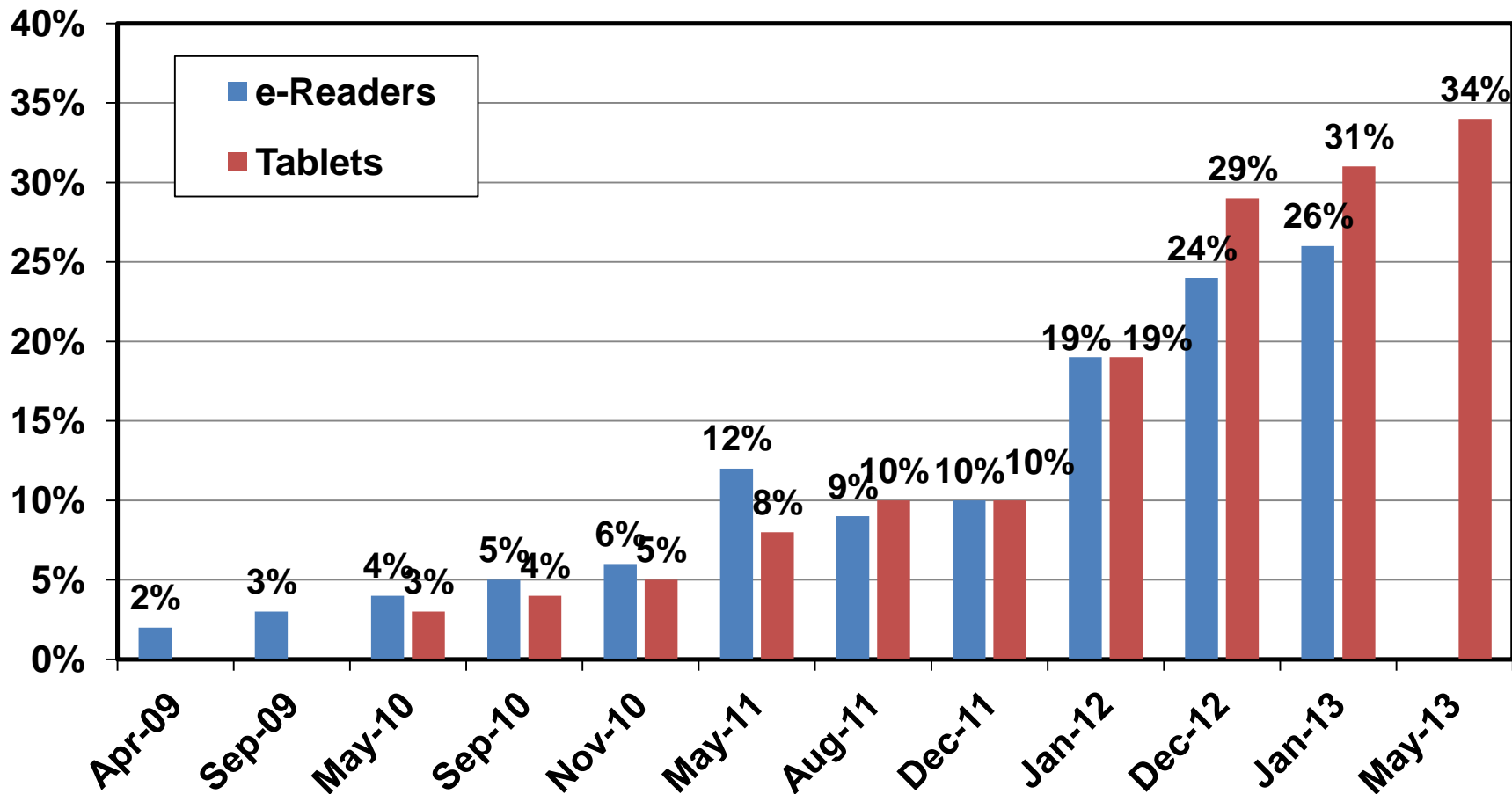


✓ **Capacity shuts to tighten graphic markets:**

- 880,000 tonnes of shuts in less than six months in uncoated freesheet
- Coated mechanical weakening rapidly, more shuts to come
- Coated freesheet tightens as capacity expansion in Asia halts
- Uncoated mechanical surprisingly tight due to shuts in Europe and strong demand

Media Tablet Ownership Expanding Rapidly, Could Reach 40% of Adults by 2014

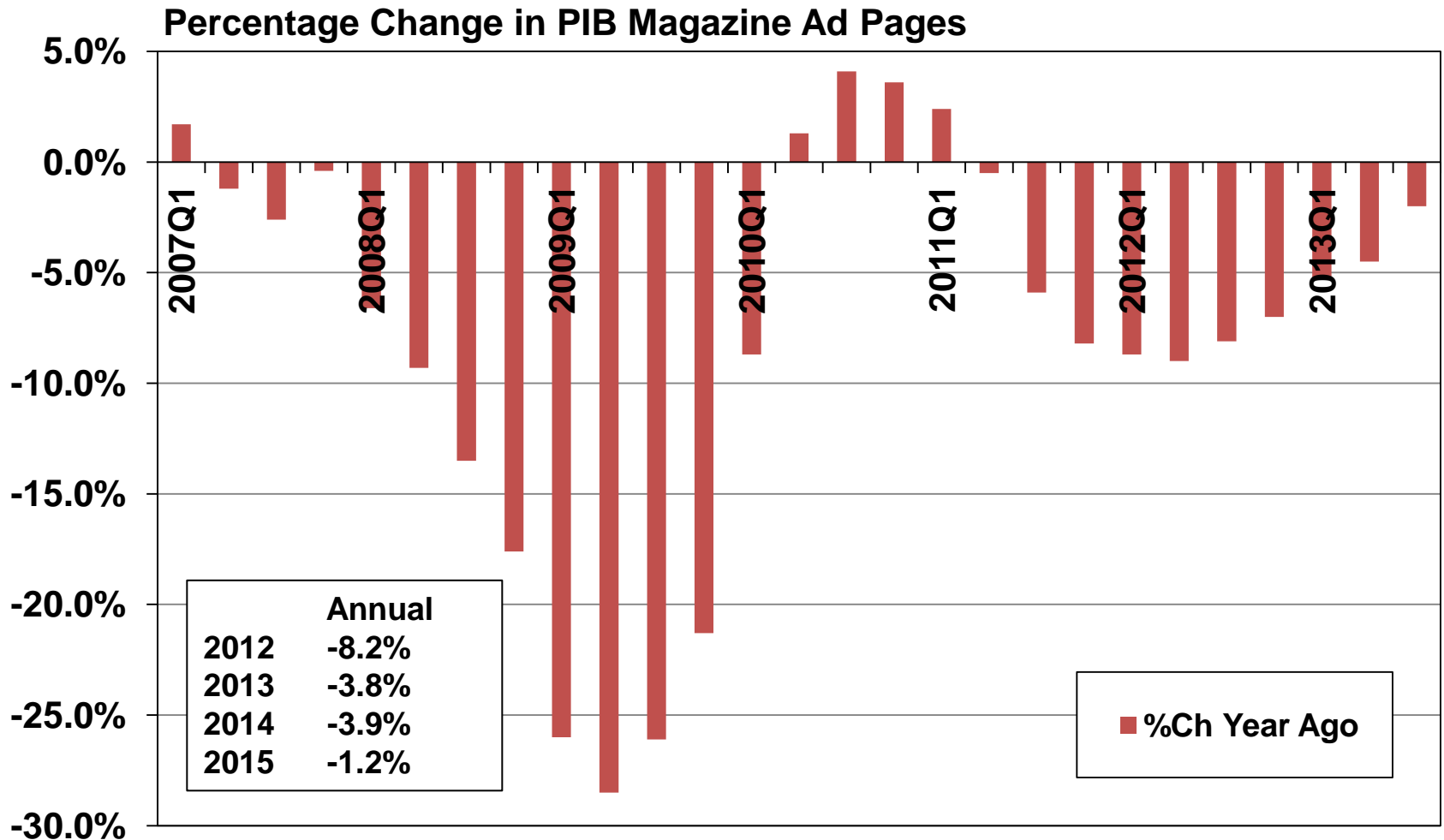
Percent of Adults Who Own Tablet Computers and E-readers



