



Research Seminar in Quantitative Economics
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THE U.S. AND MICHIGAN OUTLOOK FOR 2017-2019

**PREPARED FOR PRESENTATION AT THE
CONSENSUS REVENUE ESTIMATING CONFERENCE**

**LANSING, MICHIGAN
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BY

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“The Michigan Model”

Latest Data

- 2016q3 real GDP growth at 3.5 percent
 - 0.8 percentage points due to temporary export boost
 - 0.6 percentage points due to inventories
- Domestic final sales growth quite tame
 - Grew at 2.1 percent rate in 2016q3
 - Up 1.8 percent over 2015q3
 - 2014q3-2015q3 growth was at 3.0 percent
- Labor market keeps improving despite slow output growth

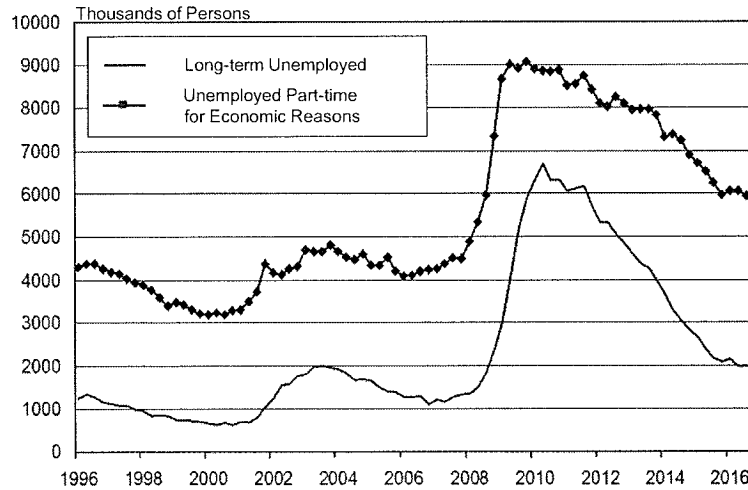
RSQE: January 2017

Labor Market

- Payroll job gains averaged 180,000/month in 2016
 - slightly behind the 2011–15 average of 202,000 jobs.
- Initial unemployment insurance claims relative to labor force keep setting record lows
- Job quits rate back to pre-2008 level
- 12-month growth of private hourly earnings at 2.9 percent - fastest during current expansion
- Several labor market indicators still show considerable slack

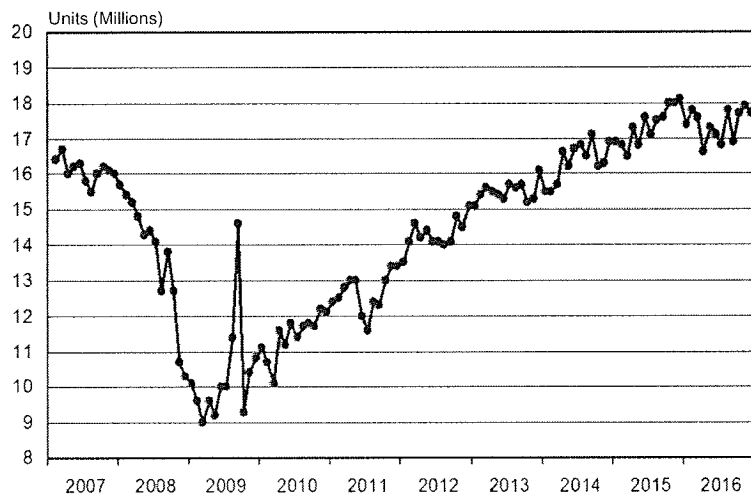
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Underemployed and Long-term Unemployed



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Light Vehicle Sales



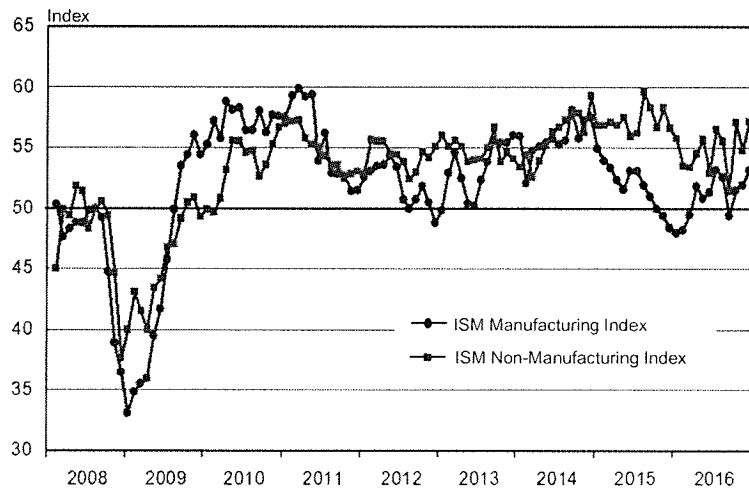
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Latest Data

