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# Indiana Economy Approaching Mid-Decade

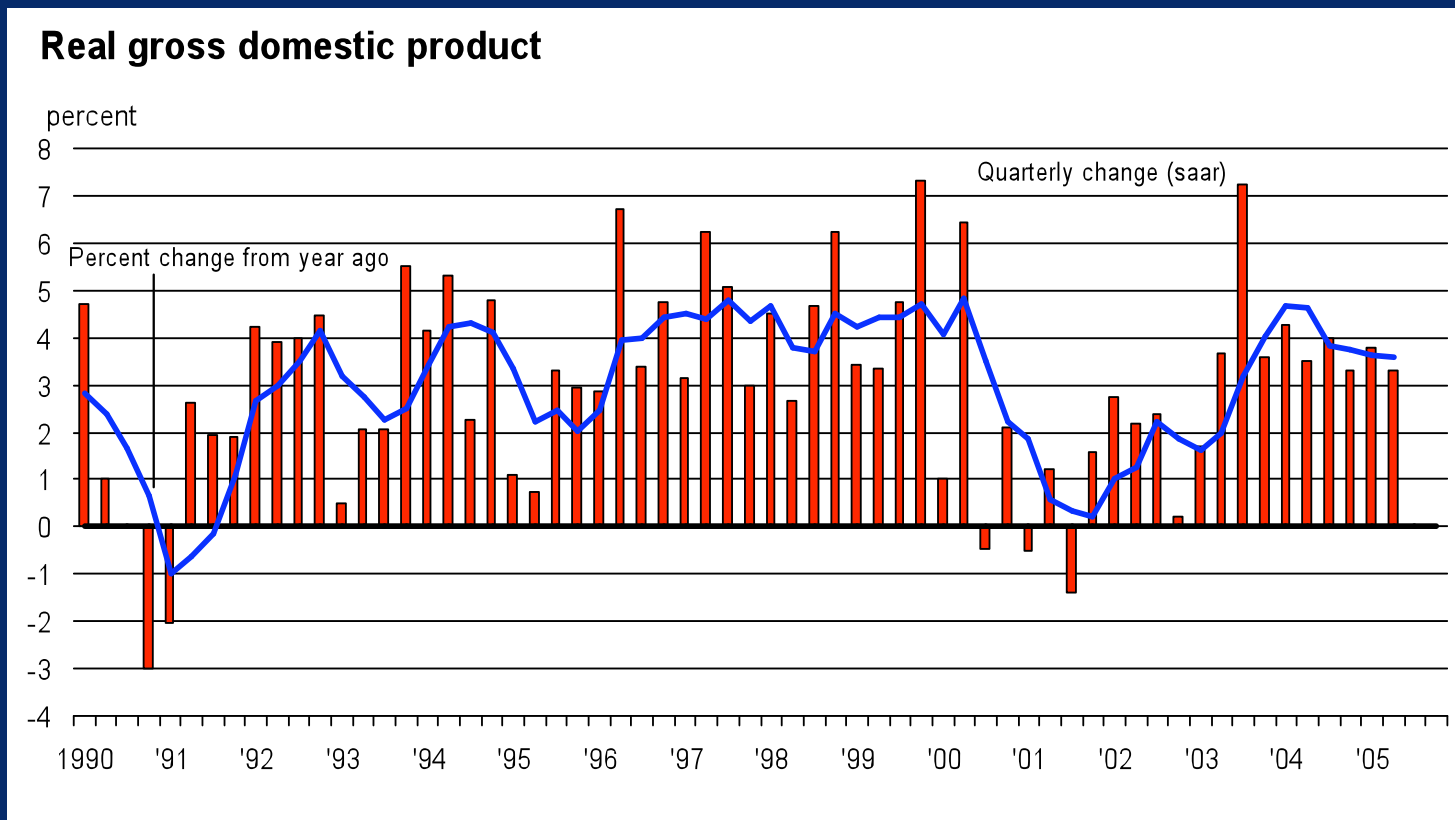
**William A. Testa**

**Vice President and Director of Regional Programs**

**Federal Reserve Bank of Chicago**

**November 9, 2005**

## The economy has expanded for nearly four years



# Risks to the Outlook

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- **High energy prices could lead to further declines in consumer sentiment and reduced rates of spending growth.**
- **With good economic fundamentals and a resilient economy, any easing of headwinds could lead to more buoyant consumer and business spending.**
- **Deteriorating headline inflation could lead to further increases in inflationary expectations and increase cost pressures further.**

# Energy Prices: Risk to Growth and Inflation

## Spot oil price

(West Texas Intermediate, dollars per barrel)



## Retail gasoline price

(regular unleaded, dollars per gallon)



## Natural gas price

(Henry Hub, dollars per mmbtu)



## Heating oil price

(No. 2, NY, dollars per gallon)

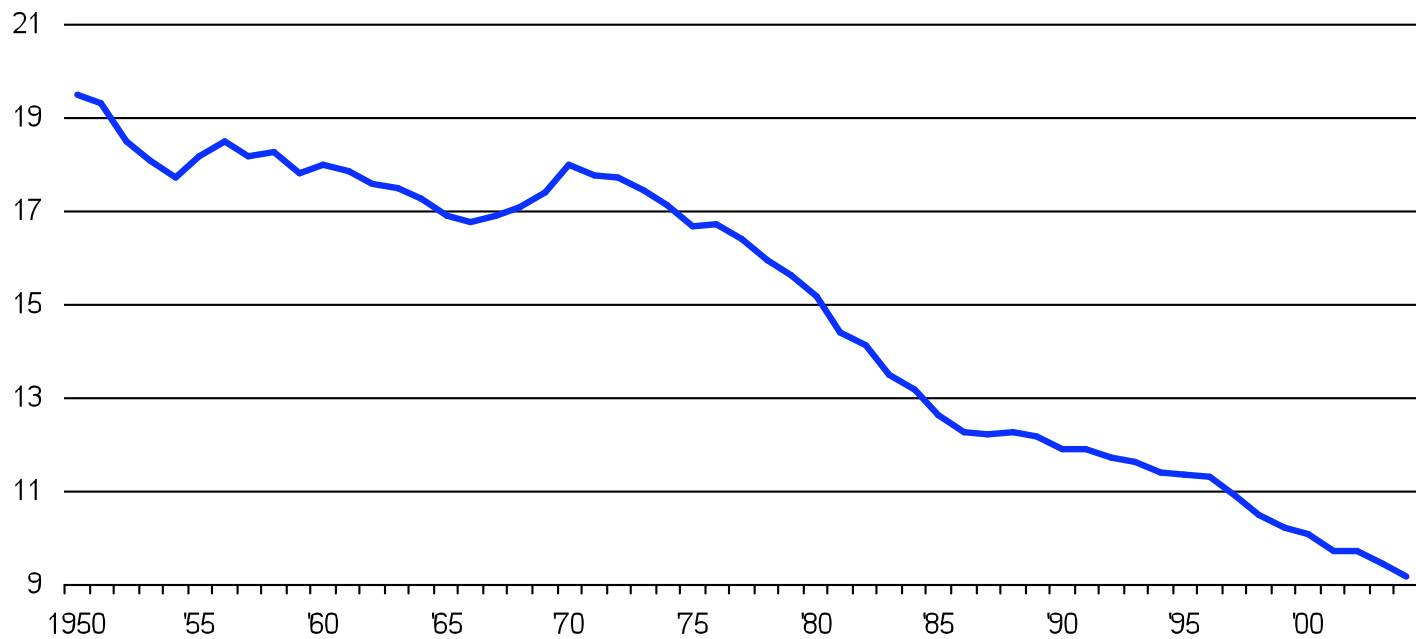


## The United States has become more efficient in the use of energy over the past 50 years

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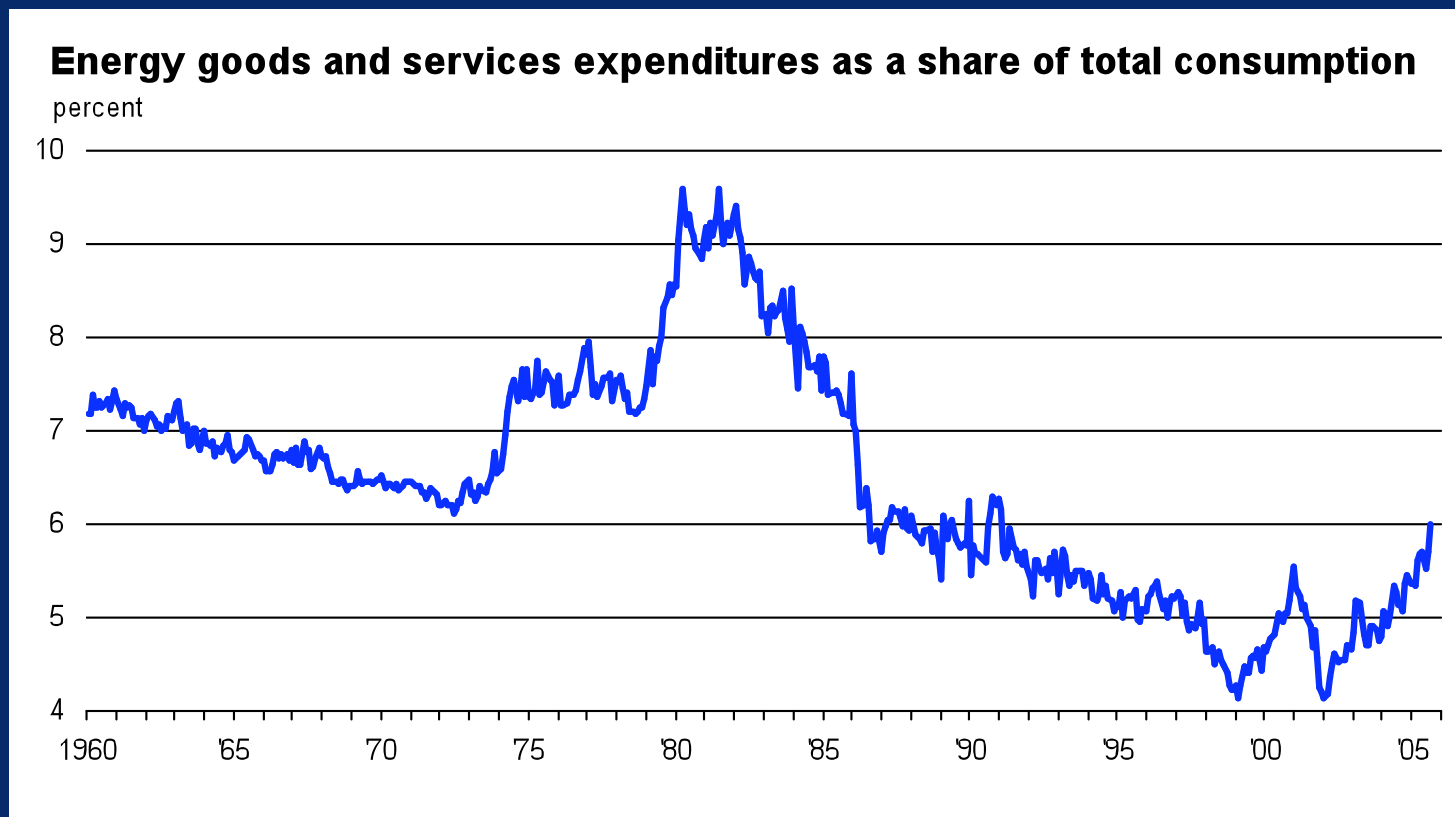
### Energy consumption per dollar of GDP