Source: pewinternet.org

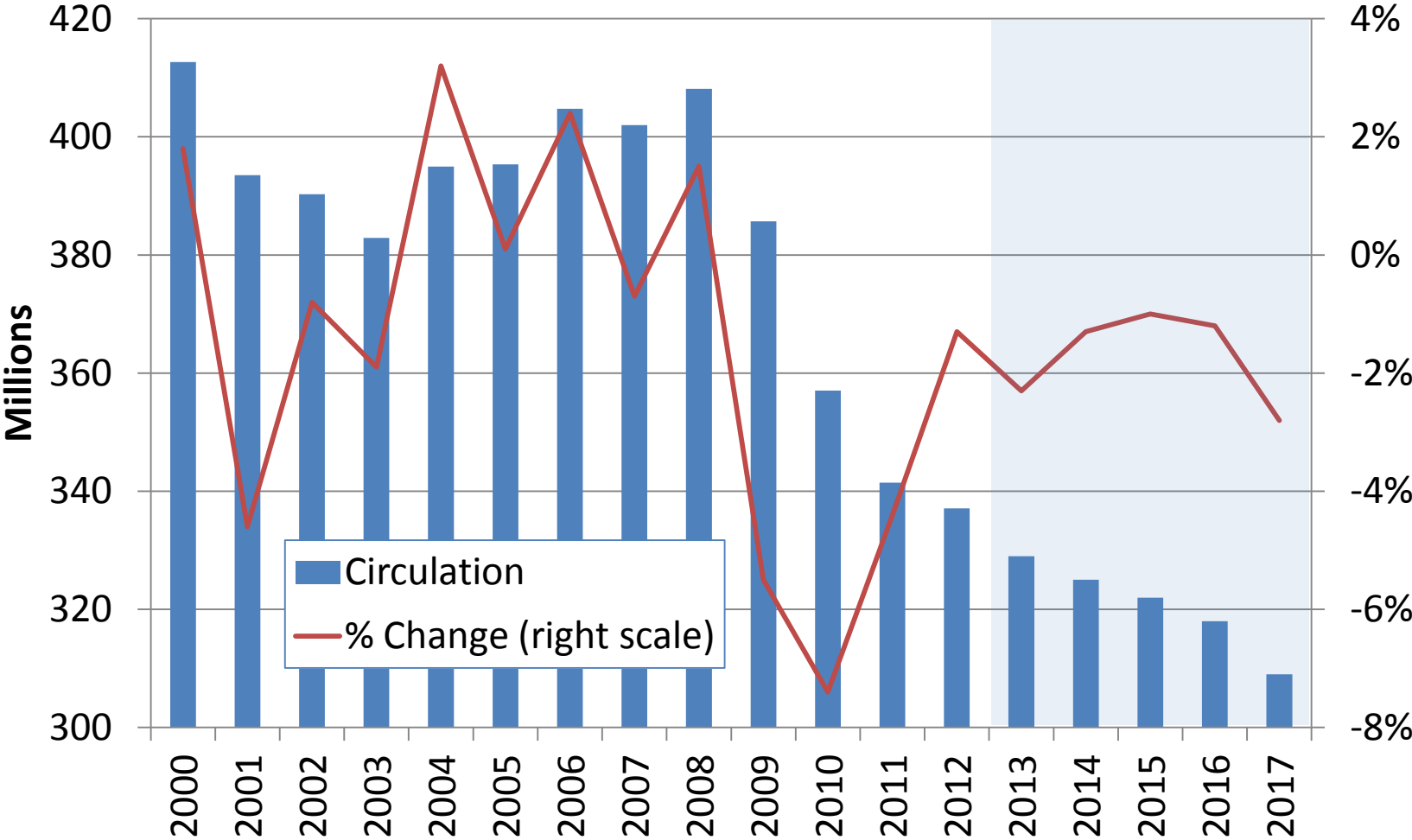
US Magazine Printed Ad Pages

...Q3 down only 1.8%, YTD down 3.8%



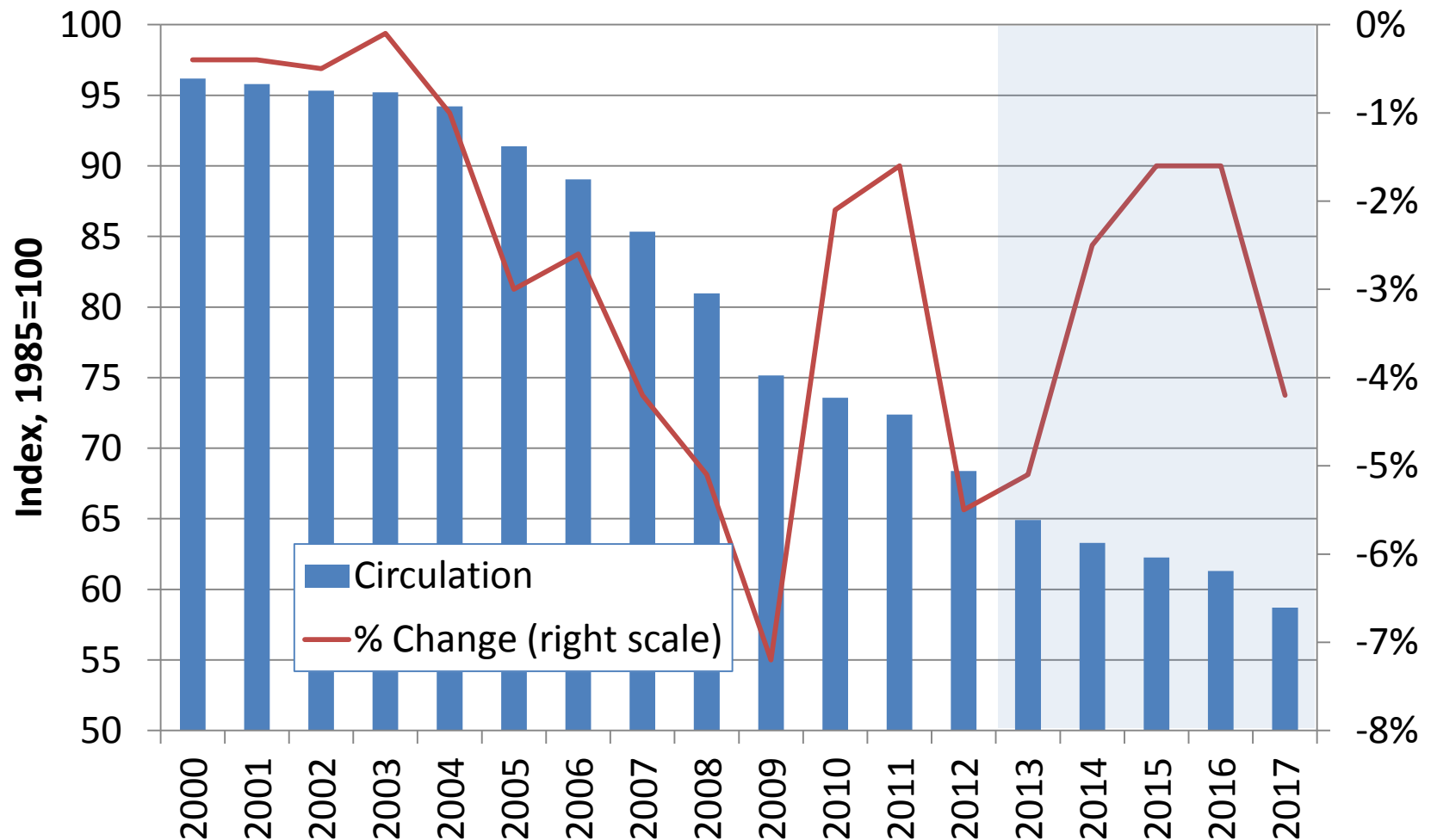
Circulation of Printed Magazines in N. America

(Includes consumer, farm, and religious, paid & verified and analyzed nonpaid; Excludes digital)



Source: Alliance for Audited Media & RISI

Circulation of Printed Newspapers Down 5% in 2012 and 2013... Leading to difficulty for insert publishers

