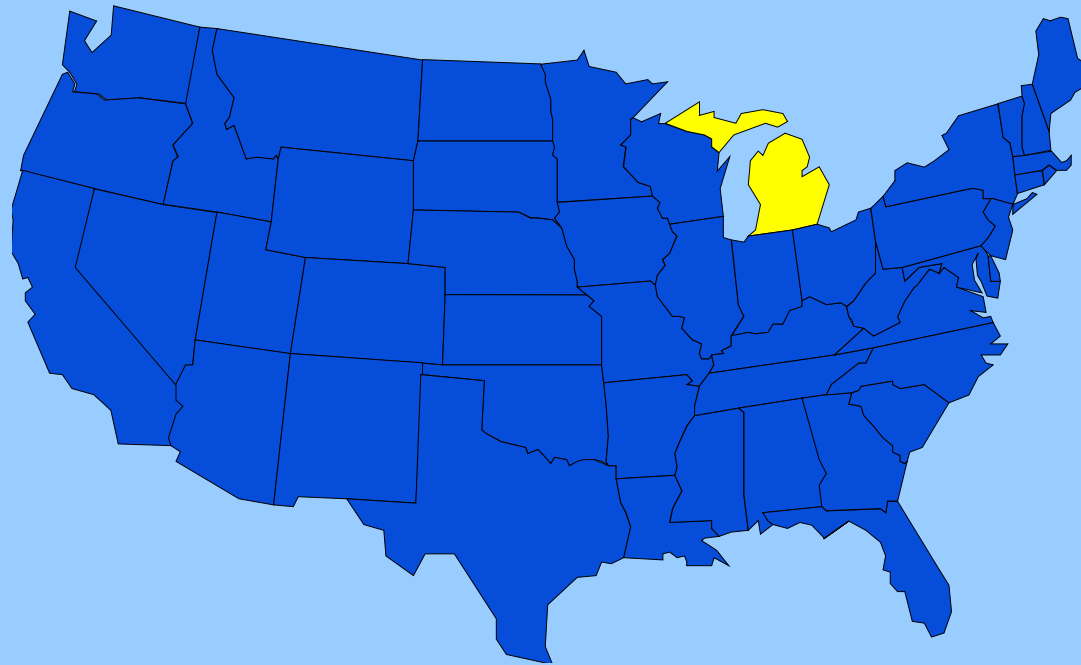


The U.S. and Michigan Outlook for 2016-2018



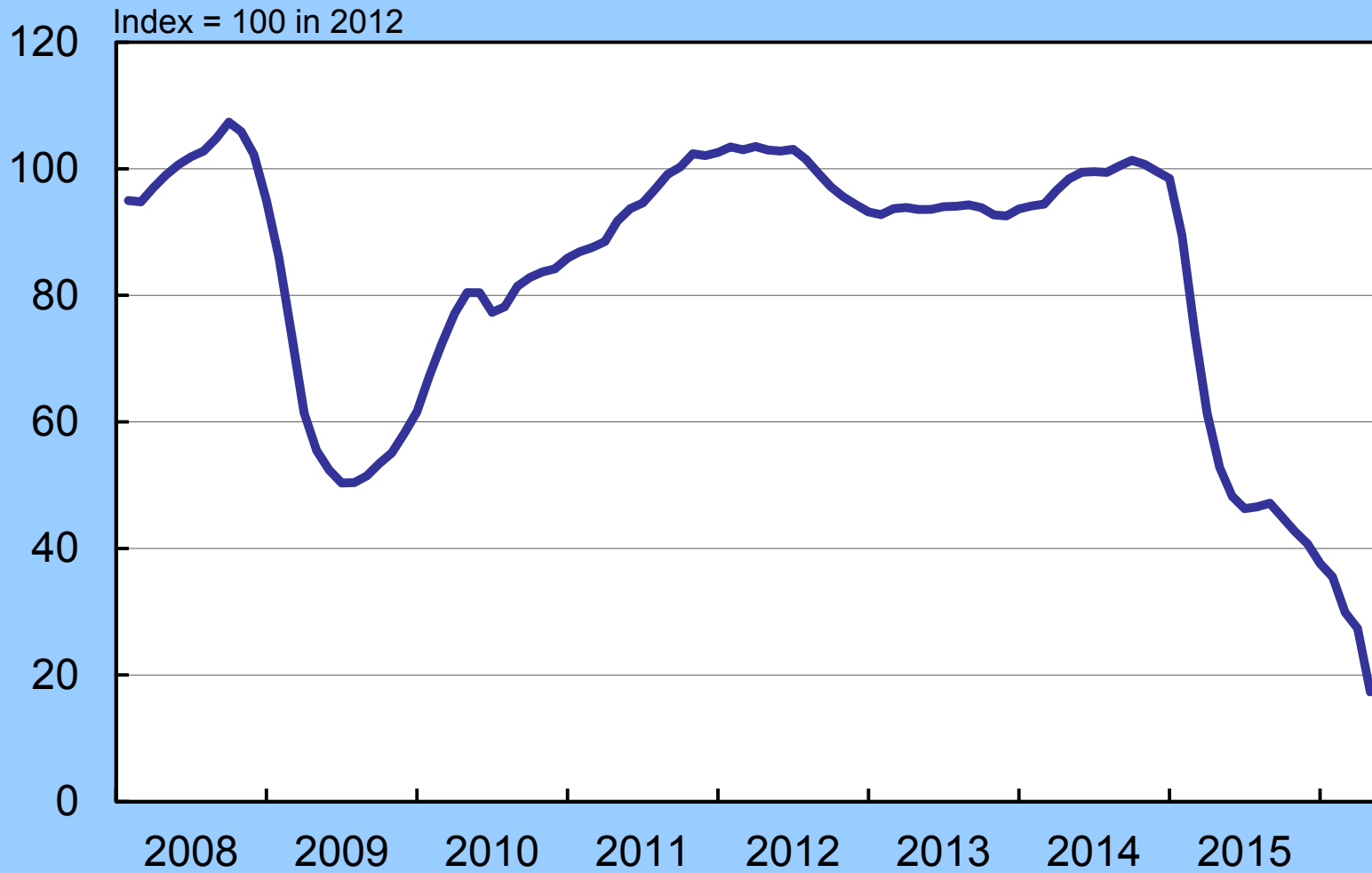
Consensus Revenue Estimating Conference
Lansing, Michigan
May 17, 2016

The Current State of the Economy

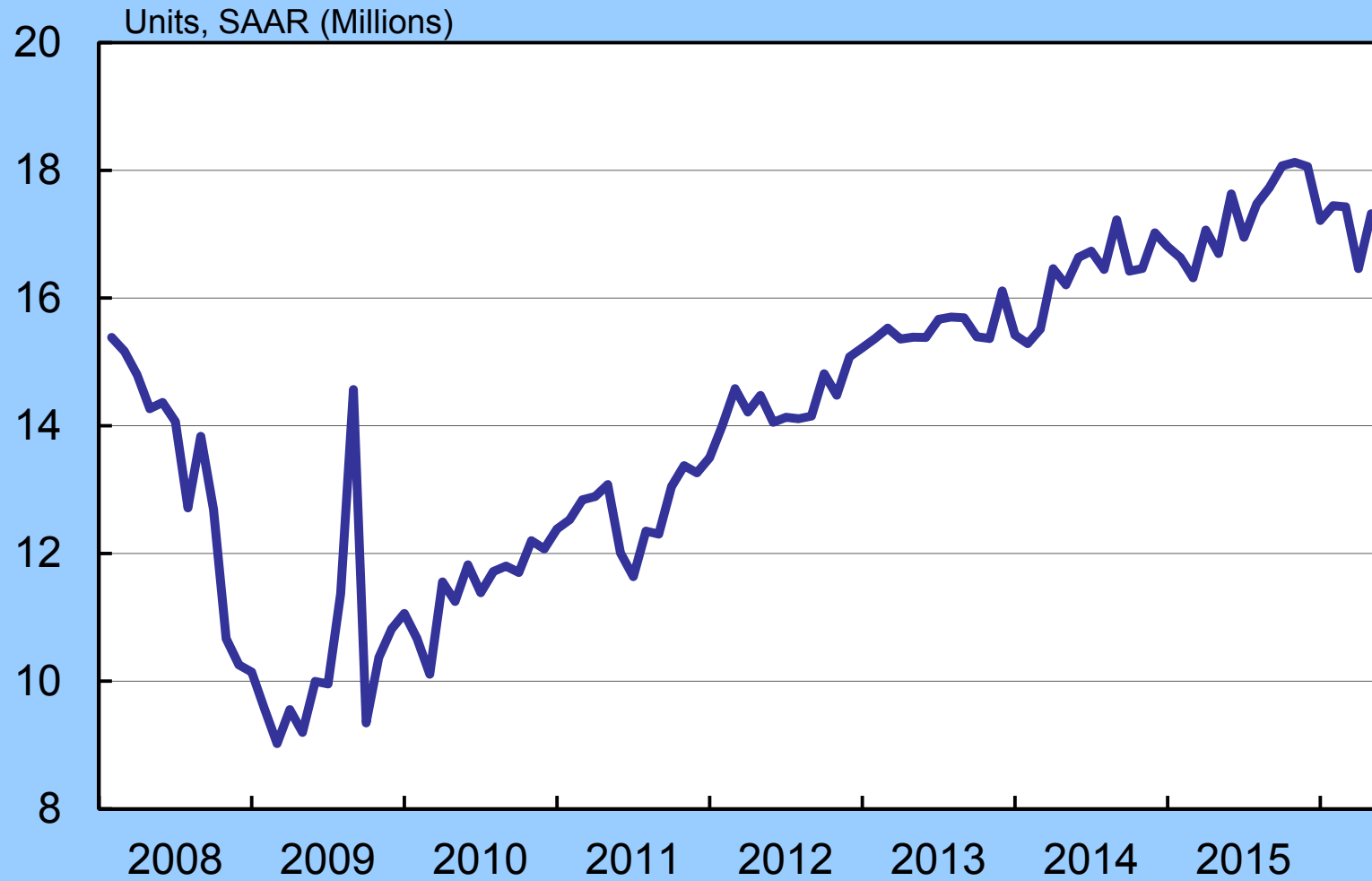
Latest Data

- 2016q1 real GDP growth at 0.5 percent, SAAR
 - Third year in a row with a very slow first quarter
- Real GDP up 1.9 percent over 2015q1
- Key factors in 2016q1 slowdown:
 - Inventory correction
 - Weak vehicle sales
 - Another sharp drop in oil and gas exploration
 - Wiped nearly \$100 billion off GDP since the end of 2014

