

Cement & Construction Outlook

Minnesota Concrete Council

November 17, 2011



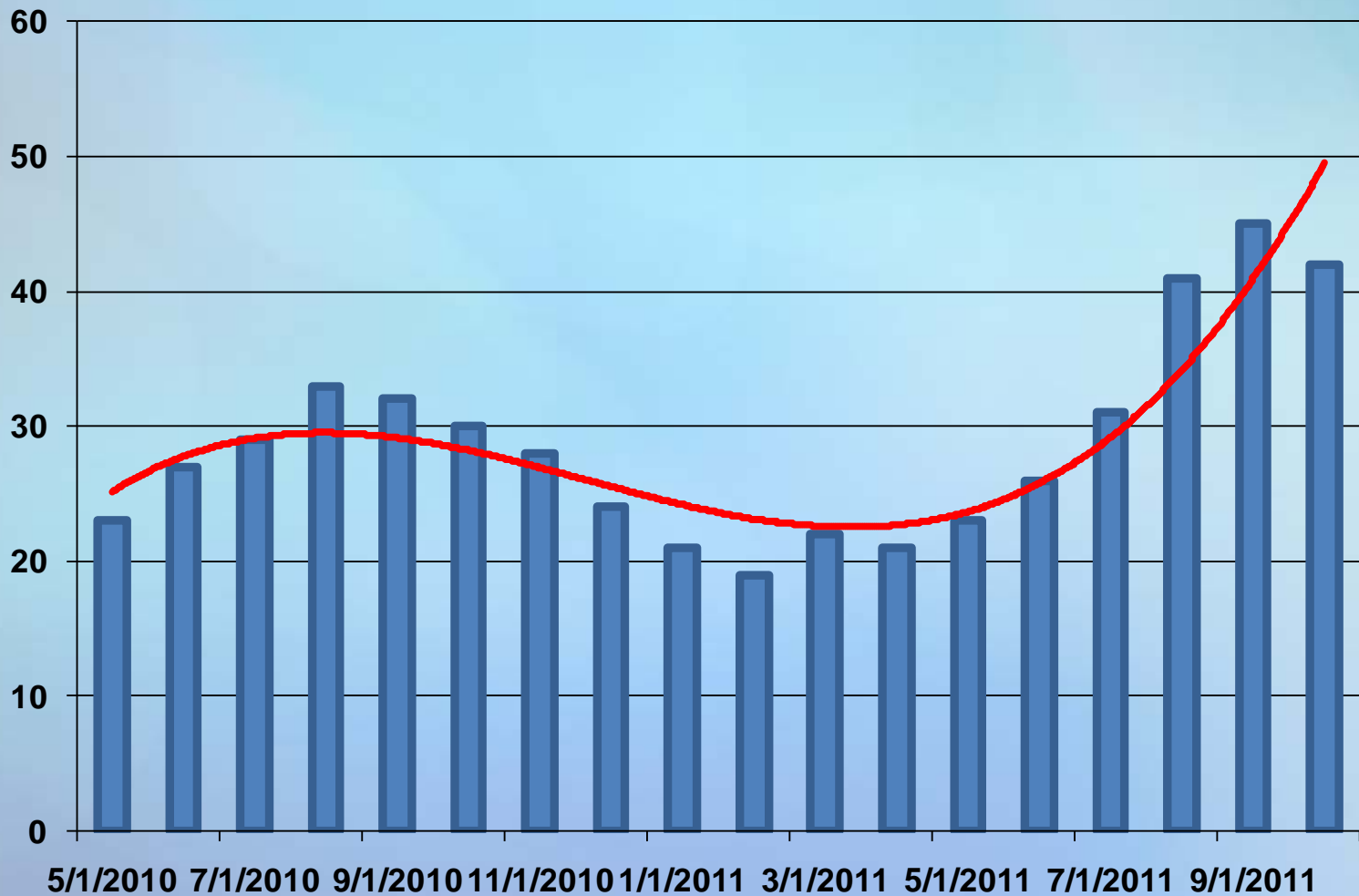
Dave Zwicke, PCA Analytics Manager, Sr. Economist

Bottom Line

- **Economy in a slow growth period characterized by tepid job gains.**
 - Limited policy tools to stimulate.
 - More than 1 in 3 chance of double dip in 2011/2012
- **Only marginal gains in residential construction**
 - Hindered by foreclosures, tight lending standards and slow job growth.
- **Nonresidential engaged in a long, slow healing process**
 - Process has only begun.
- **Public no longer a key positive**
 - State deficits and lower property taxes will have negative affect

Risk of Recession

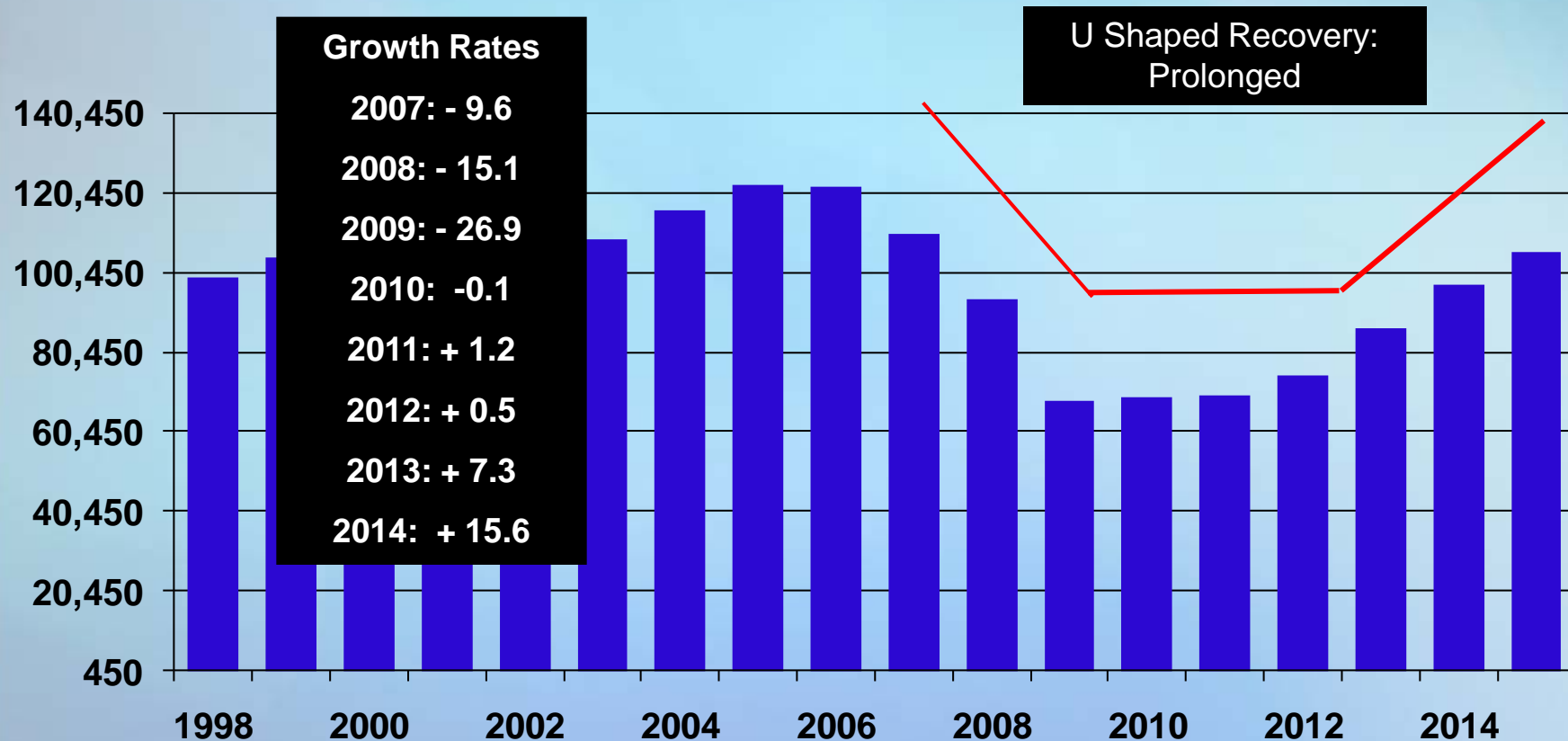
% Probability the U.S. will Enter a Recession in 6 months



Source: Moody's

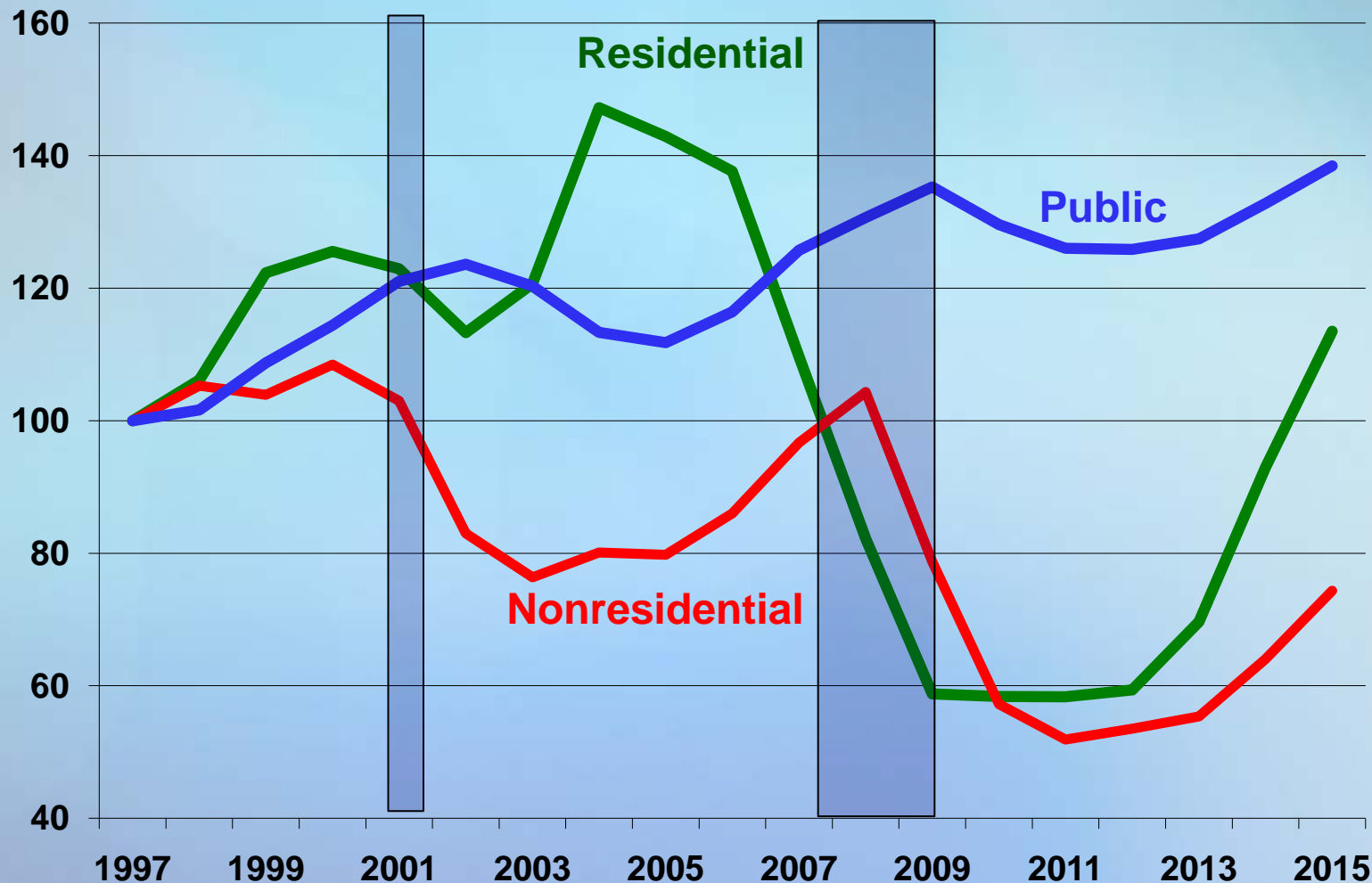
Portland Cement Consumption: Fall Outlook

Thousand Metric Tons



Construction Turning Points

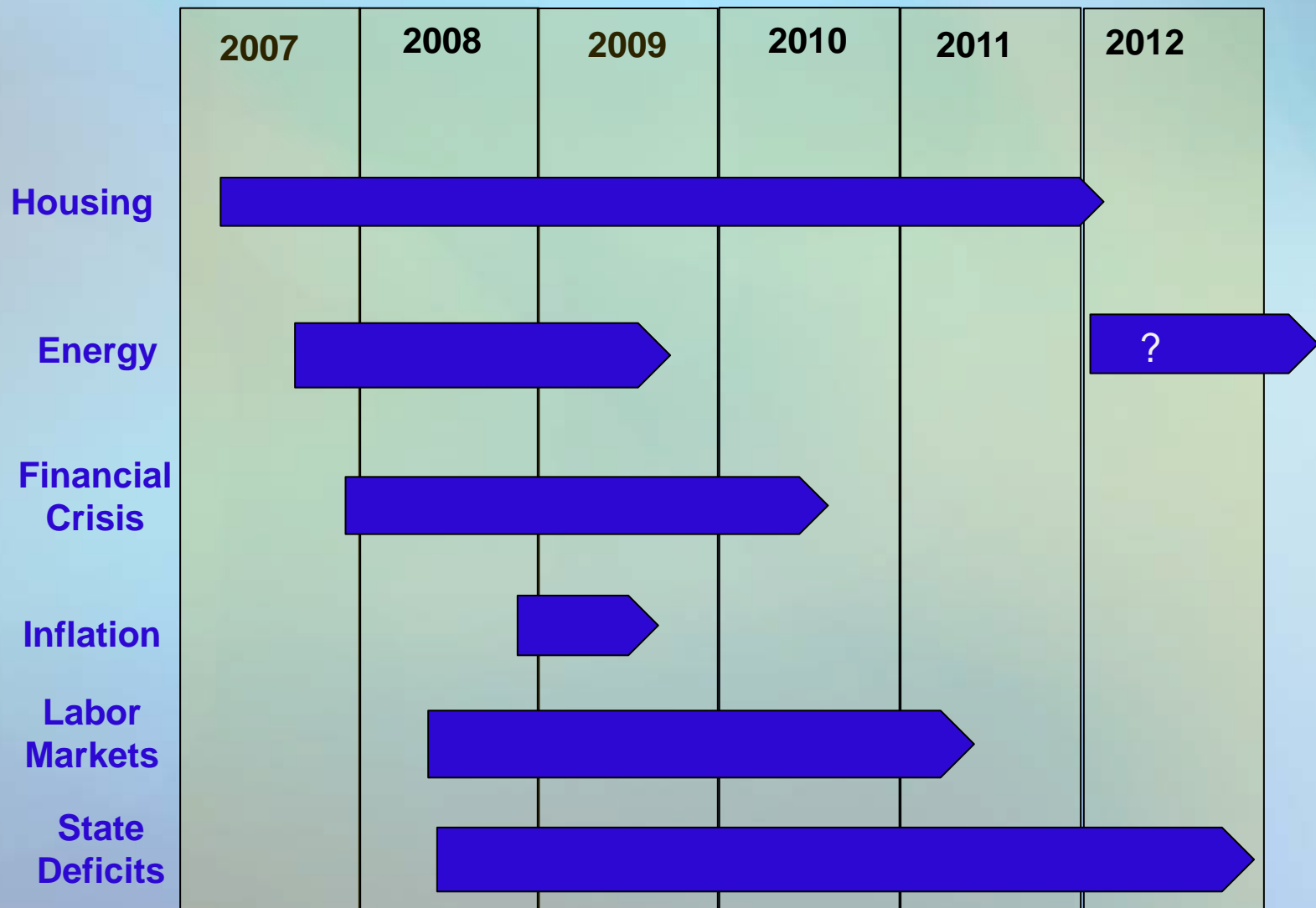
Real Construction Spending Index, 1997=100



Economic Outlook



Economic Headwinds



U.S. Unemployment Rate Improving...

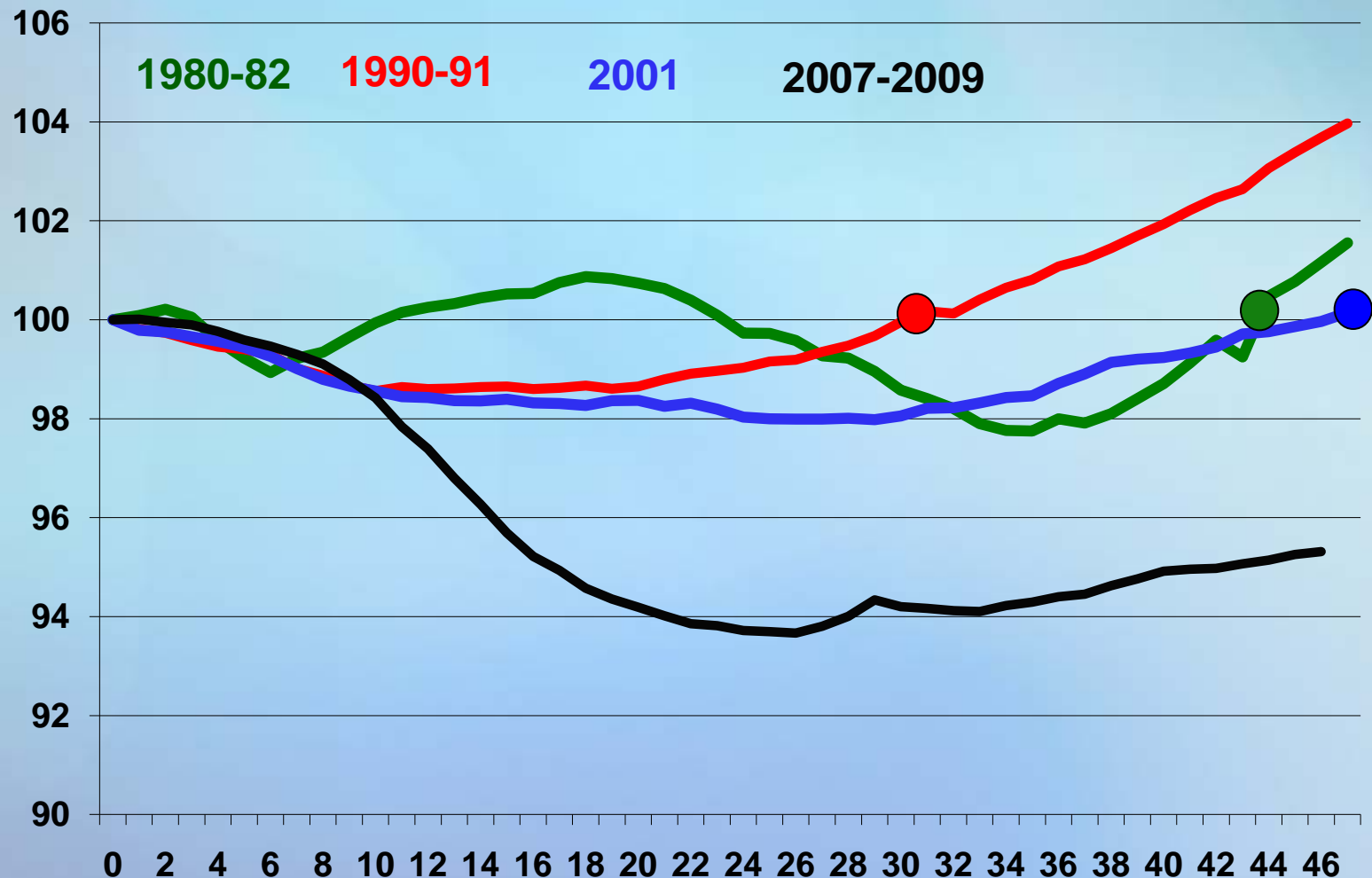
Unemployment Rate (L)

Labor Force (Mil) (R)



Getting back to Even...