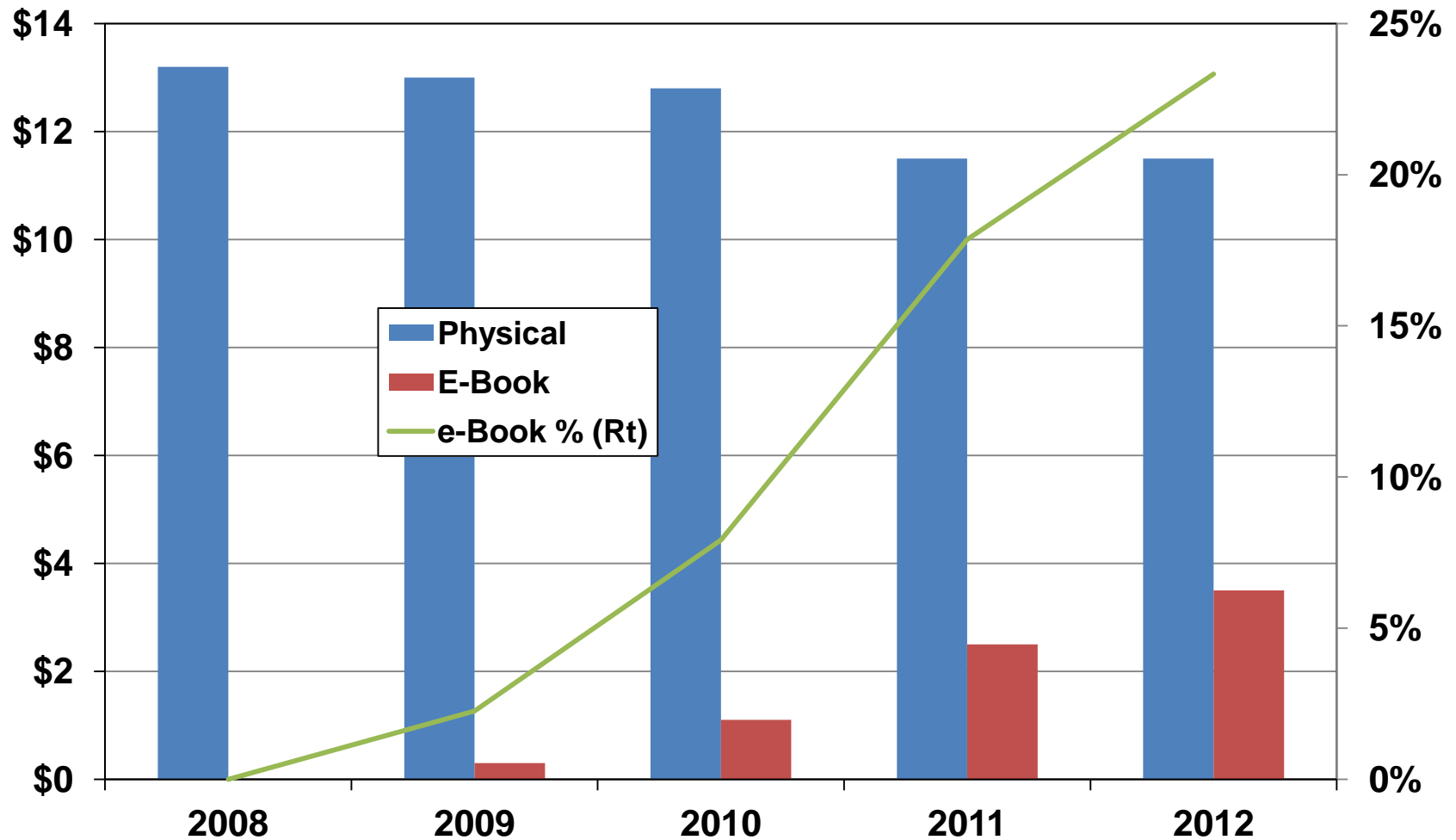


Source: Alliance for Audited Media & RISI

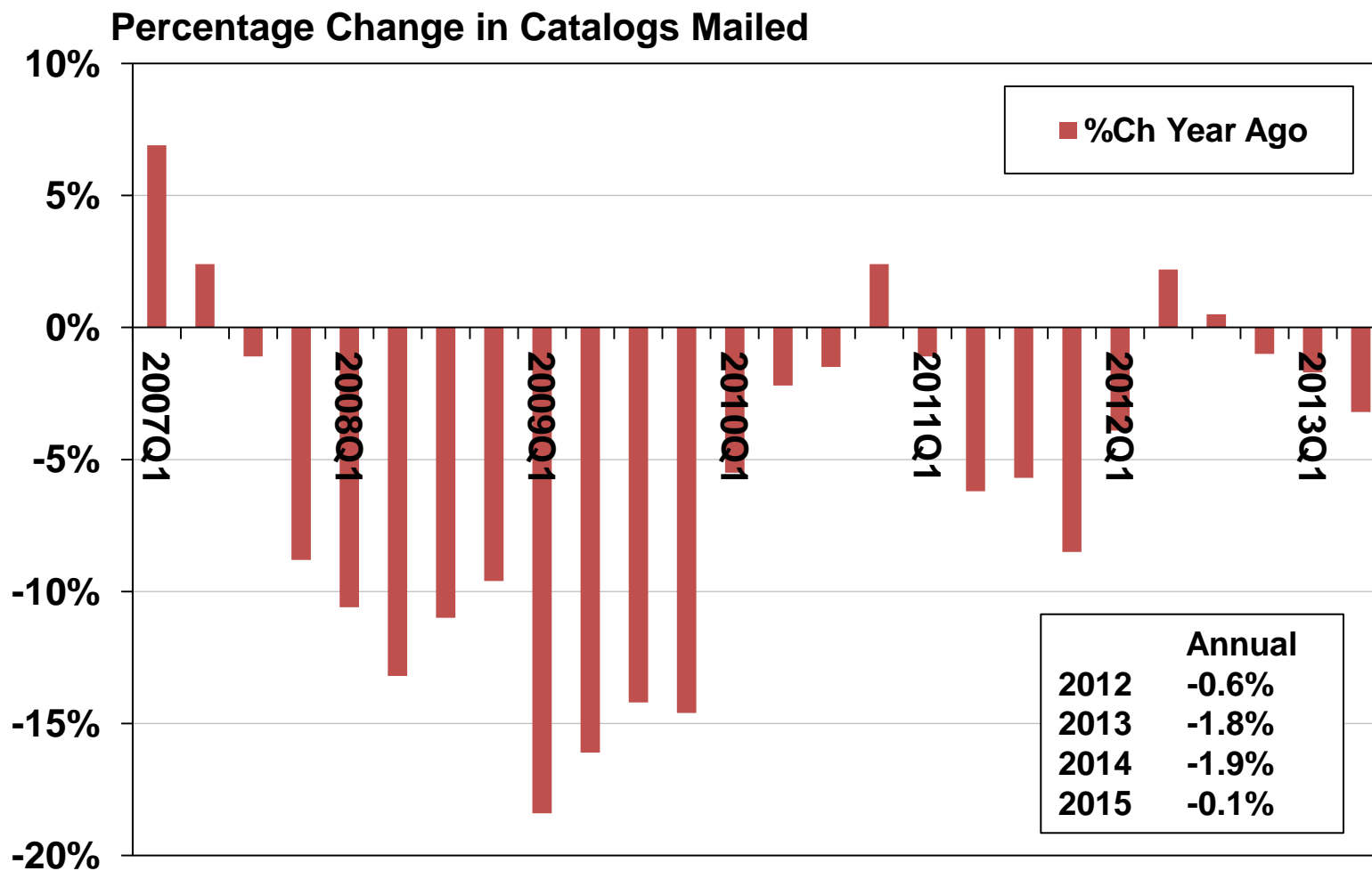
Adult Trade Book Sales

Billion US Dollars

Source: Bookstats/BISG



US Catalog Mailings Showing Only Moderate Declines

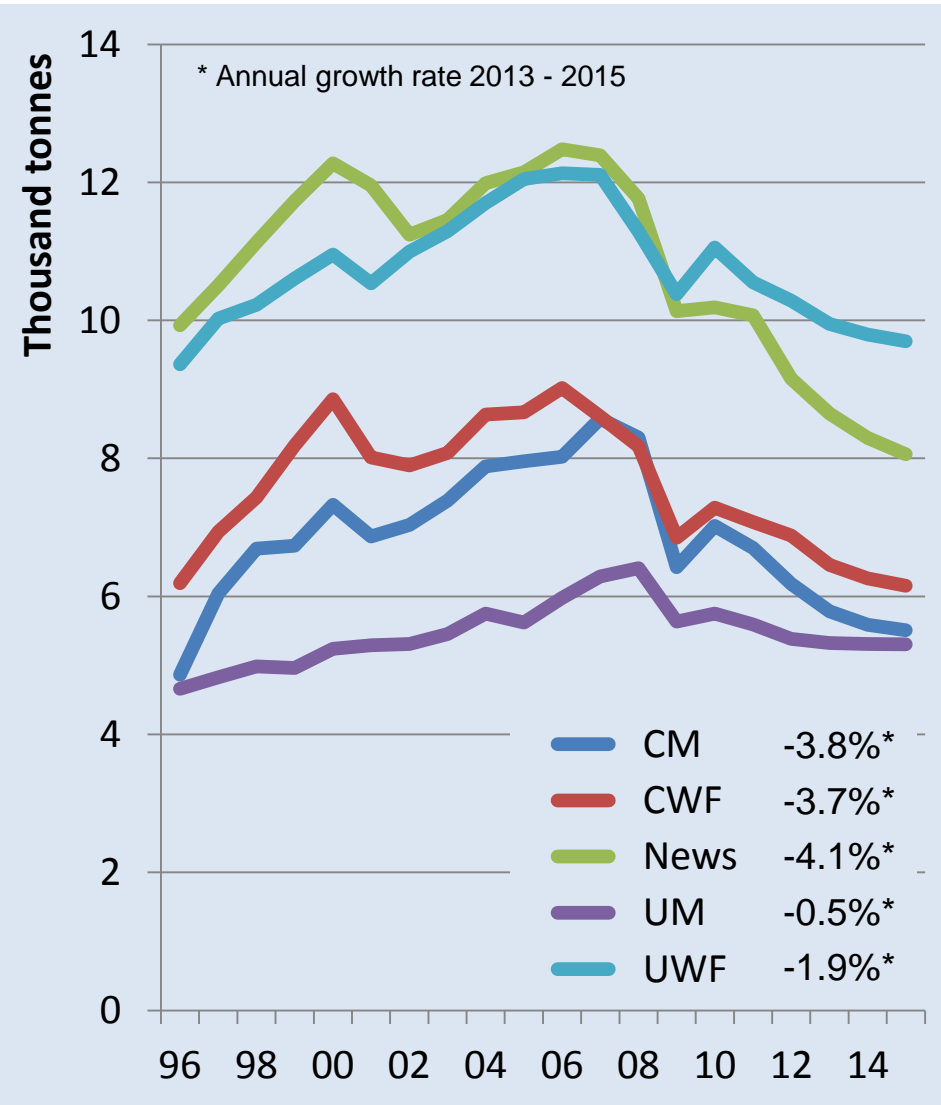


Postal Service Mail Volume Beats Expectations in 2013

	Postal Service Plan Fiscal 2013 (Ending Sept 30)	Actual Volume For Fiscal 2013 (released 11/18/2013)
First Class	-6.1%	-4.1%
Standard Mail	-3.1%	+1.8%
Periodicals	-3.0%	-5.7%
Total Mail	-4.3%	-0.9%

- **Standard mail growing in late 2012 and 2013, reversing recent trends**
- **USPS reporting success in its QR Code discount promotion, and said in its latest report that this positive impact would continue**

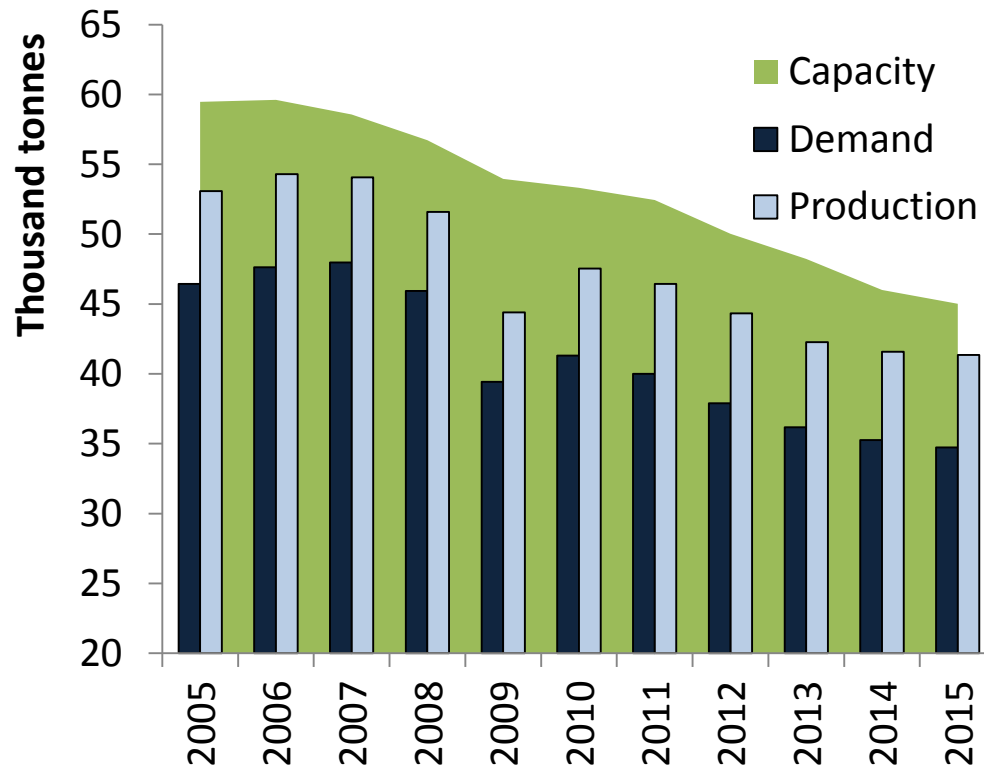
Europe... another mature market in decline



- ✓ UWF and Newsprint, the most important grades and heavily impacted grades
- ✓ Europe started its decline later than North America
- ✓ Region slightly more protected to new technologies, but equally exposed to mature economies

Exports are more important for this region

- ✓ Persistent demand decline of 5% per year continuing due to economic woes in 2013
 - Once GDP starts growing again, demand declines will abate to 1.5-2.5% per year for 2014 to 2015