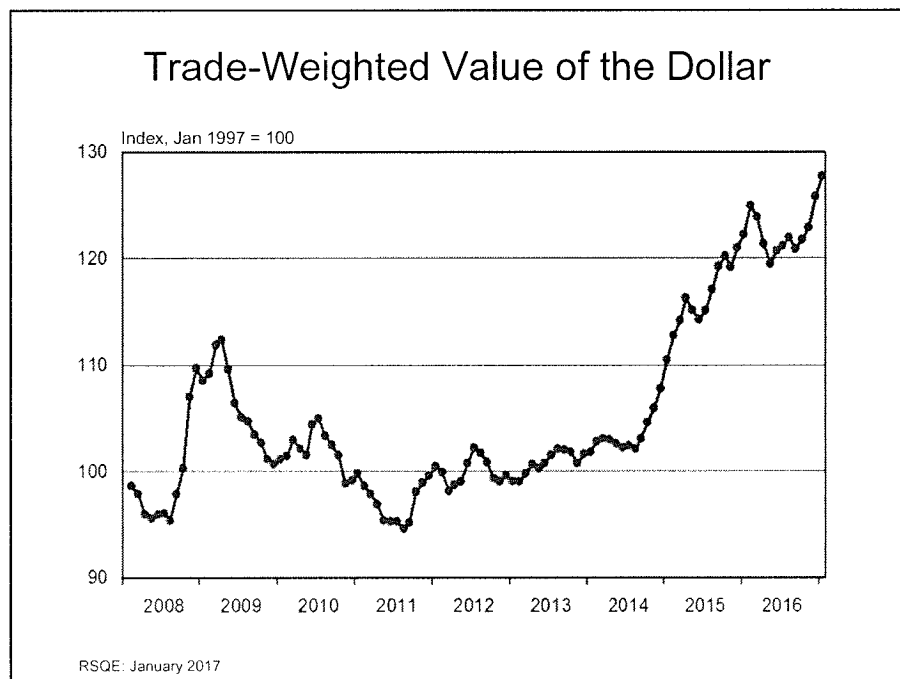
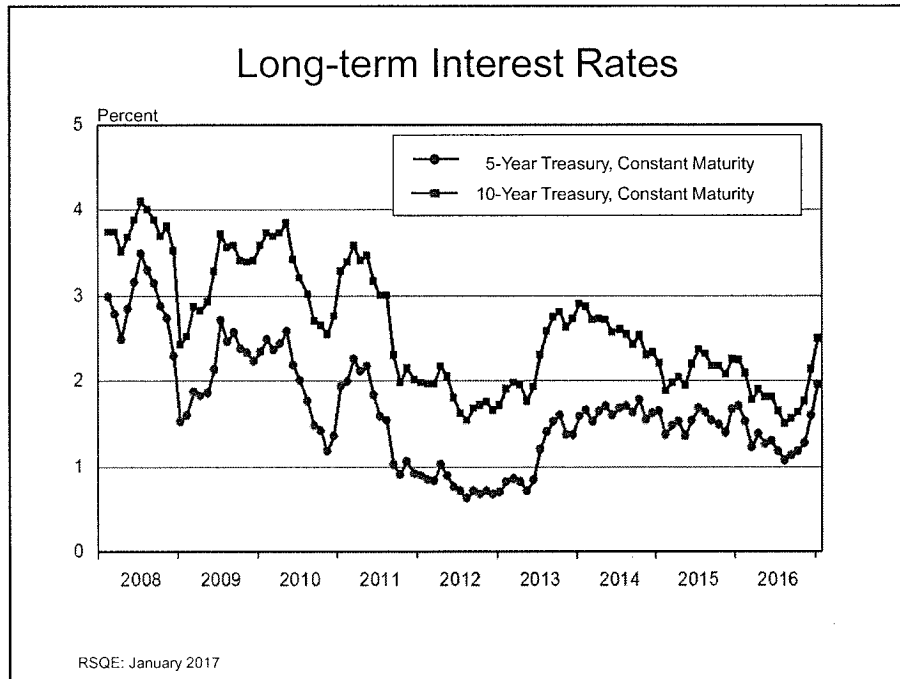
- Light vehicle sales set a new record in 2016, but may have peaked
- Fed's Manufacturing Industrial Production index flat during 2016
- ISM Manufacturing and Nonmanufacturing indexes show expansion, improved in November-December
- Long-term interest rates up sharply since early November
- The value of the dollar jumped, approaching post-Bretton Woods era high
- Sentiment indexes rose sharply in recent months