Thousand Btu per chained (2000) dollar



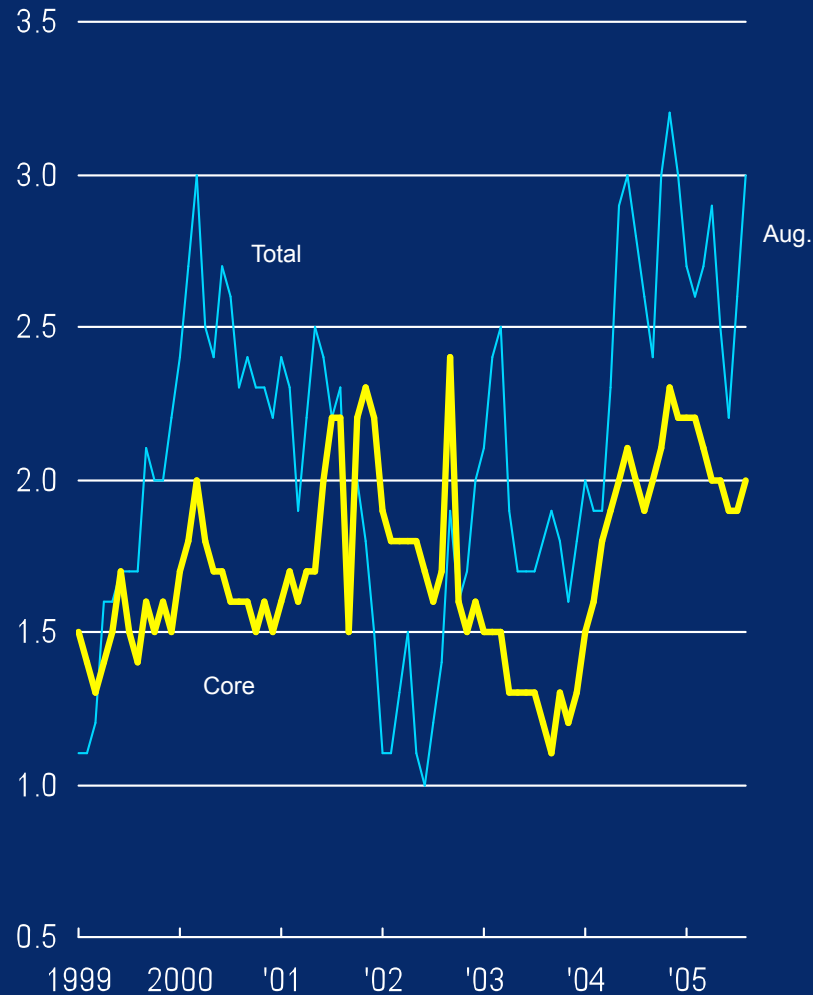
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**Expenditures on energy rose over the past few years,  
but remain well below historical rates**

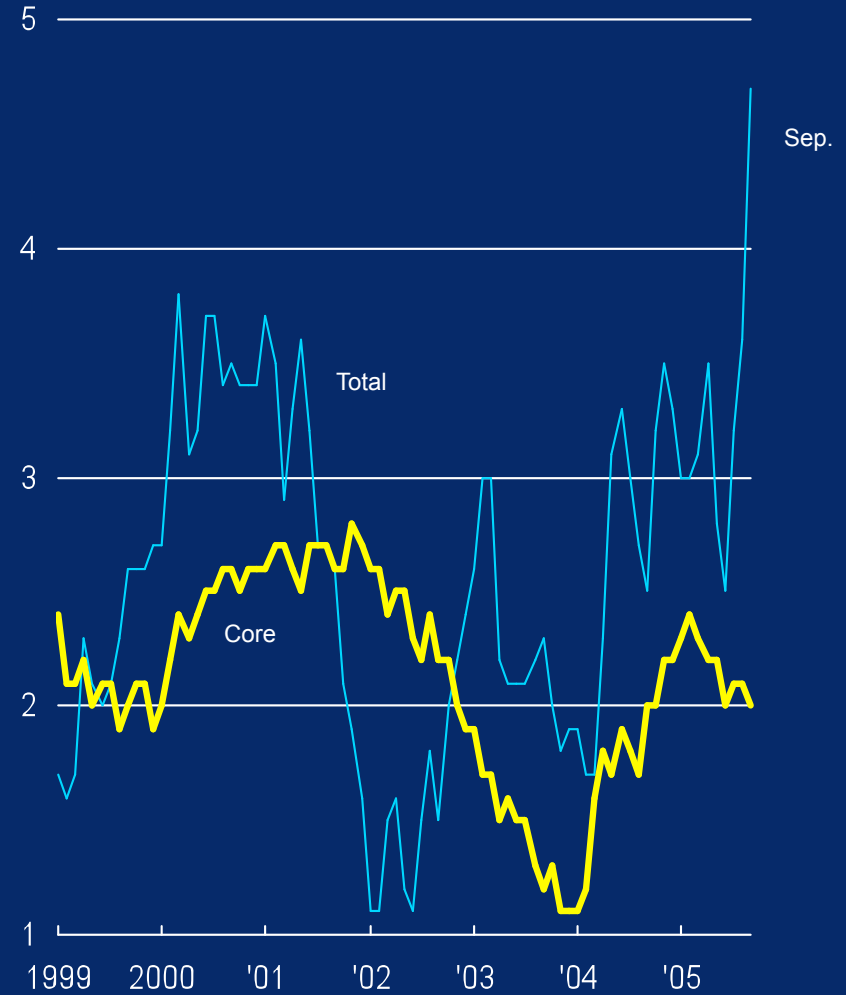


# Inflationary Pressures

**PCE price index**  
(12-month percent change)



**Consumer price index**  
(12-month percent change)



# Inflation Expectations on the Rise

**TIPS inflation compensation**  
(percent)



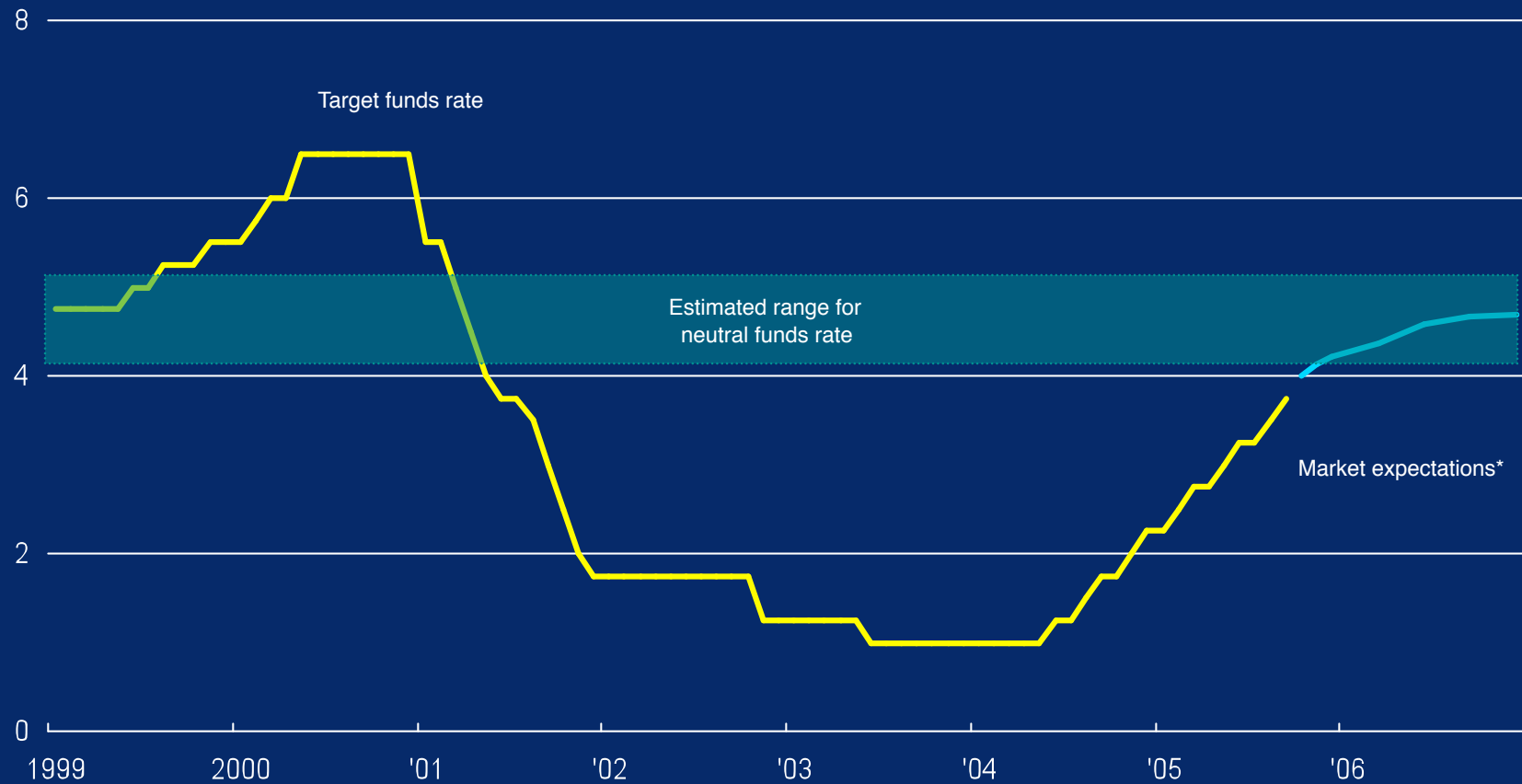
**Consumers' inflation expectations**  
(percent)





# Monetary Policy Approaching Neutral Zone

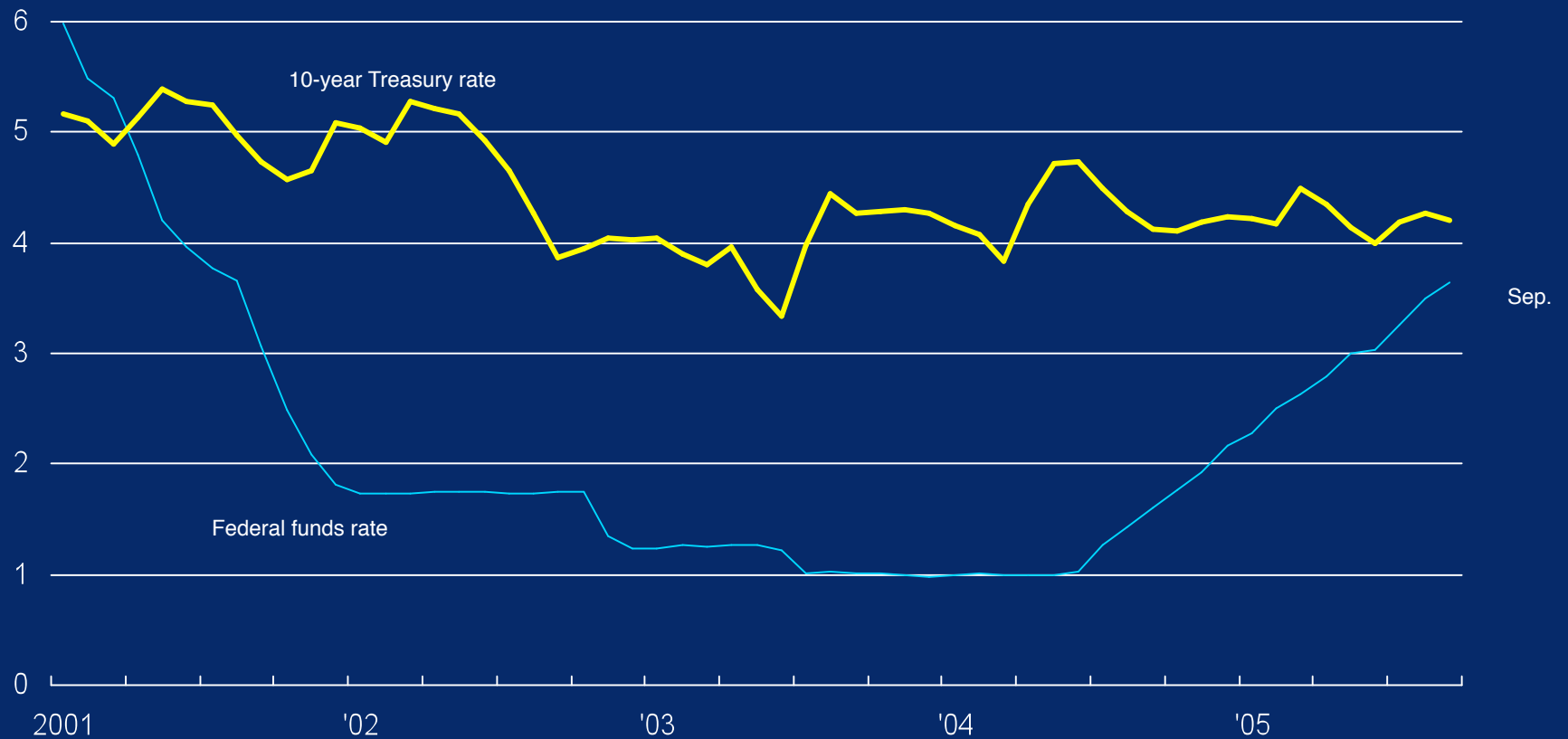
**Target federal funds rate**  
(percent)