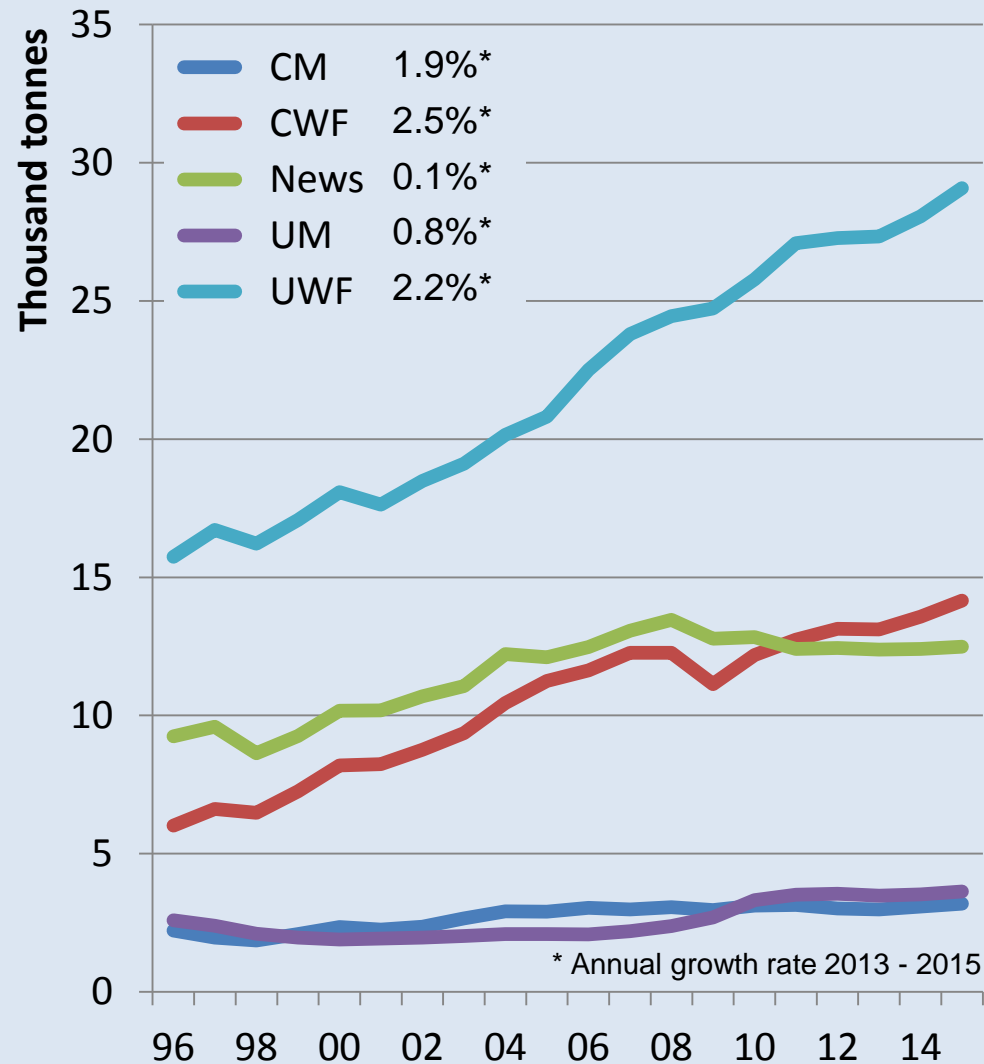


- ✓ East is growing, West is in decline. But East not growing fast enough to compensate for declines overall
- ✓ 2012 showed sharp capacity declines mainly in coated grades, 2013 was the turn for newsprint
- ✓ Operating rates still struggling to rise

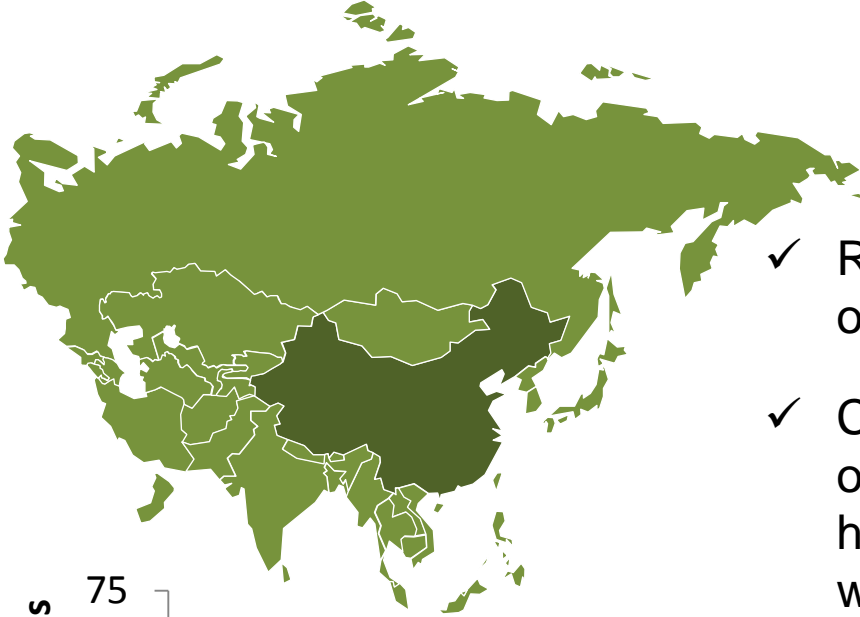
Asia, the region with the most attractive projections



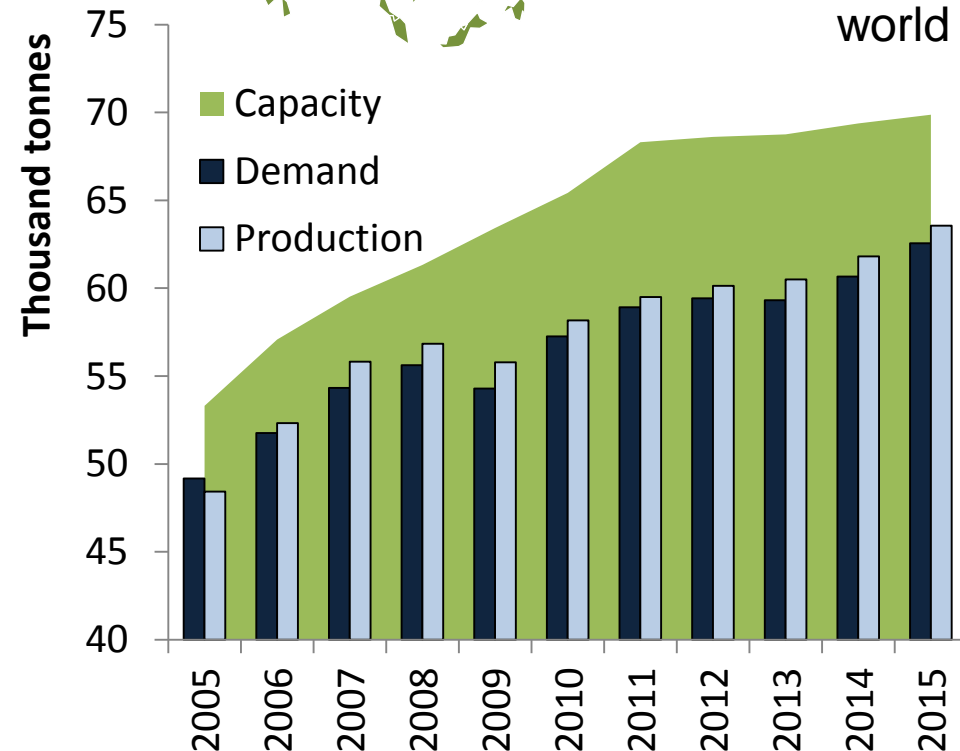
- ✓ UWF still represent the more buoyant grade for the region
- ✓ Growth rate has slowed down considerably lately... and will continue this year. **(2% per year instead of 5-7% of 2010-2011)**
- ✓ Newsprint basically flat even in Asia
- ✓ China slowing, Japan decline accelerating



...although troubled with overcapacity



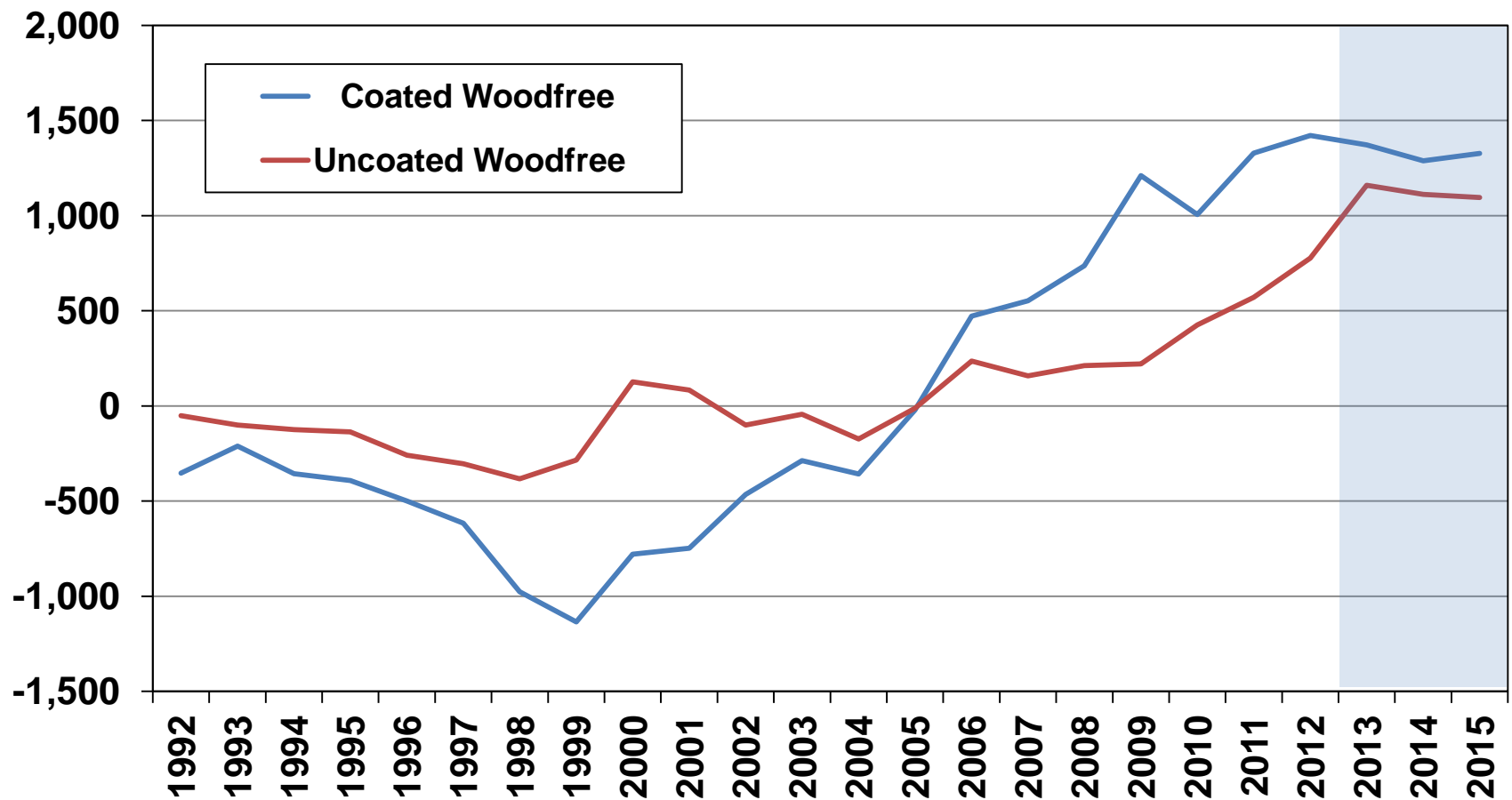
- ✓ Region has grown to be more export market oriented lately
- ✓ Capacity expansion exerting pressure on operating rates, profitability and on keeping healthy export levels amid protectionism in world markets