RSQE: January 2017

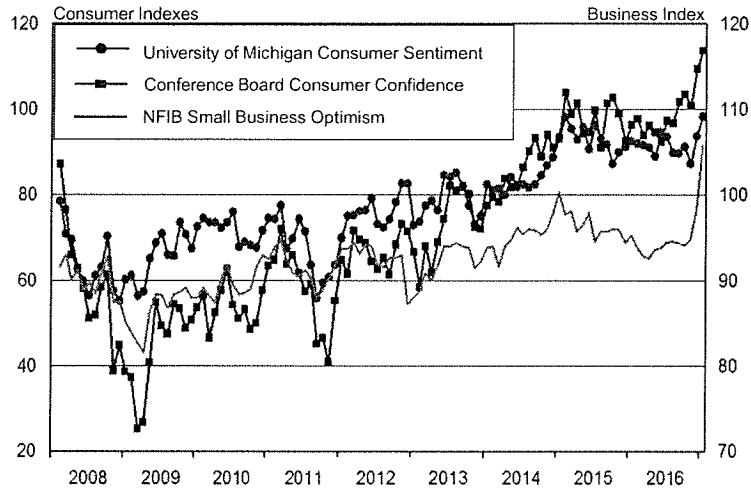
Institute of Supply Management Manufacturing and Non-Manufacturing Indexes



RSQE: January 2017

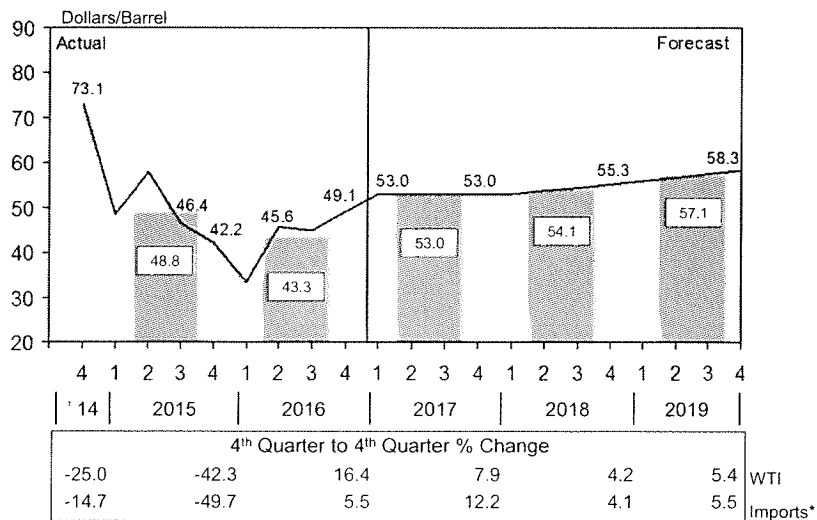


Sentiment Indexes



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Price of Oil (West Texas Intermediate Crude)



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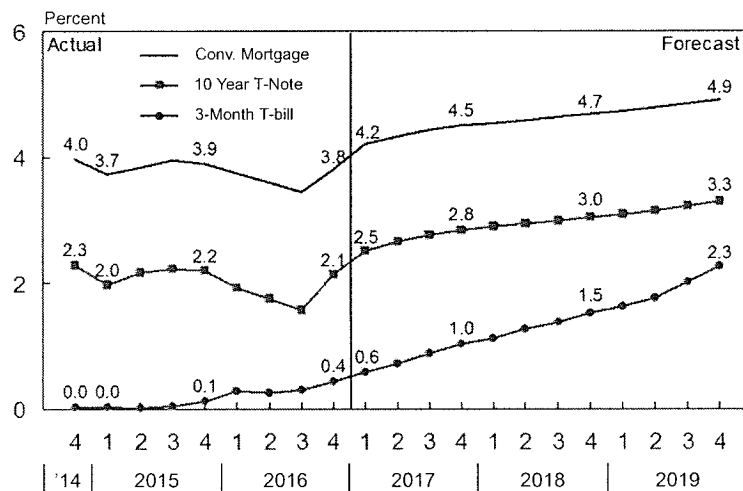
*Implicit deflator for petroleum & products