\* - Based on fed funds futures and quoted Eurodollar rates

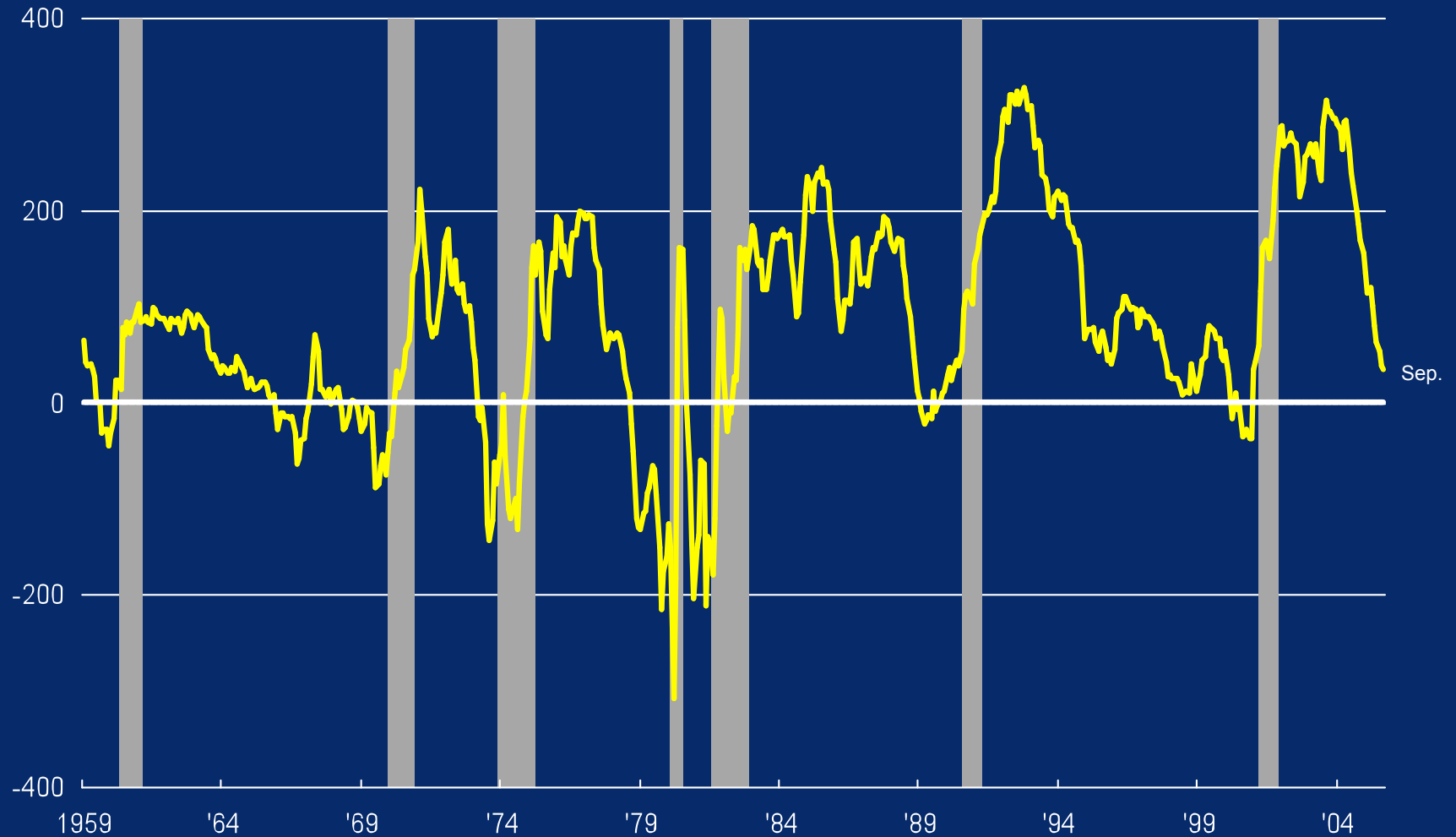
# Conundrum Update

## Interest rates (percent)



# Yield Curve Inversion—When Does It Matter?

**Spread between the 10-year and 1-year Treasury rates**  
(basis points)

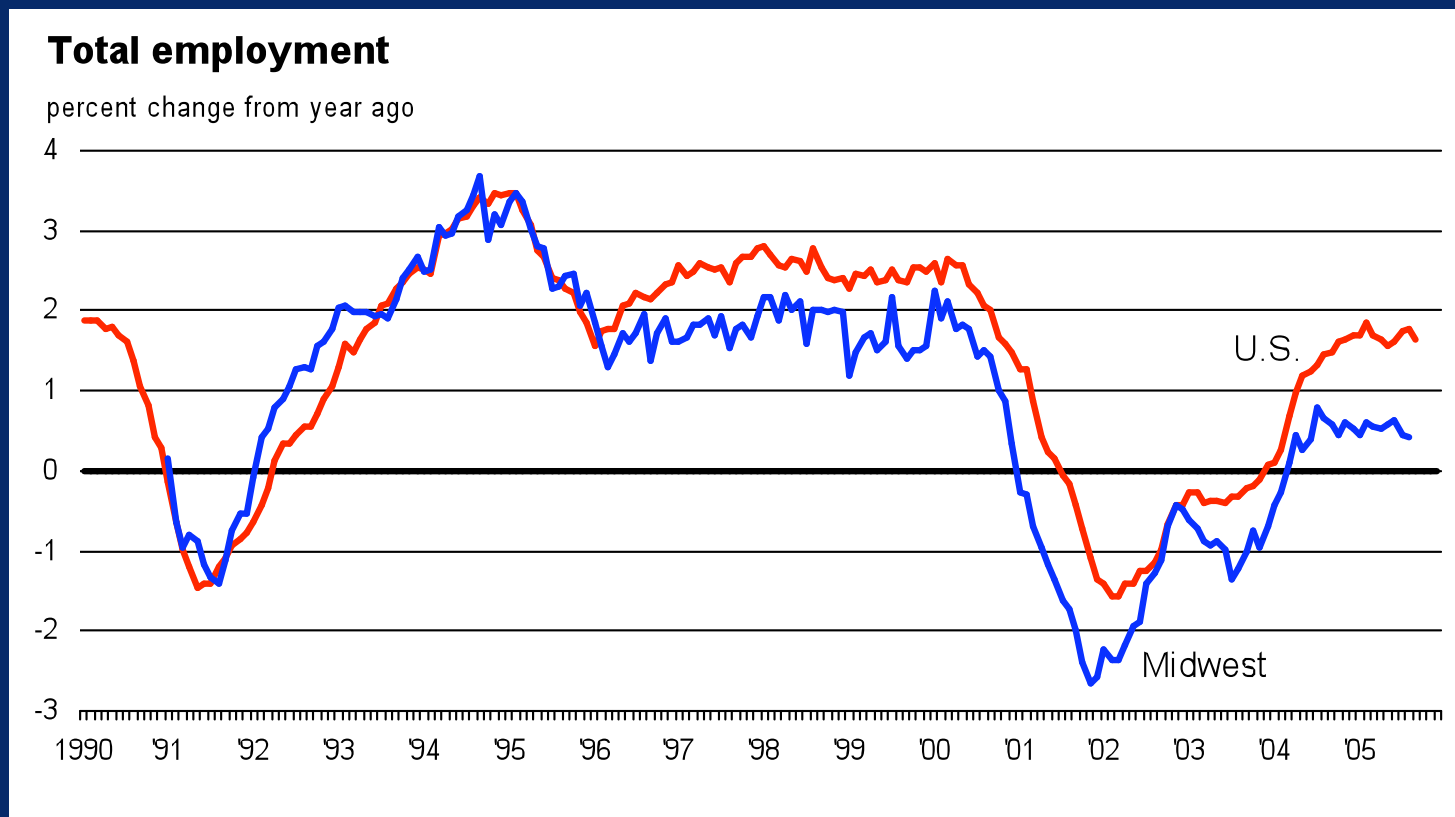


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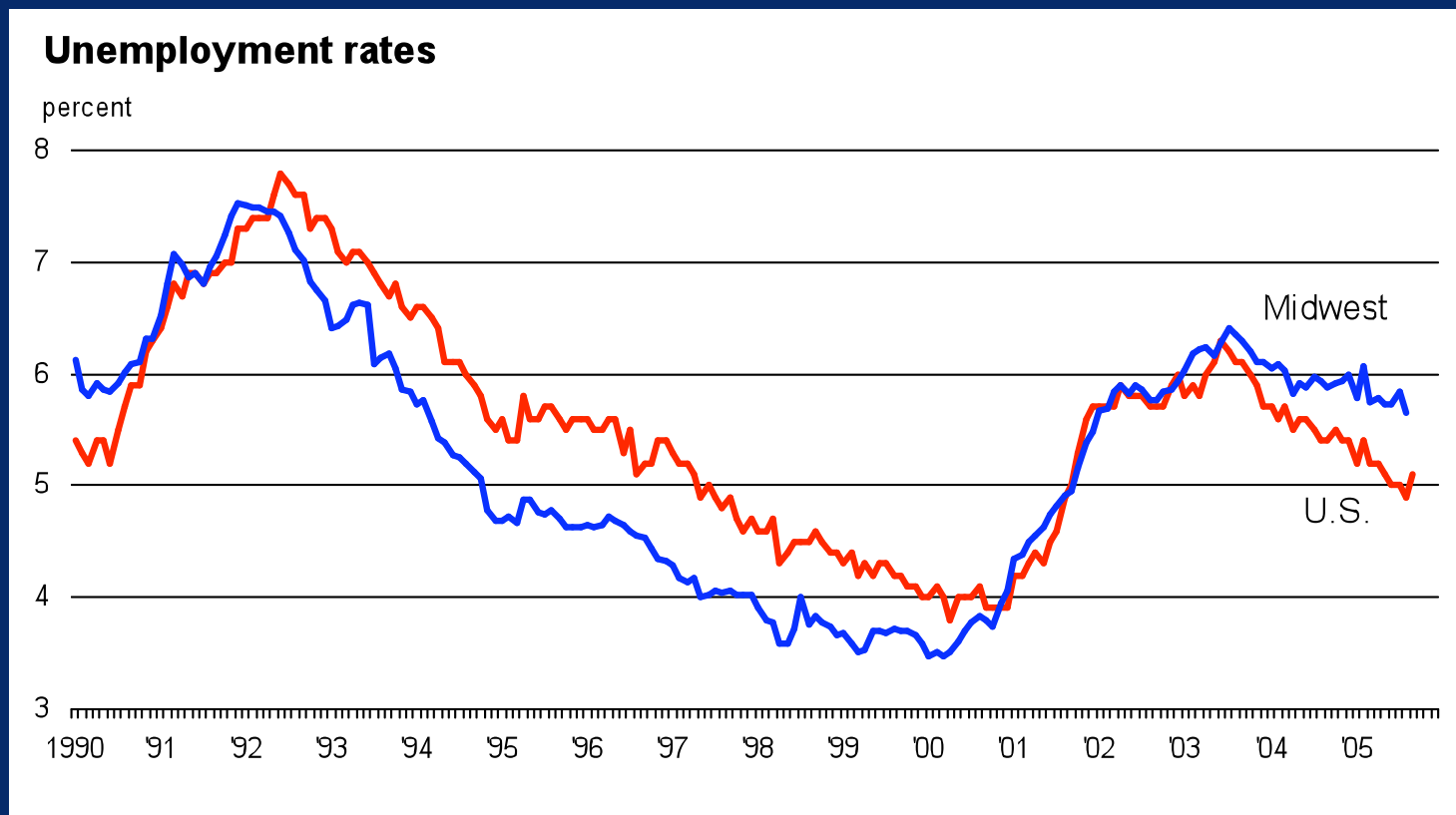
# Indiana and the Midwest