- ✓ Chinese government trying to rein in excess capacity
 - Forced closure of small, old, polluting mills
 - Reduced aid for new expansions in markets with oversupply
 - Results in significant increase in Chinese operating rates

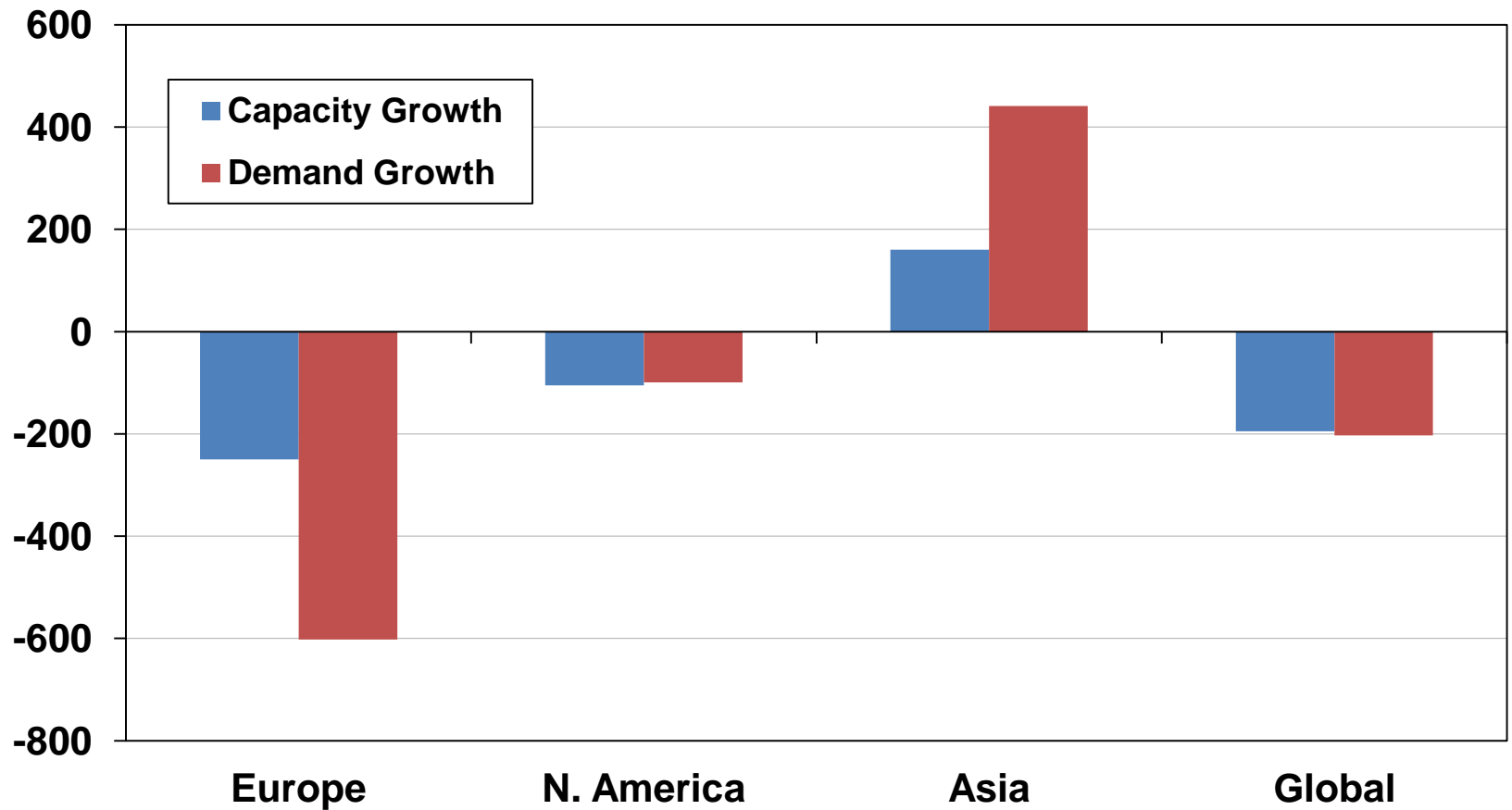
Expansion Phase of Chinese Exports Coming to an End as Government Reins in Capacity Growth and Shuts Old Machines

Chinese Net Exports of Woodfree Papers, Thousand Tonnes



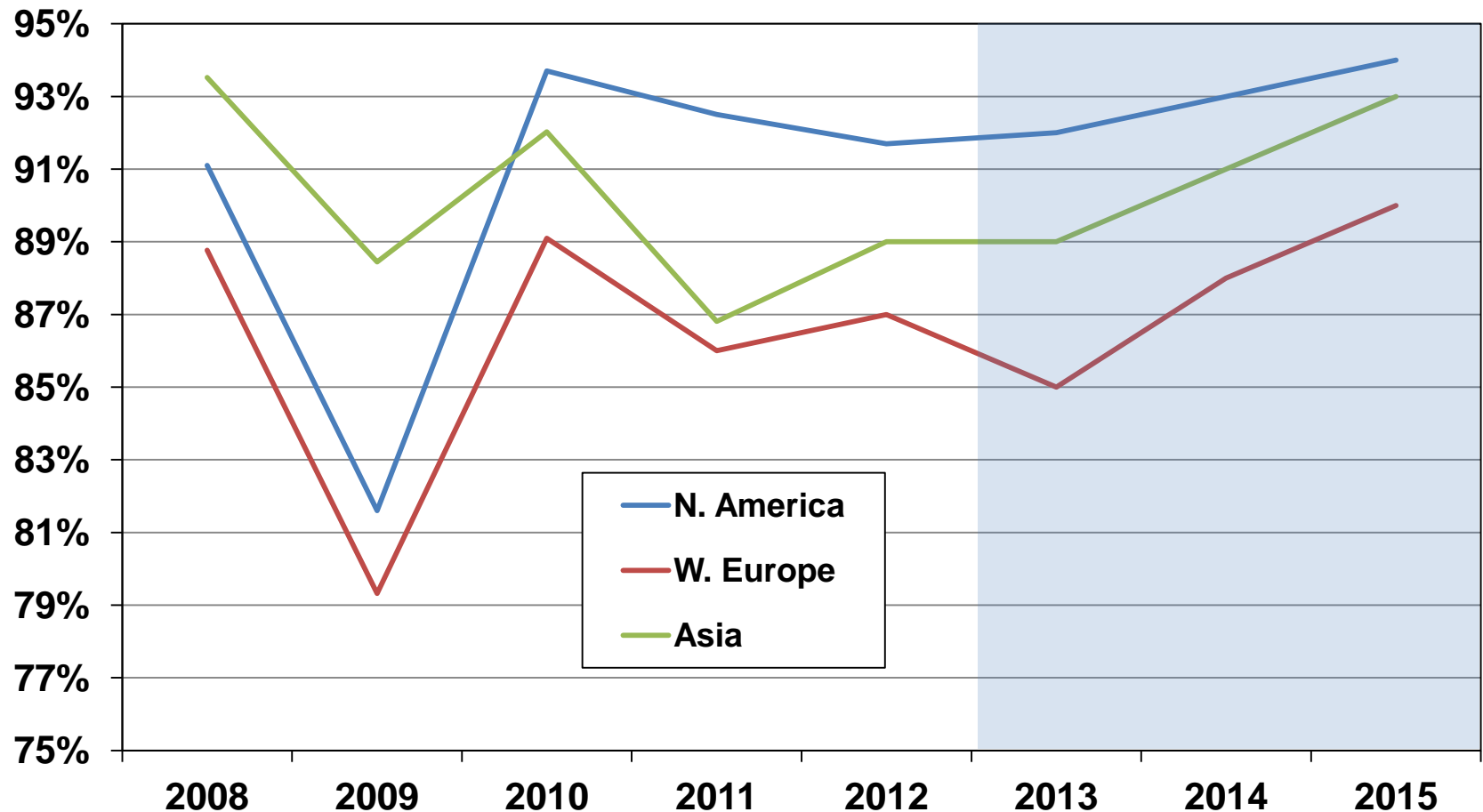
Announced Net Coated Woodfree Capacity Changes for 2013-2014 vs RISI Forecast of Demand Growth for the Same Period