Monetary Policy

- In December, the Fed increased the target federal funds rate to 50-75bps range
- Motivation:
 - Uptick of core inflation
 - Continued improvement of employment indicators
- Further increases are data-dependent
 - Core inflation was very weak in November
- Path most consistent with our outlook:
 - Two 25 bps fed funds target hikes a year in 2017-18

RSQE: January 2017

Market Interest Rates



RSQE: January 2017

Fiscal Policy

- End of six years of divided government, major shifts in fiscal path likely
- ACA (Obamacare) repeal legislation seems certain
 - A delay to implementation of the repeal until 2020 is likely
 - Forthcoming repeal will likely slow ACA-related spending in 2018-19
- Sequestration relief beyond 2017 is uncertain
- Lower taxes likely
 - Lower personal and corporate tax trajectories
 - Starting in 2018
- Federal deficit widens by about 1% of GDP by 2019

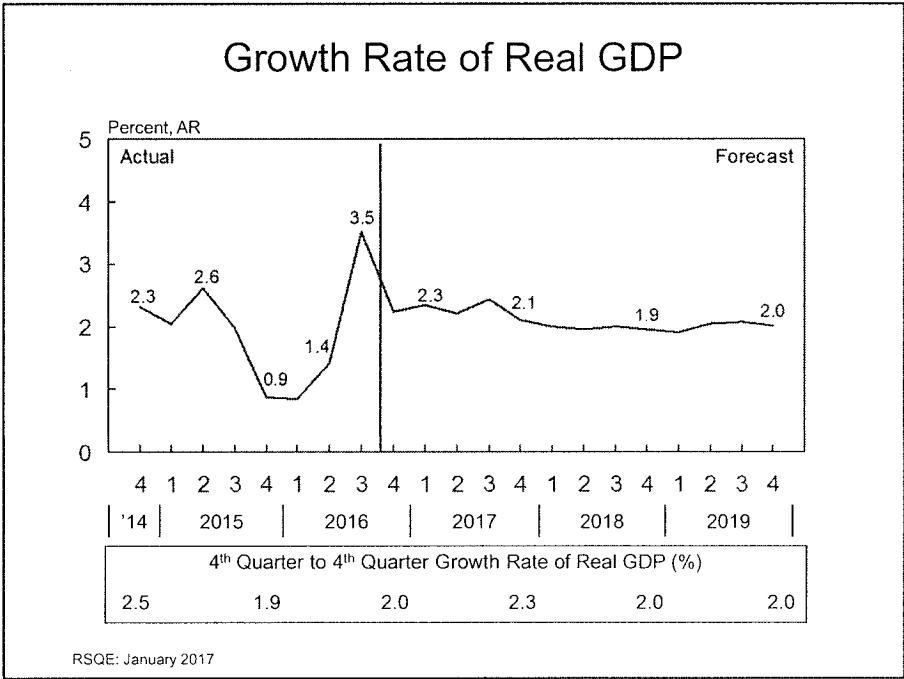
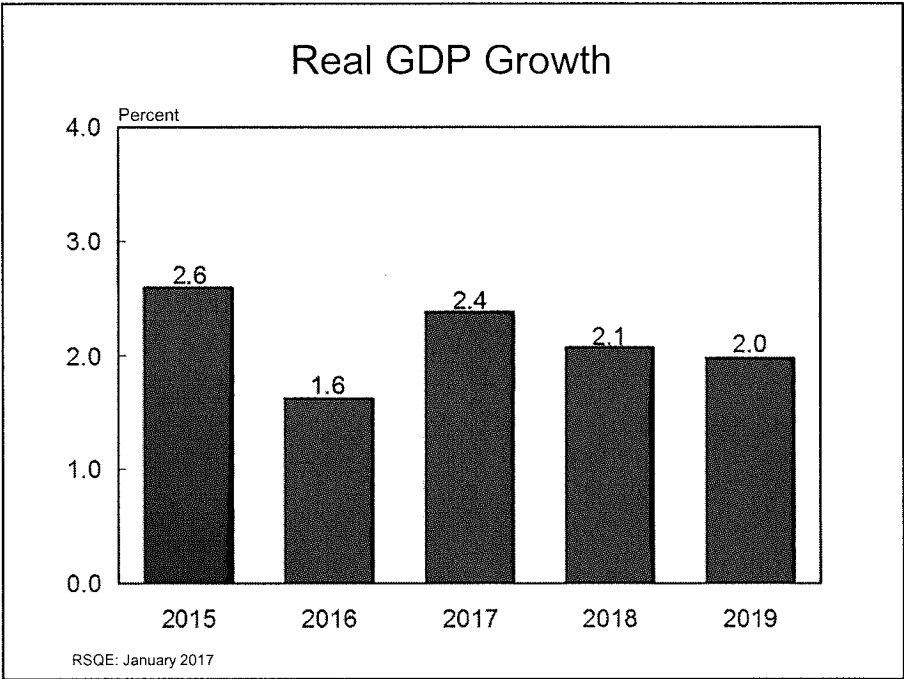
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Federal Budget, NIPA Basis