Industrial Production: Drilling Oil and Gas Wells



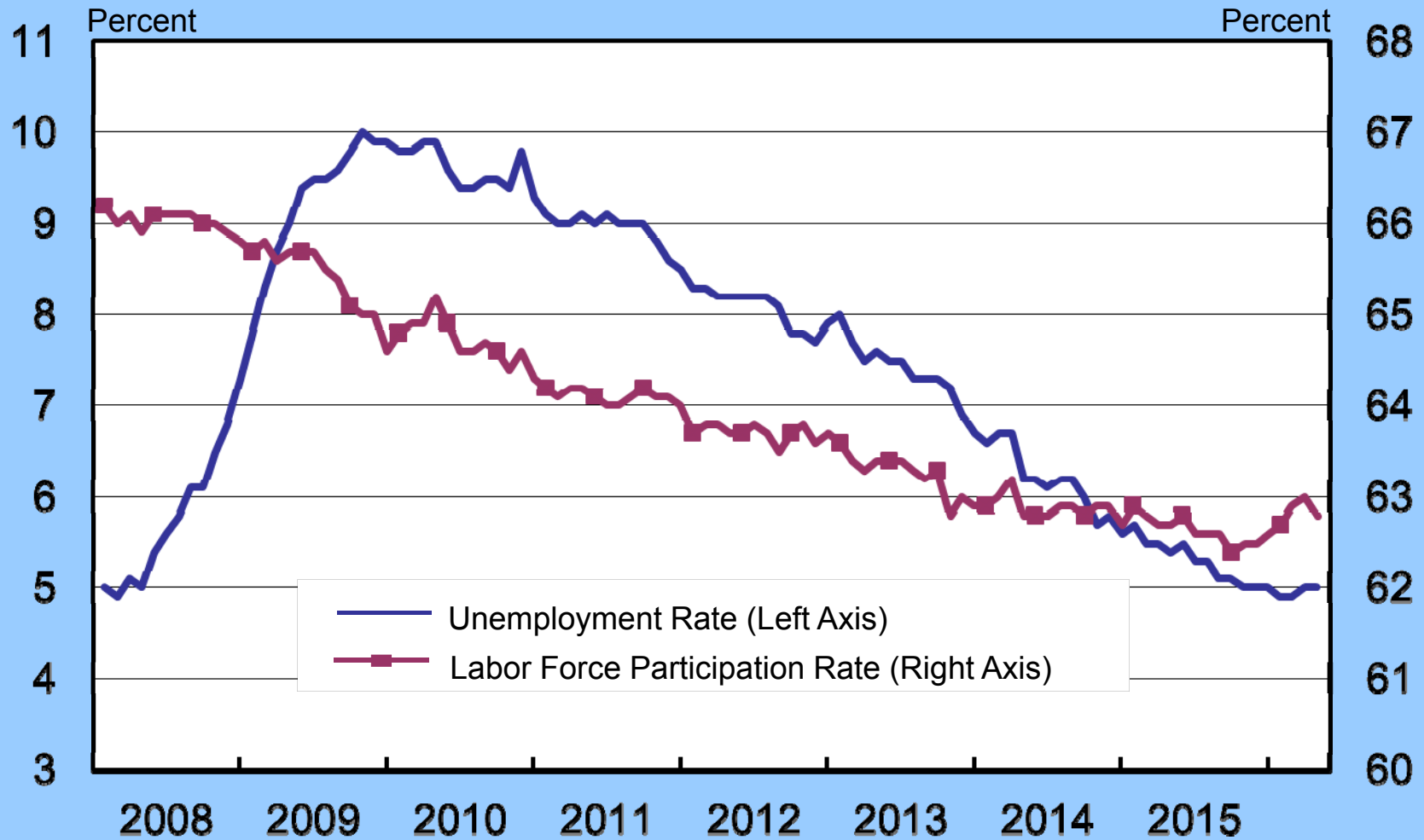
Light Vehicle Sales, Monthly



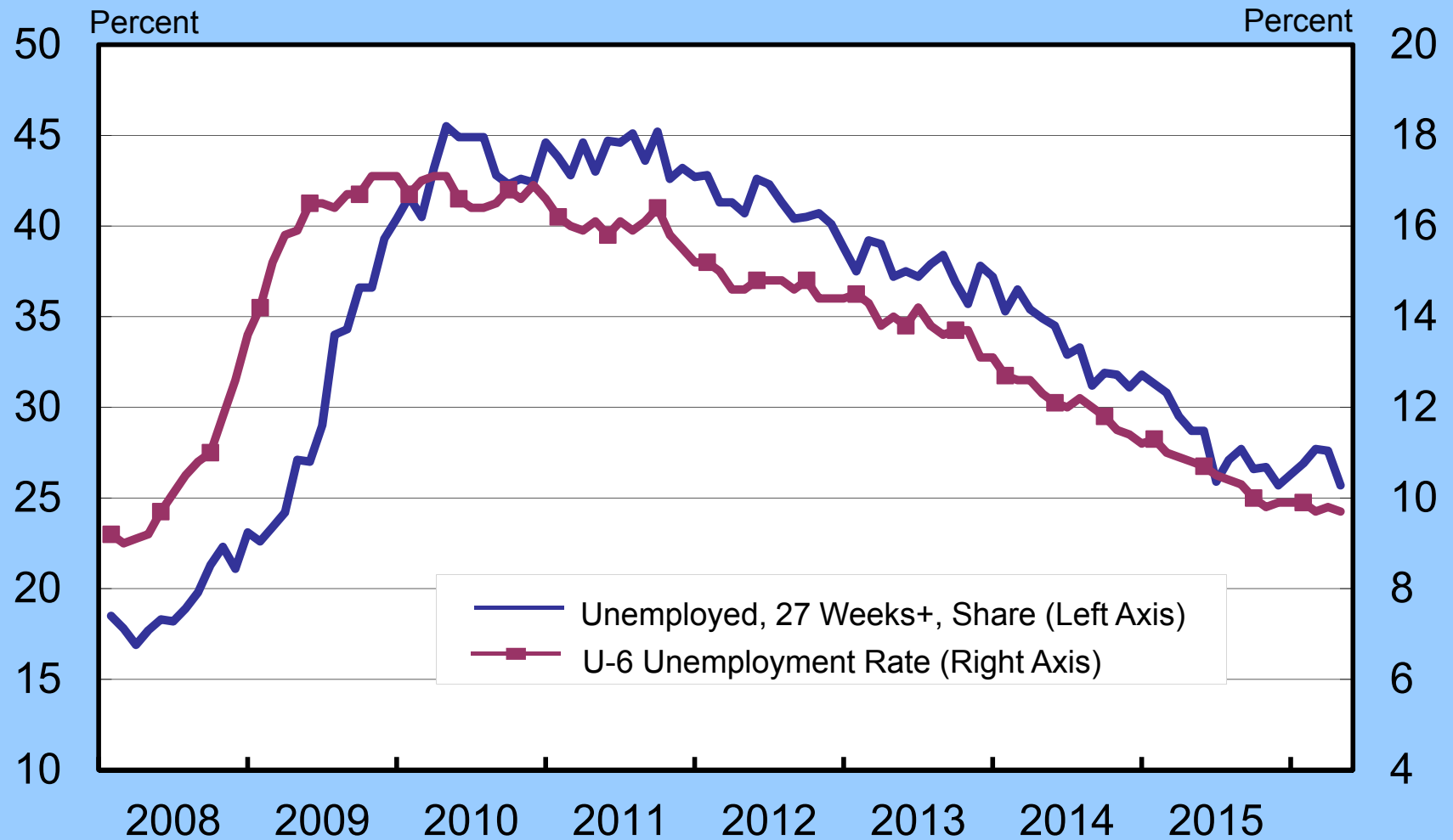
Latest Data

- Labor Market keeps improving
 - Labor force participation rate up recently
 - Wage growth finally picking up
- At a slower pace along some dimensions
 - Jan-Apr payroll job gains slowed to 192,000/month
 - Unemployment rate ticked up to 5.0 percent
 - Slower improvement on broader unemployment rate
 - Decelerating decline in share of long-term unemployed

Unemployment and Participation Rates



Long-term Unemployed Share and U-6 Unemployment Rate

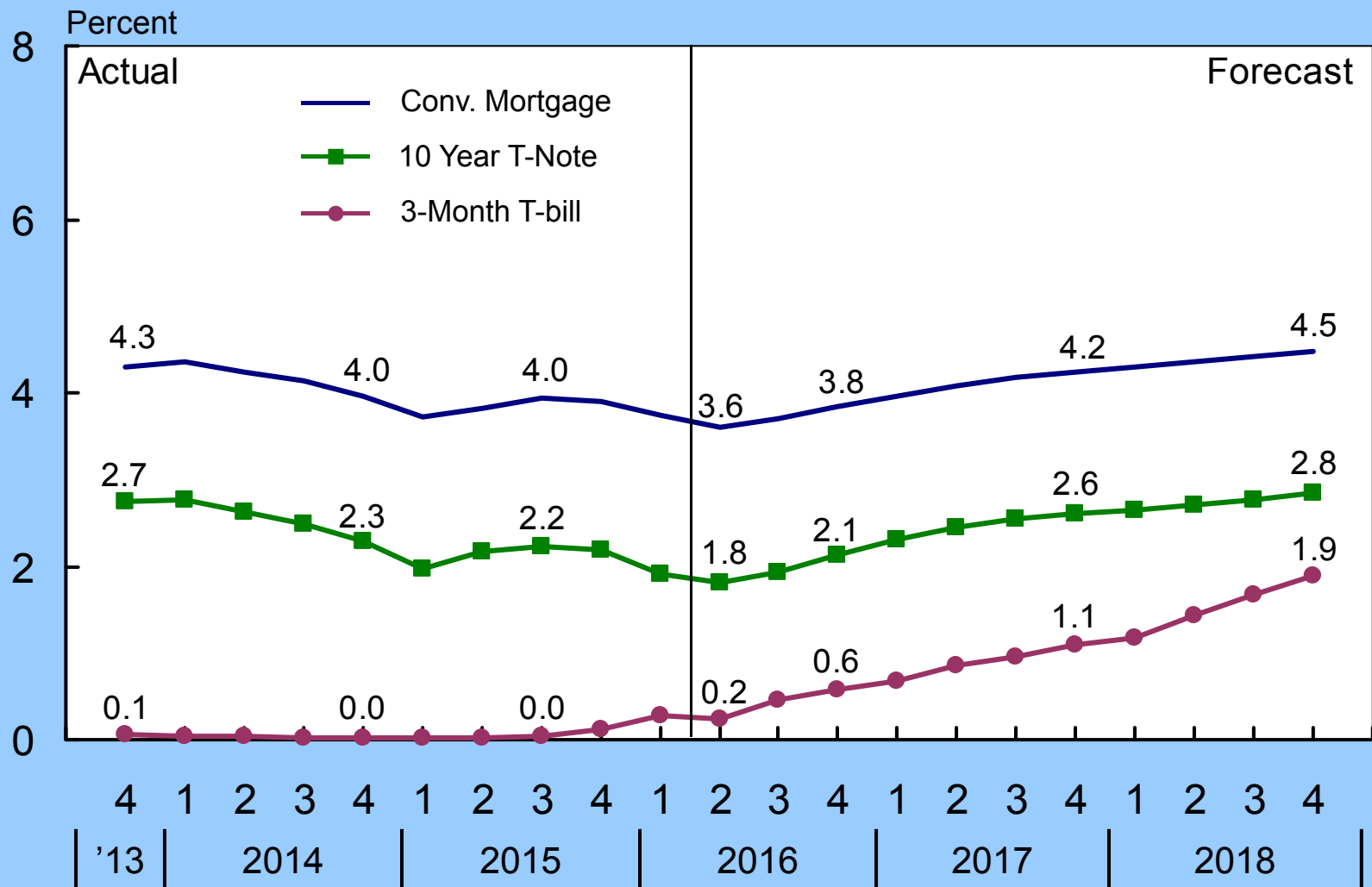


Key Inputs

Monetary Policy

- Fed's dual mandate update:
 - Inflation stubbornly under 2 percent target
 - Labor markets improving, somewhat more slowly
- Next fed funds 25bps target range increase:
 - **September**, the last one for 2016
- Future tightening is data-dependent
- Most consistent with our outlook:
 - Two 25bps increases in target range in 2017
 - Four 25bps increases in target range in 2018

Market Interest Rates



Fiscal Policy

- No major action until 2017
- Discretionary spending set to grow in 2016
 - First time since 2011
- Retiring baby boomers drive transfer spending growth
- 2016 Elections – major risk
- Single-party control is unlikely
- Federal deficit projected to inch down