Thousand Tonnes



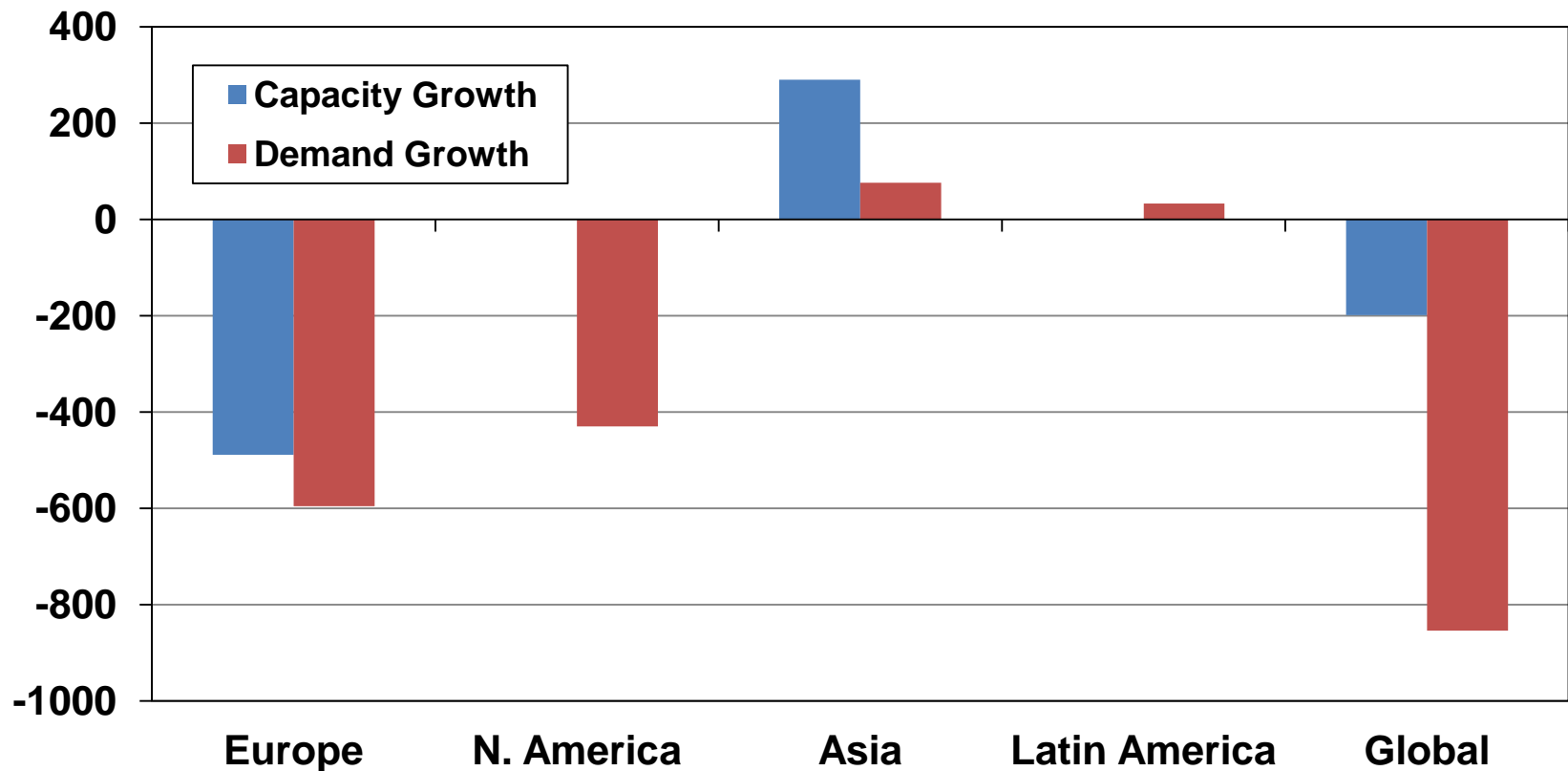
Coated Woodfree Operating Rates

Lack of announced capacity expansion will cause operating rates to improve



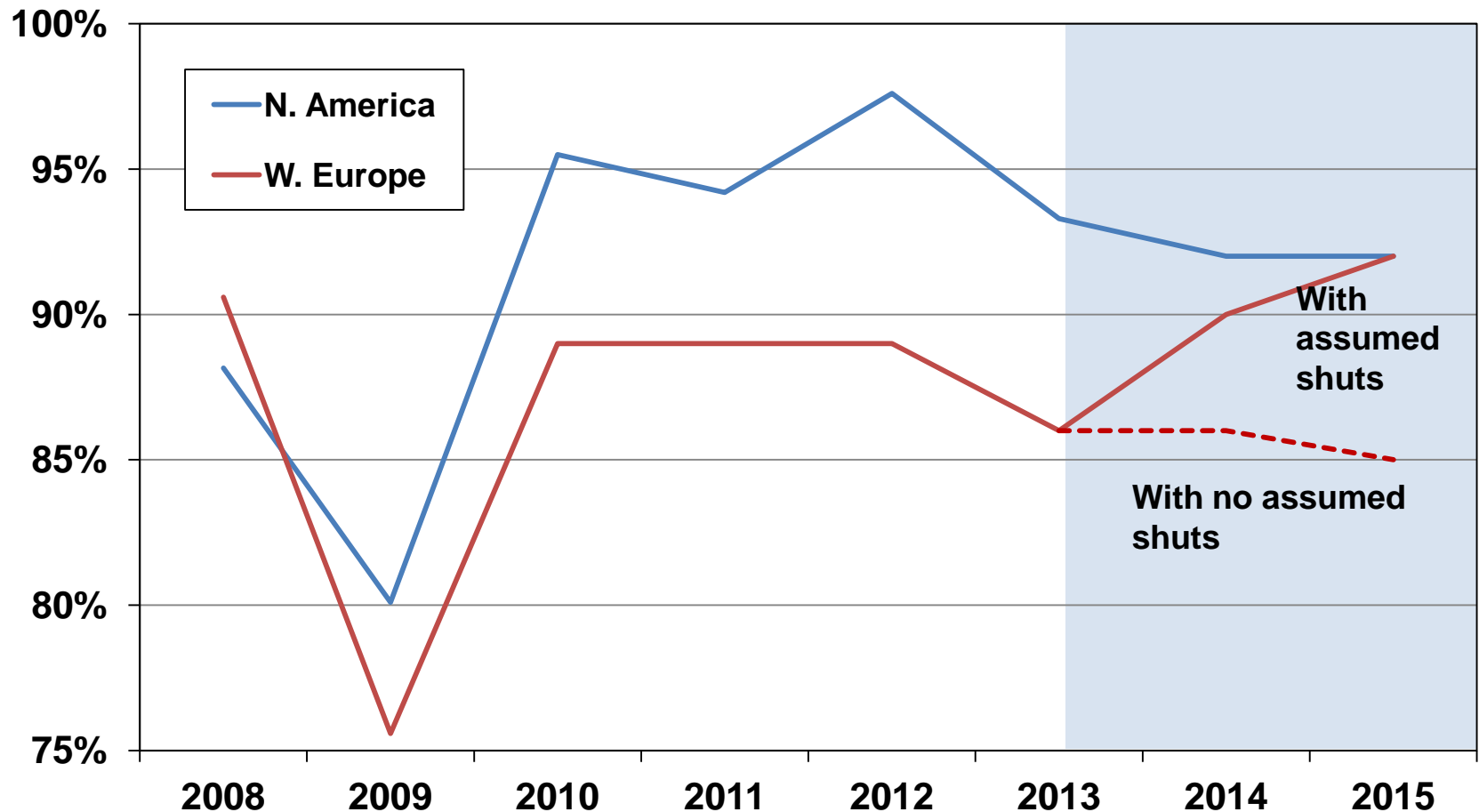
Announced Net Coated Mechanical Capacity Changes for 2013-2014 vs RISI Forecast of Demand Growth for the Same Period