**Regional employment growth has been flat  
for the past year and underperforming national employment growth for  
nearly ten years**

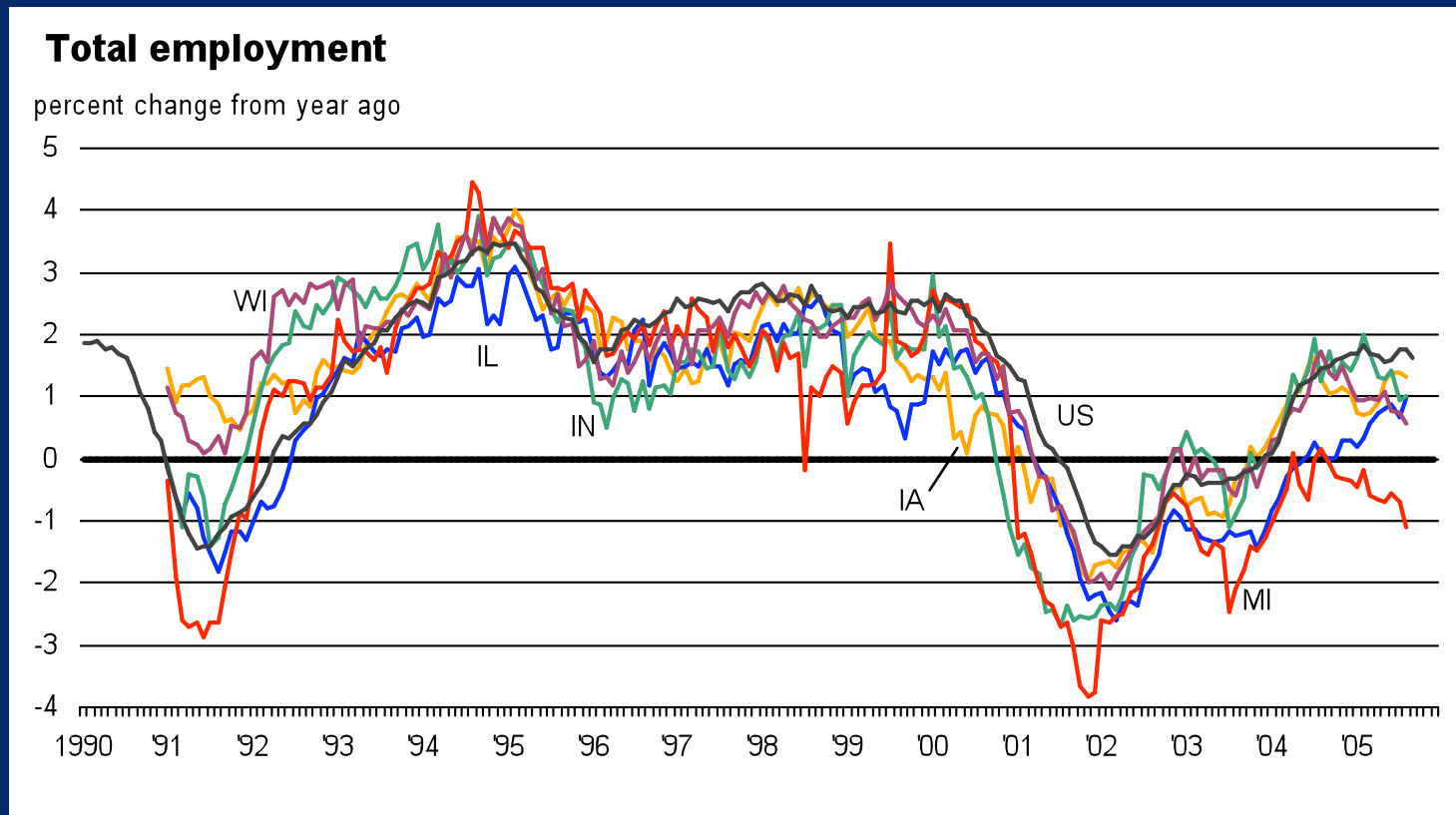
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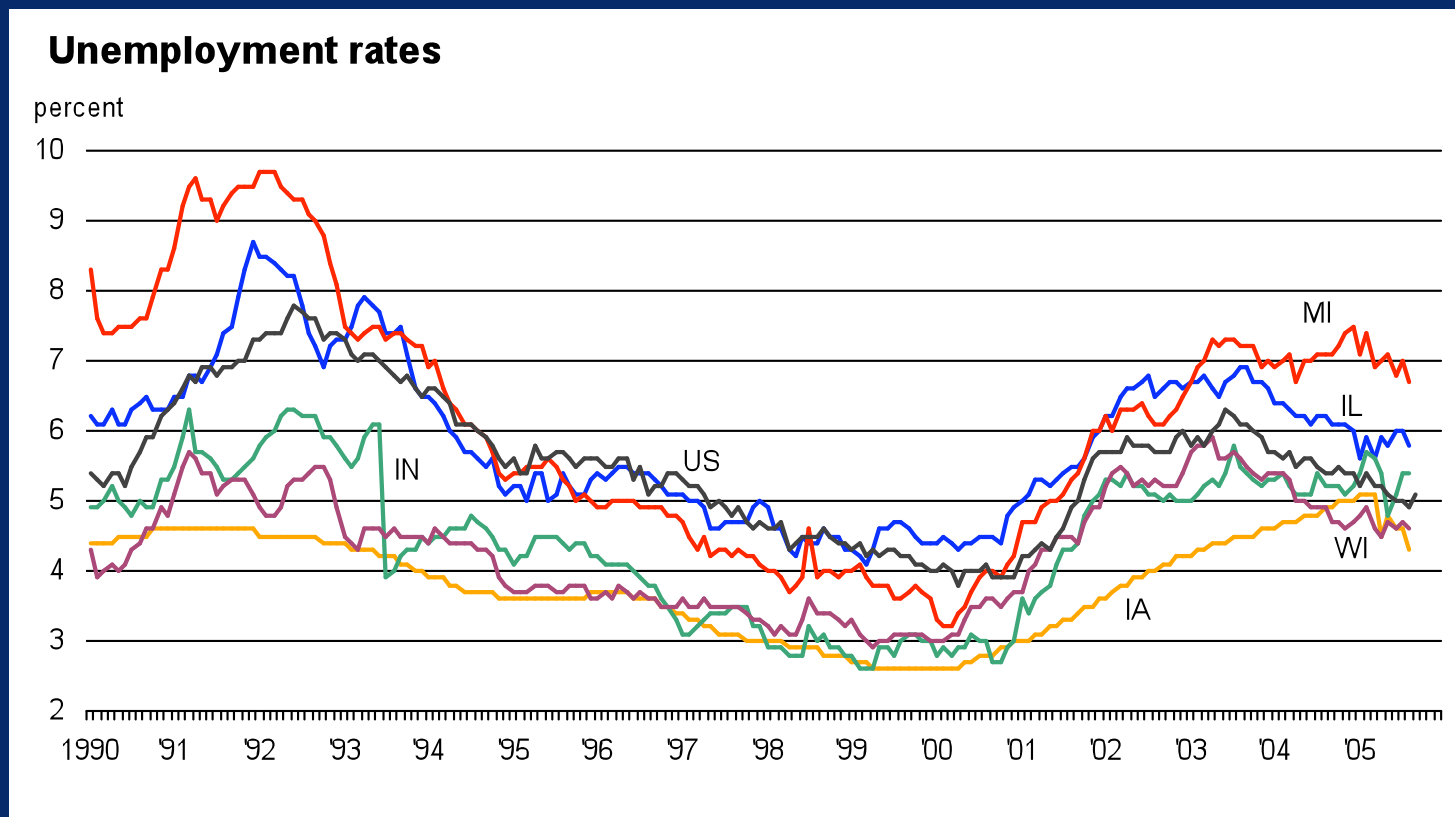
**Unemployment rates in the Midwest have been above the nation for the past two years**



**All states in the region have experienced slower employment growth than the nation, with Michigan being the only state whose employment remains lower than a year-earlier**