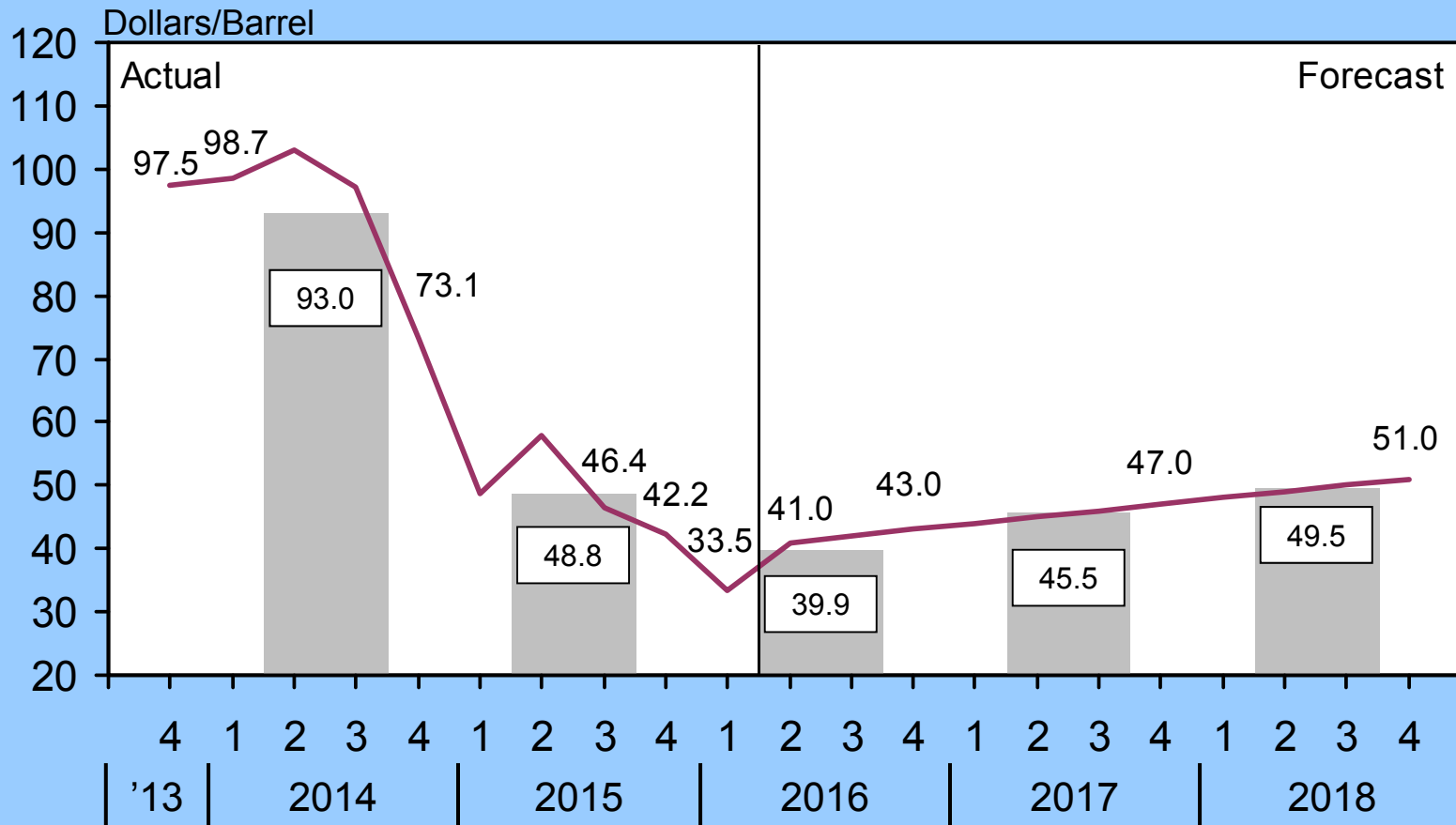
Federal Budget, NIPA Basis

(Billions of Dollars)

		Forecast		
	<u>FY '15</u>	<u>FY '16</u>	<u>FY '17</u>	<u>FY '18</u>
Current receipts	3390.2	3521.4	3686.9	3900.0
% change	4.2	3.9	4.7	5.8
Current expenditures	3988.2	4117.9	4278.9	4475.7
% change	3.2	3.3	3.9	4.6
Consumption	956.1	970.8	995.7	1027.6
% change	0.1	1.5	2.6	3.2
Transfer payments	2537.0	2637.8	2748.4	2875.4
% change	5.2	4.0	4.2	4.6
Surplus (+) or deficit (-)	-598.0	-596.6	-592.0	-575.6
Percent of GDP	-3.4	-3.3	-3.1	-2.9

Oil Prices

(West Texas Intermediate Crude)

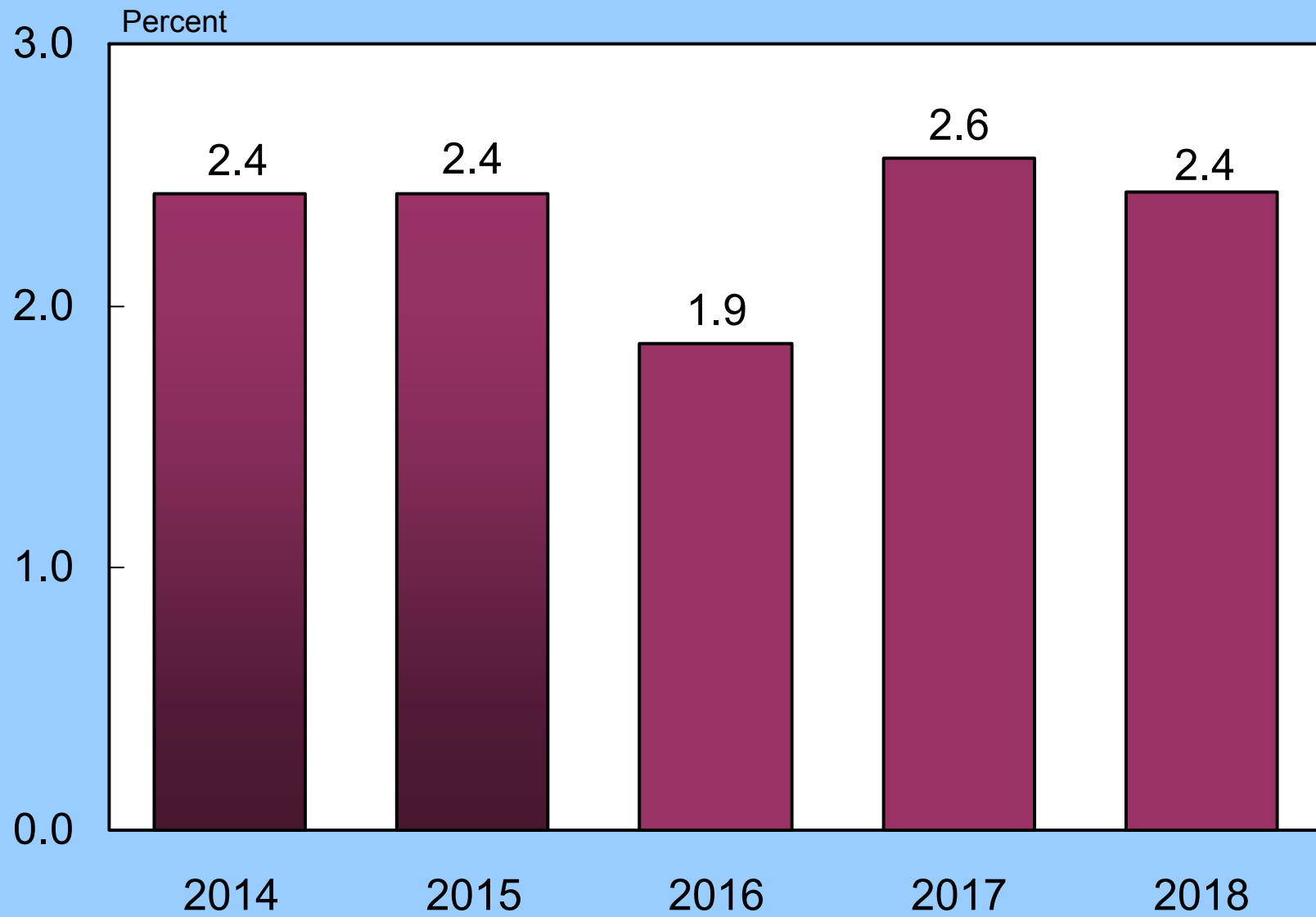


4 th Quarter to 4 th Quarter % Change					
10.5	-24.9	-42.3	1.9	9.3	8.5
-2.8	-14.5	-49.6	-1.6	11.6	8.4