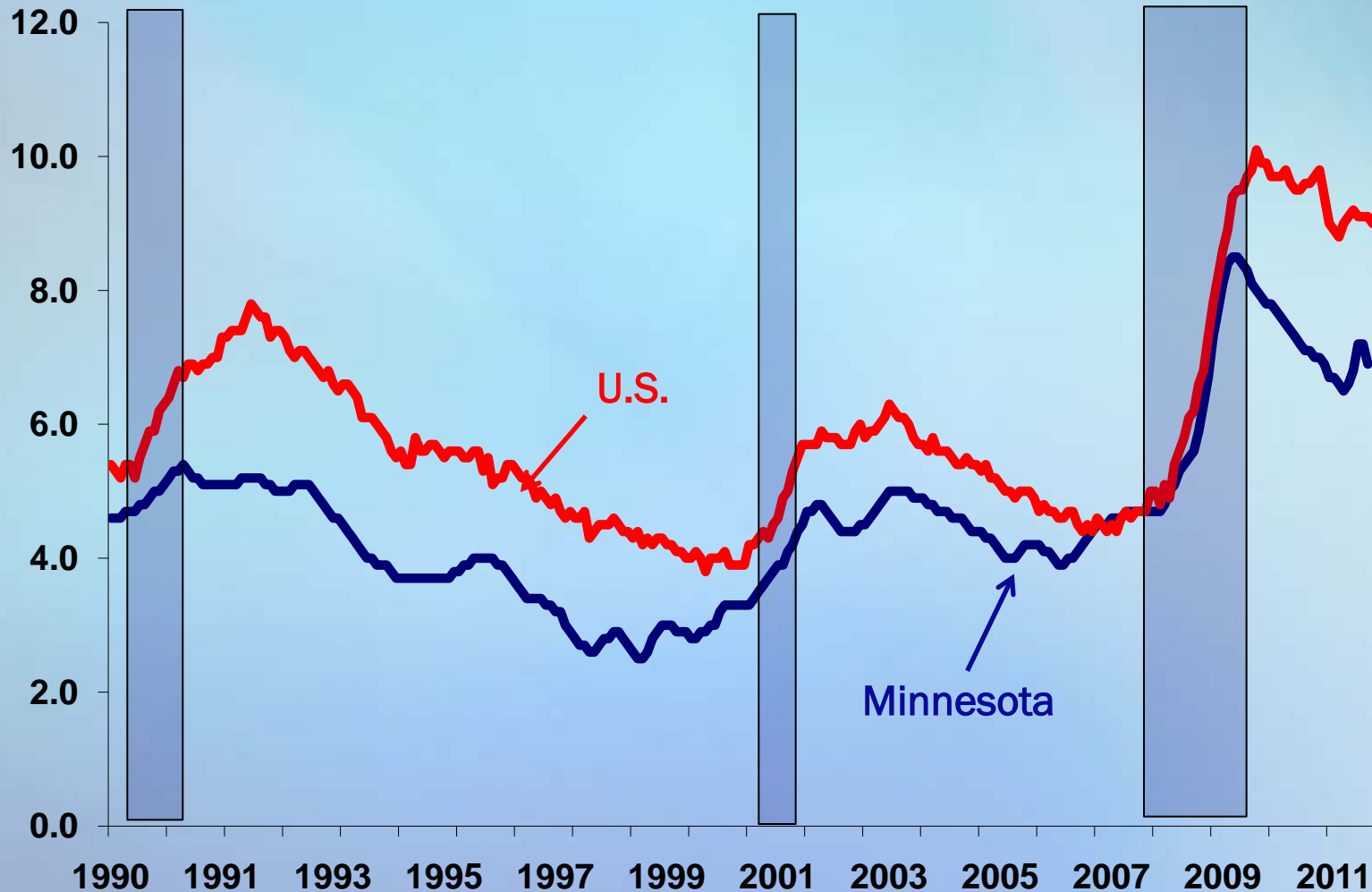
Employment, Index = Recession Start



Minnesota Unemployment

Unemployment Rate

 = Recession



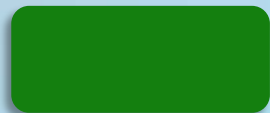
Minnesota Job Growth

Year-over-Year Change in Employment

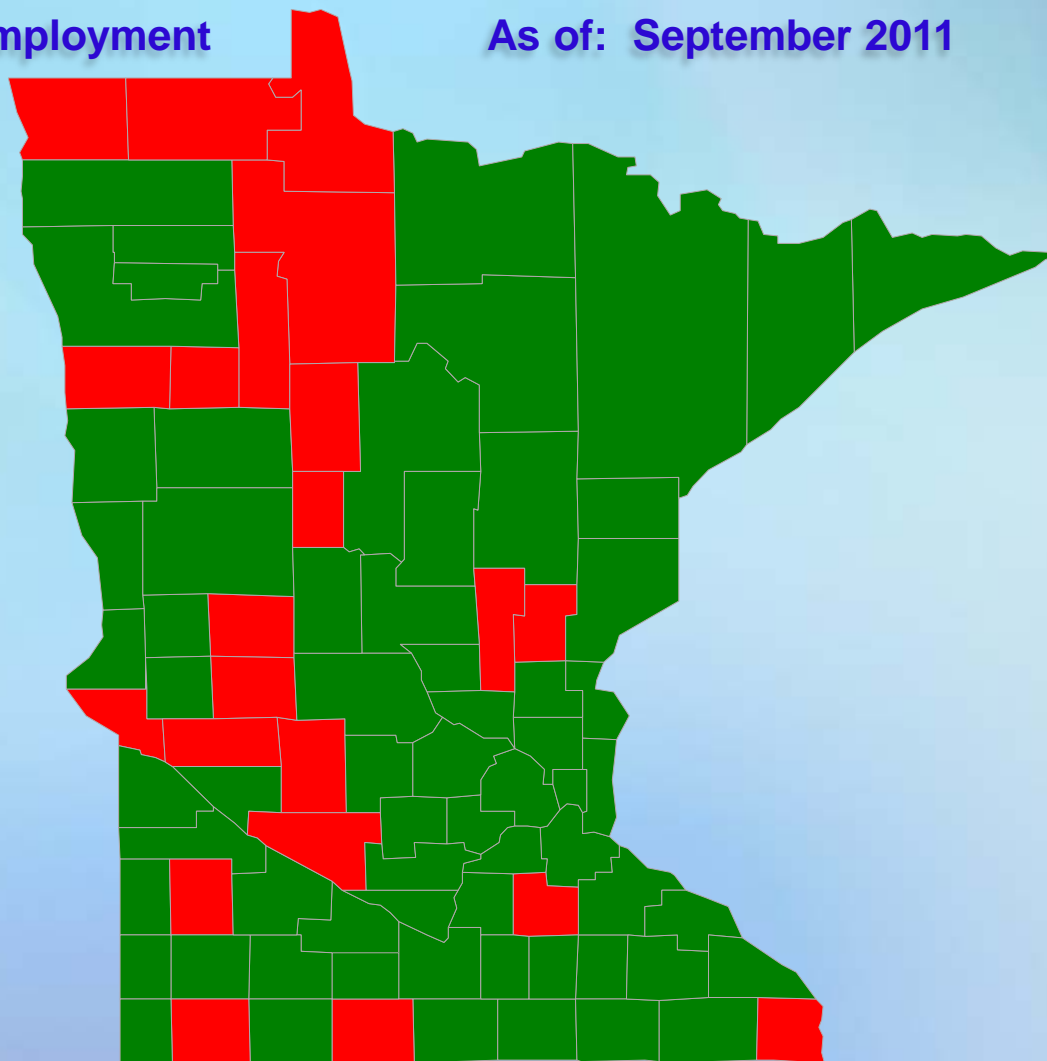
As of: September 2011



Contracting

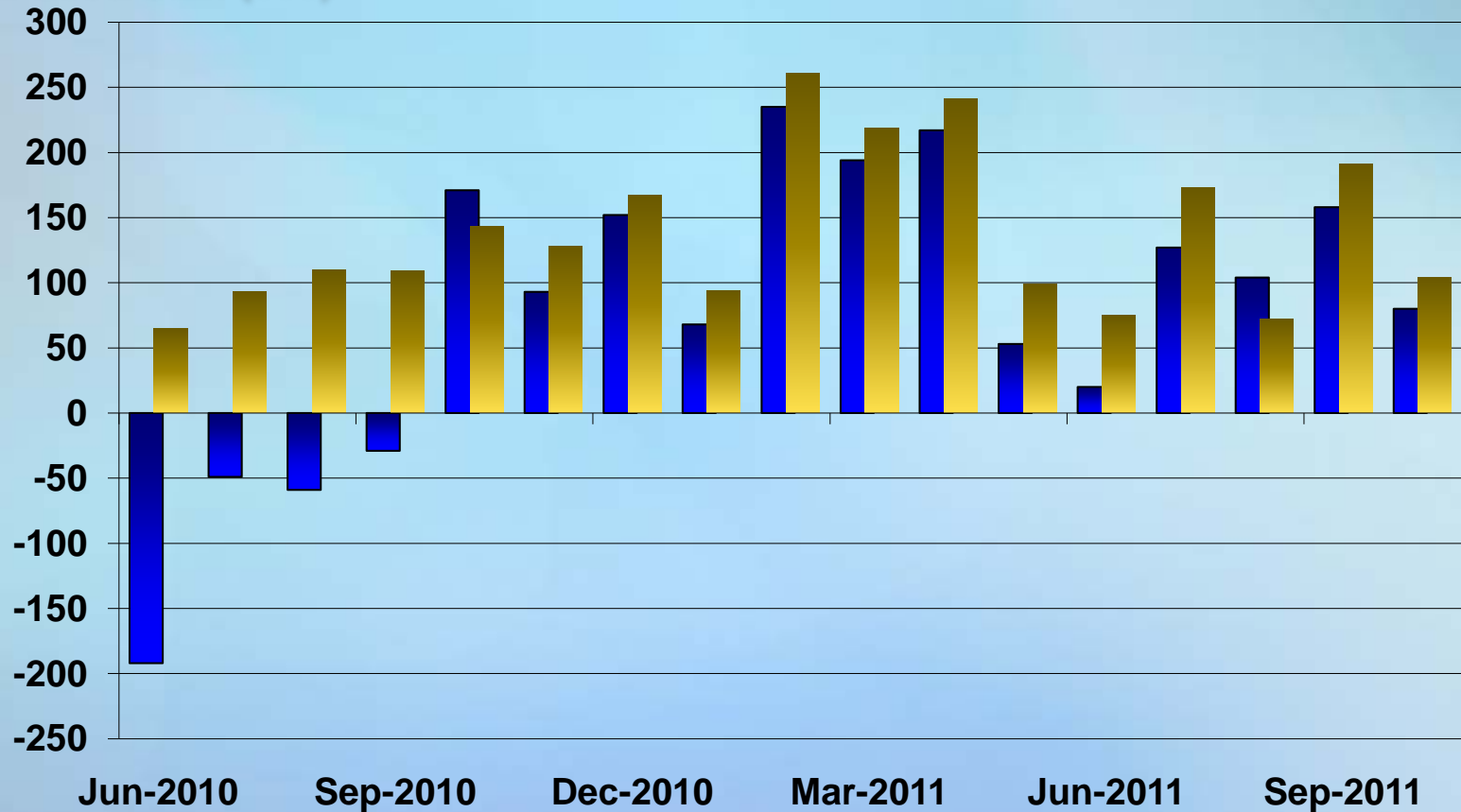


Expanding



U.S. Job Growth a little better than reported...

Net Job Loss/Gain (000)



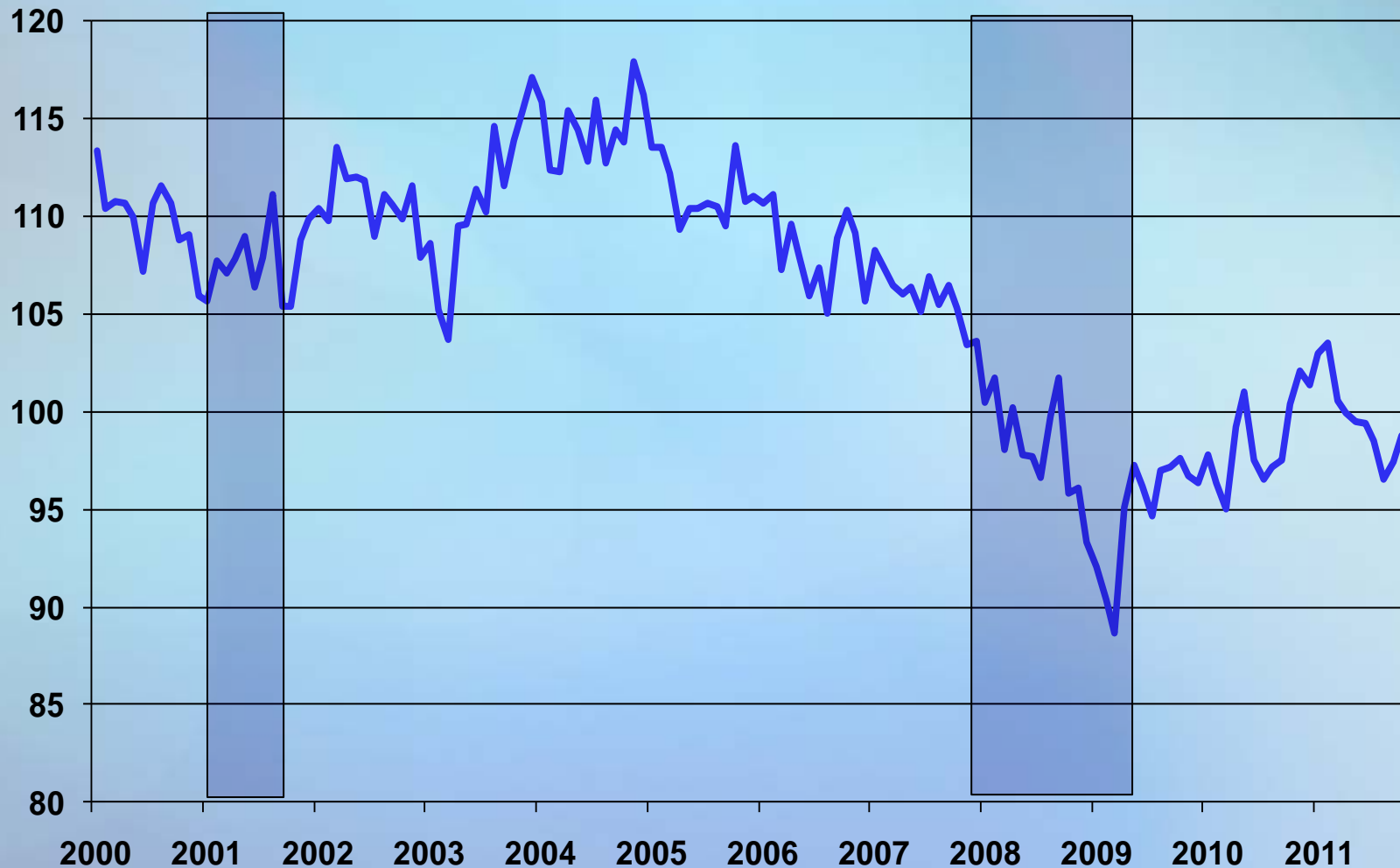
Source: BLS

Net Job Growth

Private Sector Job Gr.