## Unemployment rate in Michigan has not improved for over two years



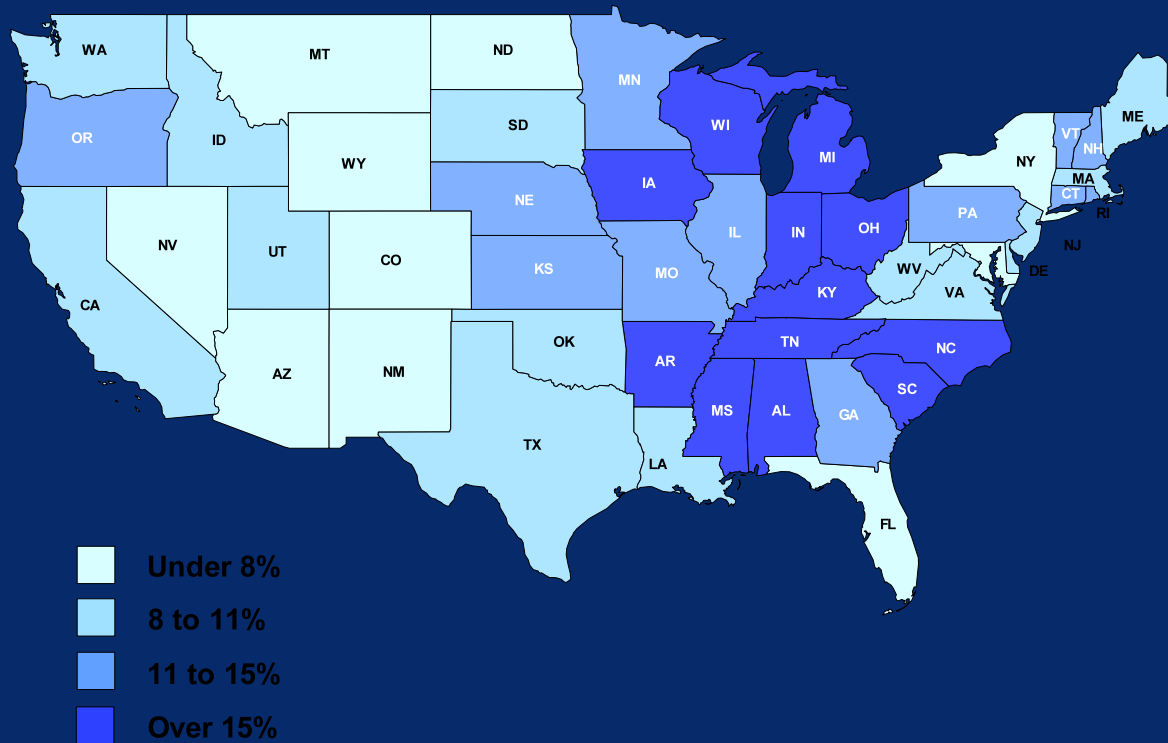


## Midwest manufacturing employment has tracked the U.S. over the past year

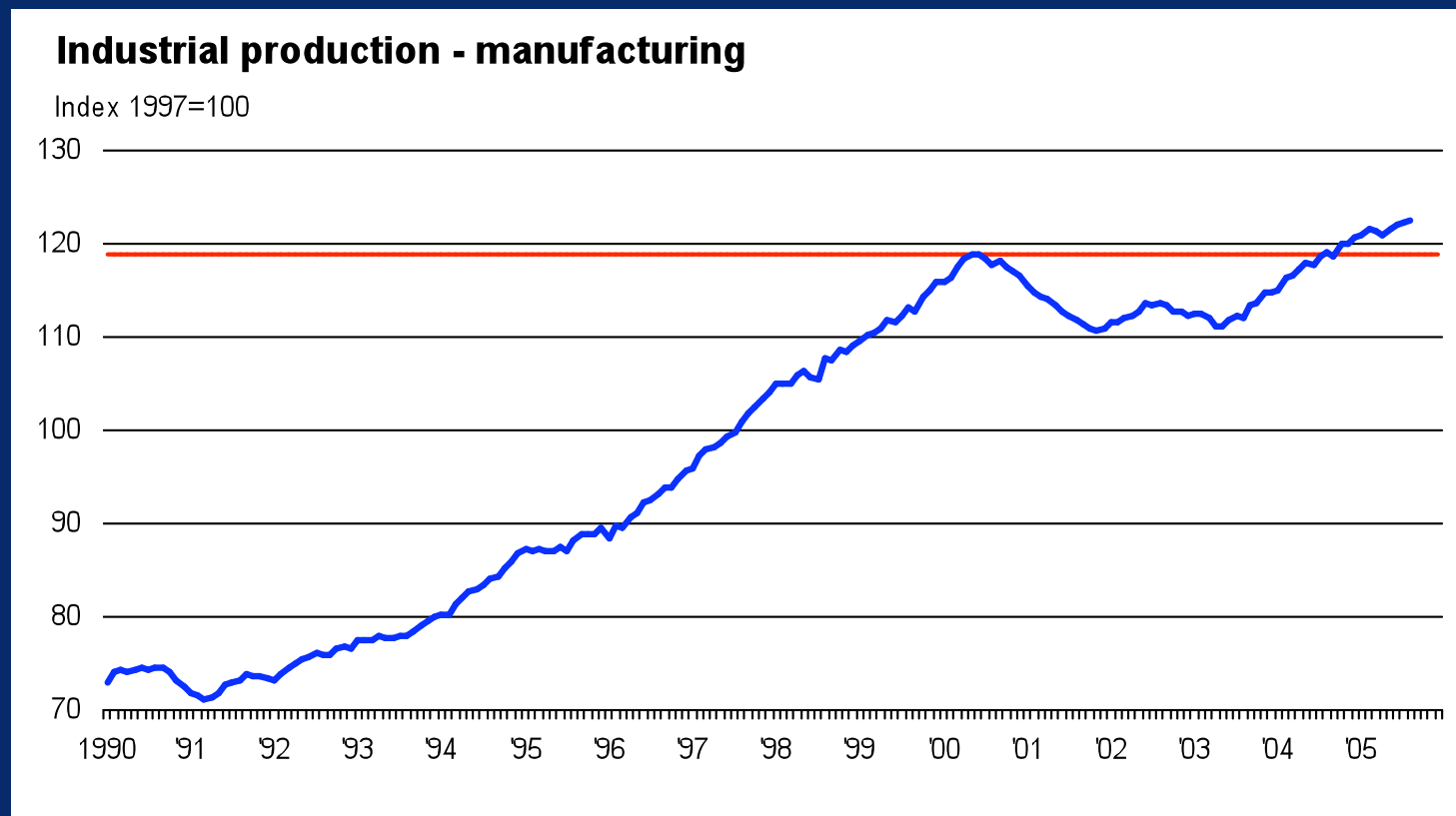


## The Midwest continues to be the region's manufacturing center, though much of it has spread southward

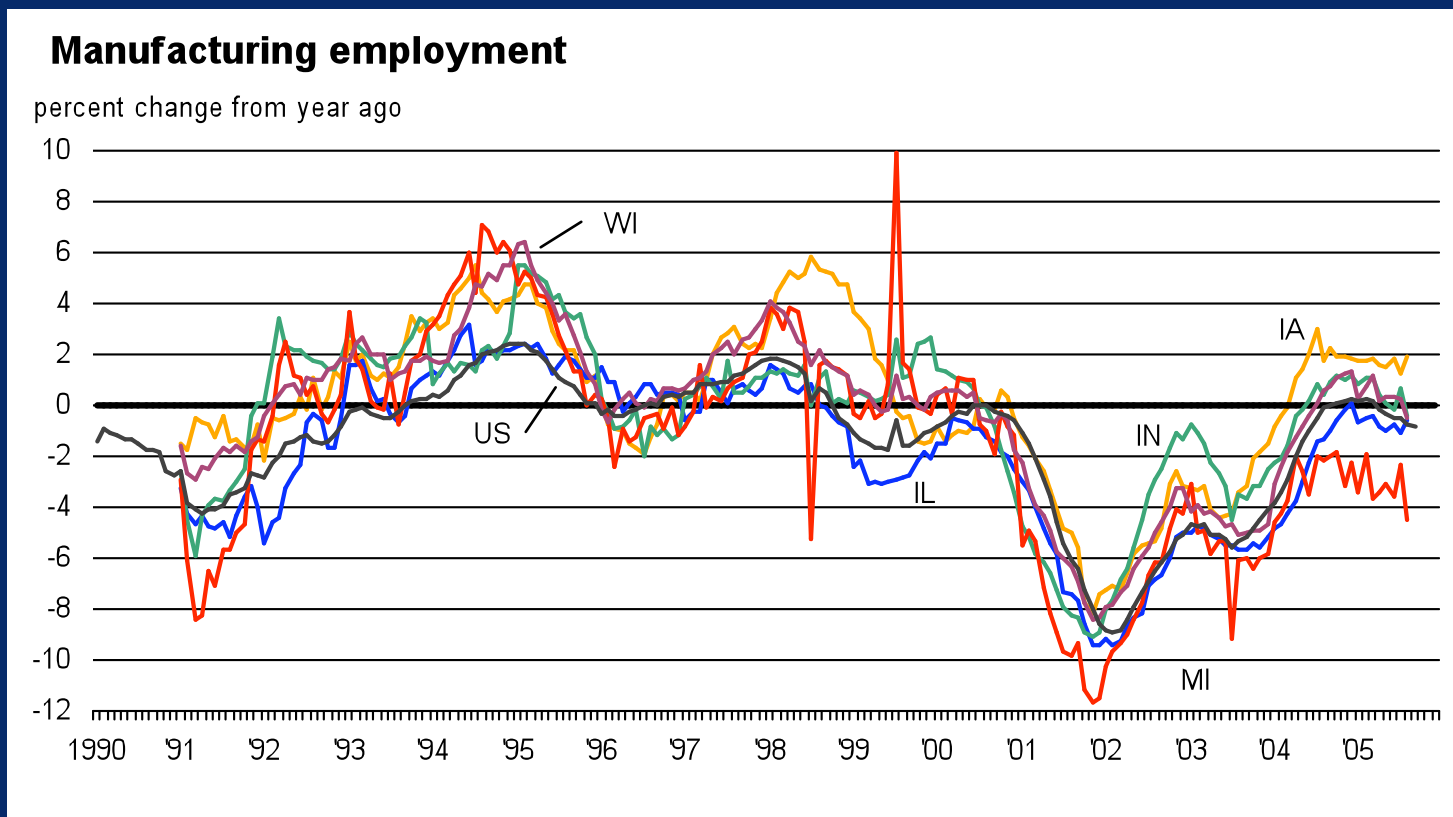
Manufacturing as a percent of total employment



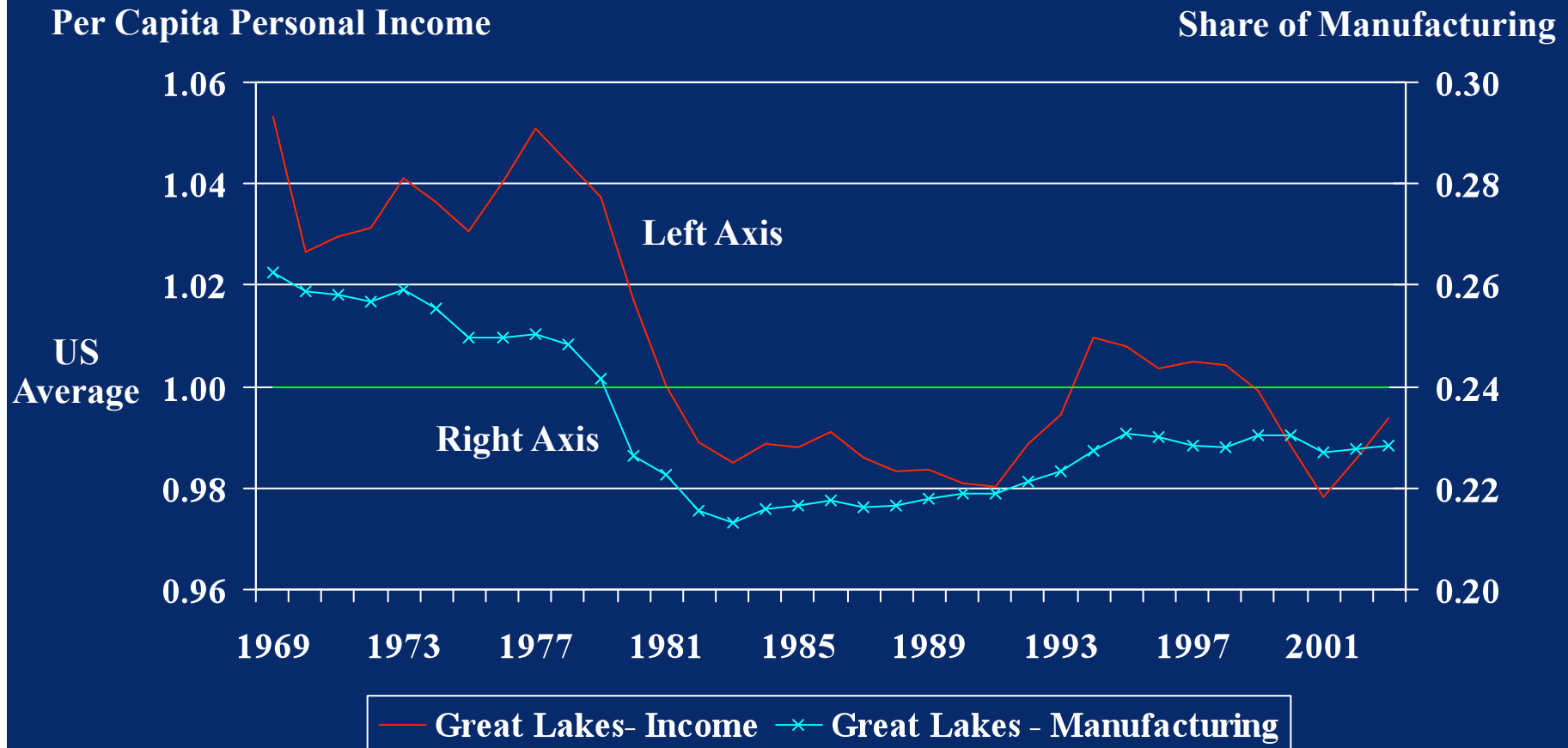
## Manufacturing output in the United States has exceeded the previous peak set in June 2000