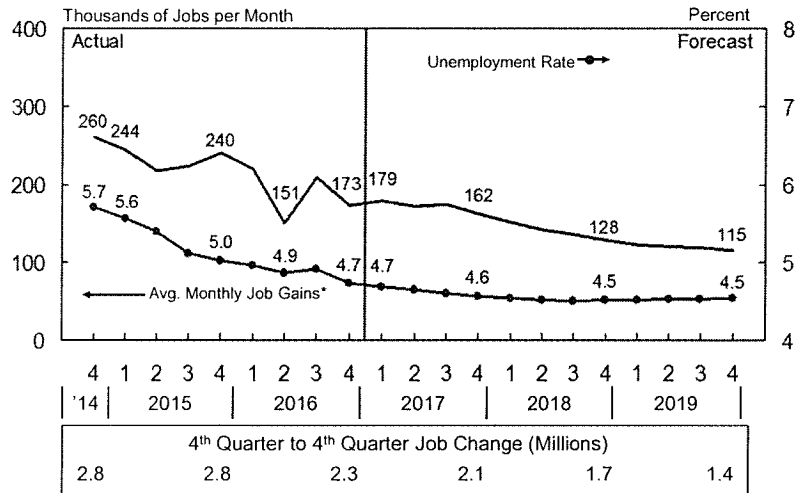
(Billions of Dollars)

	Forecast				
	FY'15	FY'16	FY'17	FY'18	FY'19
Current receipts	3399.2	3494.7	3637.2	3701.3	3763.7
% change	3.8	2.8	4.1	1.8	1.7
Current expenditures	3988.9	4124.0	4306.1	4483.4	4674.3
% change	3.1	3.4	4.4	4.1	4.3
Consumption	958.9	974.2	1004.4	1037.1	1072.4
% change	0.2	1.6	3.1	3.3	3.4
Transfer payments	2538.3	2630.9	2735.4	2829.7	2934.2
% change	5.1	3.6	4.0	3.4	3.7
Surplus (+) or deficit (-)	-589.7	-629.3	-668.9	-782.0	-910.6
Percent of GDP	-3.3	-3.4	-3.5	-3.9	-4.4

RSQE: January 2017



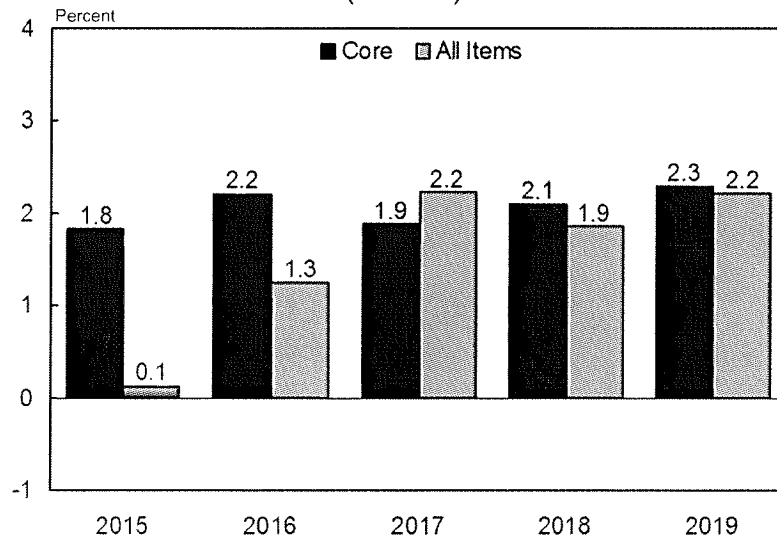
Nonfarm Payroll Employment Gains and Unemployment Rate