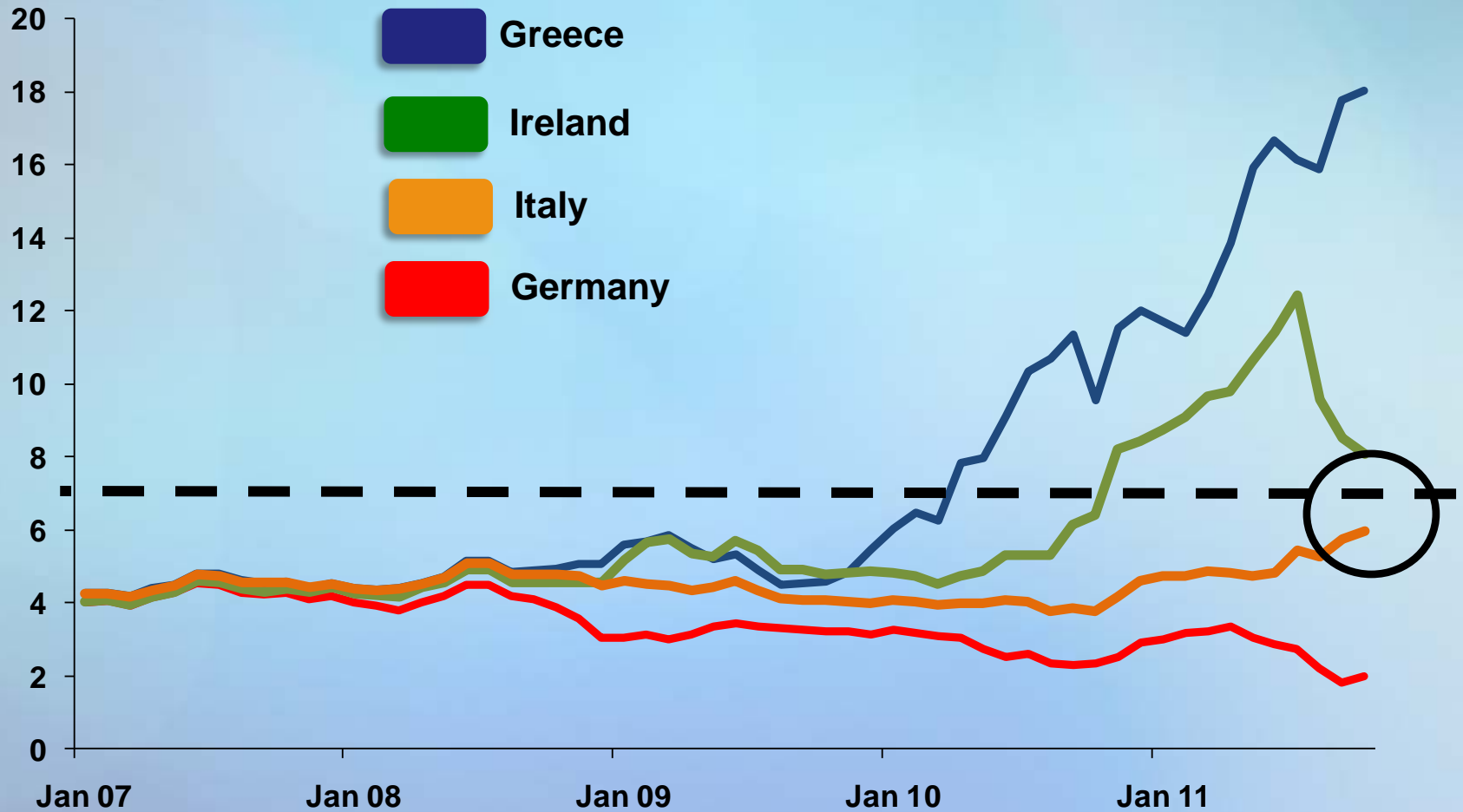
Businesses Remain Cautious...

Small Business Optimism Index



European Sovereign Debt Concerns

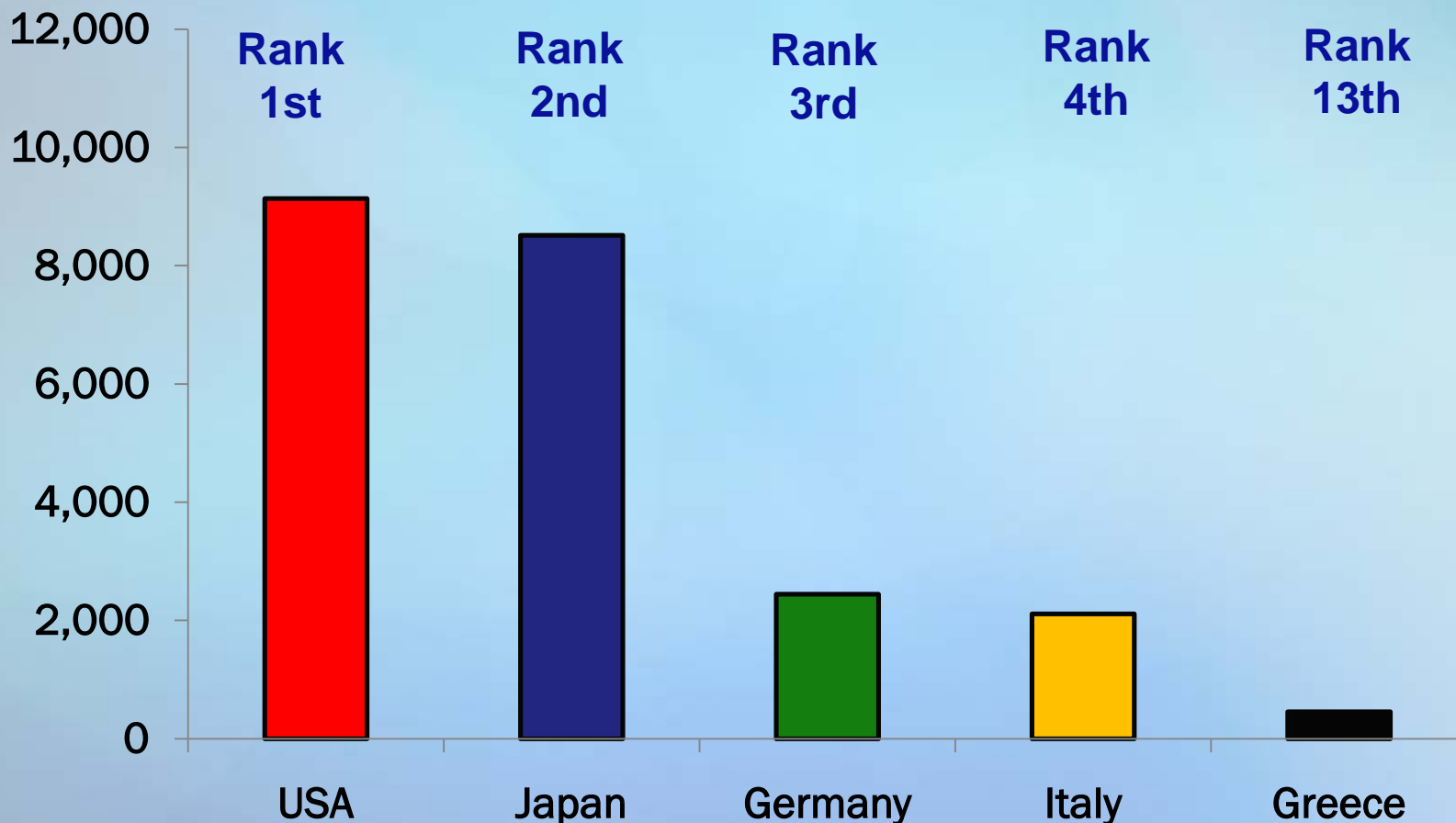
10 Y Treasury Yields



Source: European Central Bank (ECB)

Total Sovereign Debt by Nation

USD, billions as of 2010



Source: CIA 2011 World Fact Book

Residential Construction





The chart displays the growth of patents over time. The Y-axis is labeled with values from 0.4 to 5.4 in increments of 0.5. The X-axis is labeled with quarters from 2000Q1 to 2011Q1. The blue bars represent new patents, and the red bars represent existing patents. The total height of the stacked bars indicates the total number of patents. The data shows a period of low activity until around 2007, followed by a sharp increase in both new and existing patents, peaking in 2010.

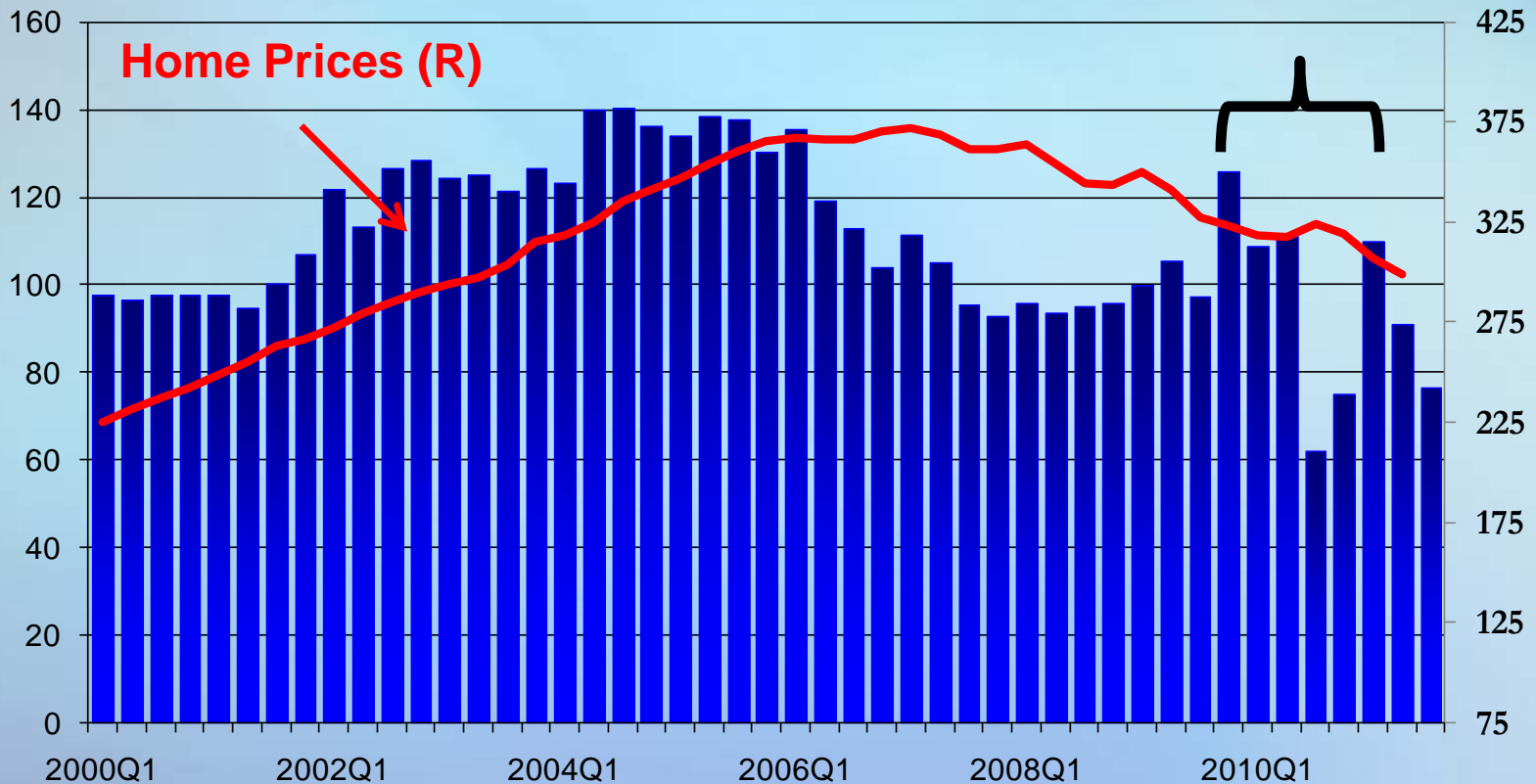
Quarter	New Patents (Blue)	Existing Patents (Red)	Total Patents
2000Q1	0.3	0.1	0.4
2000Q2	0.3	0.1	0.4
2000Q3	0.3	0.1	0.4
2000Q4	0.5	0.1	0.6
2001Q1	0.5	0.1	0.6
2001Q2	0.6	0.2	0.8
2001Q3	0.7	0.2	0.9
2001Q4	0.7	0.2	0.9
2002Q1	0.7	0.2	0.9
2002Q2	0.8	0.2	1.0
2002Q3	0.9	0.2	1.1
2002Q4	0.9	0.2	1.1
2003Q1	0.9	0.2	1.1
2003Q2	0.9	0.2	1.1
2003Q3	0.9	0.2	1.1
2003Q4	0.9	0.2	1.1
2004Q1	0.9	0.2	1.1
2004Q2	0.9	0.2	1.1
2004Q3	0.9	0.2	1.1
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2005Q2	0.9	0.2	1.1
2005Q3	0.9	0.2	1.1
2005Q4	0.9	0.2	1.1
2006Q1	1.0	0.2	1.2
2006Q2	1.0	0.2	1.2
2006Q3	1.0	0.2	1.2
2006Q4	1.0	0.2	1.2
2007Q1	1.0	0.2	1.2
2007Q2	1.0	0.2	1.2
2007Q3	1.0	0.2	1.2
2007Q4	1.0	0.2	1.2
2008Q1	1.0	0.2	1.2
2008Q2	1.0	0.2	1.2
2008Q3	1.0	0.2	1.2
2008Q4	1.0	0.2	1.2
2009Q1	1.0	0.2	1.2
2009Q2	1.0	0.2	1.2
2009Q3	1.0	0.2	1.2
2009Q4	1.0	0.2	1.2
2010Q1	1.0	0.2	1.2
2010Q2	1.0	0.2	1.2
2010Q3	1.0	0.2	1.2
2010Q4	1.0	0.2	1.2
2011Q1	1.0	0.2	1.2

Source: Mortgage Bankers Association

Existing Home Sales - Minnesota

Existing Home Sales, 000 SAAR

Home Tax Credit
Expirations



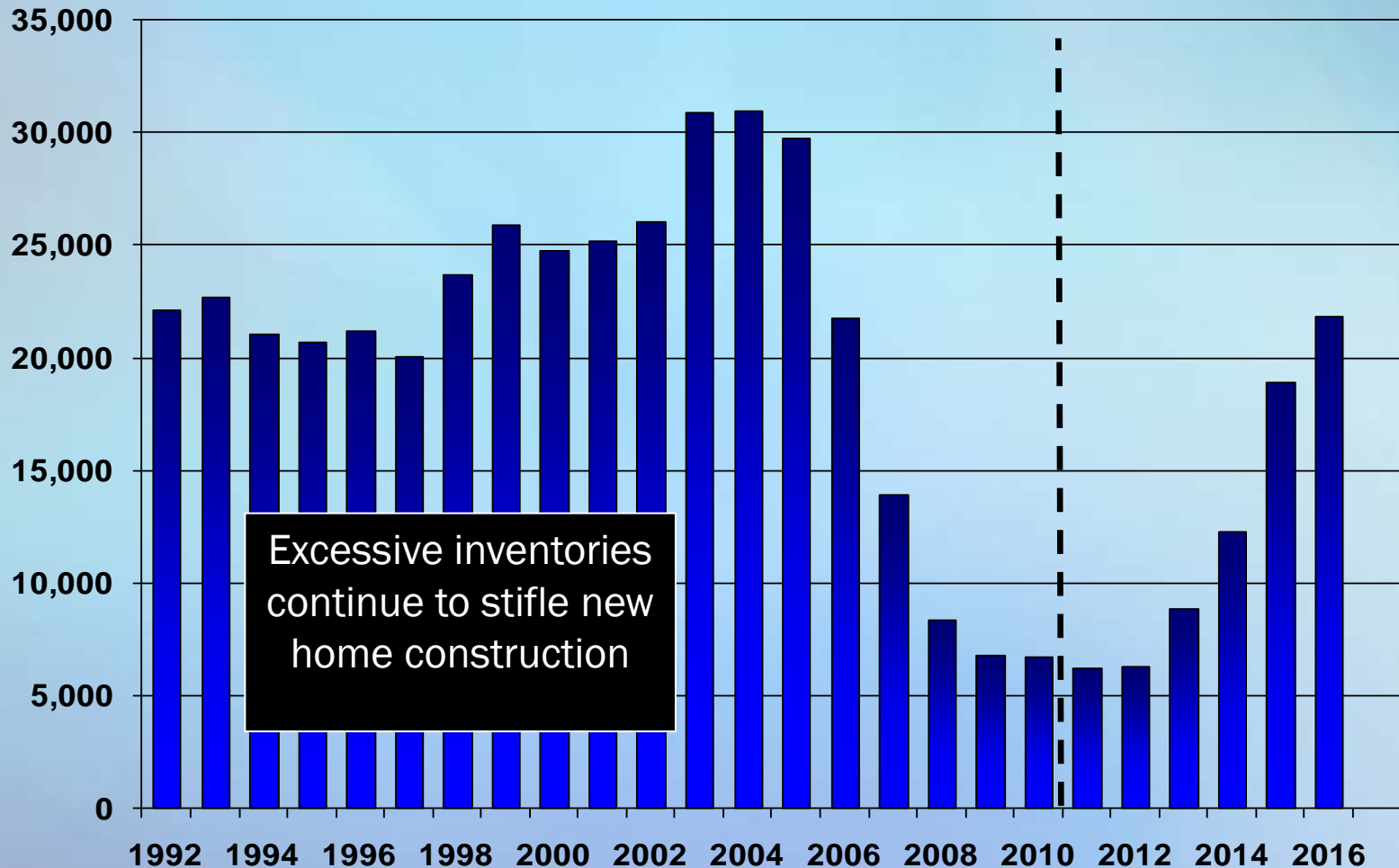
Minnesota Home Prices Undervalued...?