Thousand Tonnes



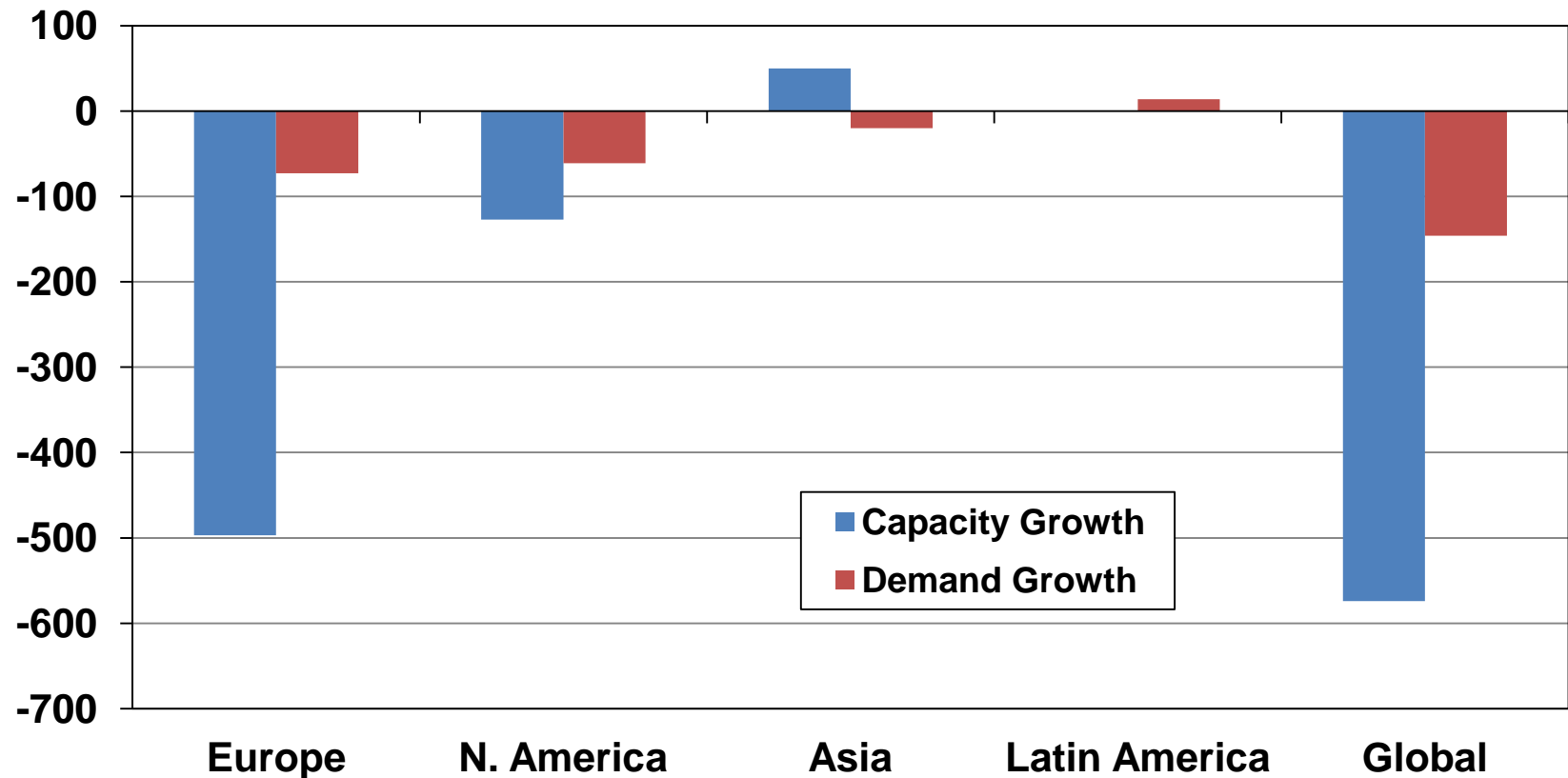
Coated Mechanical Operating Rates

Decline in North America leads to weaker markets, Europe forecast assumes shuts



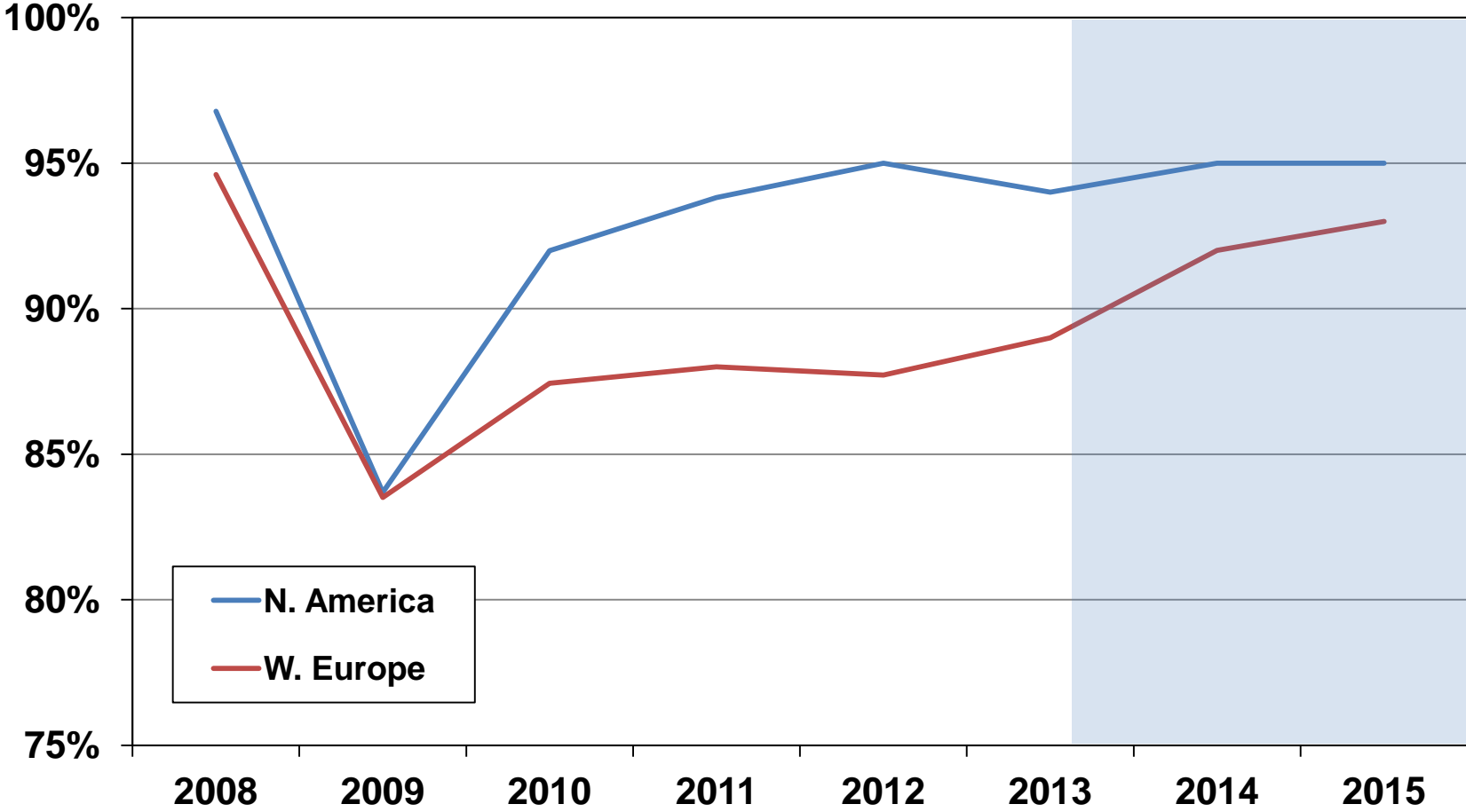
Announced Net Uncoated Mechanical Capacity Changes for 2013-2014 vs. RISI Forecast of Demand Growth for the Same Period

Thousand Tonnes



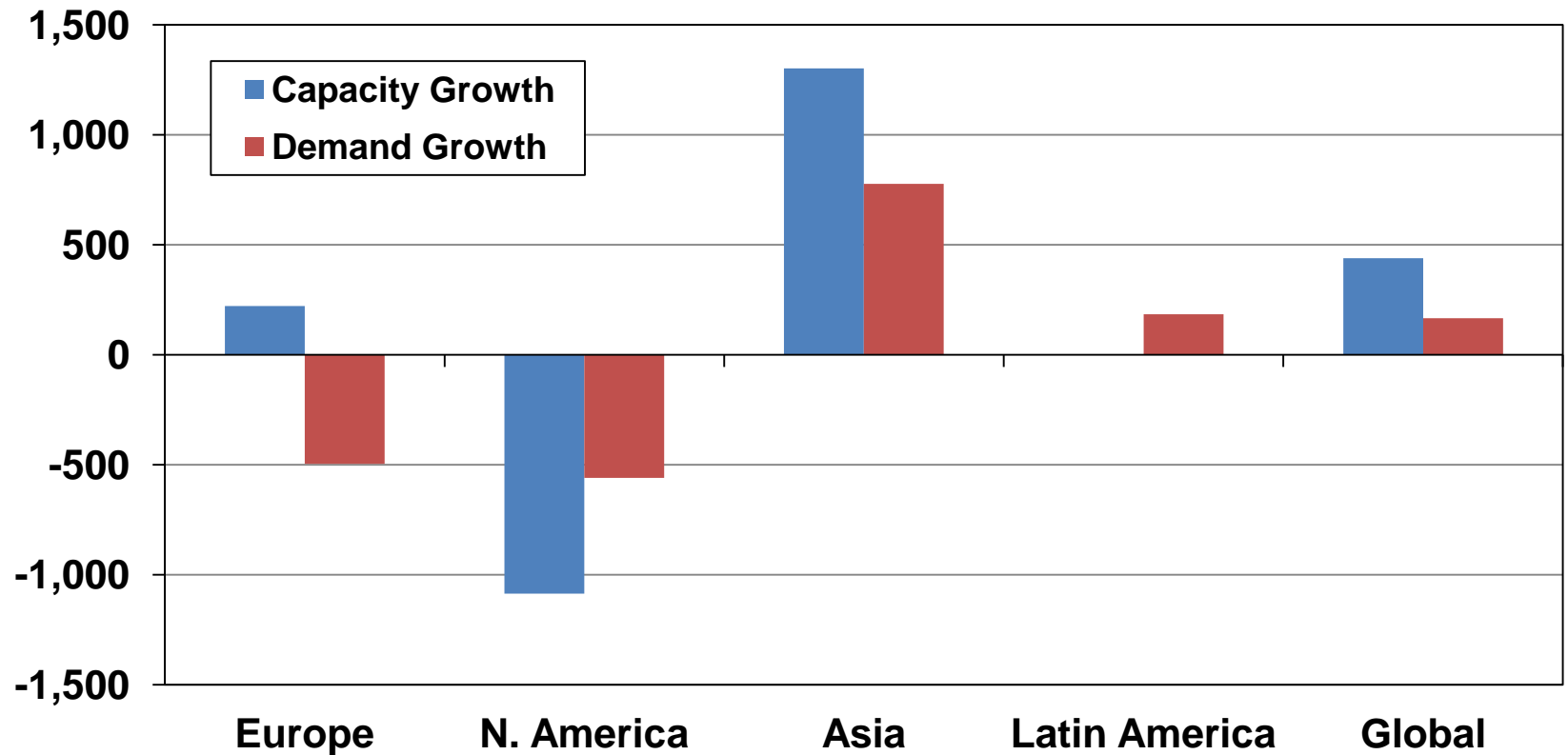
Uncoated Mechanical Operating Rates

Massive shuts in Europe cause global markets to tighten despite restarts in North America



Announced Net Uncoated Woodfree Capacity Changes for 2013-2014 vs RISI Forecast of Demand Growth for the Same Period