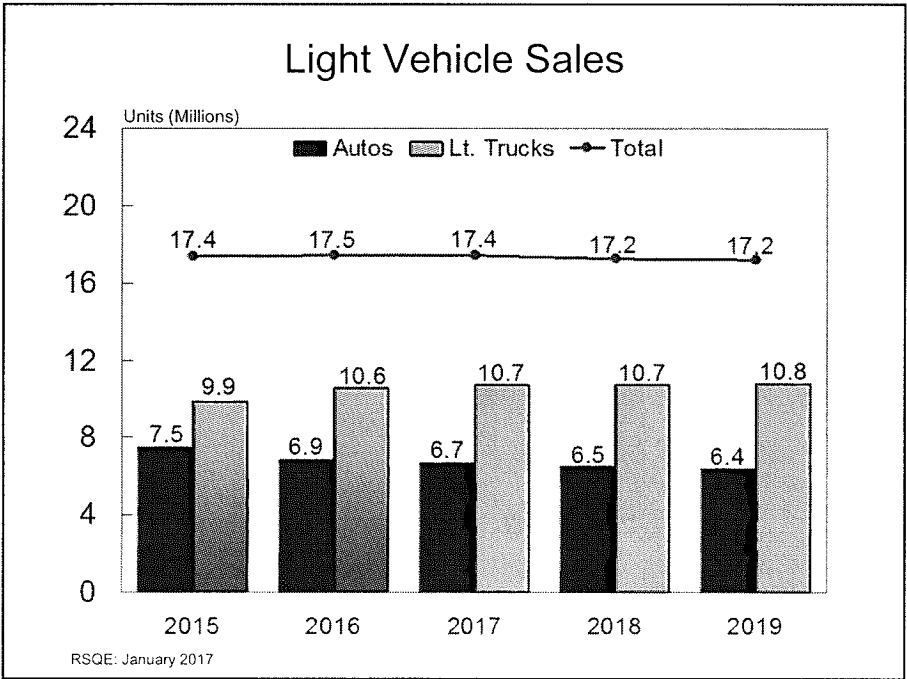
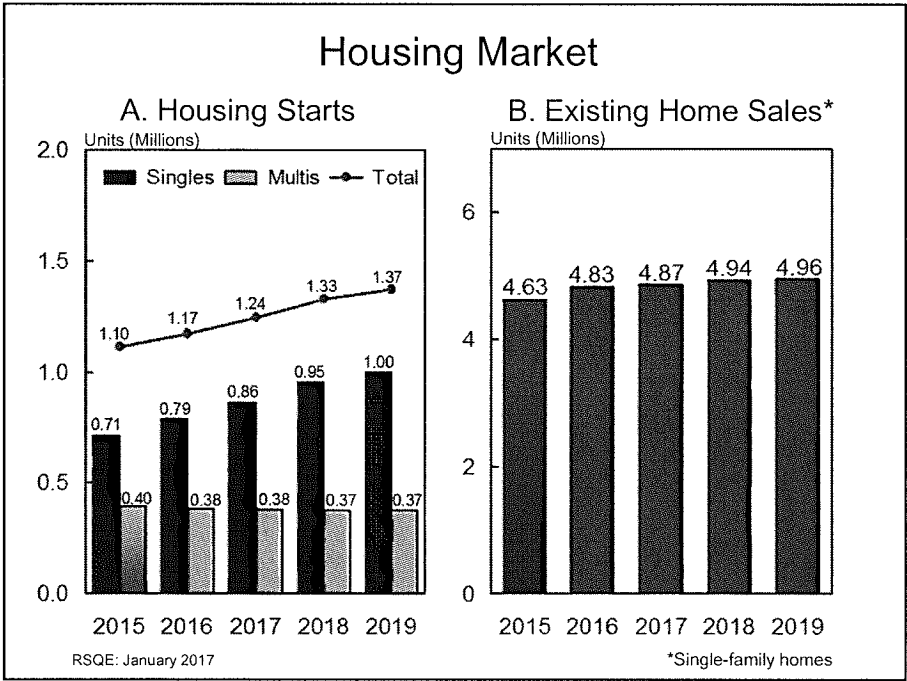
RSQE: January 2017

* 1/3 the change in quarterly value

Consumer Price Inflation (CPI-U)