Source: Census

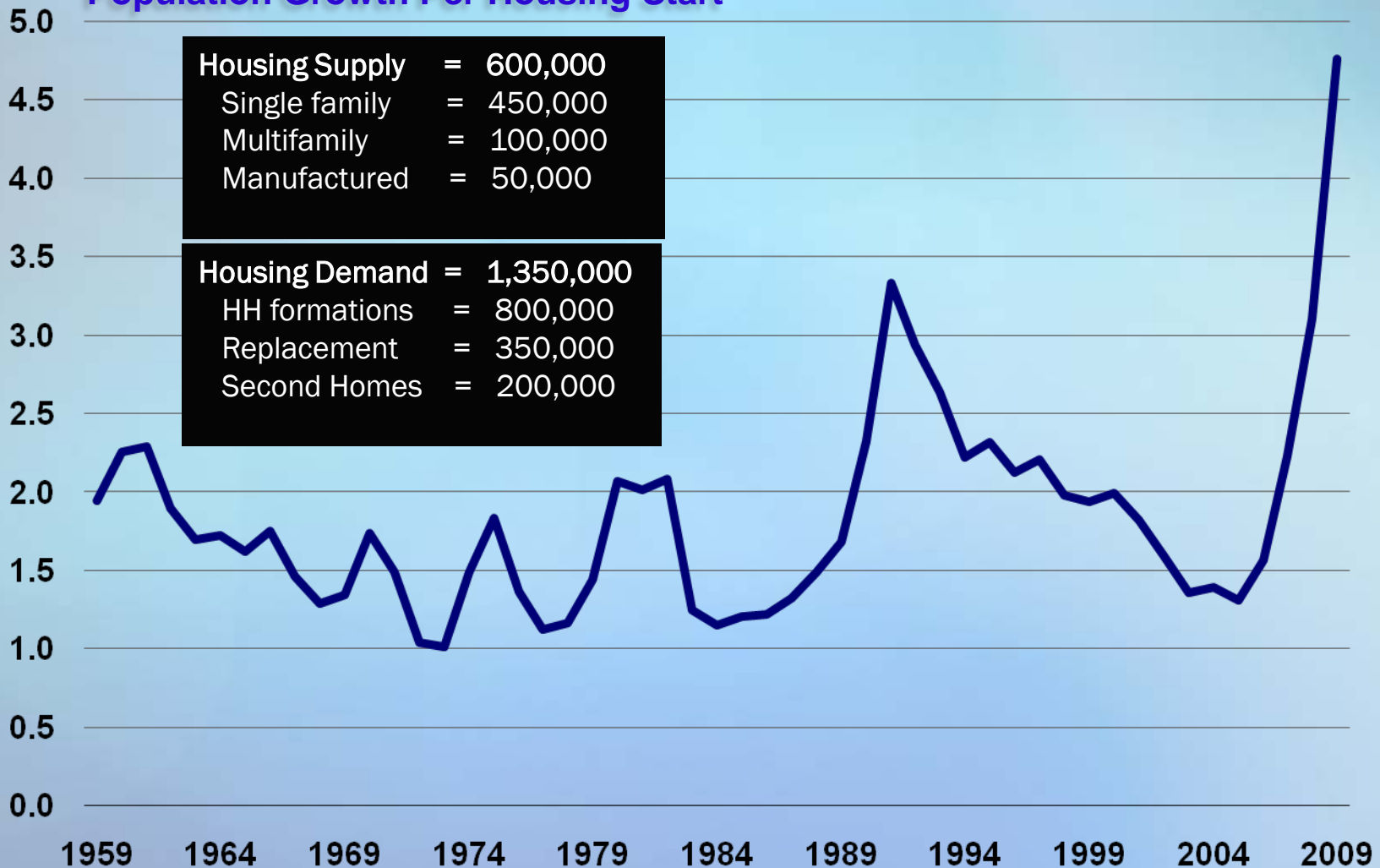
Single Family Construction: Minnesota

Single Family Permits, Units



SF: Coiled Spring or Structural Change?