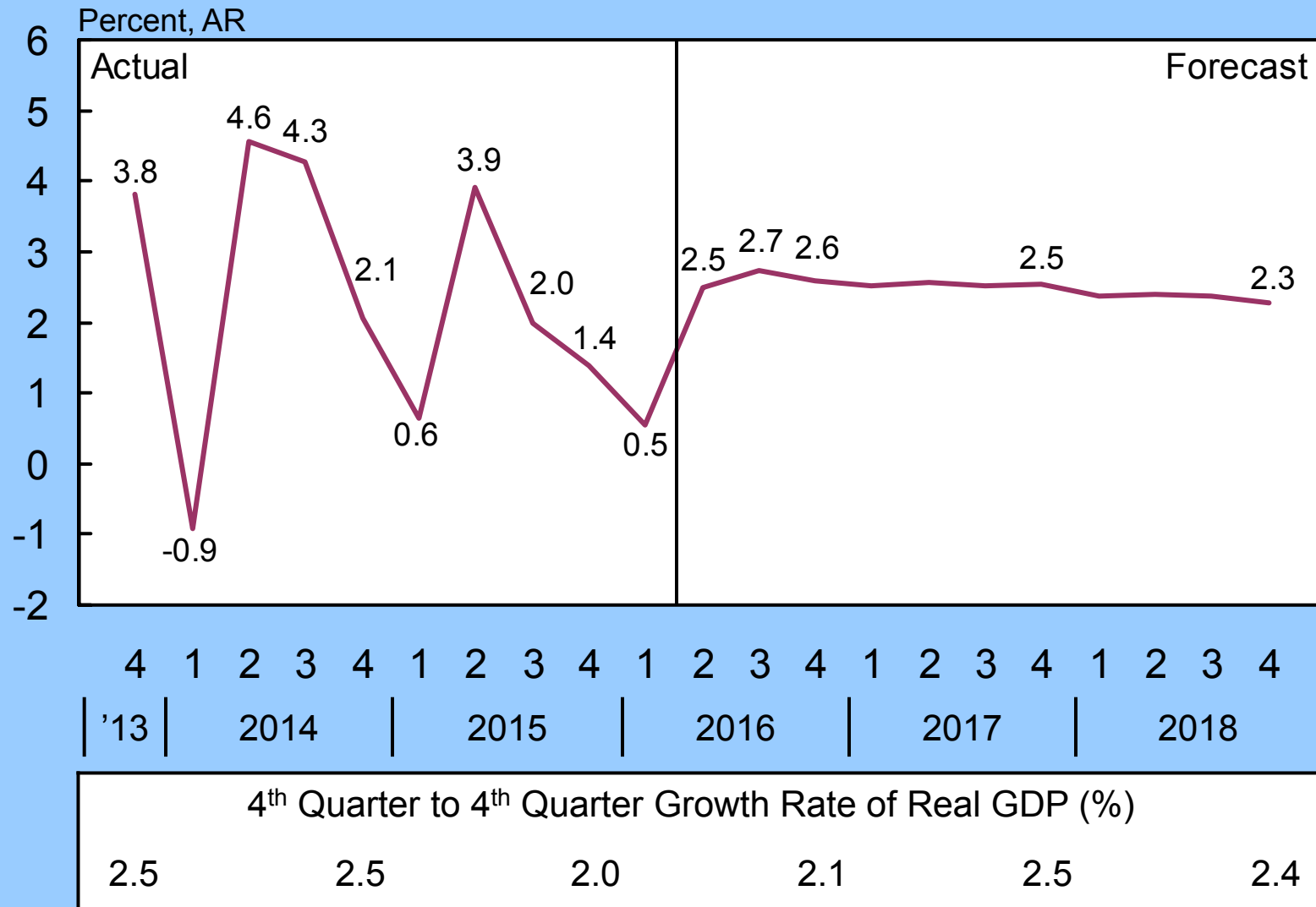
WTI
Imports*

RSQE Forecast

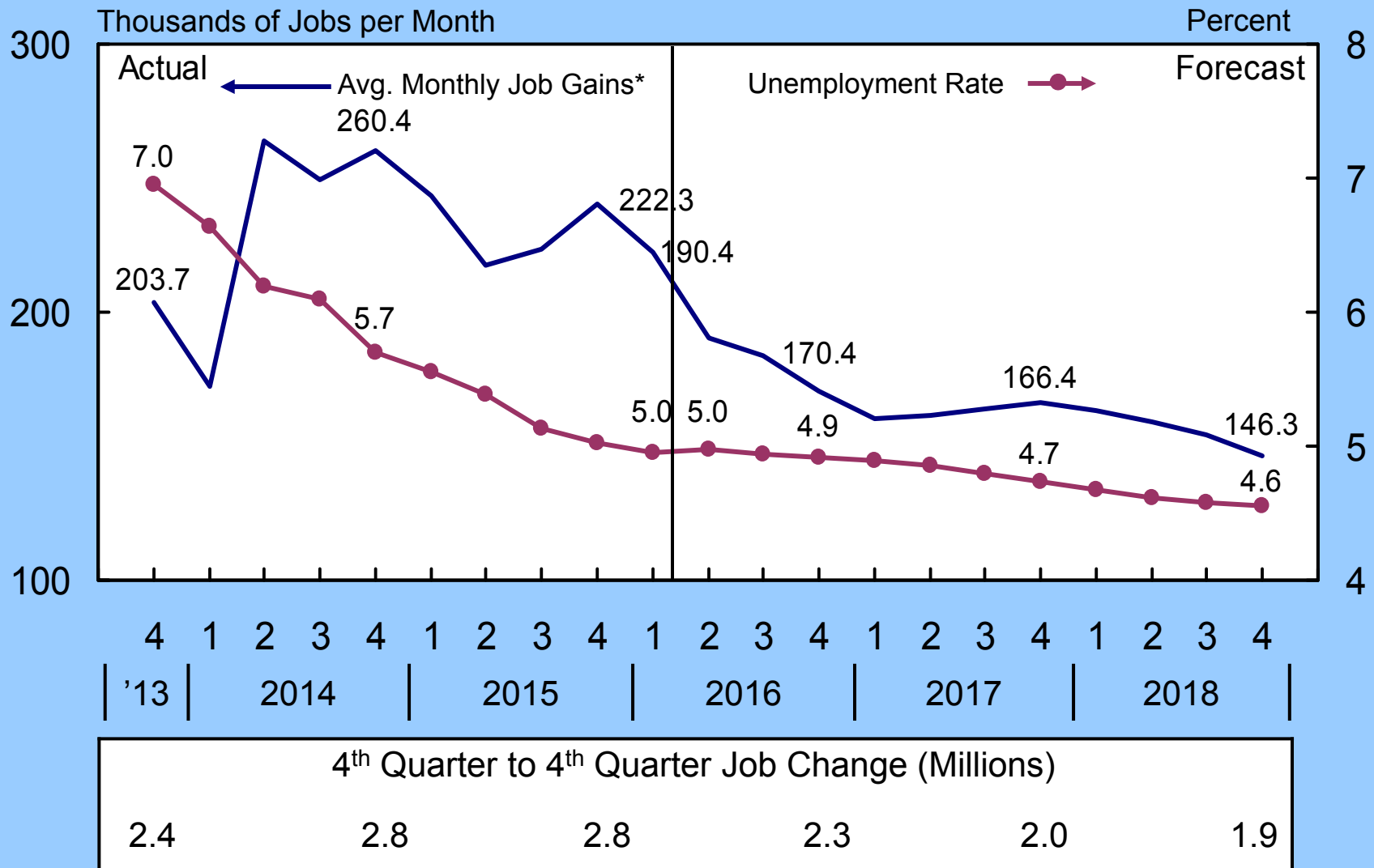
Real GDP Growth



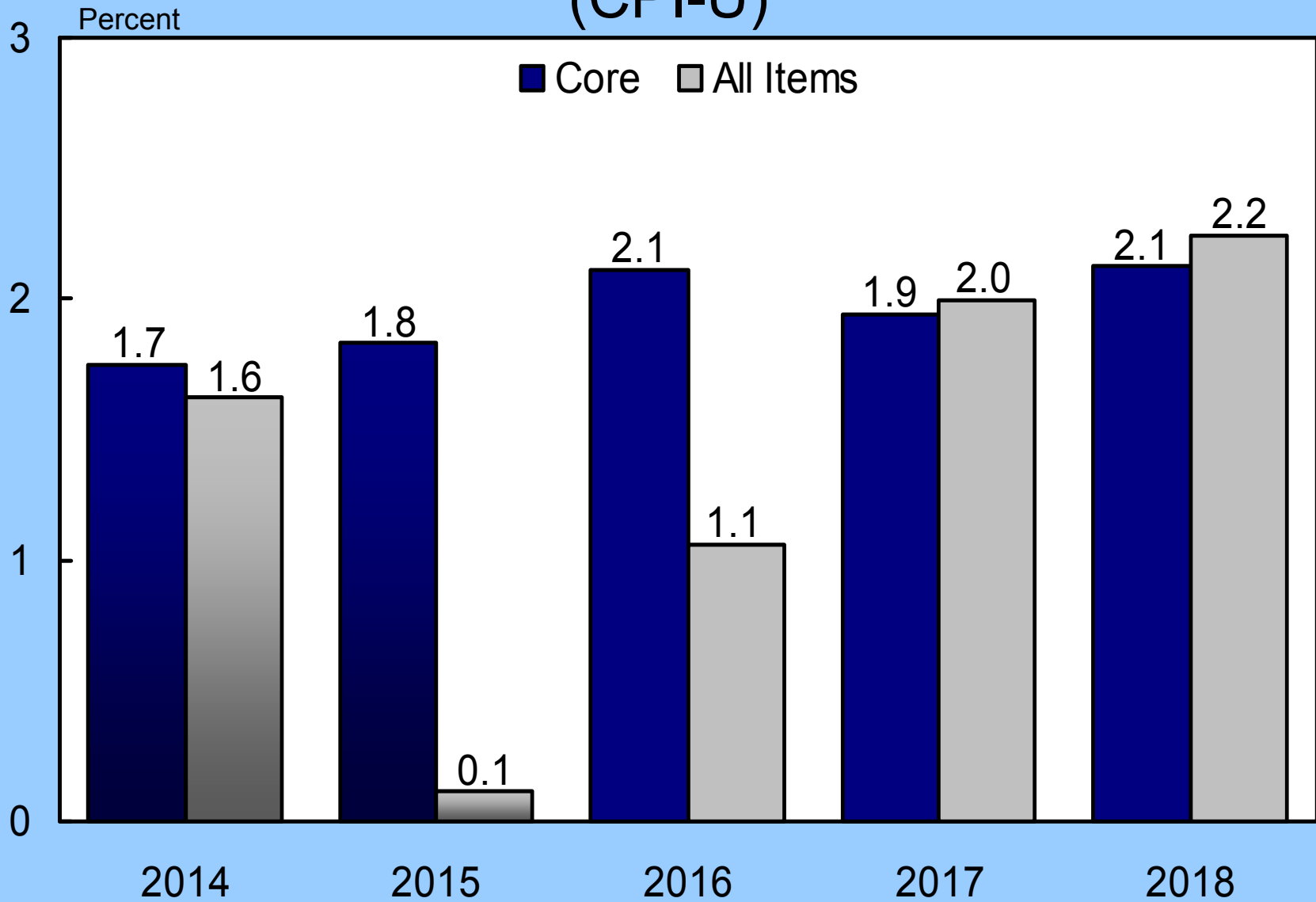
Growth Rate of Real GDP



Nonfarm Payroll Employment Gains and Unemployment Rate



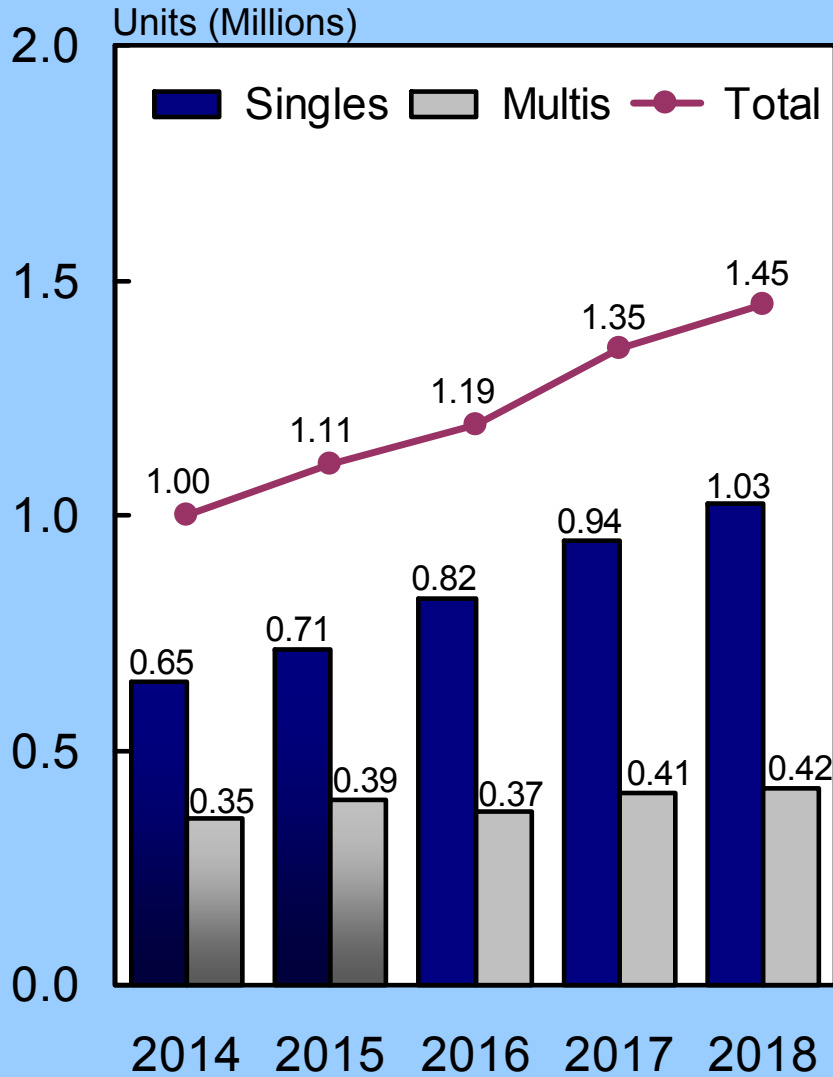
Consumer Price Inflation (CPI-U)