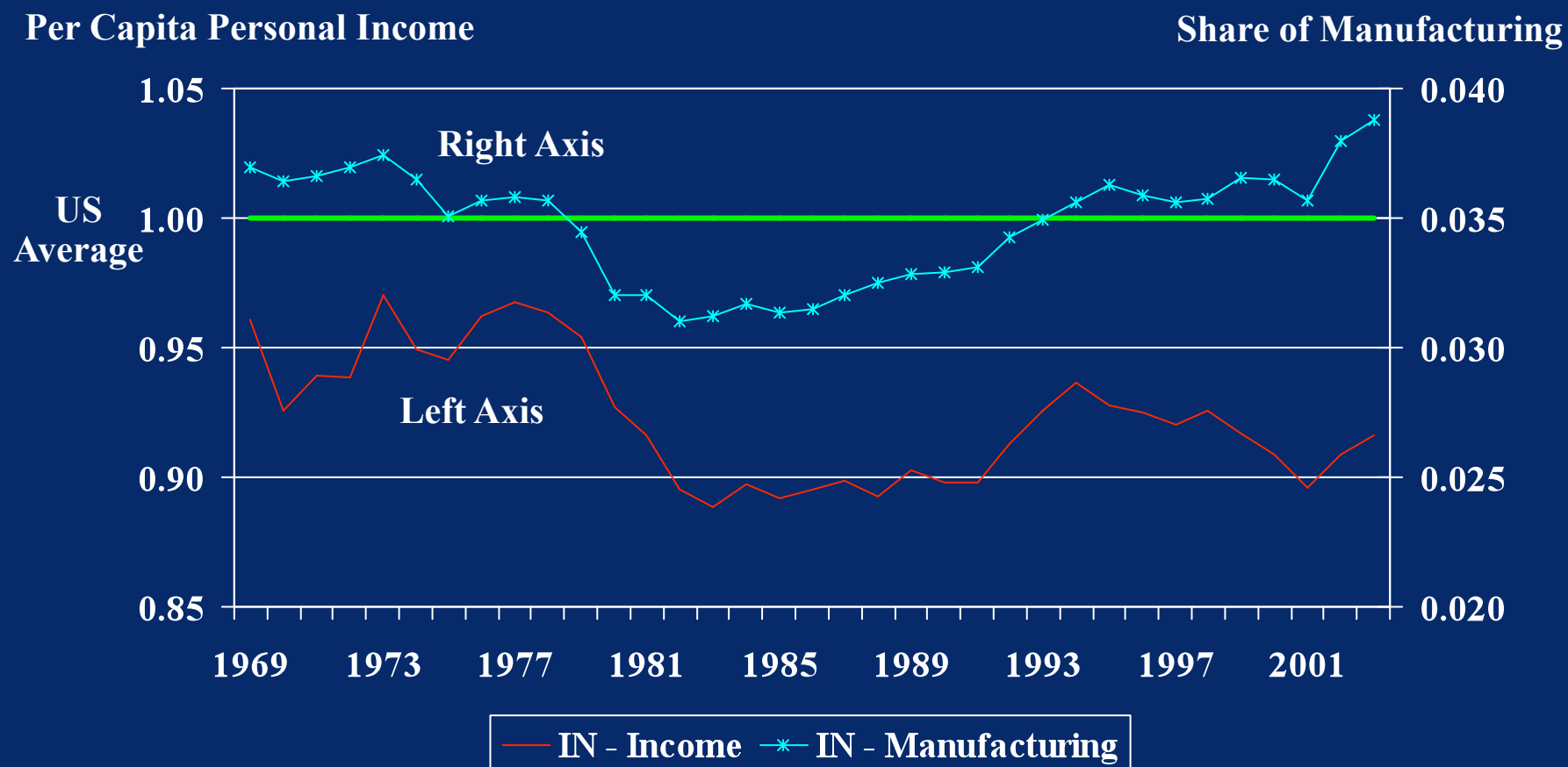
## Iowa leads and Michigan trails the region in manufacturing employment growth



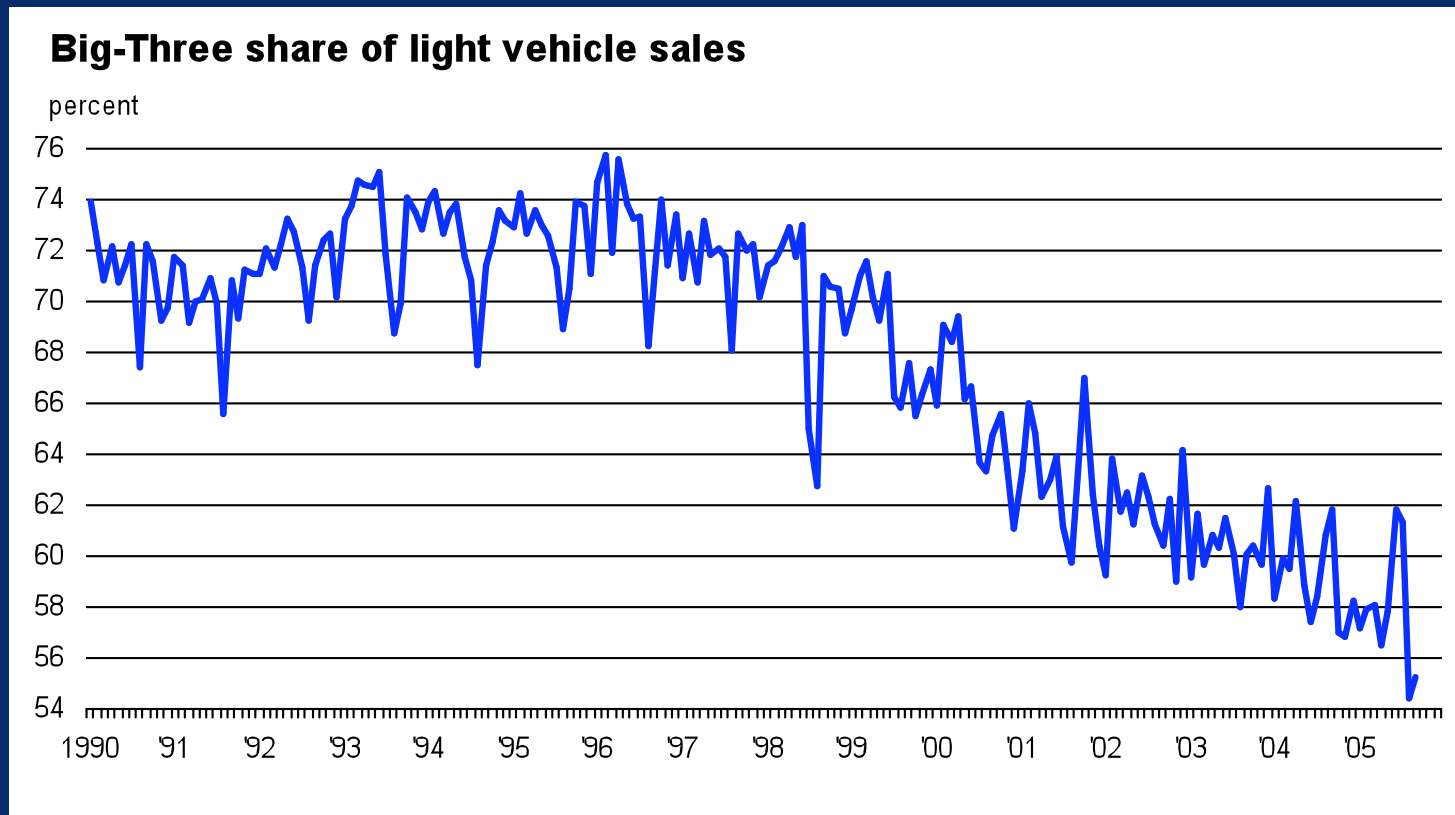
# Regional Manufacturing and Personal Income



# Indiana Manufacturing and Personal Income

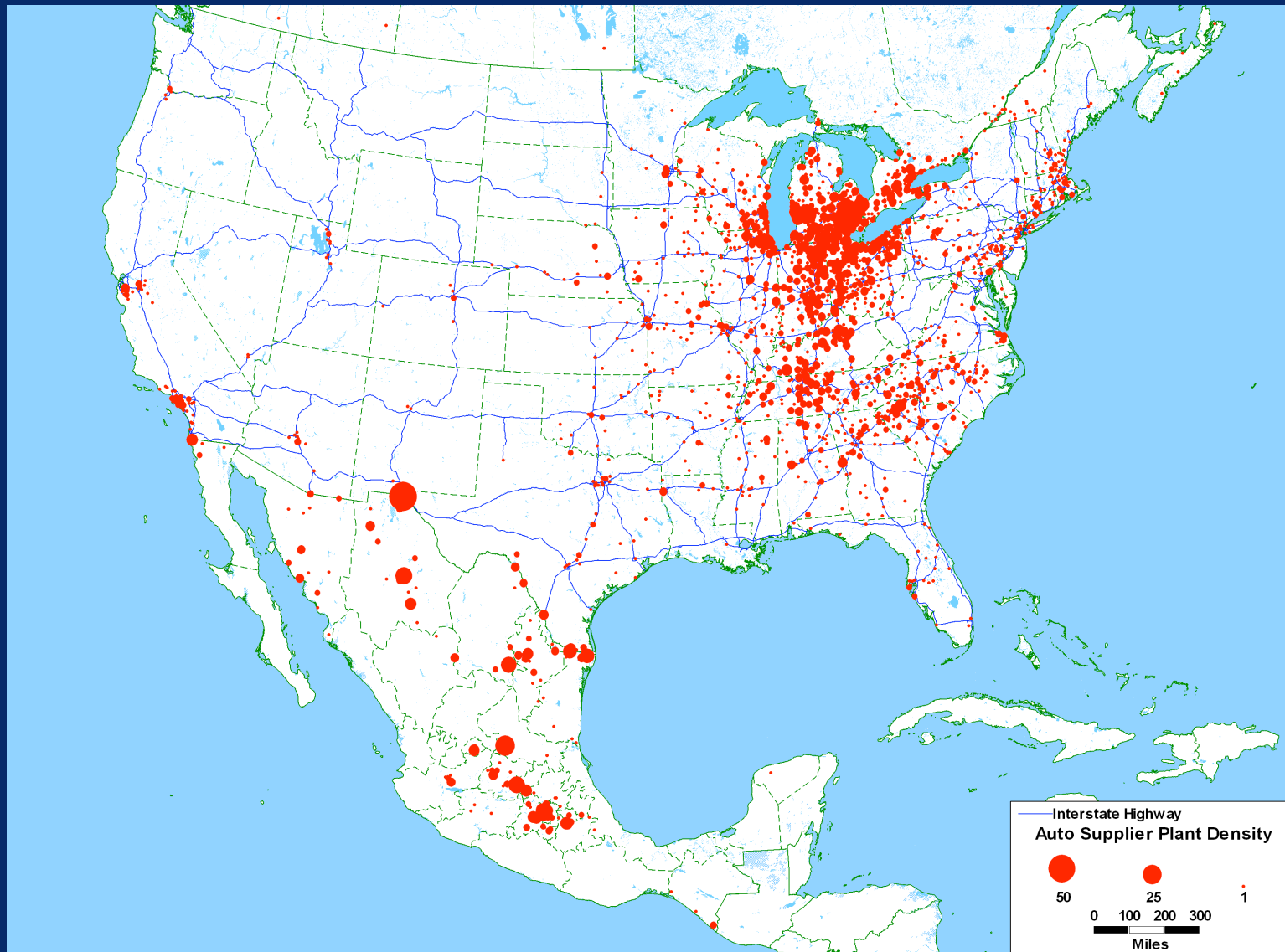


## The Big-Three's market share continues to be challenged



## The Midwest and autos: Suppliers are highly clustered...

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# In terms of employment...