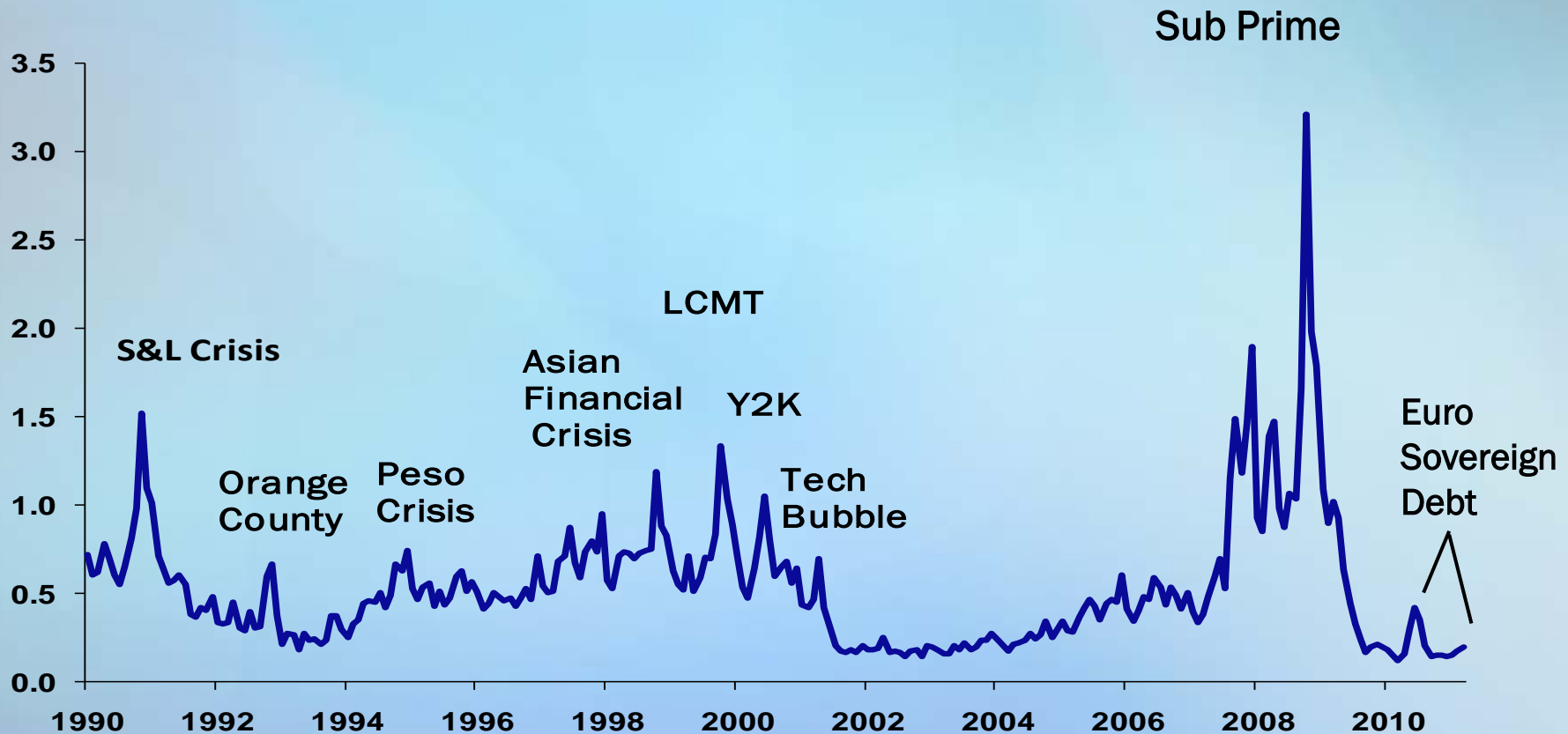
Population Growth Per Housing Start



Nonresidential Construction



Risk of Eurozone Contagion? ...Yes & No

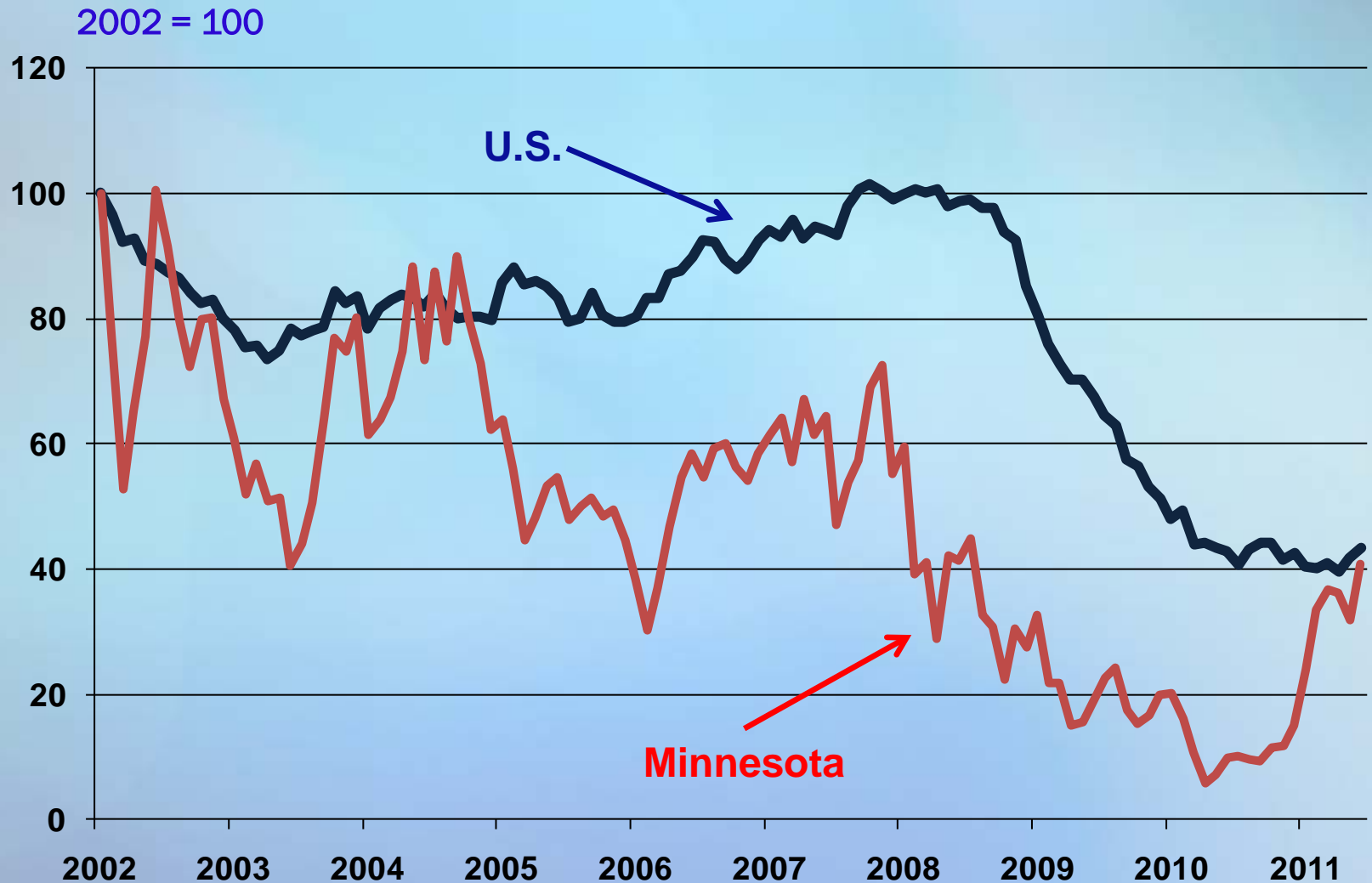


U.S. Nonresidential Construction Spending

Real \$, millions

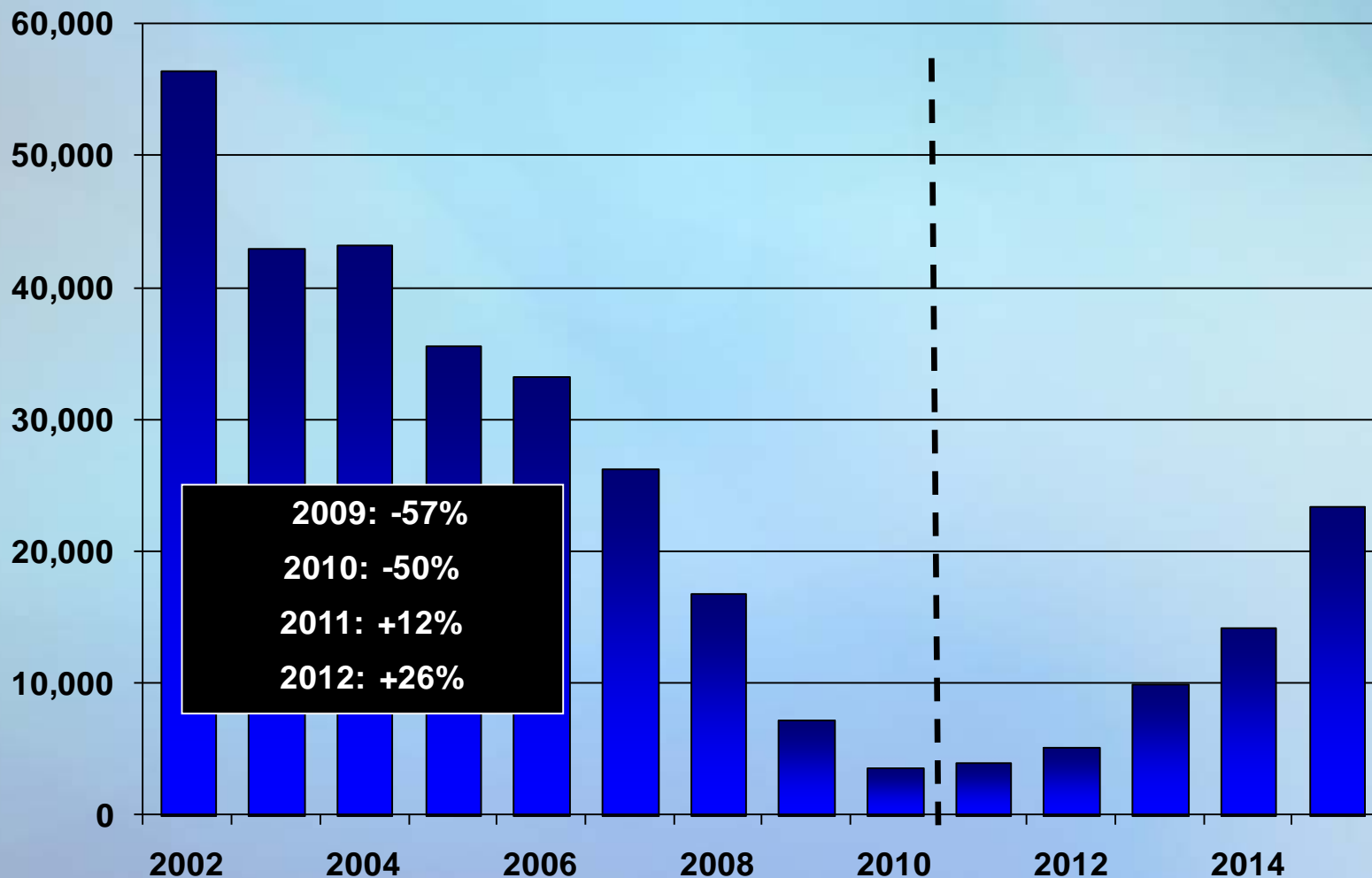


Office Building Construction Spending



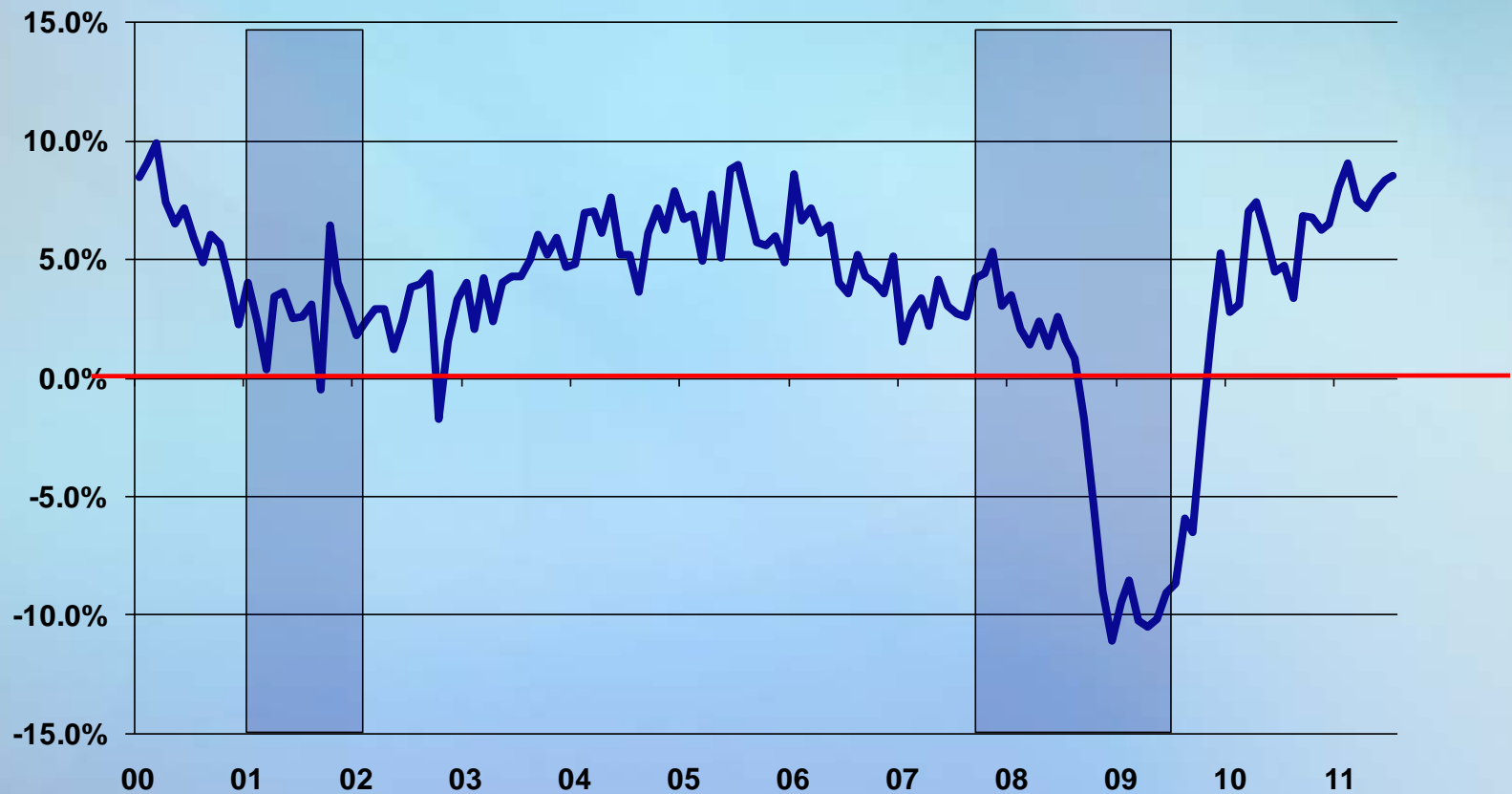
Office Outlook— Minnesota

Cement Consumption - Metric Tons



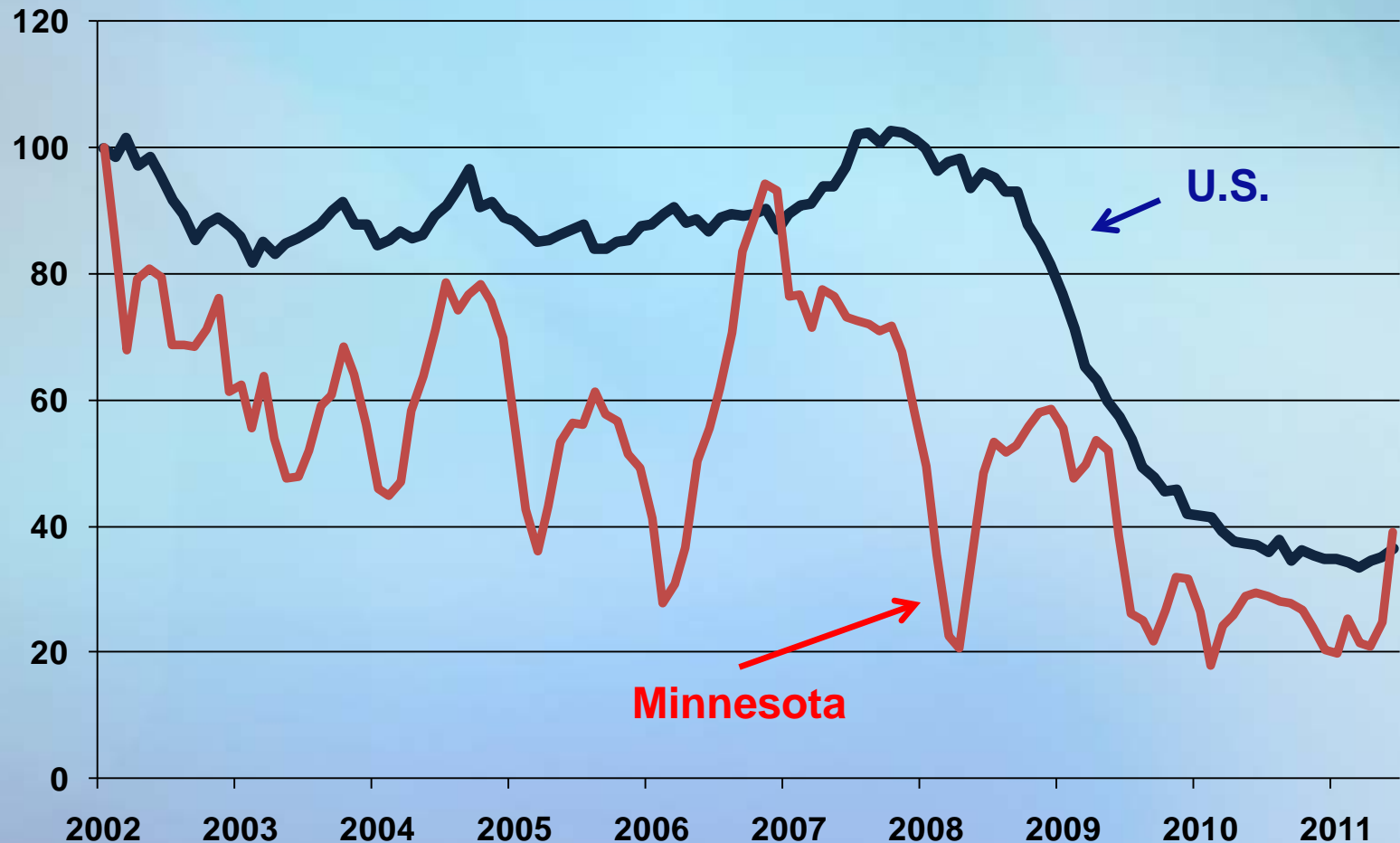
Retail Sales Have Recovered...

Annual Percent Change



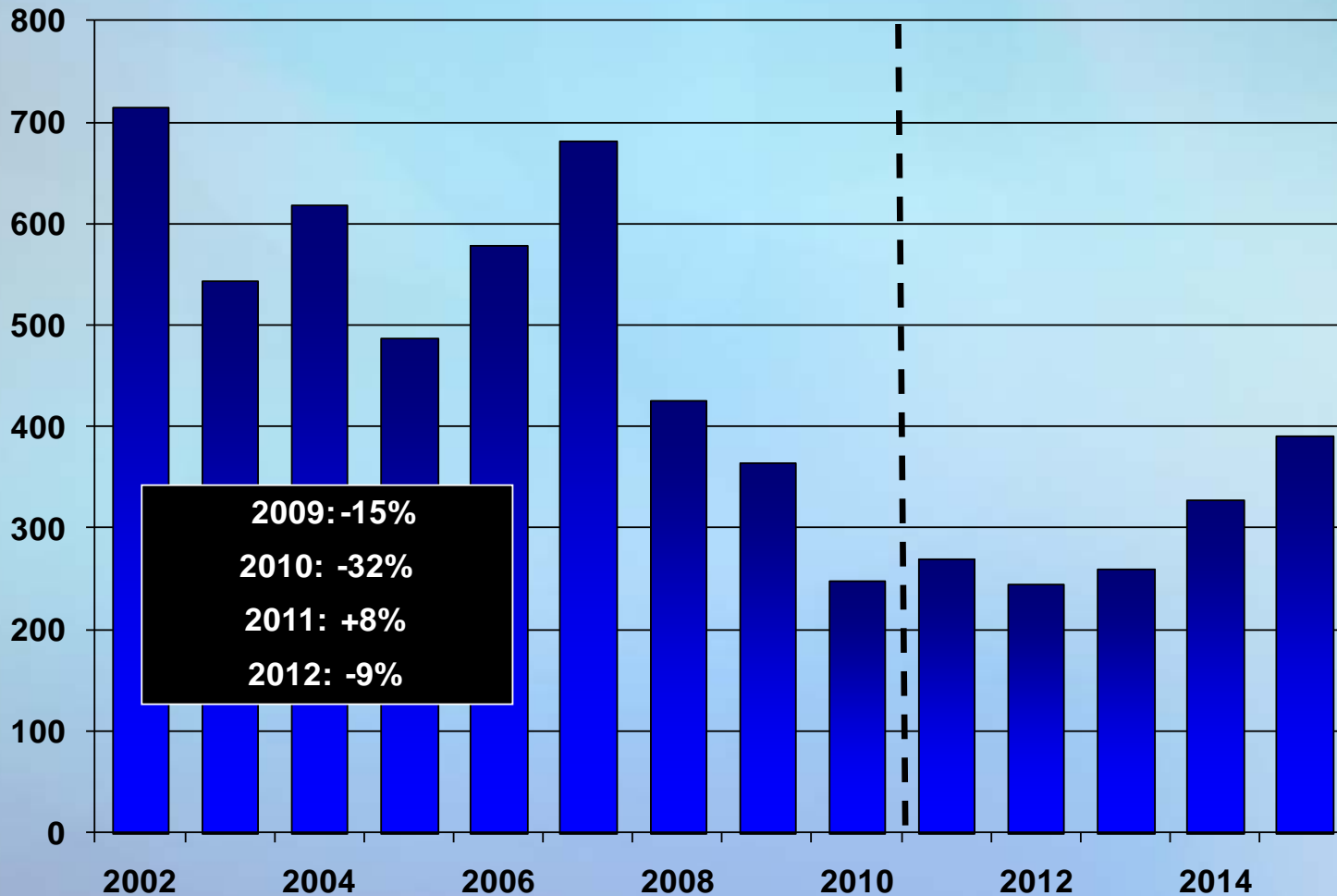
Retail Building Construction...

\$, Millions, Real 1996 Dollars



Retail Outlook— Minnesota

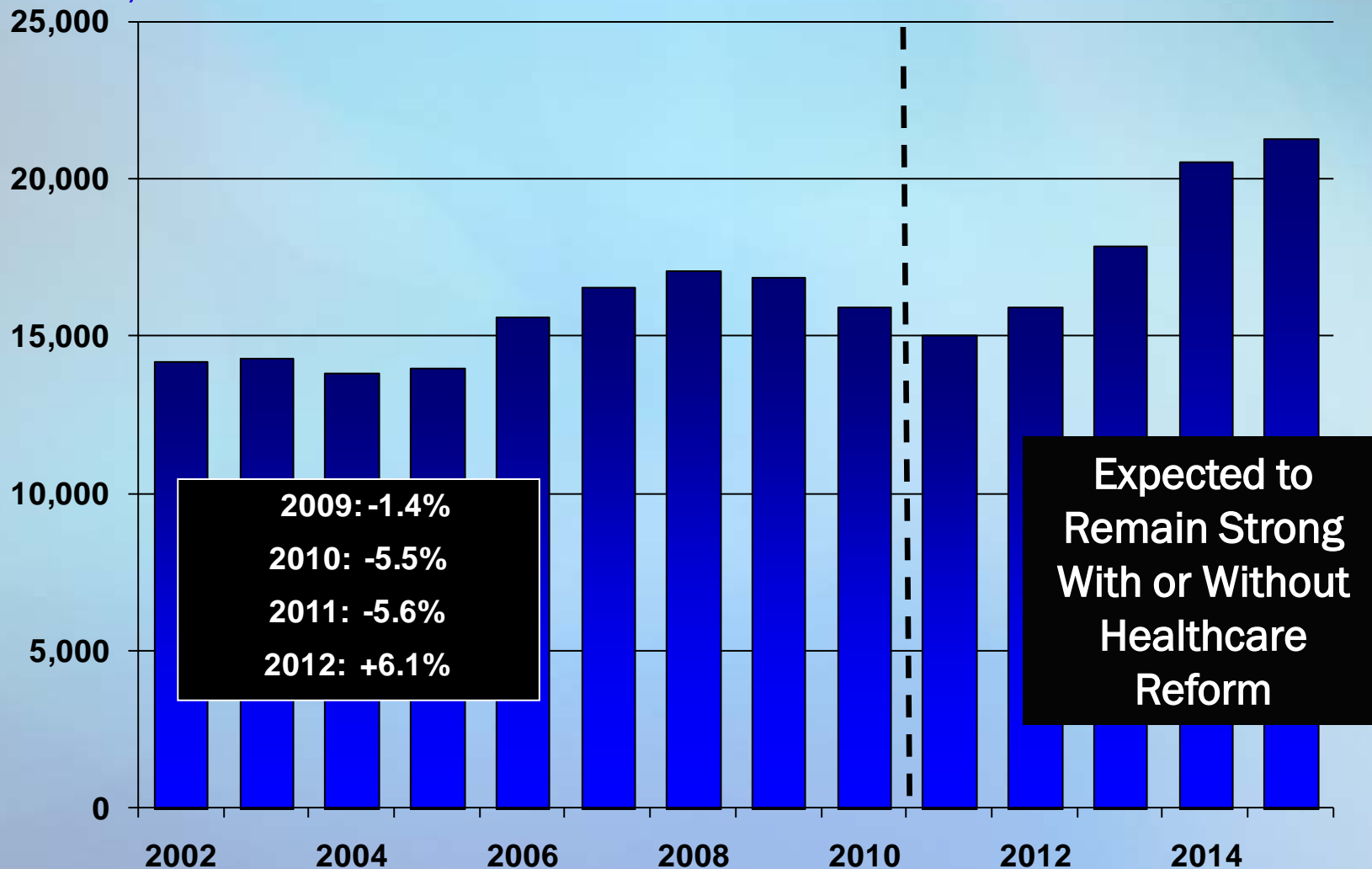
\$, Millions, Real 1996 Dollars





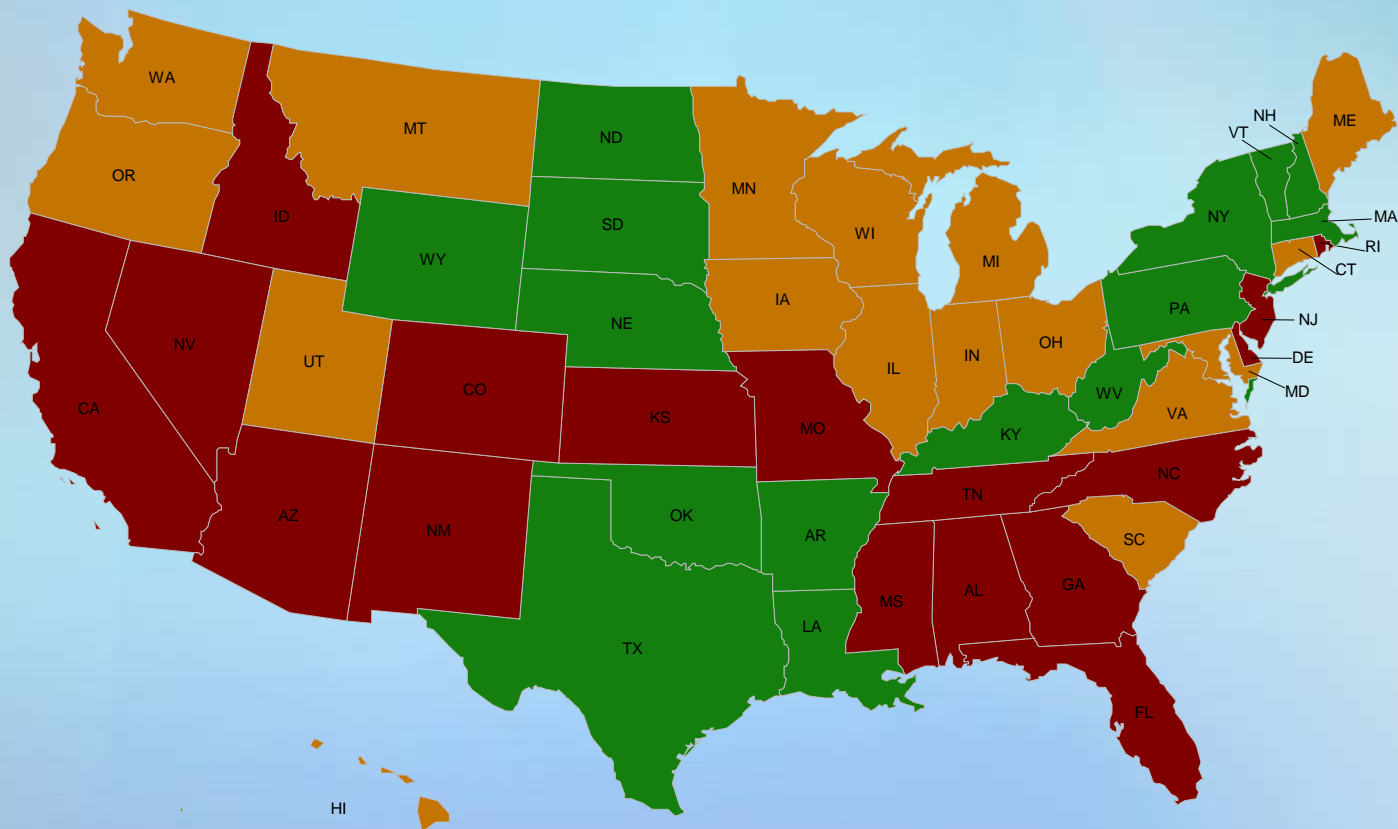
Medical/Institution Outlook– U.S.

\$, Millions, Real 1996 Dollars



Commercial Construction - Order of Recovery

Rankings based on: Office, Industrial, Retail and Hospitality Employment Trends



Source: PCA

Early Recovery

Average Recovery

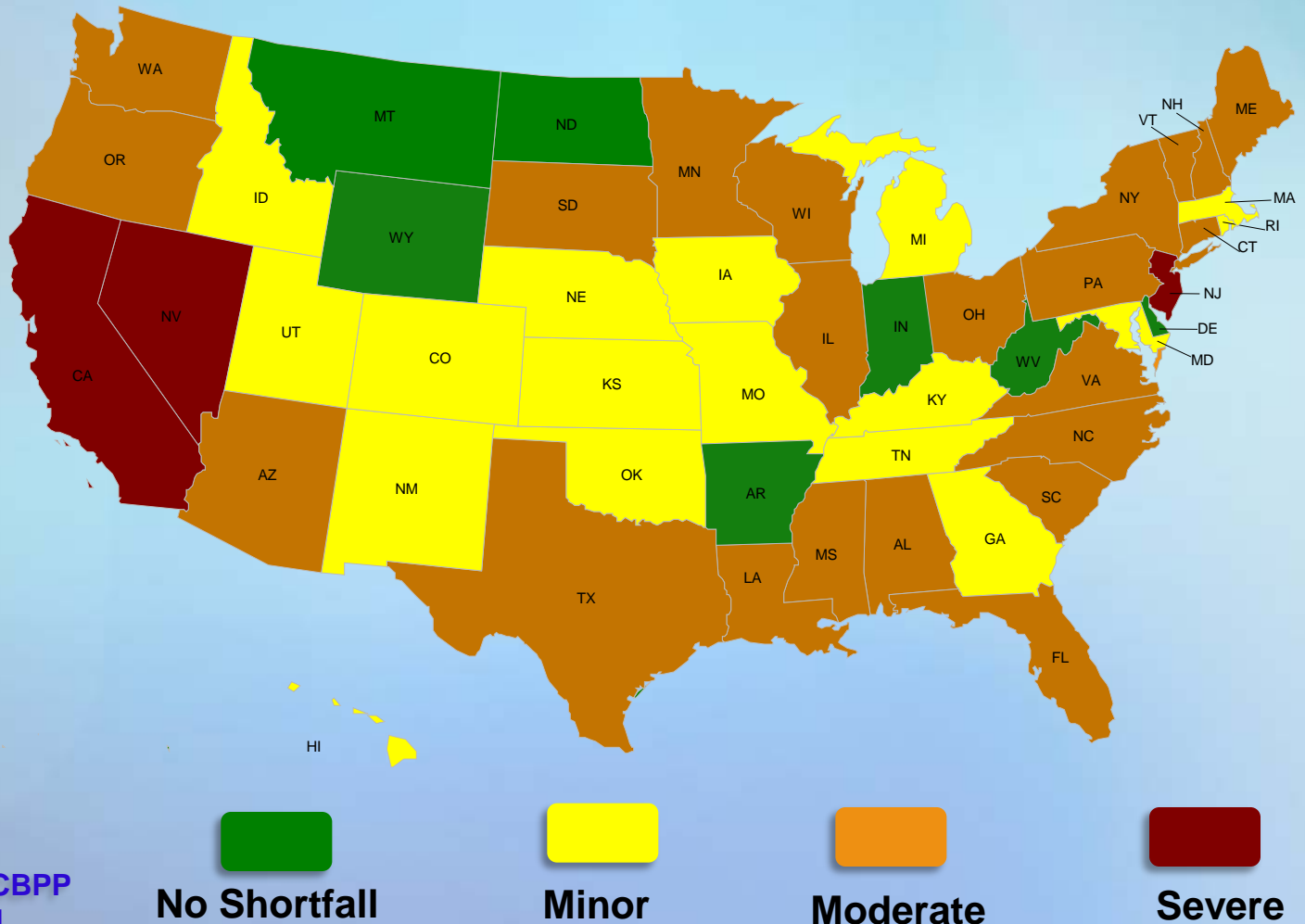
Late Recovery

An aerial photograph showing a complex highway interchange. A large, multi-lane concrete bridge structure is under construction, spanning over existing roads and green spaces. The bridge has several lanes and is supported by concrete pillars. The surrounding area includes urban buildings, parking lots, and some construction equipment. The text "Public Construction" is overlaid in white on the right side of the image.