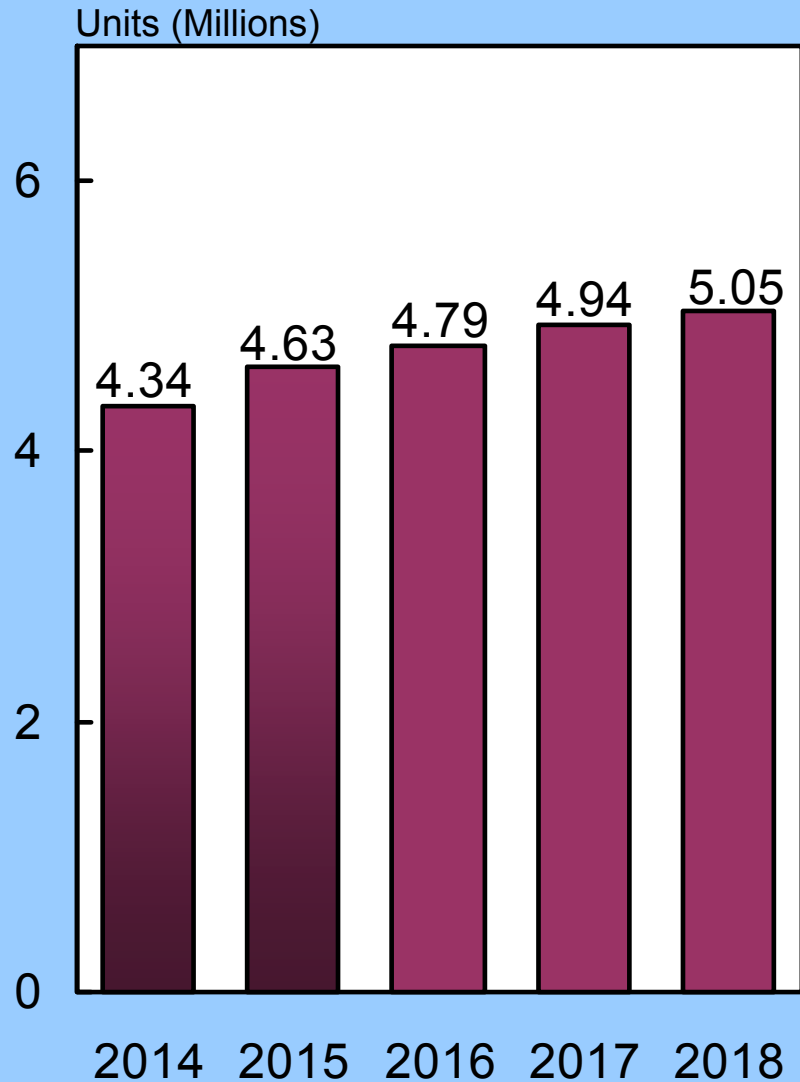
RSQE: May 2016

Housing Market

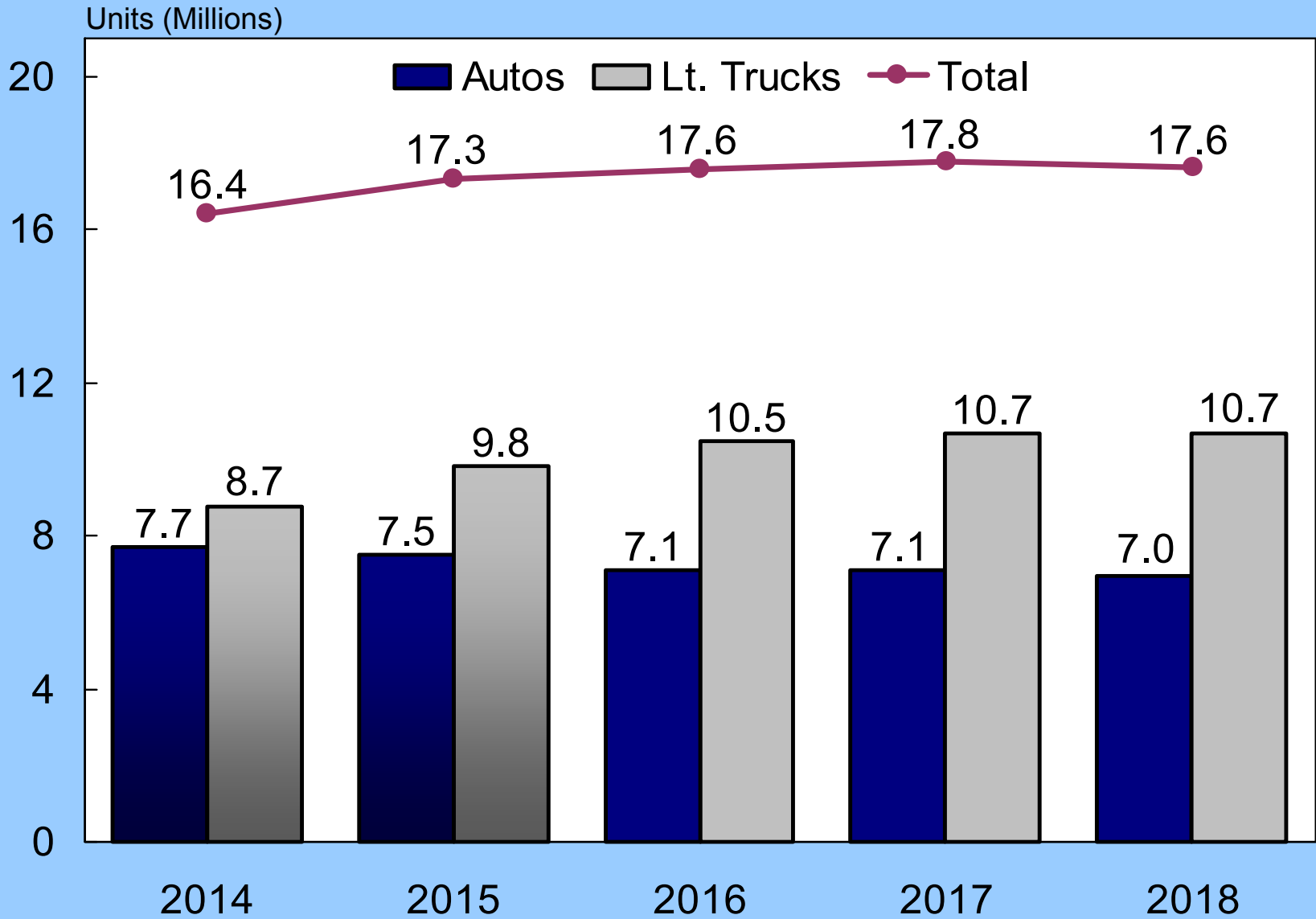
A. Housing Starts



B. Existing Home Sales*



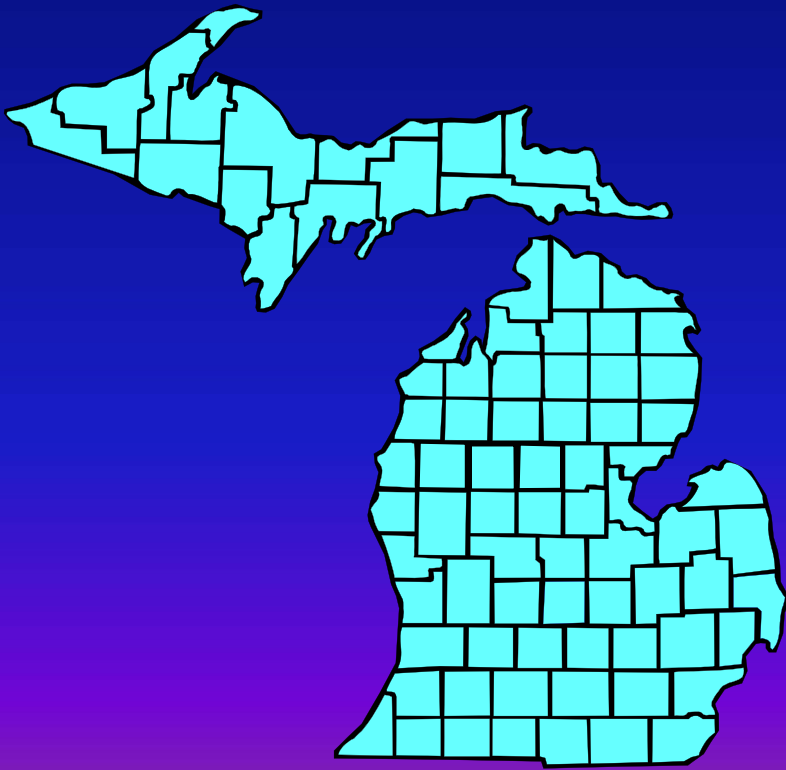
Light Vehicle Sales



Risks to the Outlook:

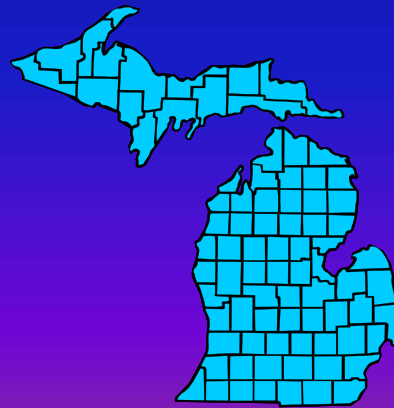
- World economic growth
- Financial turbulence
- 2016 elections
- Monetary policy
- Commodity prices
- Abnormal Weather