Thousand Tonnes

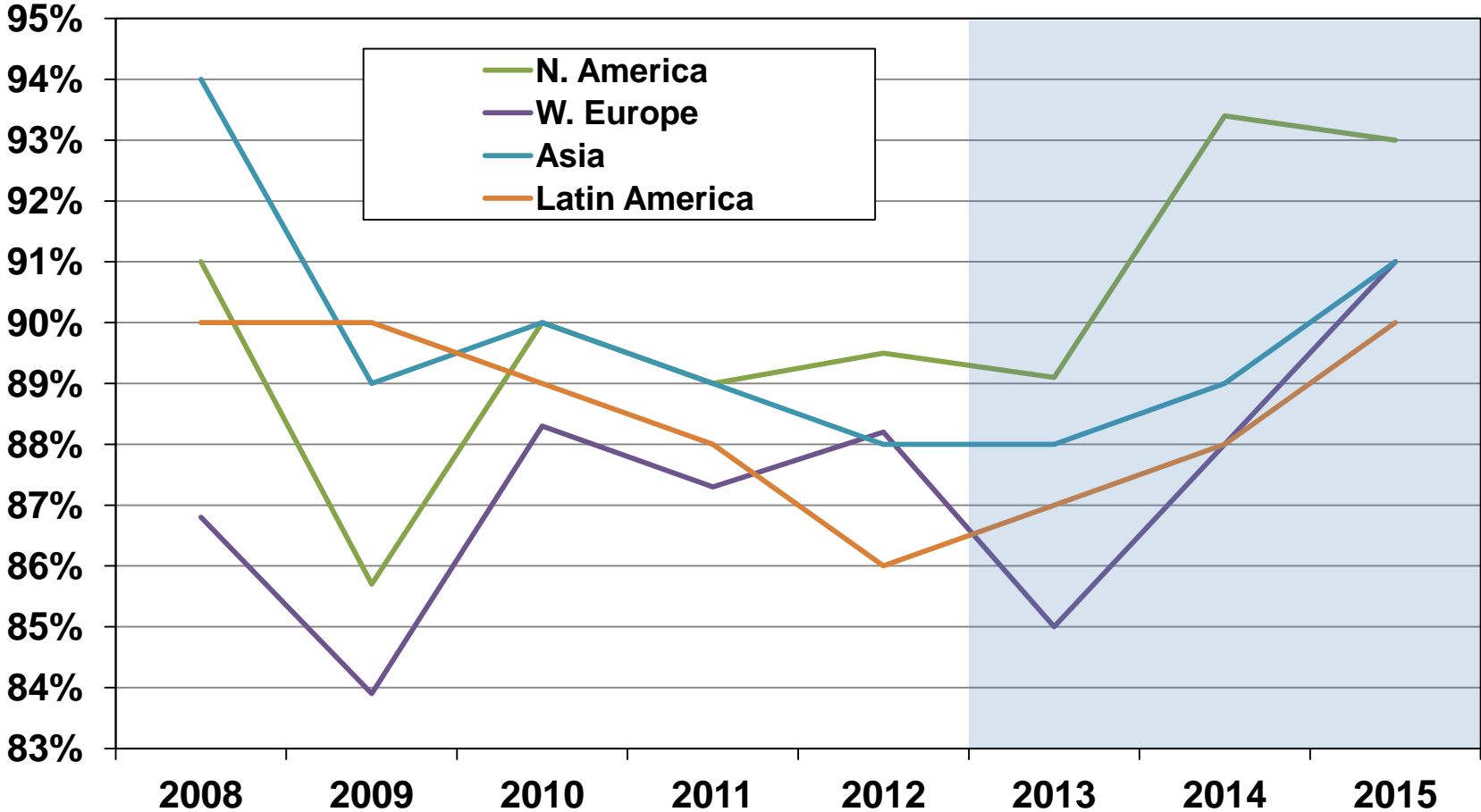


US Uncoated Freesheet Capacity Shuts

- **880,000 tonnes of capacity shuts in 4Q13 & 1Q14**
 - **9% of North American capacity**
 - **Offsets two or three years of demand decline**
 - **IP Courtland 695,000 tonnes**
 - **Boise International Falls 104,000 tonnes (in addition to 54,000 tonne shut at St. Helen's in late 2012)**
 - **GP Crossett 84,000 tonnes**
 - **Follows capacity reductions earlier in 2013 at Domtar Marlboro mill and Harbor Paper mill**
 - **The “Big Four” all reducing capacity in the same year**

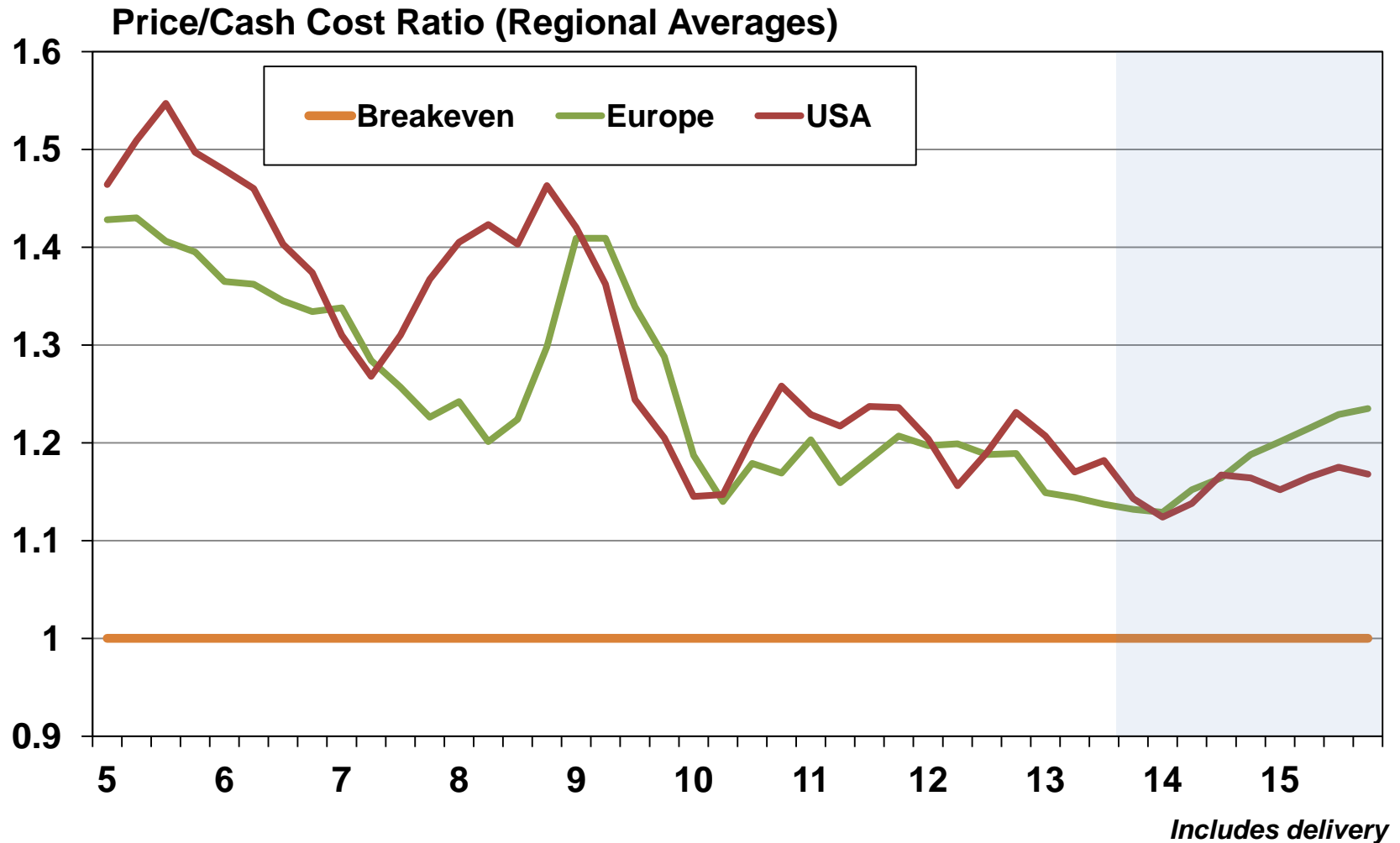
Uncoated Woodfree Operating Rates

More than 1.0 million tonnes of shuts in North America will tighten global markets, despite some capacity growth in Asia and Europe



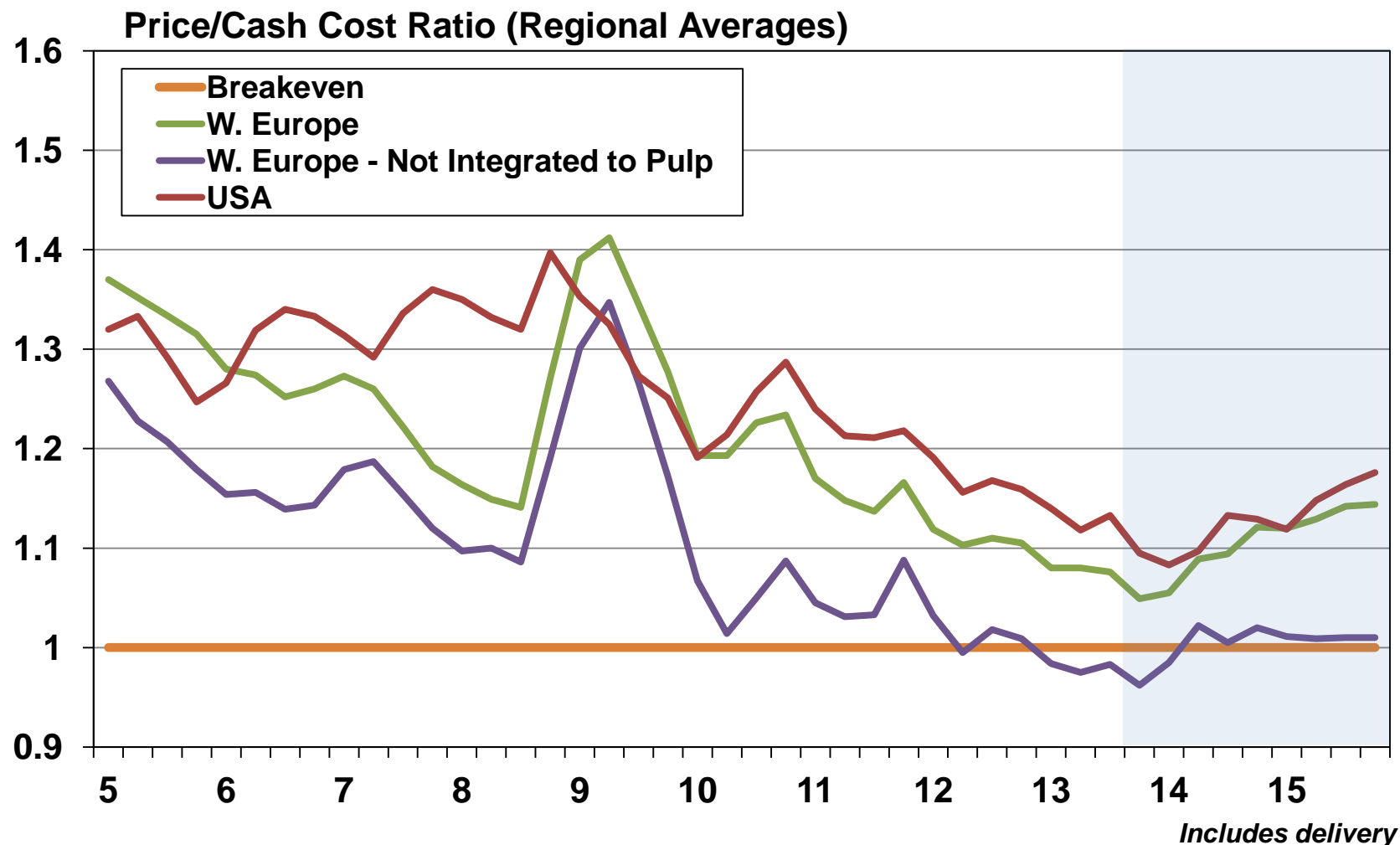
LWC Profitability...

No major difference in profitability for USA vs Europe, but margins are lower than uncoated woodfree



Coated Woodfree Profitability

Profitability trending down, higher pulp costs may push some nonintegrated mills into negative cash flow



Historical Publishing Paper Prices (\$US/cwt)

...Trend has been flat or down for the past three years