## Motor vehicle parts employment (000)

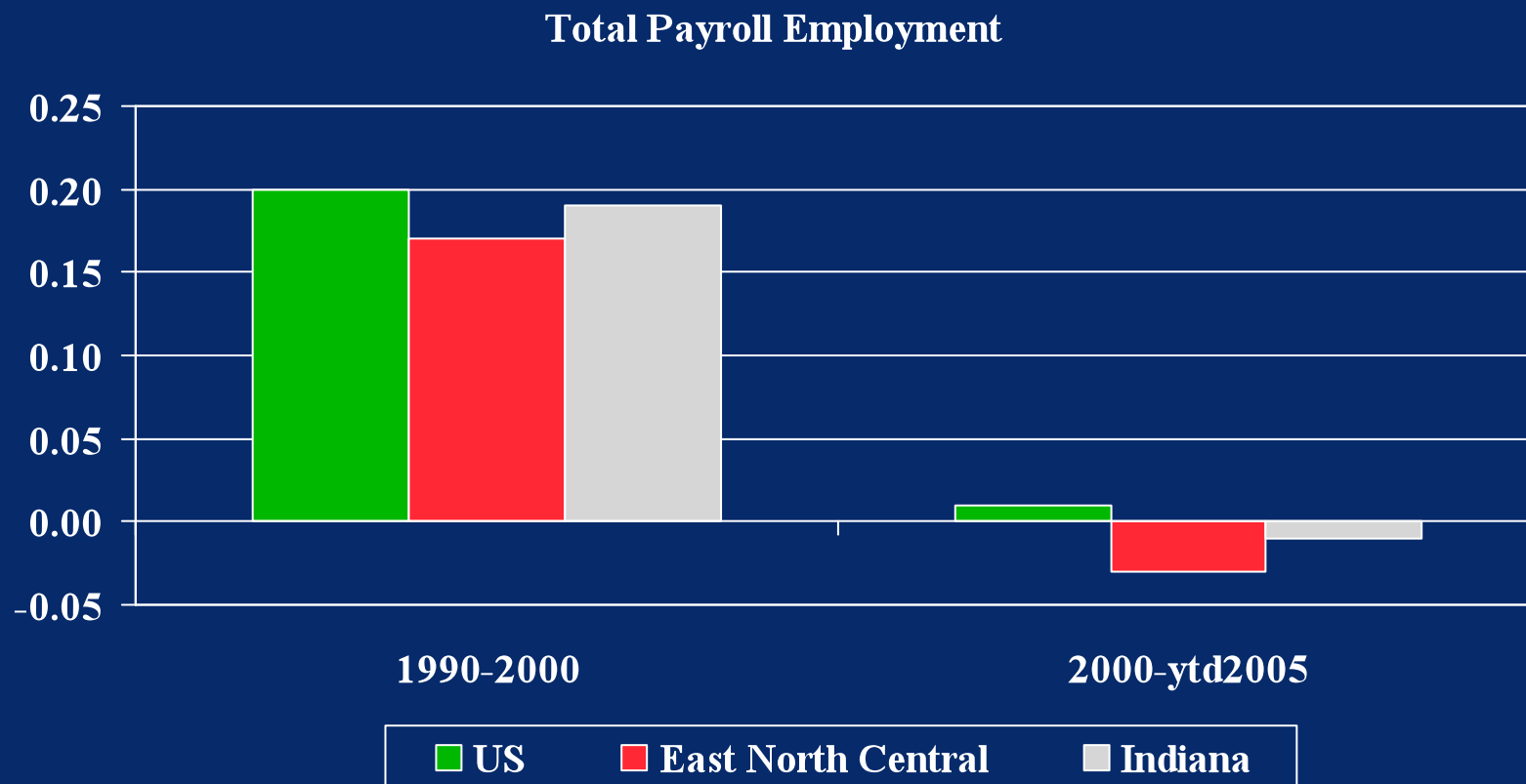
	2000	2005 - YTD	% Change
Michigan	226.2	149.1	-34%
Indiana	94.9	74.2	-22%
Ohio	111.6	93.2	-16%
Rest of the US	406.8	328	-19%
US Total	839.5	644.5	-23%

## Motor vehicle assembly employment (000)

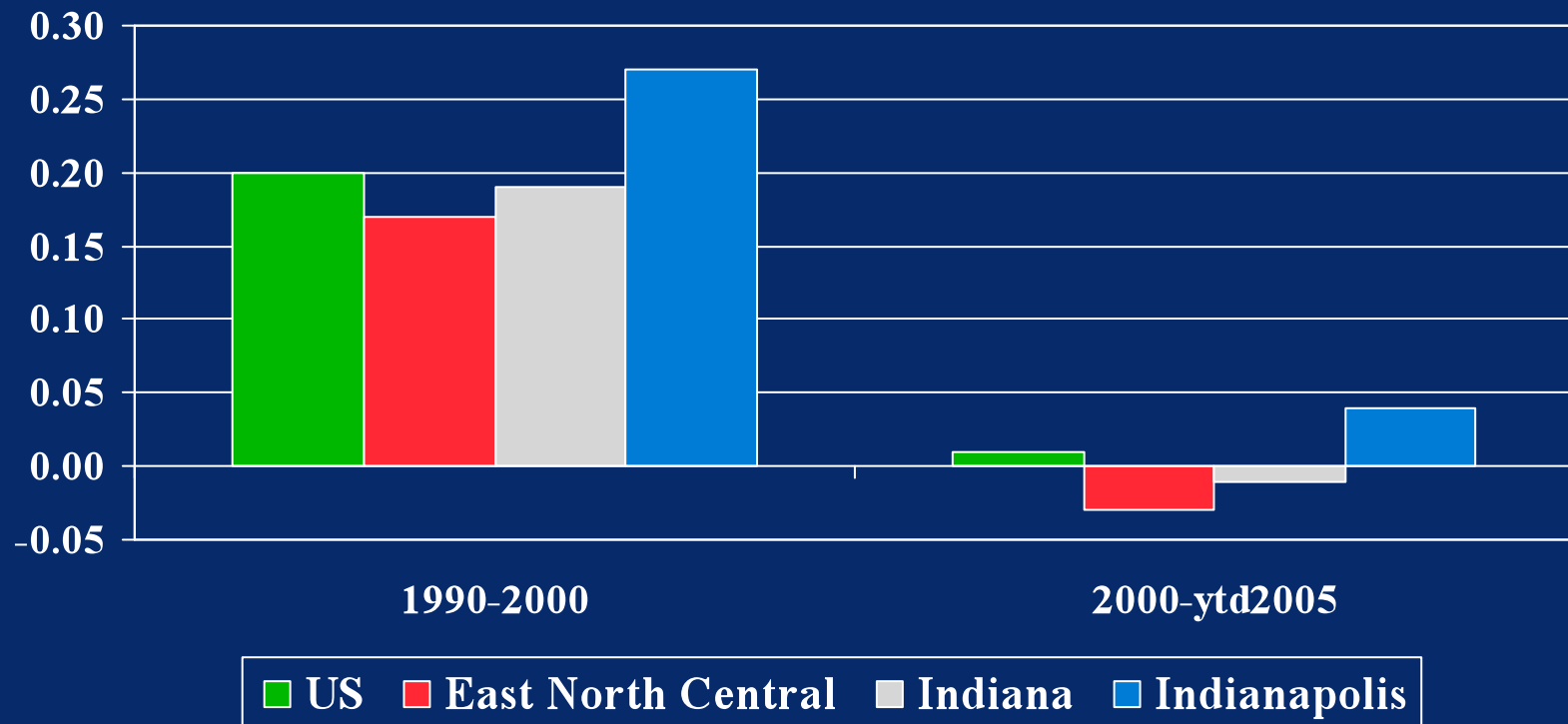
	2000	2005 - YTD	% Change
Michigan	94.3	54.3	-42%
Indiana	9.8	13.2	35%
Ohio	39.2	29.4	-25%
Rest of the US	148.1	127.4	-14%
US Total	291.4	224.3	-23%

# The Midwest and Indiana at Mid-decade

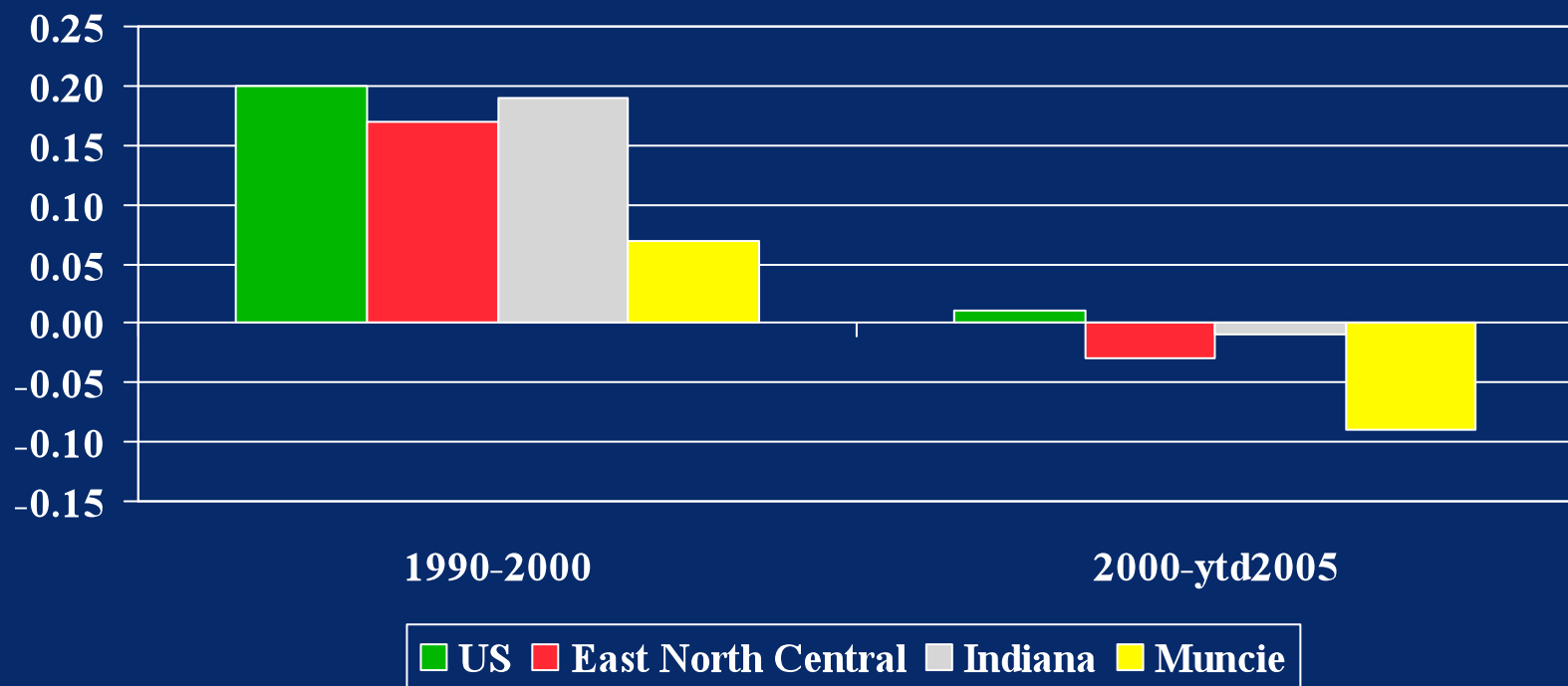
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### Total Payroll Employment