RSQE: January 2017



Risks to the Outlook

- Fiscal path very uncertain
 - Taxes, infrastructure, ACA
- Monetary policy
 - Janet Yellen's term up in January 2018
- Trade policy
- World economic growth
- Commodity prices
- Abnormal weather

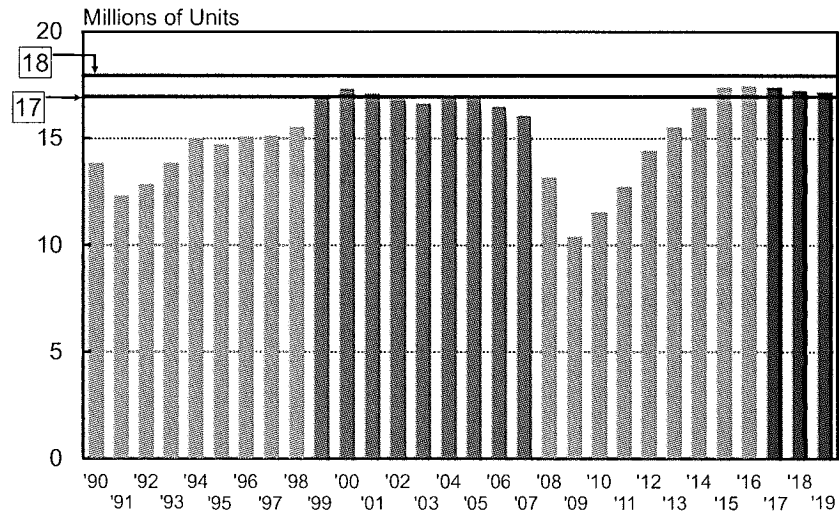
RSQE: January 2017

THE MICHIGAN ECONOMIC OUTLOOK FOR 2017–2019



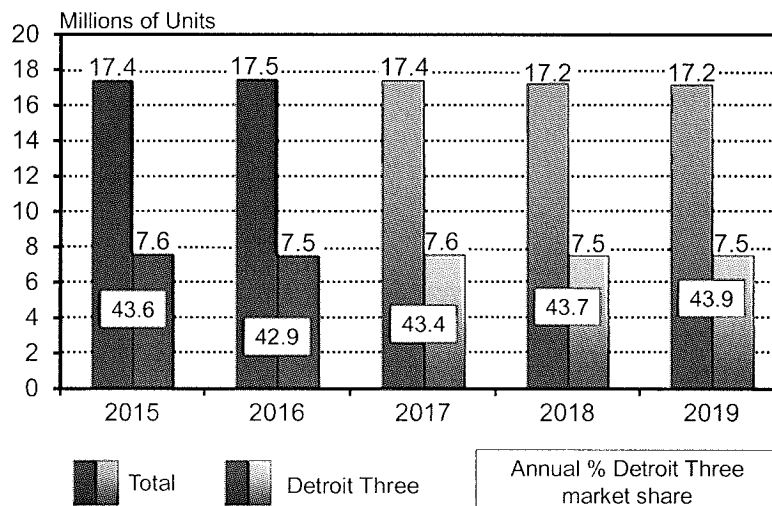
January 12, 2017

U.S. Light Vehicle Sales, 1990–2019