THE MICHIGAN ECONOMIC OUTLOOK FOR 2016–2018



May 17, 2016

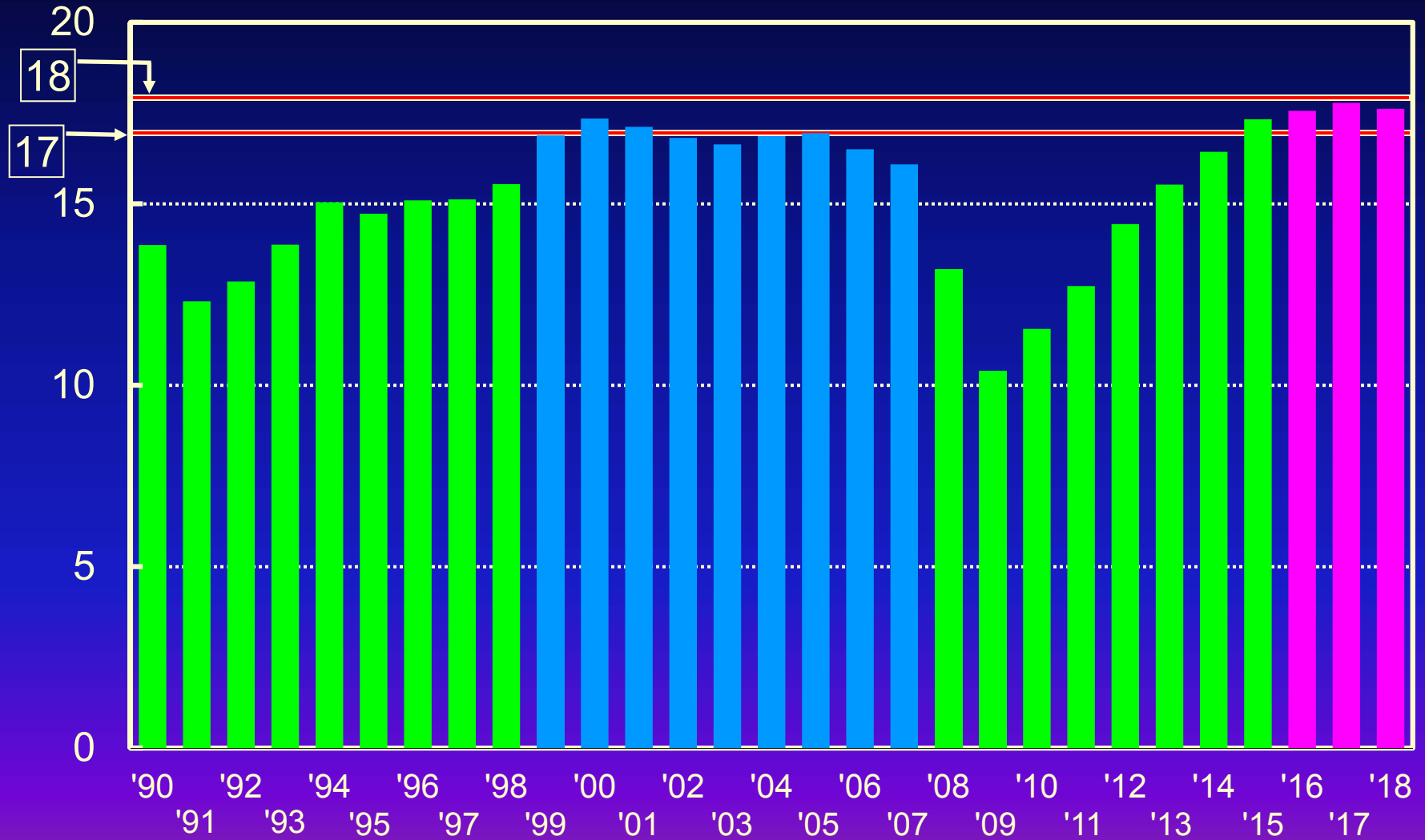
Motor Vehicle Industry Revisited



With data

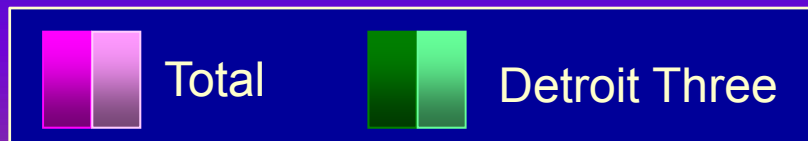
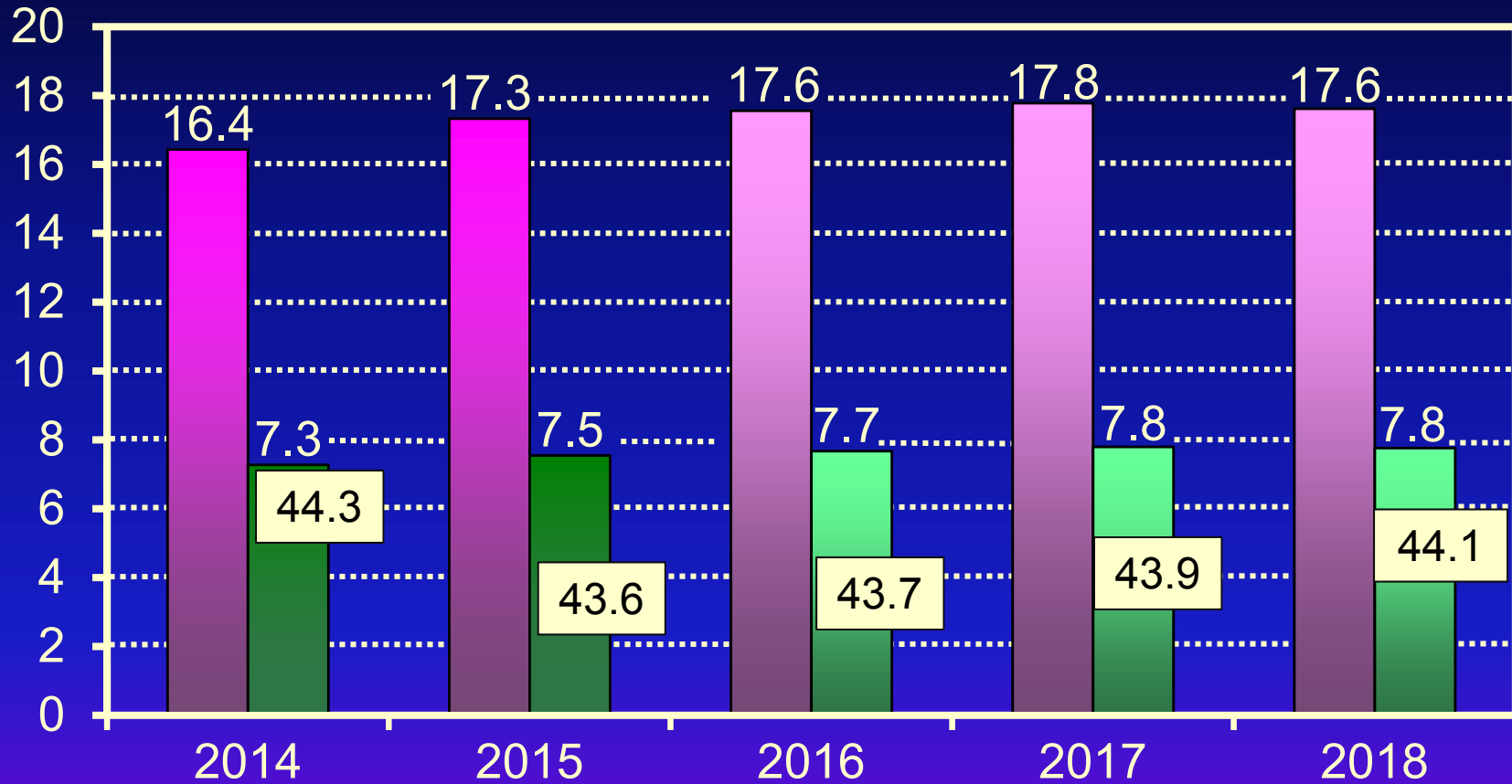
U.S. Light Vehicle Sales, 1990–2018

Millions



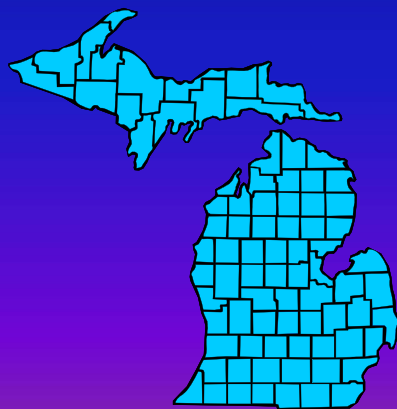
U.S. Light Vehicle Sales Total vs. Detroit Three, 2014–18

Millions
of Units

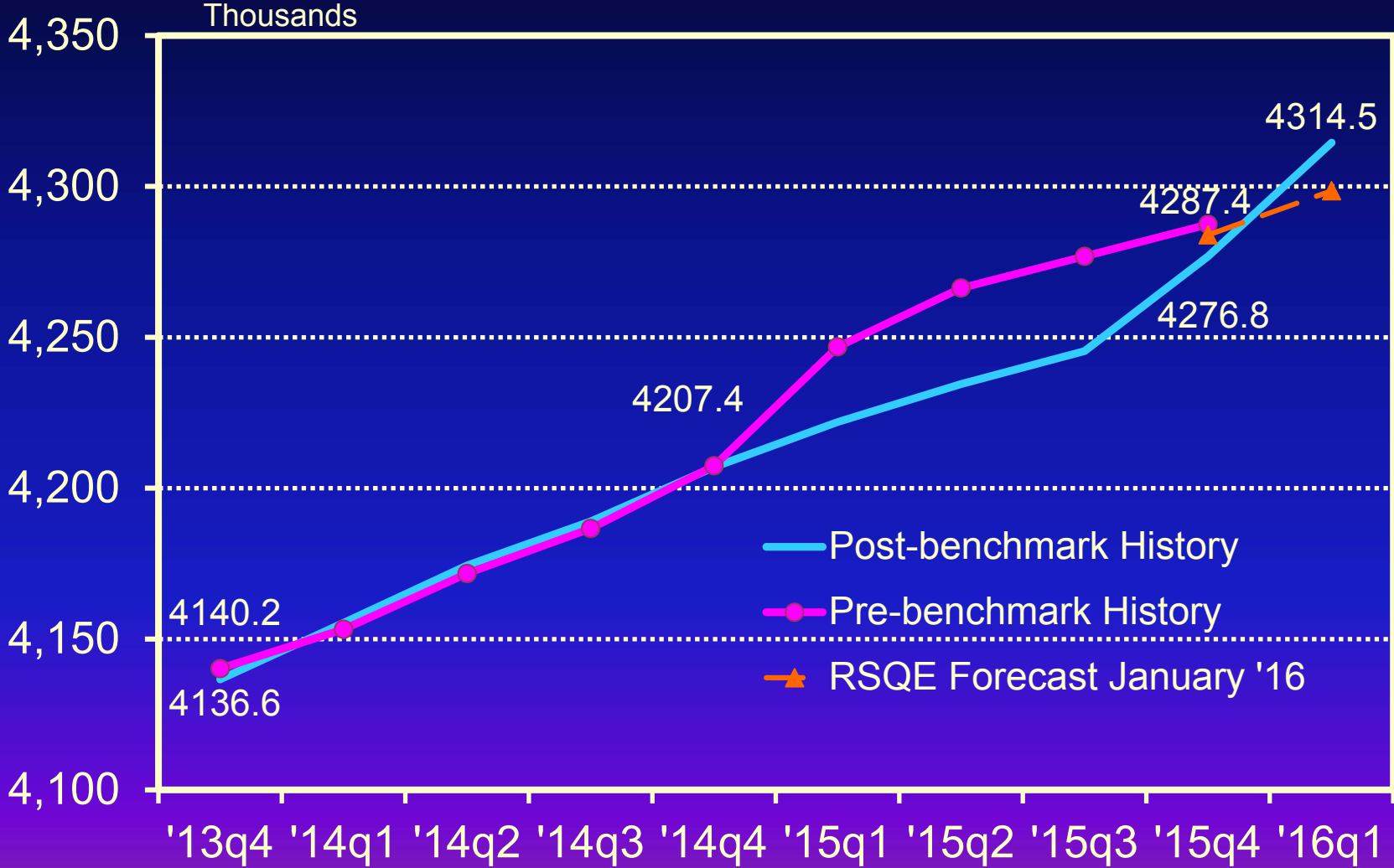


Annual % Detroit Three
market share

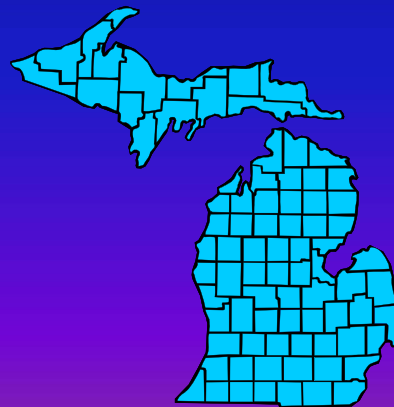
Current State of Michigan's Economy



Michigan Payroll Employment 2013q4–2016q1

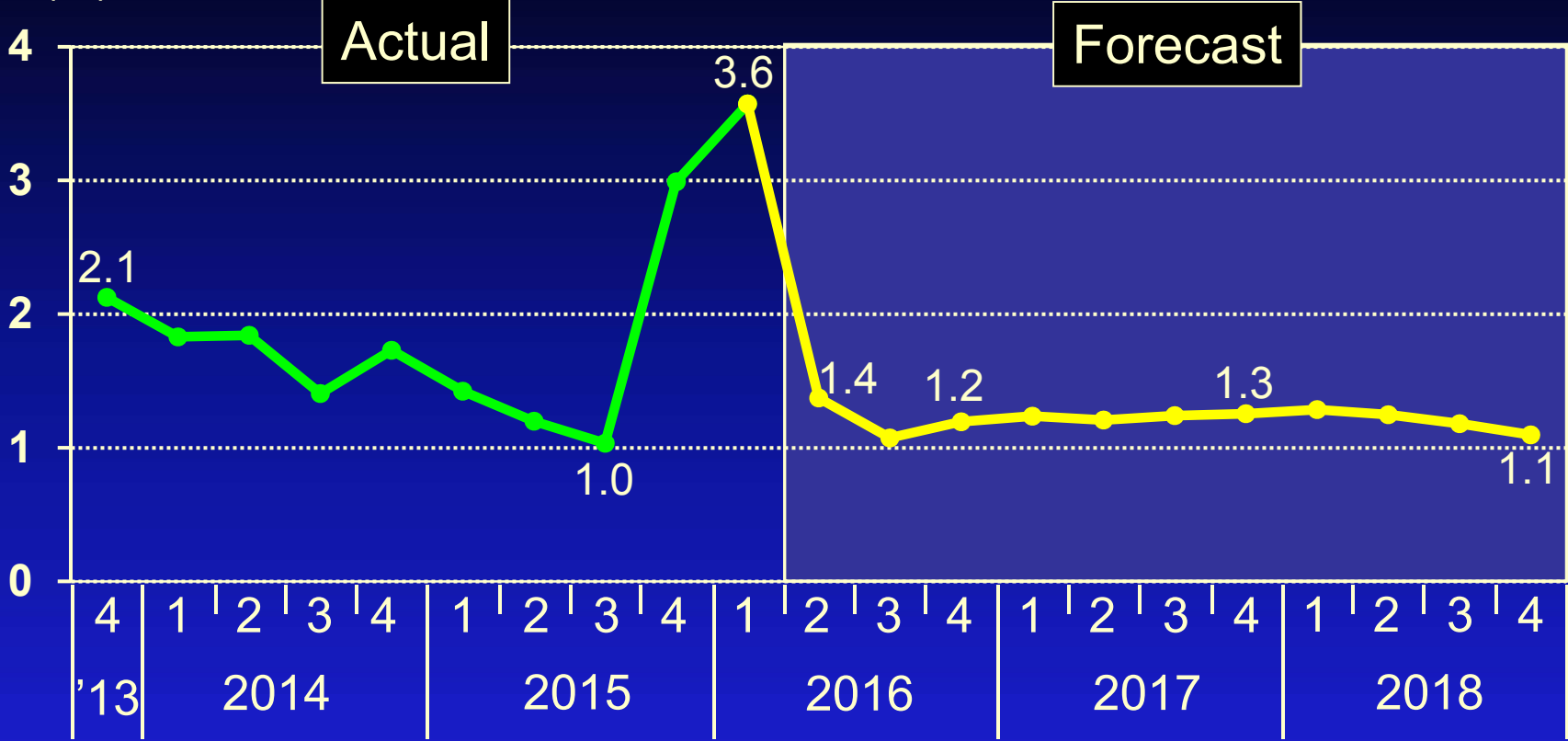


Michigan Outlook



Michigan Job Growth

Annual Rate (%)