Public Construction

State Fiscal Conditions

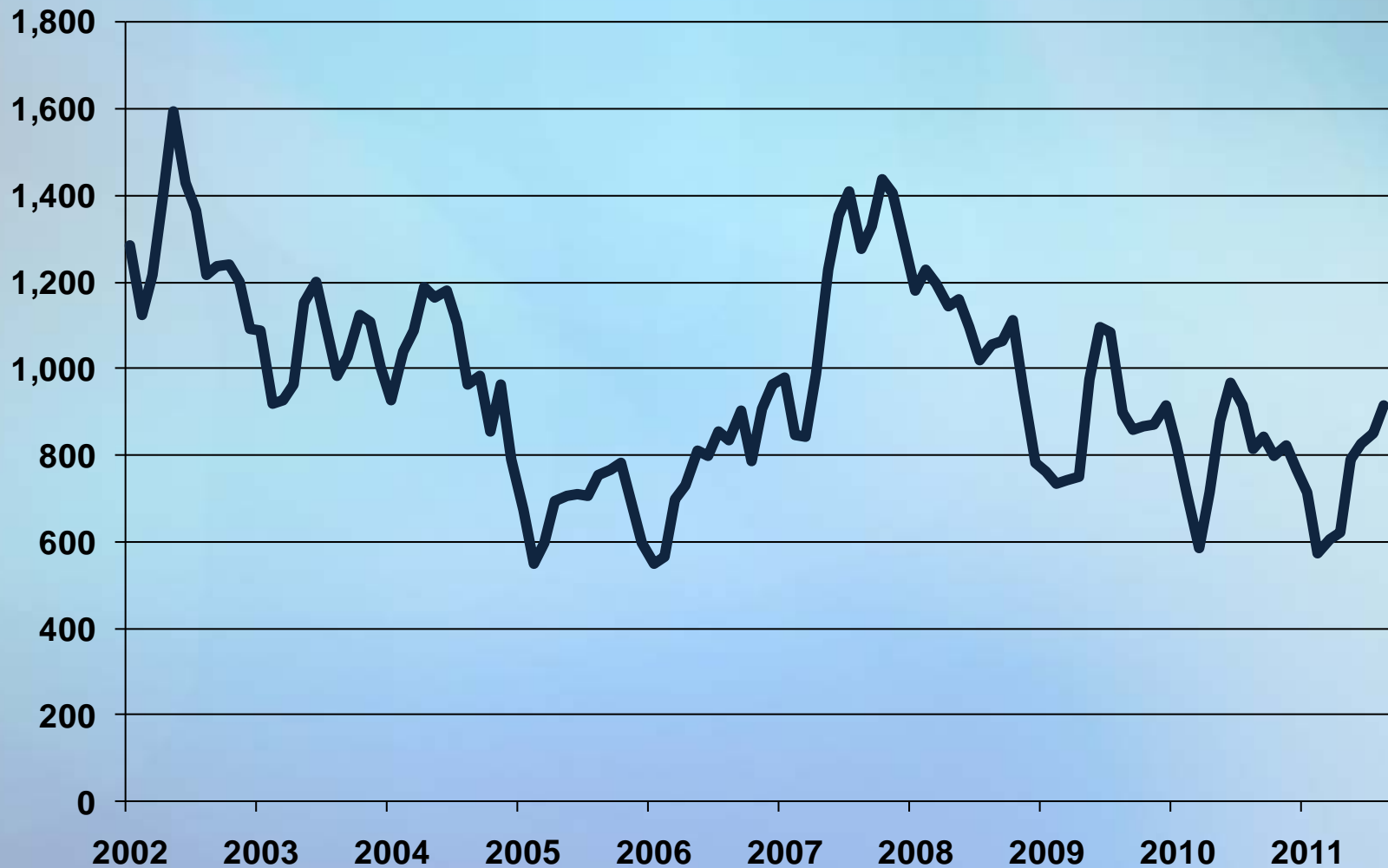
FY 2012 Deficit Share of General Fund



**Source: PCA/CBPP
June 2011**

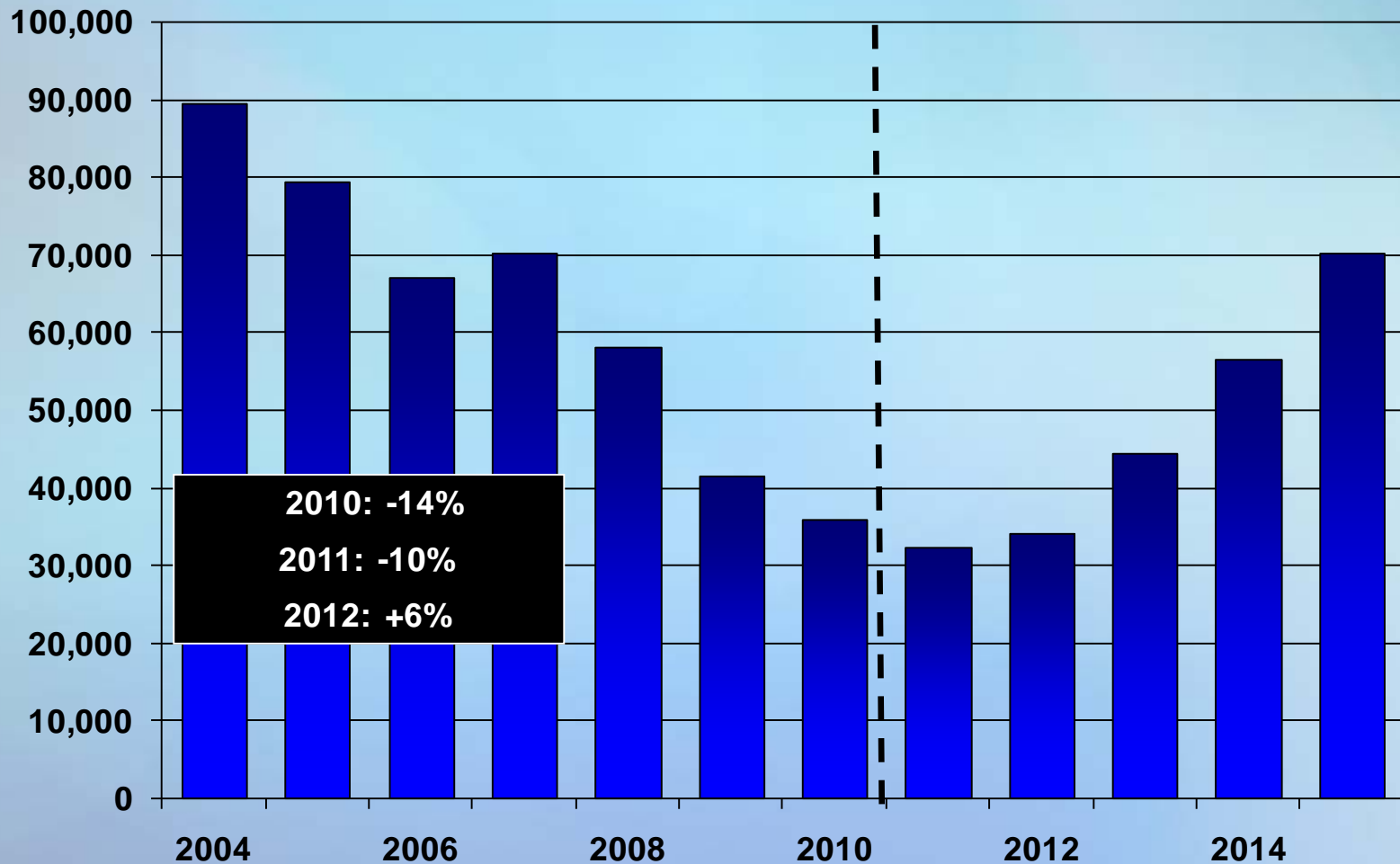
Public Buildings

\$, Millions, Real 1996 Dollars



Public Building Outlook – Minnesota

Metric Tons

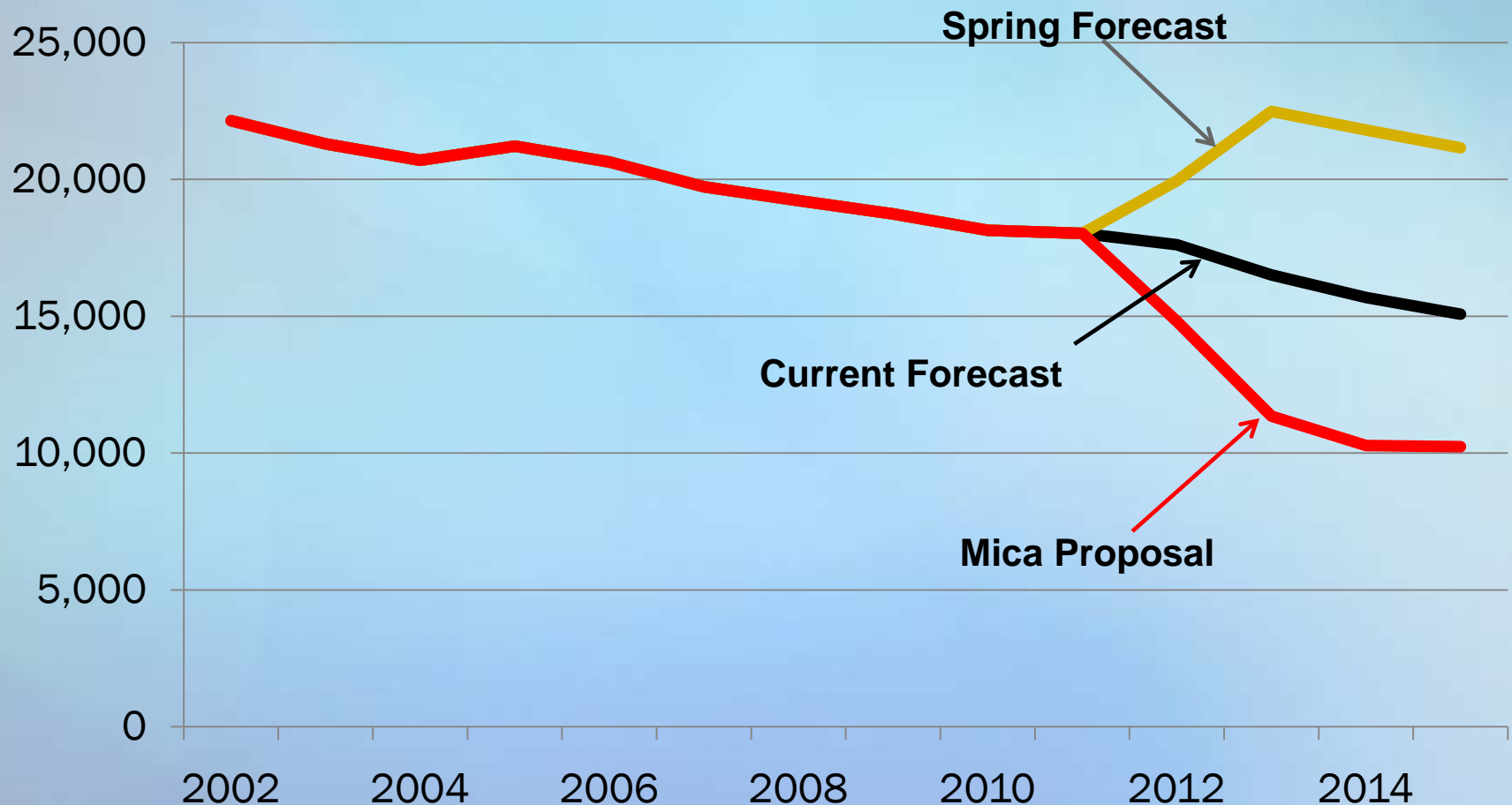


Federal Highway Funding

- **Stimulus has run its course.**
 - 83% of stimulus funds spent nationally
 - 97% of Minnesota's stimulus funds spent
- **Federal Highway Bill (SAFETEA-LU) Expired - 2009**
 - 8 Extensions since bill expired
 - Next Deadline March 30, 2012
- **Outlook for next bill– No Funding Increase (Possible Cut)**
 - Minimum of 20% increase necessary to maintain buying power.
- **Potential Jobs Bill**
 - \$100 billion infrastructure investment
 - Funding is would largely mirror ARRA