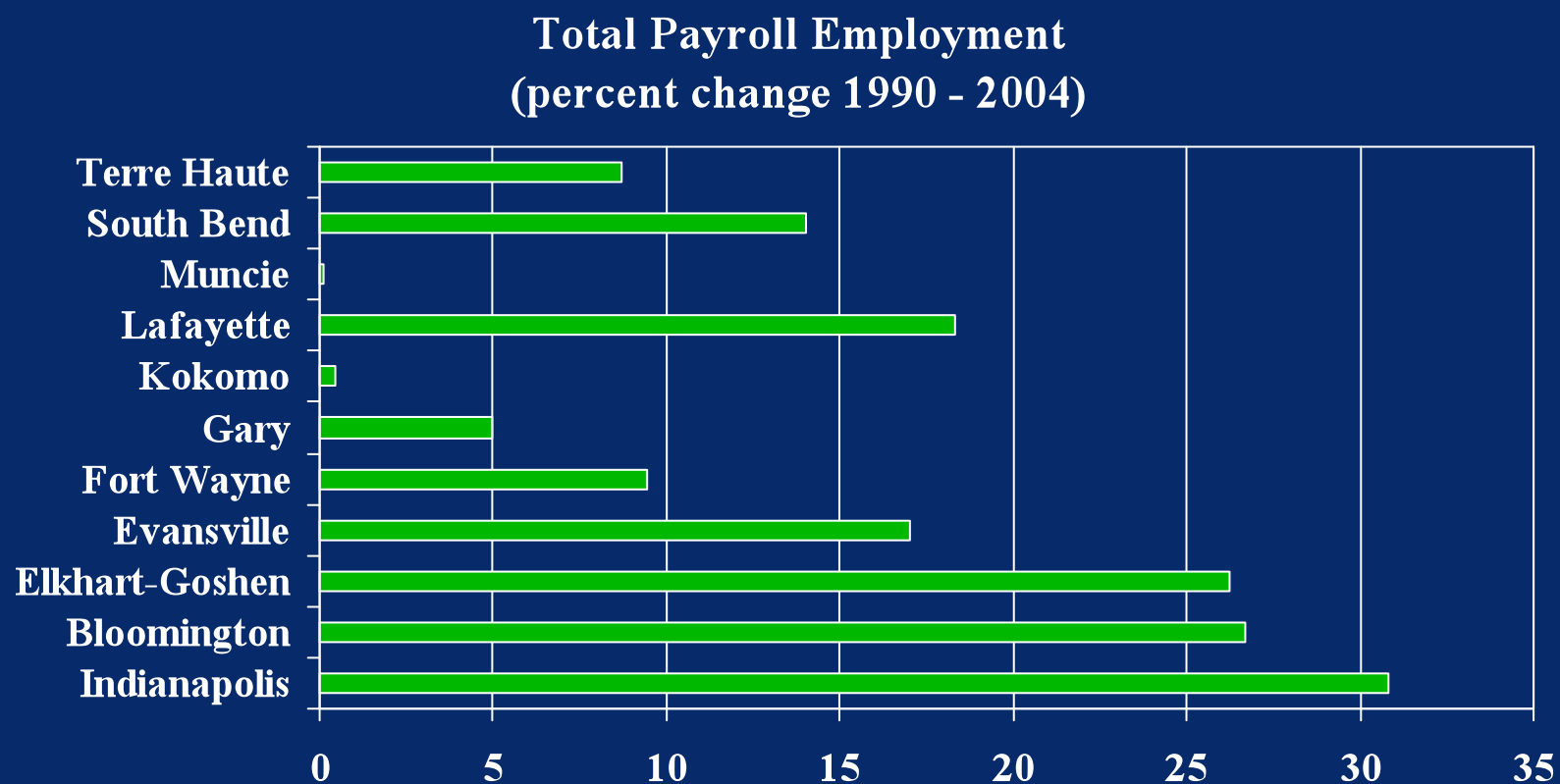


## Total Payroll Employment



# Widely disparate growth across Indiana

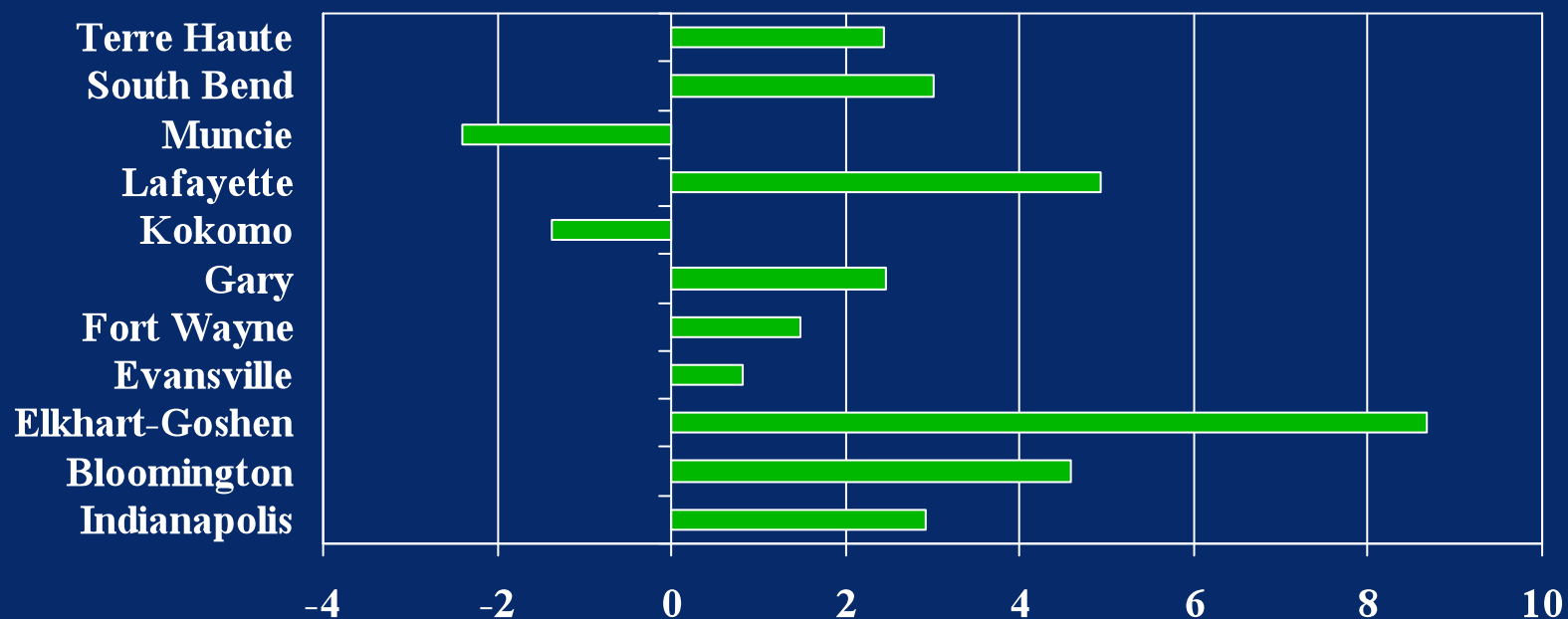
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# Widely disparate growth across Indiana

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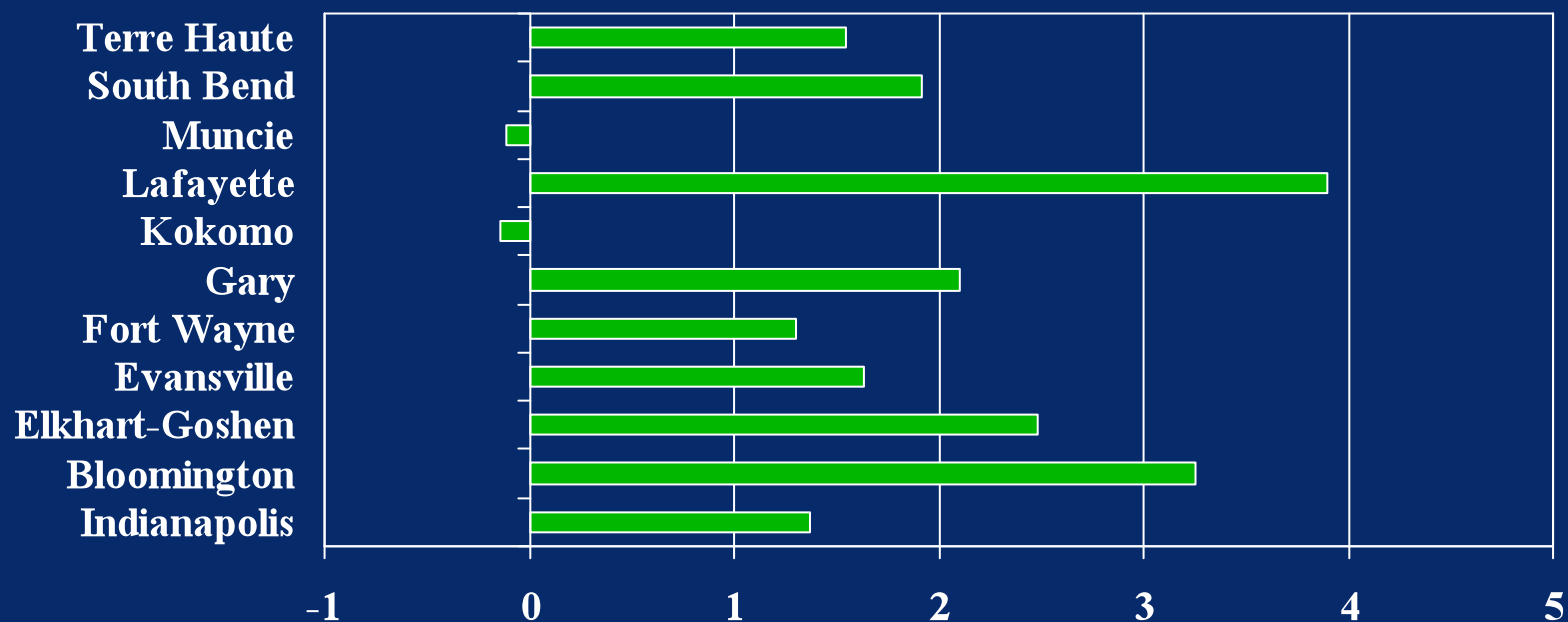
**Total Payroll Employment**  
**(percent change 2003 - Sept. 2005)**



# Widely disparate growth across Indiana

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**Total Payroll Employment**  
(percent change 2004 - Sept 2005)



# Unemployment rates

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	2005, Q3	2004, Q3	2004, Q3 / 2005, Q3	2003, Q3
<b>Terre Haute</b>	<b>6.4</b>	<b>6.6</b>	<b>1.04</b>	<b>6.1</b>
<b>South Bend</b>	<b>5.0</b>	<b>4.9</b>	<b>0.98</b>	<b>5.4</b>
<b>Muncie</b>	<b>6.2</b>	<b>5.9</b>	<b>0.94</b>	<b>6.2</b>
<b>Lafayette</b>	<b>4.4</b>	<b>4.6</b>	<b>1.04</b>	<b>5.0</b>
<b>Kokomo</b>	<b>5.7</b>	<b>7.7</b>	<b>1.34</b>	<b>8.4</b>
<b>Gary</b>	<b>5.4</b>	<b>5.5</b>	<b>1.01</b>	<b>5.9</b>
<b>Fort Wayne</b>	<b>4.9</b>	<b>5.0</b>	<b>1.01</b>	<b>5.7</b>
<b>Evansville-Henderson</b>	<b>4.8</b>	<b>4.5</b>	<b>0.93</b>	<b>4.9</b>
<b>Elkhart-Goshen</b>	<b>4.6</b>	<b>4.0</b>	<b>0.86</b>	<b>4.7</b>
<b>Bloomington</b>	<b>5.0</b>	<b>4.2</b>	<b>0.85</b>	<b>4.6</b>
<b>Indianapolis</b>	<b>4.6</b>	<b>4.5</b>	<b>0.99</b>	<b>4.9</b>
<b>Indiana</b>	<b>5.4</b>	<b>5.3</b>	<b>0.98</b>	<b>5.6</b>
<b>US</b>	<b>5.0</b>	<b>5.4</b>	<b>1.09</b>	<b>6.1</b>