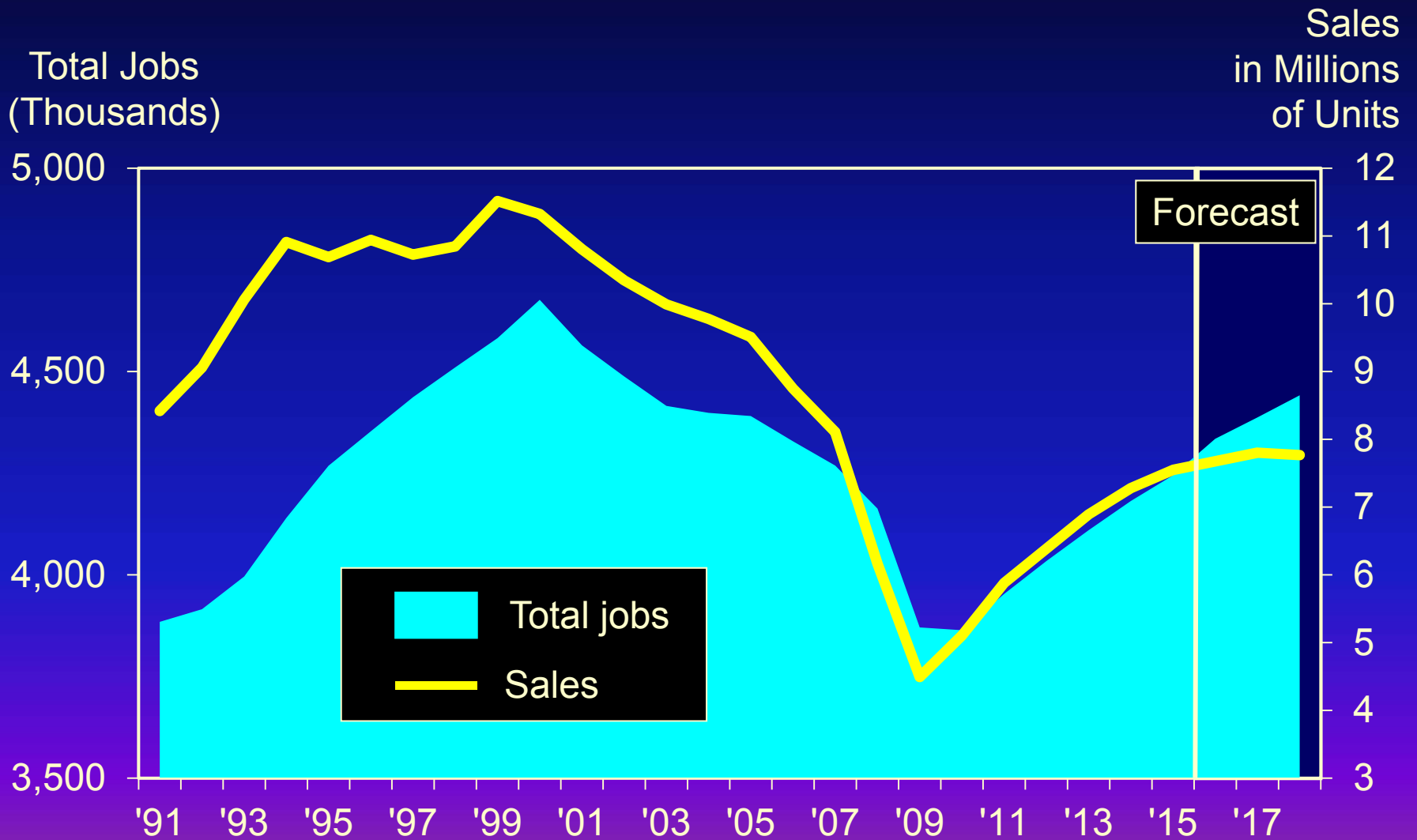


4th Quarter to 4th Quarter Growth Rate (%)					
2.0	1.7	1.7	1.8	1.2	1.2
4th Quarter to 4th Quarter Change (Thousands)					
82.1	70.4	69.8	76.9	53.8	53.0

Change in Jobs by Industry Sector (Thousands of jobs)

	2013q4 to <u>2014q4</u>	2014q4 to <u>2015q4</u>	2015q4 to <u>2016q4</u>	2016q4 to <u>2017q4</u>	2017q4 to <u>2018q4</u>
Total jobs	70	70	77	54	53
Manufacturing	24	14	2	-2	-1
Construction	8	5	14	11	8
Prof. & bus. svcs.	12	14	19	20	19
Trade, trans., util.	16	7	13	10	11
Government	-2	2	3	1	1

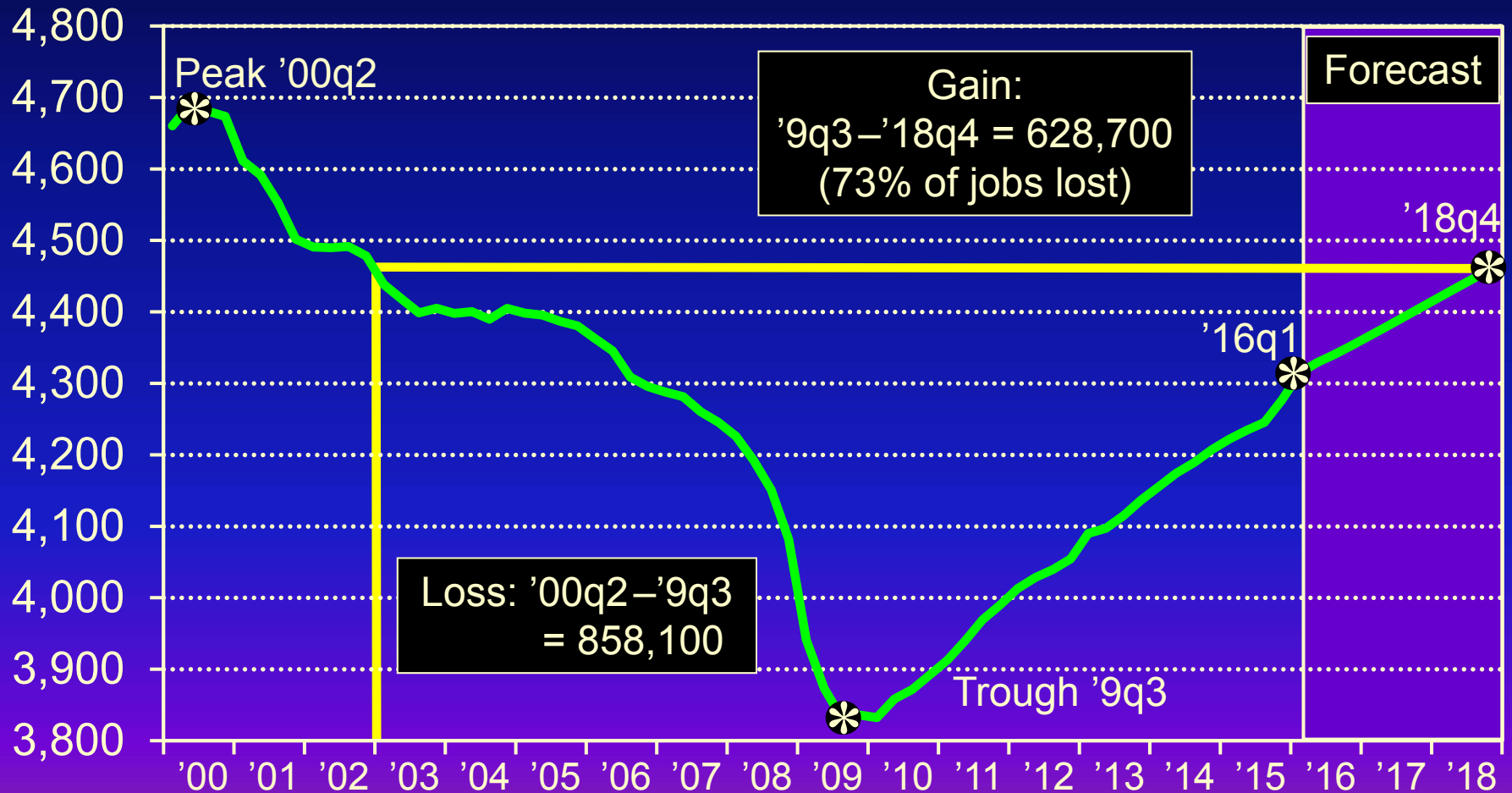
Michigan Total Jobs and Detroit Three Sales of Light Vehicles 1991 to 2018



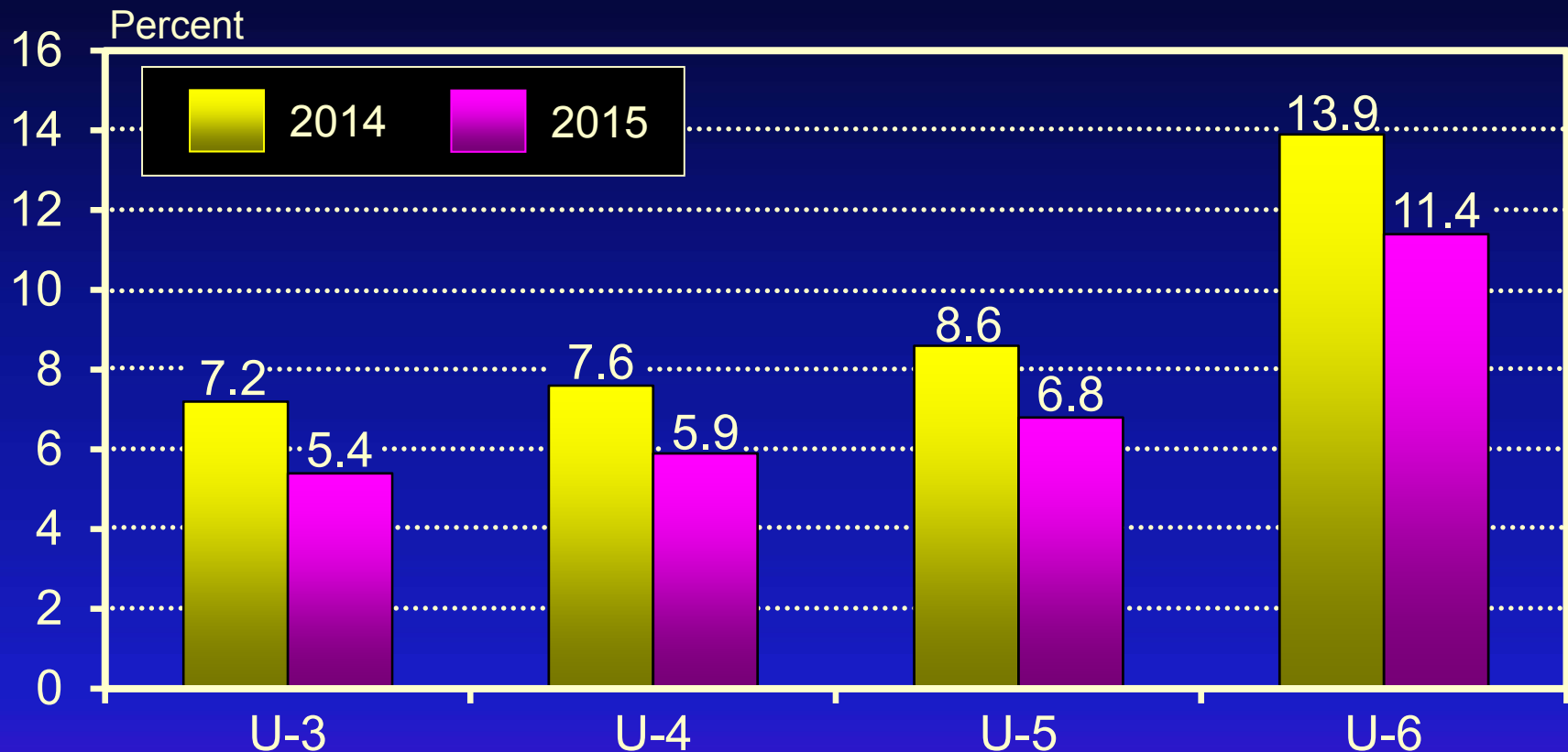
With data

Michigan Wage and Salary Employment First Quarter of 2000 to Fourth Quarter of 2018