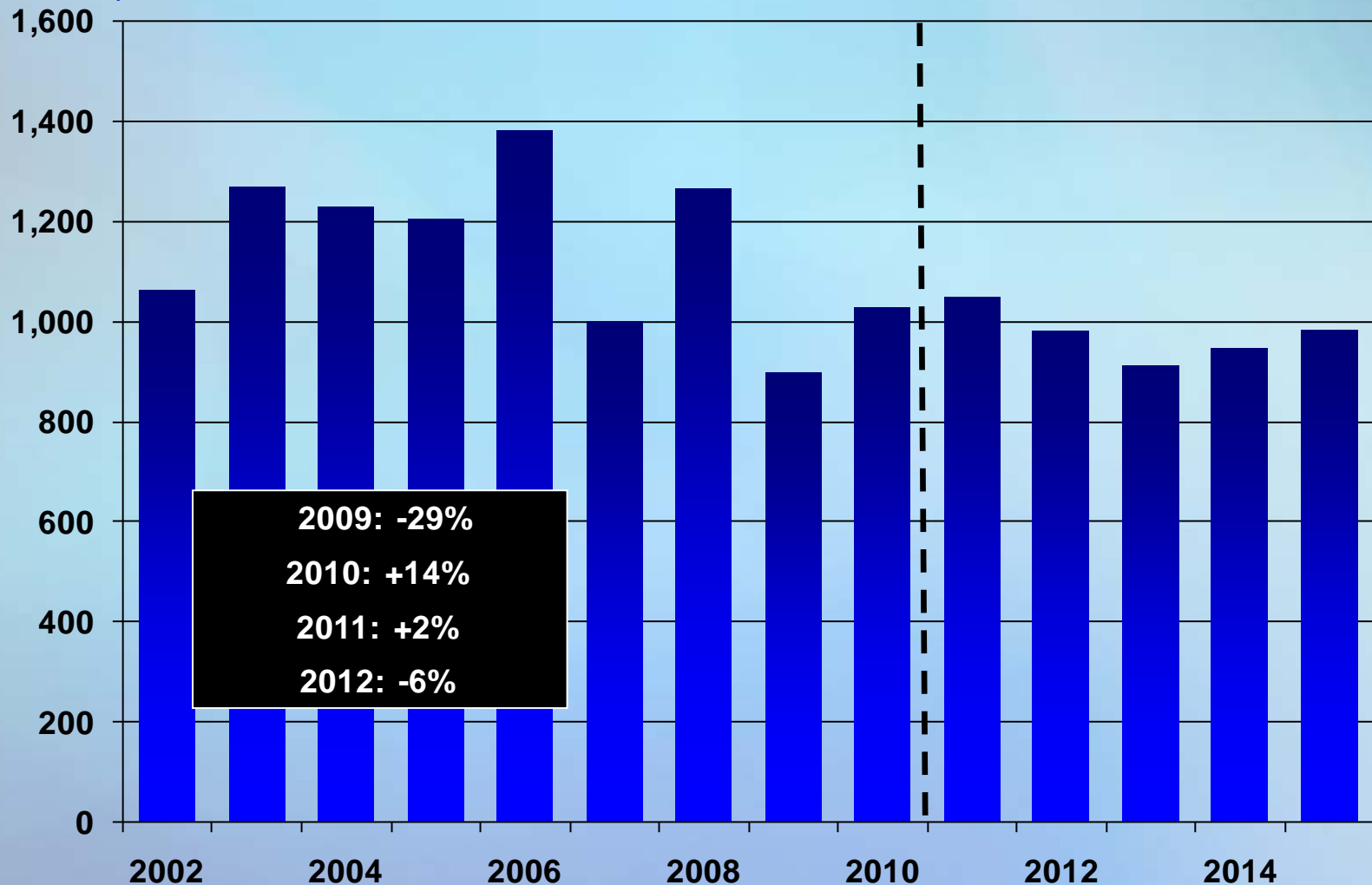
Highway Bill Cement Consumption

Scenarios: Spring Vs. Current Outlook



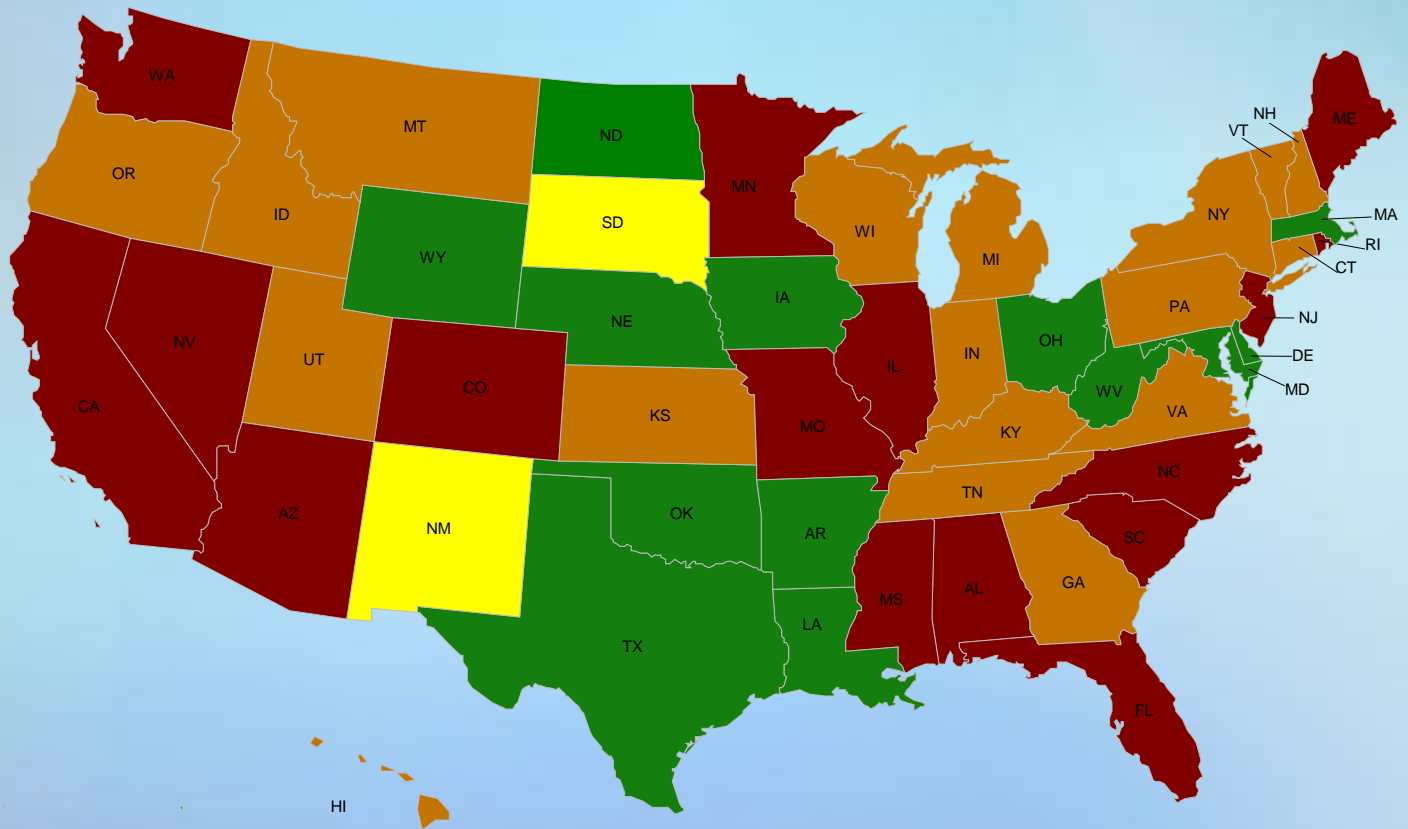
Highway Outlook – Minnesota

\$, Millions, Real 1996 Dollars



Public Construction - Order of Recovery

Rankings based on: Deficits, ARRA, Employment, Long-Term Debt



Source: PCA

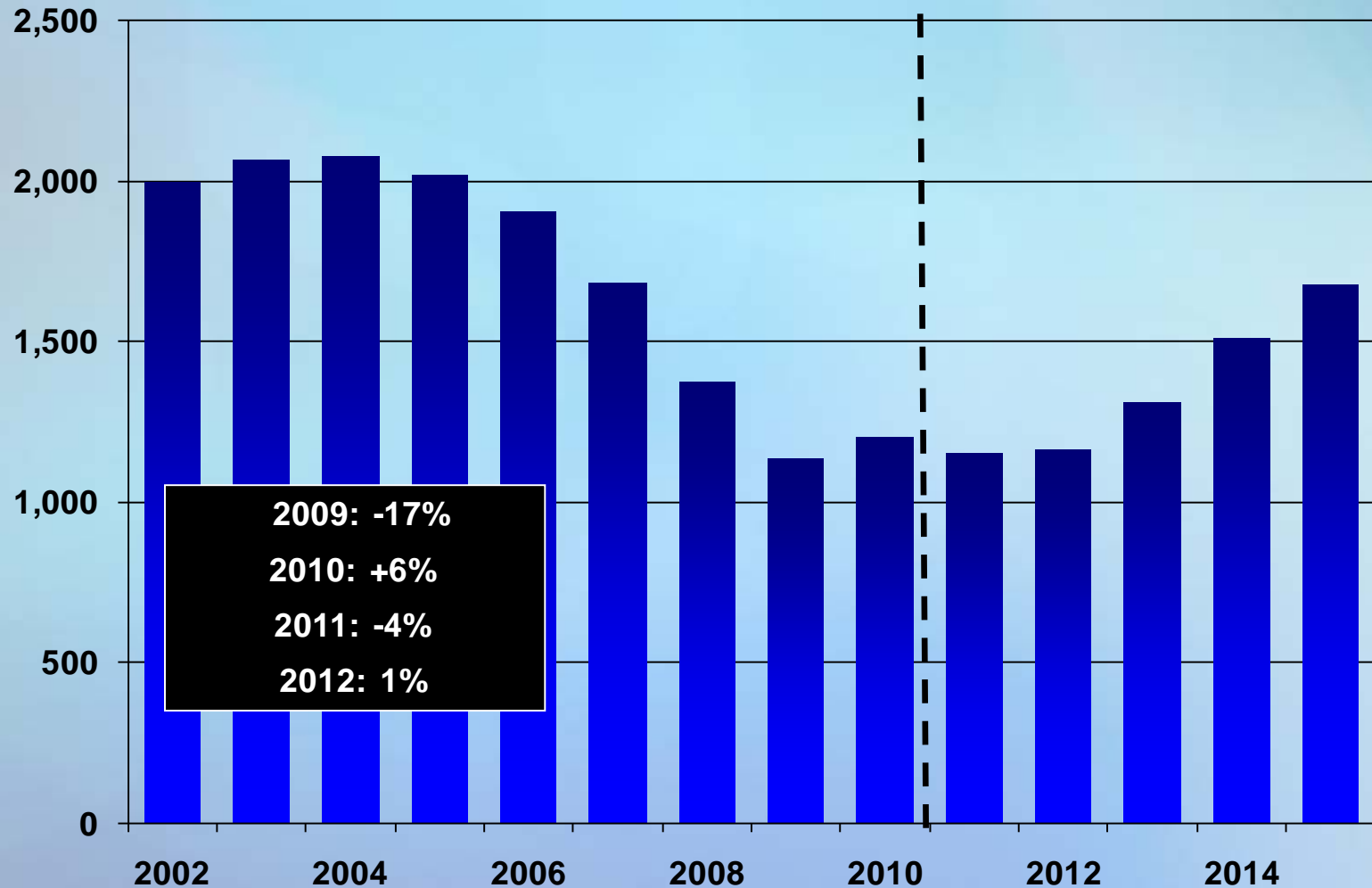

Early Recovery


Average Recovery


Late Recovery

Total Cement Consumption – Minnesota

\$, Millions, Real 1996 Dollars

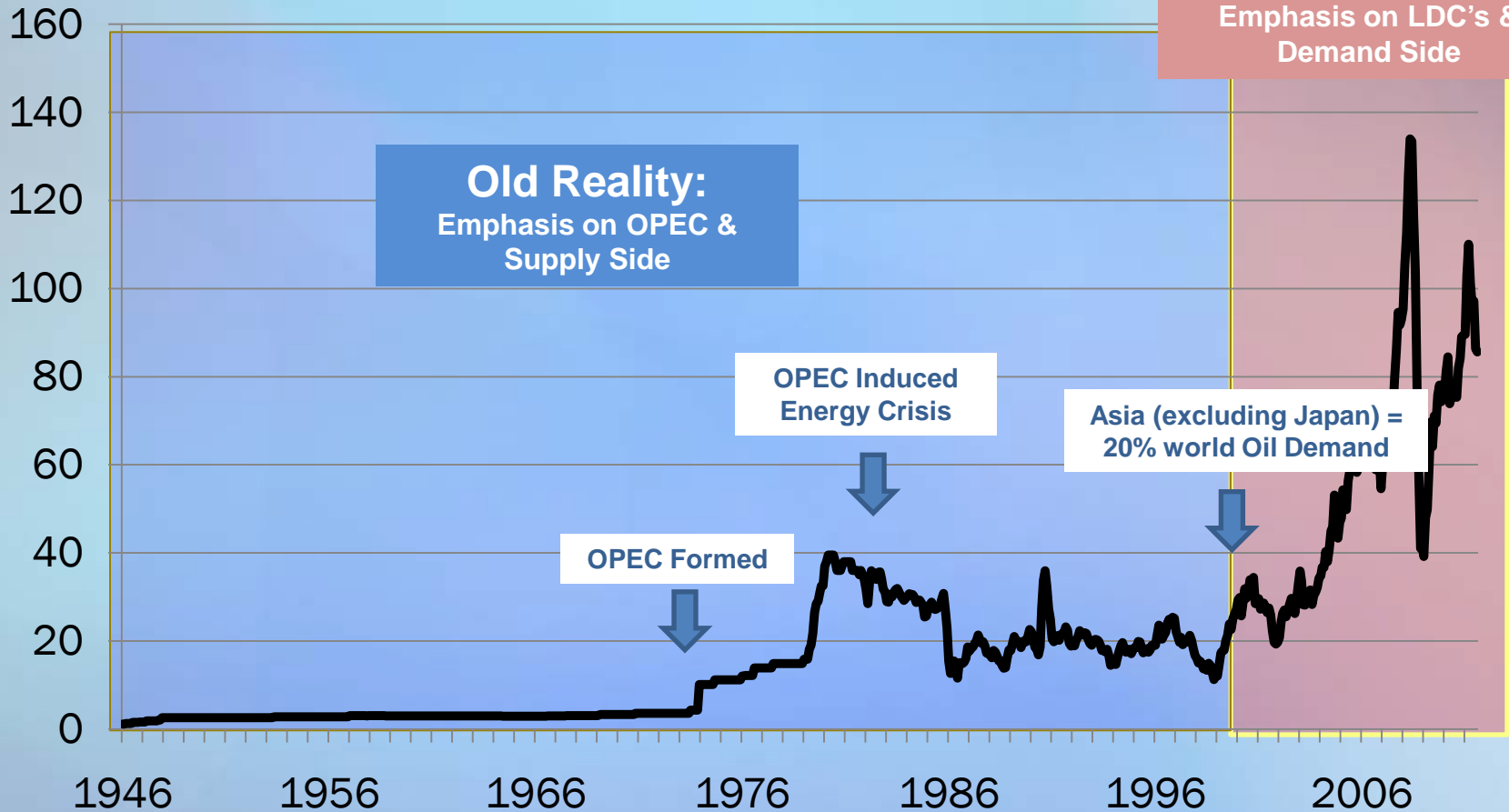


Paving New Realities



Oil Price History

\$ Per Barrel, WTI



New Reality:

Emphasis on LDC's & Demand Side

Old Reality:
Emphasis on OPEC & Supply Side

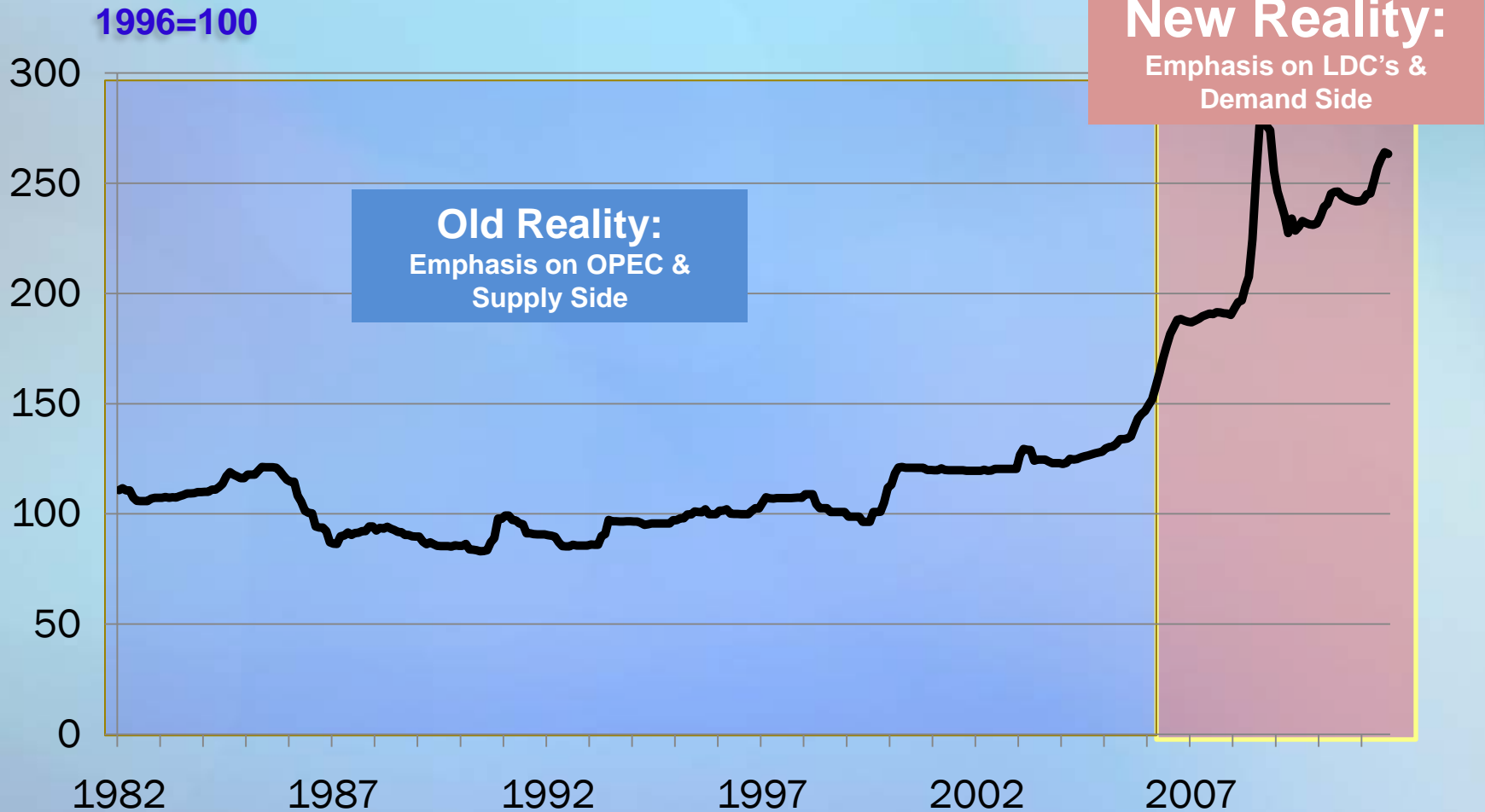
OPEC Induced Energy Crisis

OPEC Formed

Asia (excluding Japan) = 20% world Oil Demand

Source: U.S. Energy Information Agency

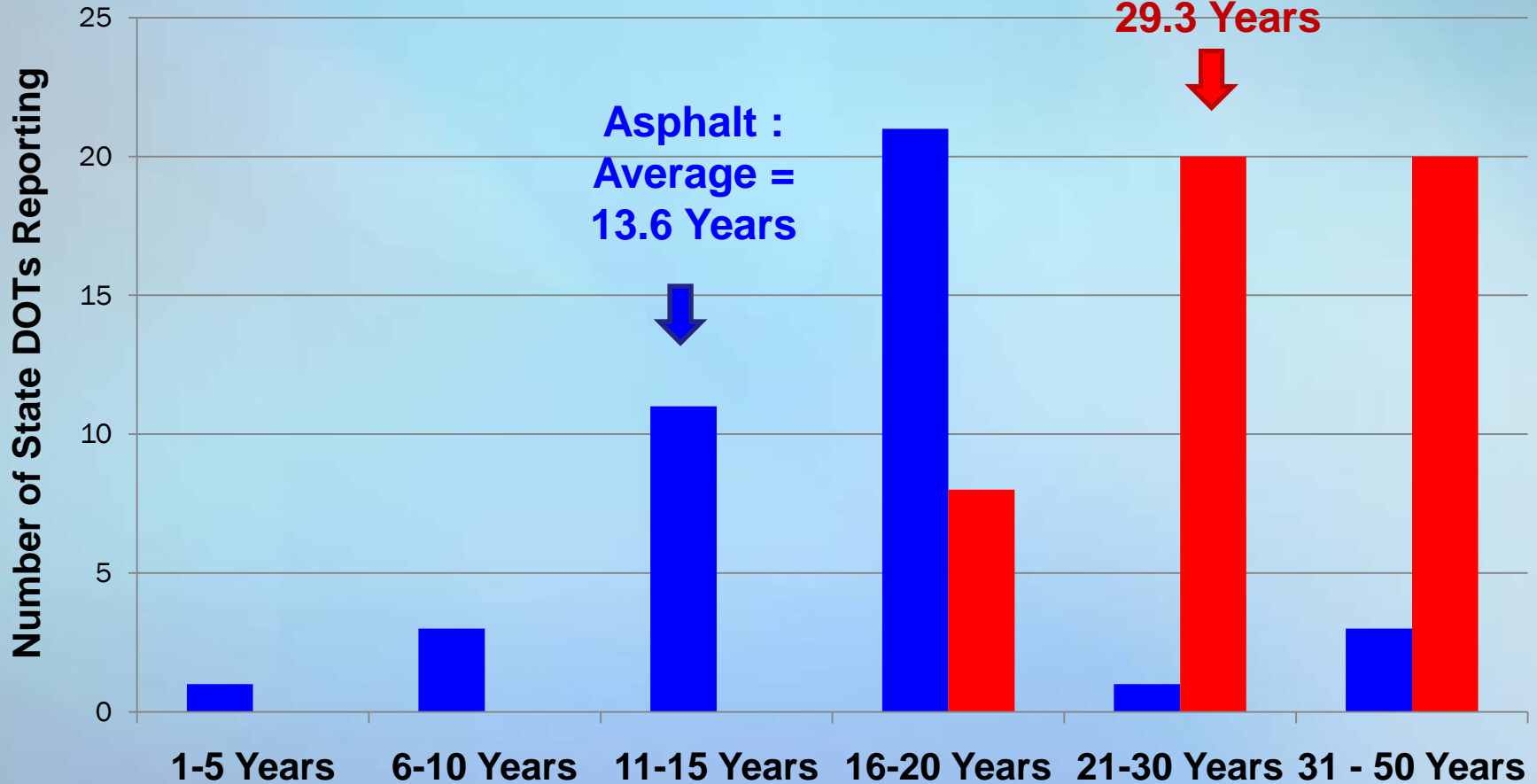
Asphalt Price History



Source: Bureau of Labor Statistics, Producer Price Index

Pavement Life Expectancy

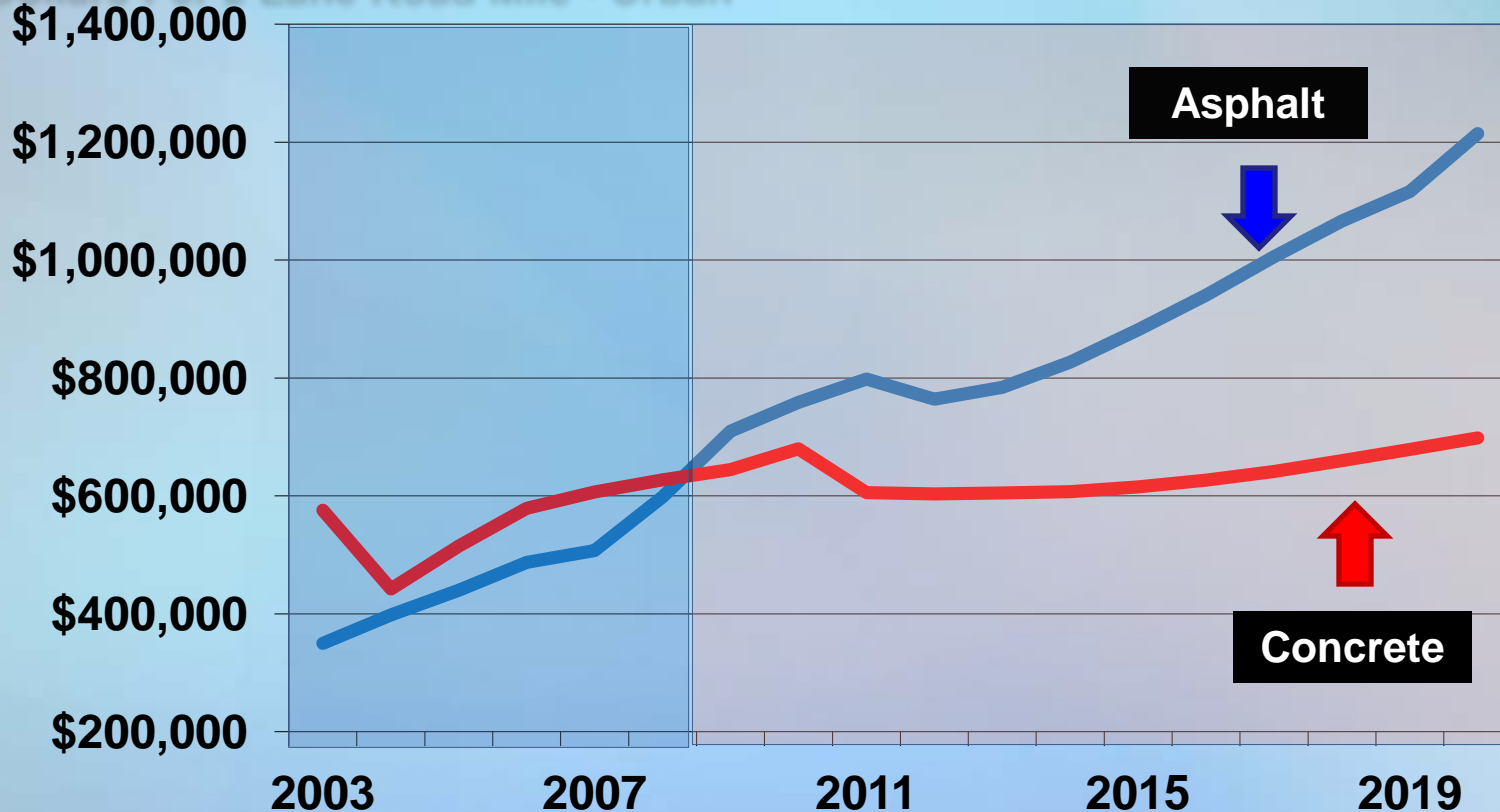
Years Before Major Reconstruction Required



Source: PCA 2008 Highway Pavement Report

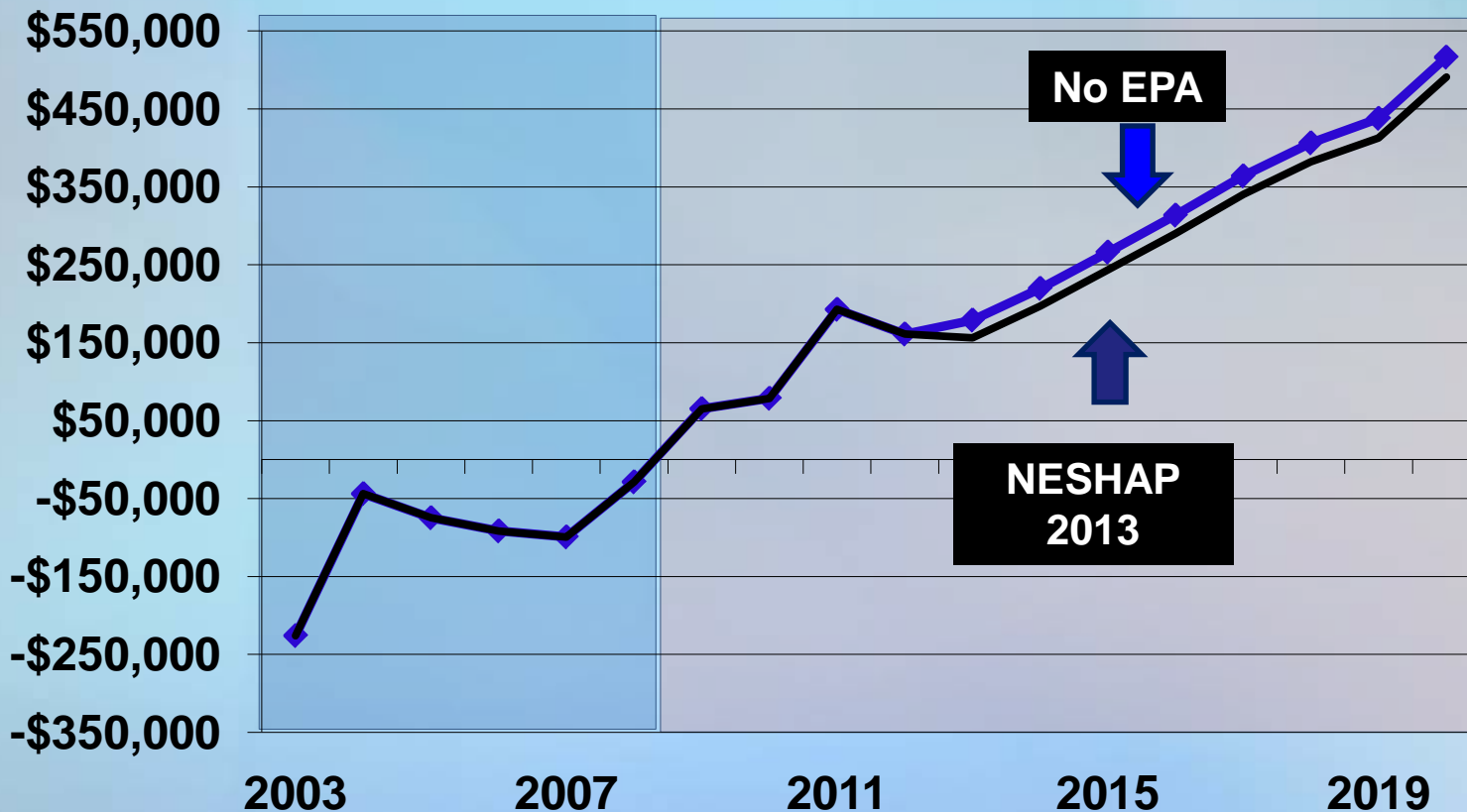
Initial Bid Paving Costs

Dollars Per 2 Lane Road Mile - Urban



Source: PCA estimates using Wispave (Wisconsin DOT paving cost software)

Concrete's Initial Bid Cost Savings Vs. Asphalt



Source: PCA estimates using Wispave (Wisconsin DOT paving cost software)

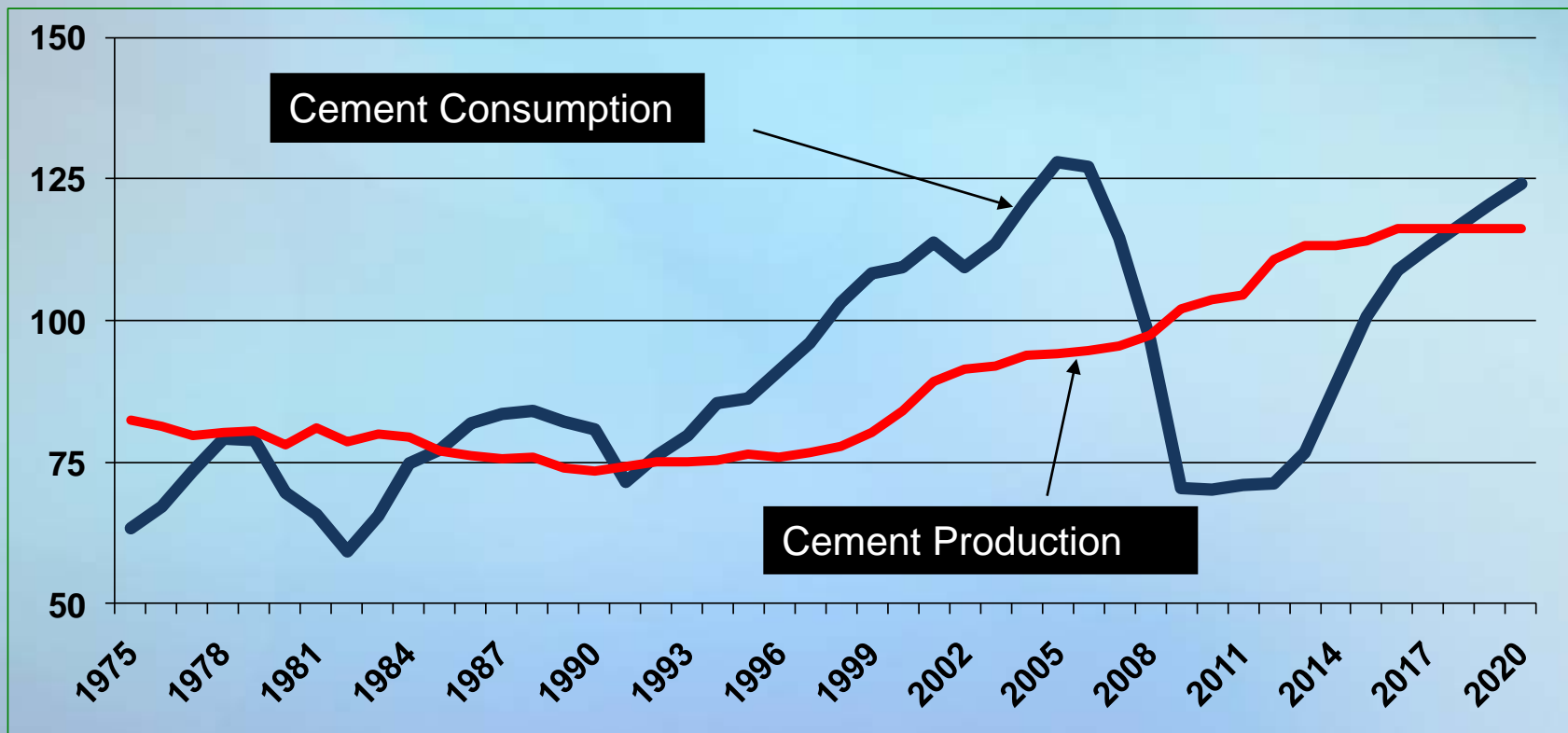
Regulatory Impacts

Most Significant Threat To Domestic Cement Production in History



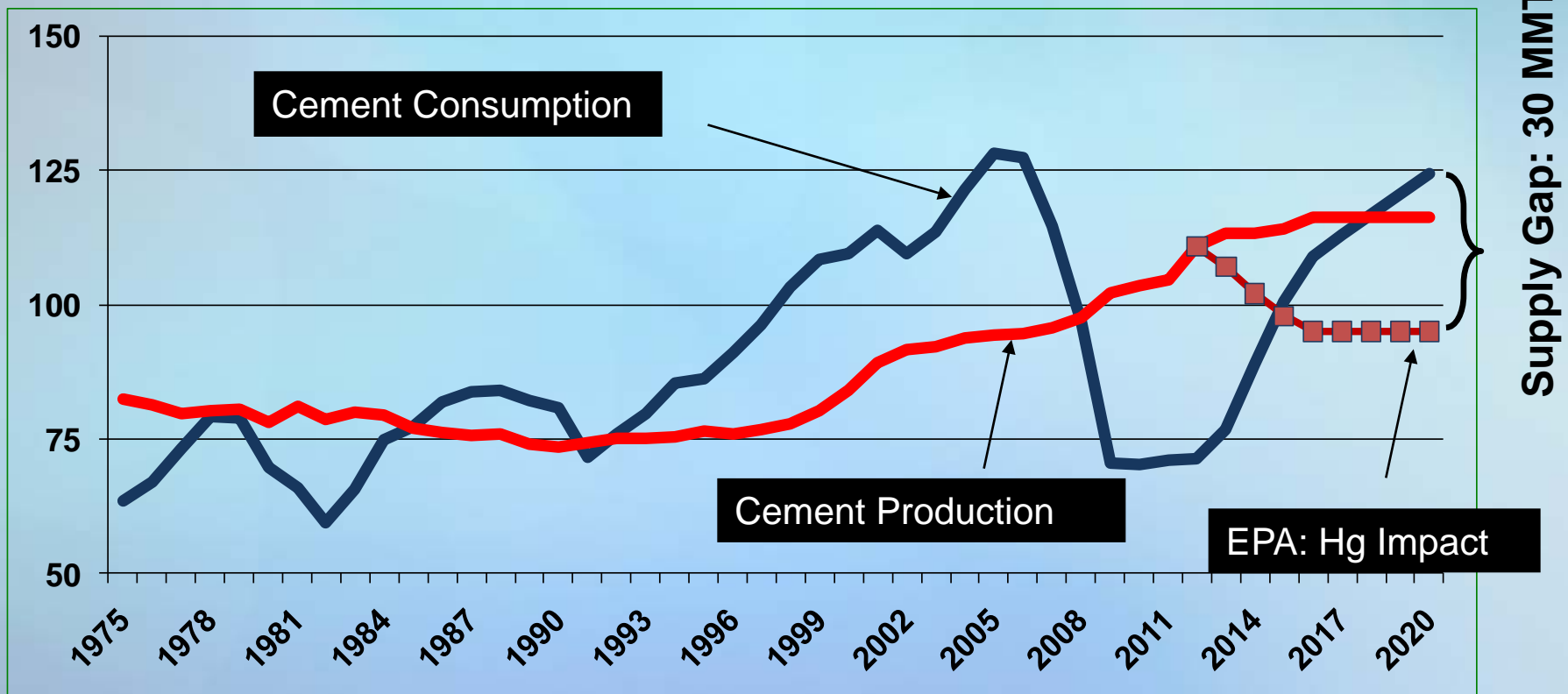
U.S. Capacity Outlook: No New Capacity Expansions Planned

Million Metric Tons



U.S. Capacity Outlook: Potential NESHAP Impacts

Million Metric Tons

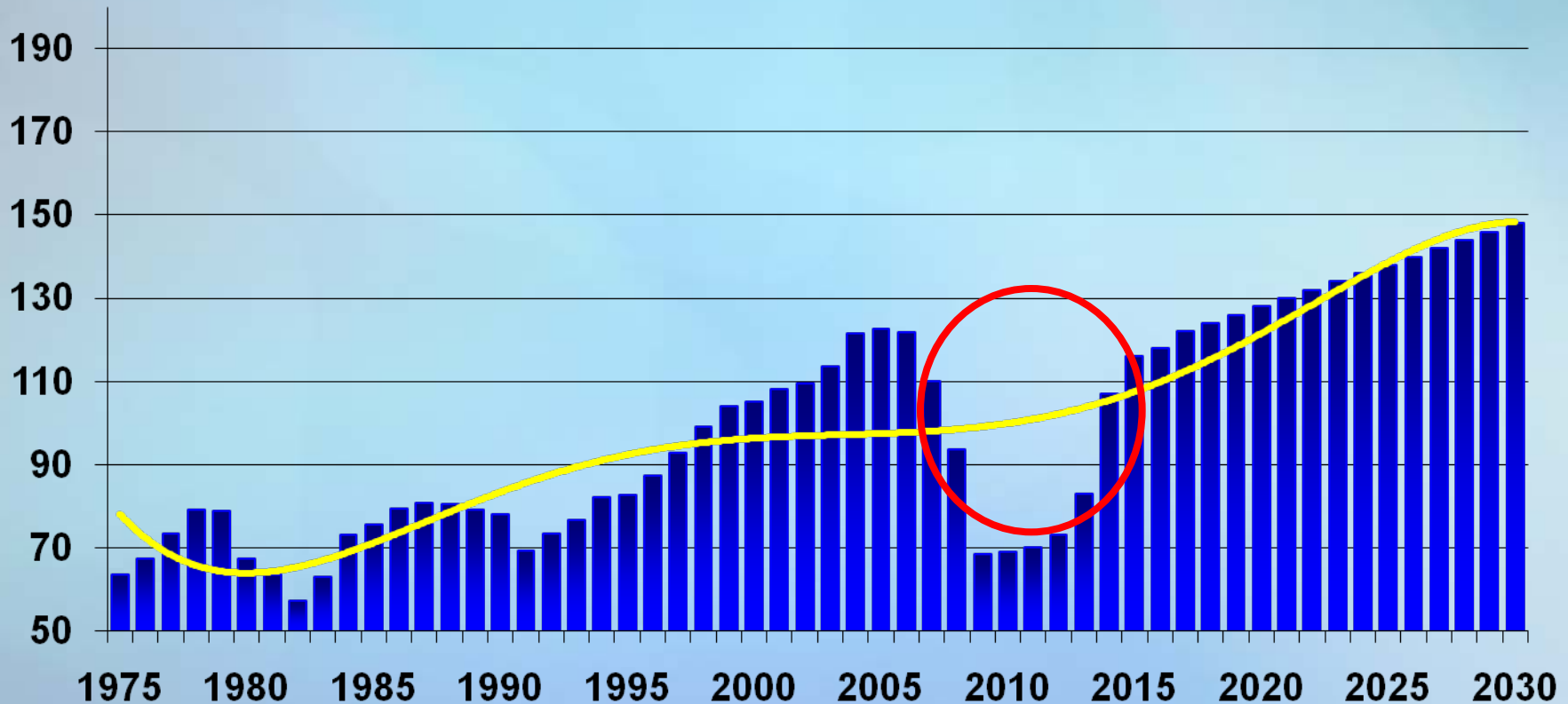


Take a Step Back...



Cement Consumption: Long-Term

Million Metric Tons



Growth in Context of Population Changes, Pent up Demand, Competitive Advantages and “Green” Revolution.

Cement & Construction Outlook

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