Thousands of jobs



Alternative Measures of Labor Underutilization Michigan, 2014 and 2015



U-3: Comparable to the official unemployment rate (7.1% in 2014, 5.4% in 2015)

U-4: Unemployed (U-3) + discouraged workers

U-5: U-4 + all other marginally attached workers

U-6: U-5 + employed part-time for economic reasons

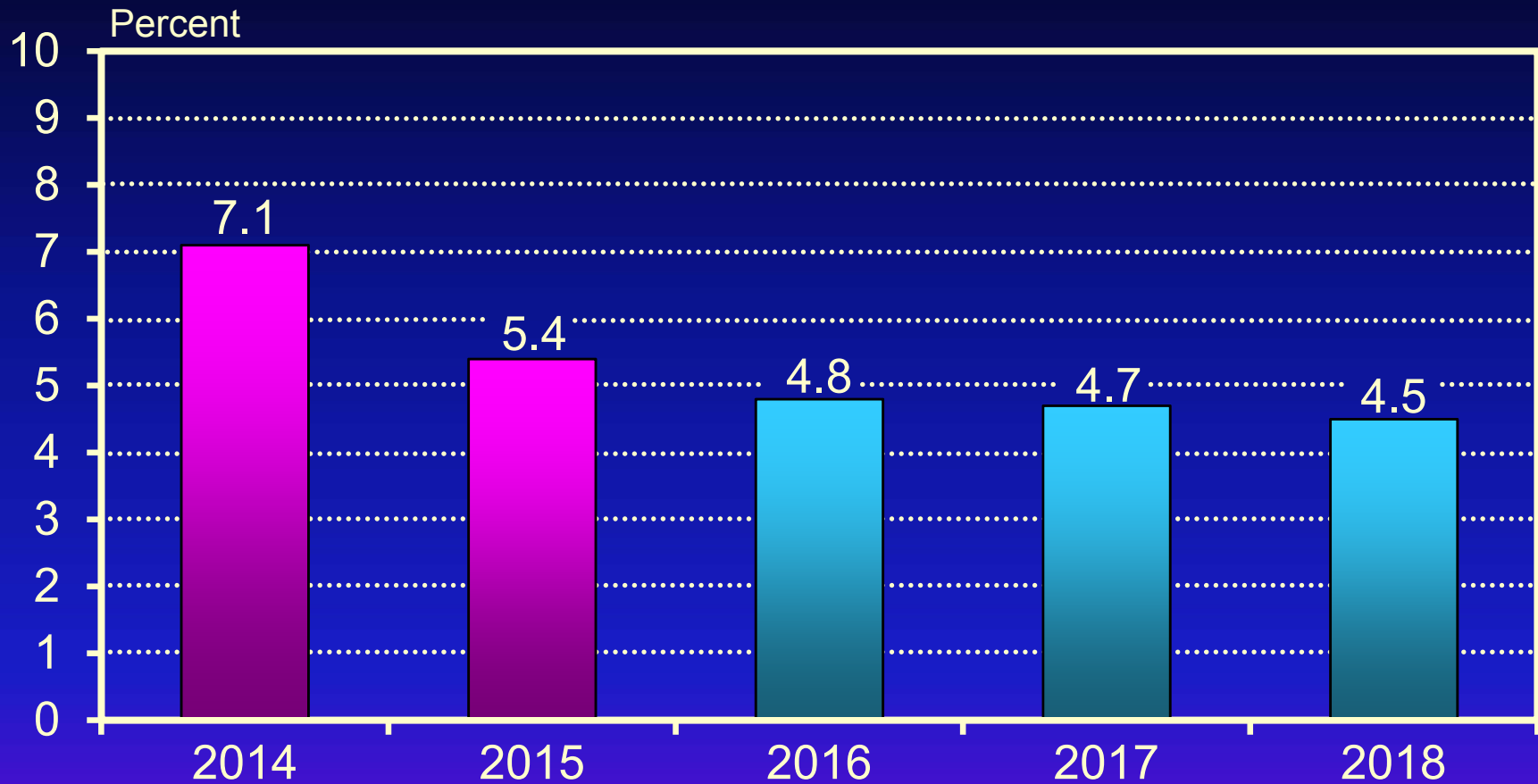
Alternative Measures of Labor Underutilization

Michigan vs. United States, 2011–15

(Percentage)

Michigan	U-3	U-4	U-5	U-6	Change			
					U-3	U-4	U-5	U-6
2011	10.2	11.1	12.3	18.8				
2012	9.1	9.8	11.0	16.6	-1.1	-1.3	-1.3	-2.2
2013	8.6	9.2	10.1	15.3	-0.5	-0.6	-0.9	-1.3
2014	7.2	7.6	8.6	13.9	-1.4	-1.6	-1.5	-1.4
2015	5.4	5.9	6.8	11.4	-1.8	-1.7	-1.8	-2.5
2011–15					-4.8	-5.2	-5.5	-7.4
United States								
2011	8.9	9.5	10.4	15.9				
2012	8.1	8.6	9.5	14.7	-0.8	-0.9	-0.9	-1.2
2013	7.4	7.9	8.8	13.8	-0.7	-0.7	-0.7	-0.9
2014	6.2	6.6	7.5	12.0	-1.2	-1.3	-1.3	-1.8
2015	5.3	5.7	6.4	10.4	-0.9	-0.9	-1.1	-1.6
2011–15					-3.6	-3.8	-4.0	-5.5

Michigan Unemployment Rate 2014–18



4th Quarter Unemployment Rate

6.4

5.1

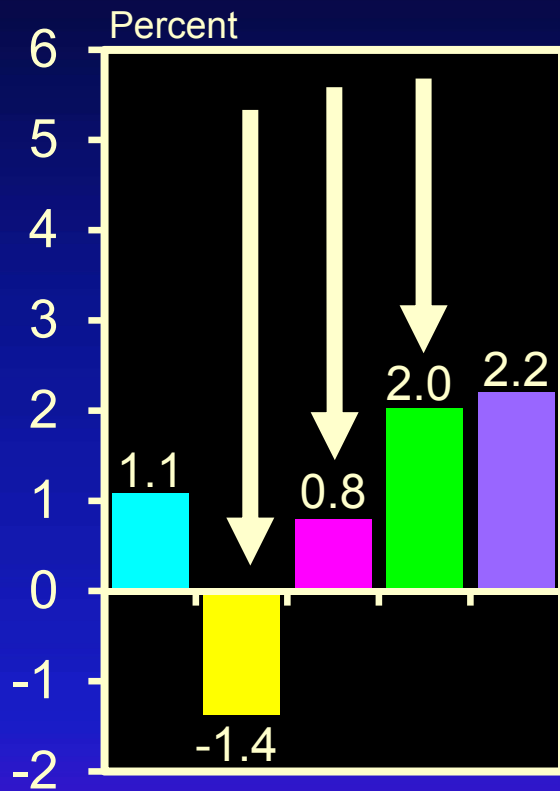
4.8

4.6

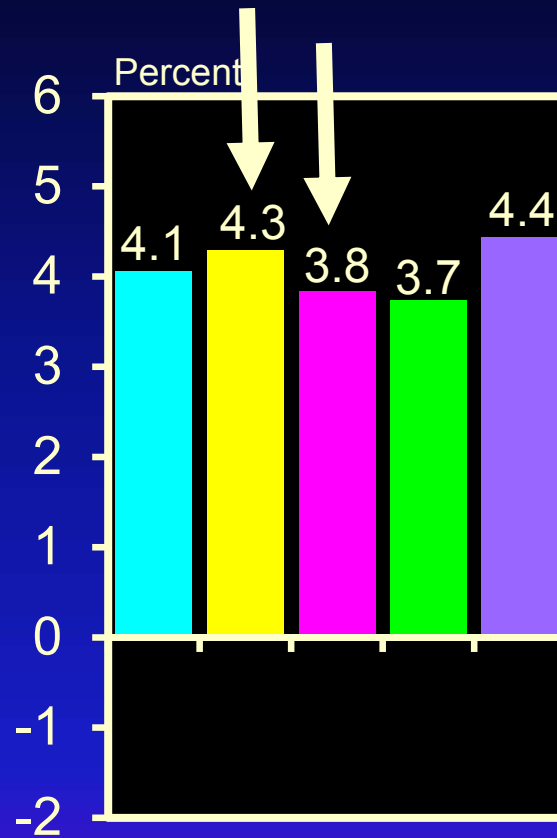
4.4

With data

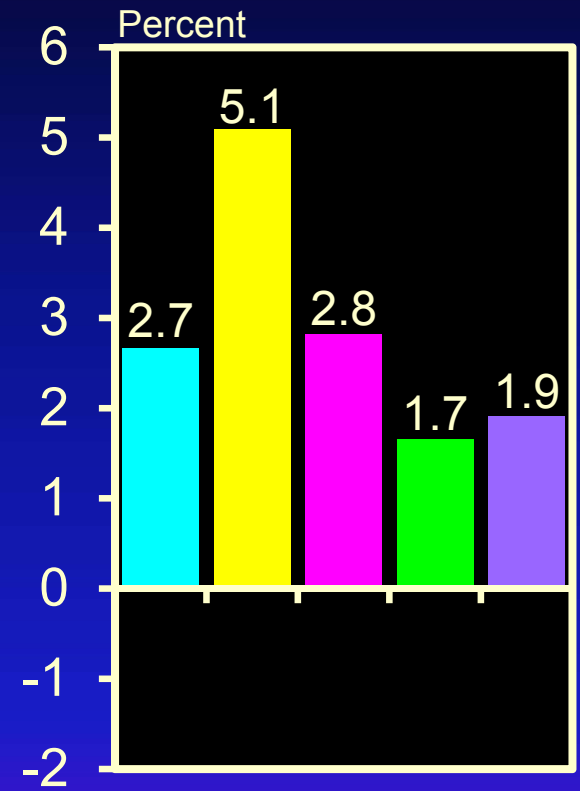
Michigan Inflation and Income Growth



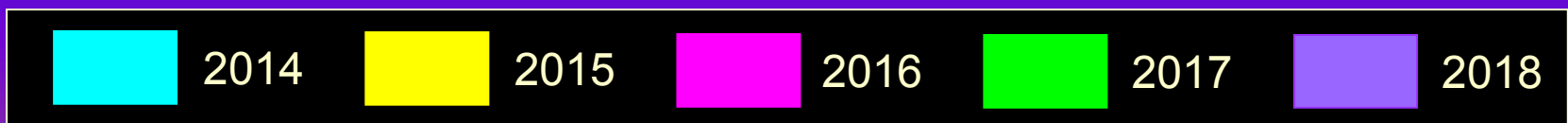
Detroit CPI



Personal Income



Real Disposable Income





www.rsqe.econ.lsa.umich.edu