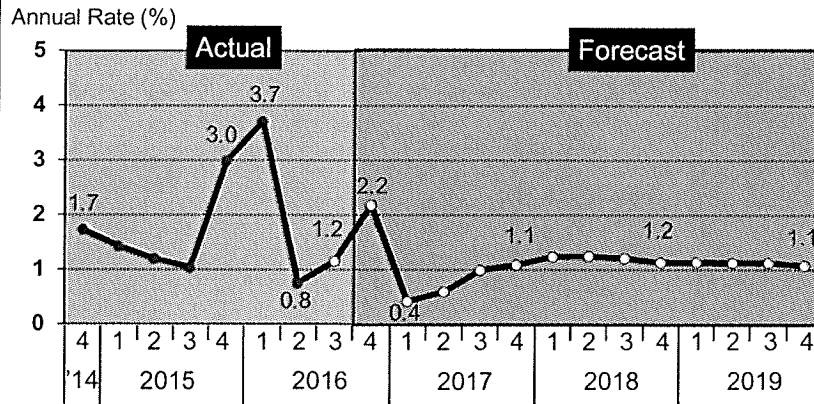
RSQE: January 2017

U.S. Light Vehicle Sales Total vs. Detroit Three, 2015–19



RSQE: January 2017

Michigan Wage and Salary Employment Growth



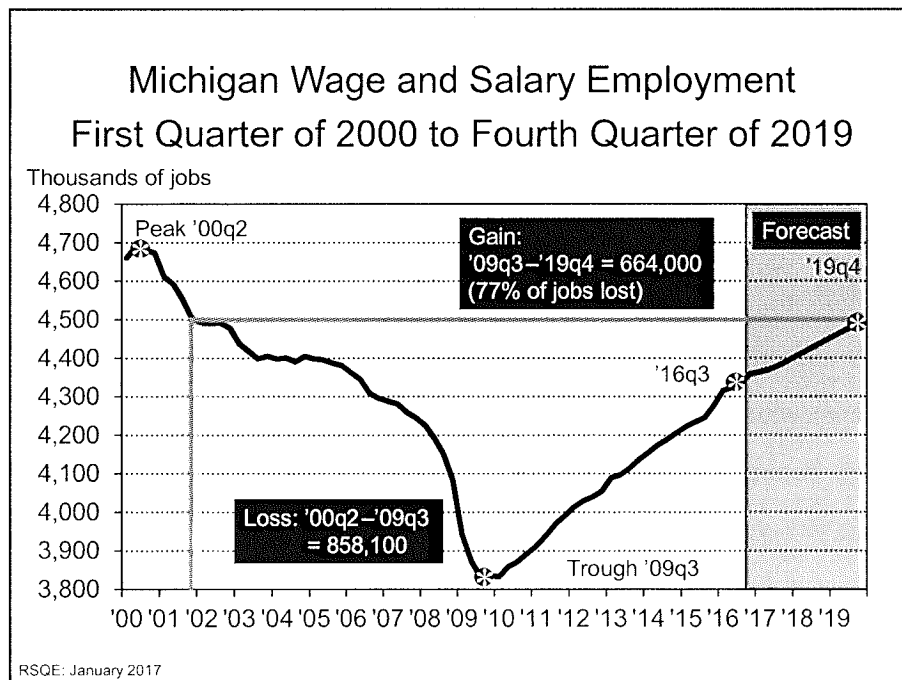
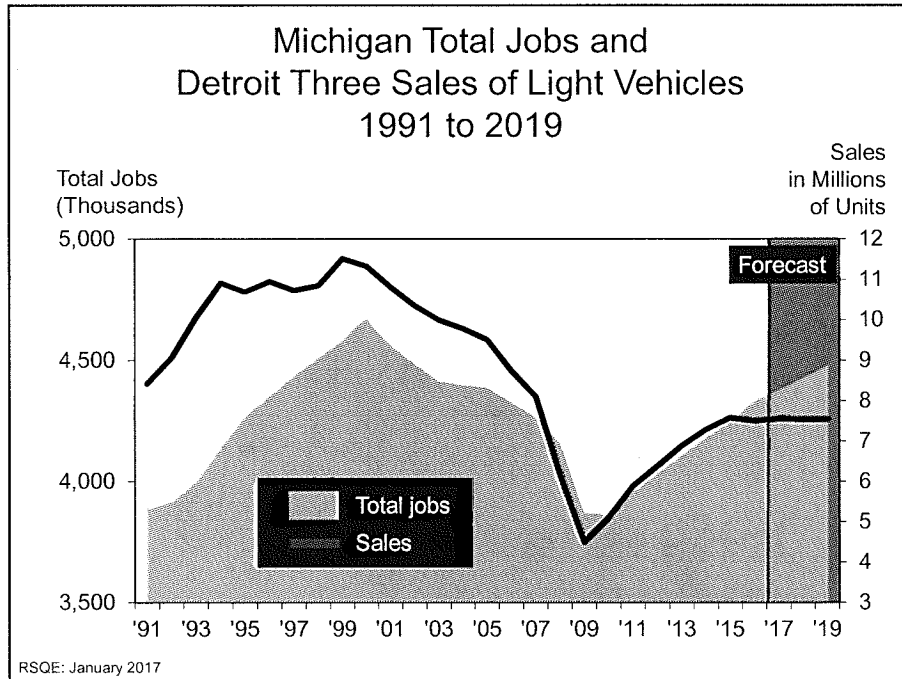
4th Quarter to 4th Quarter Growth Rate (%)					
1.7	1.7	1.9	0.8	1.2	1.1
4th Quarter to 4th Quarter Change (Thousands)					
70.4	69.8	83.0	33.6	52.9	49.5

RSQE: January 2017

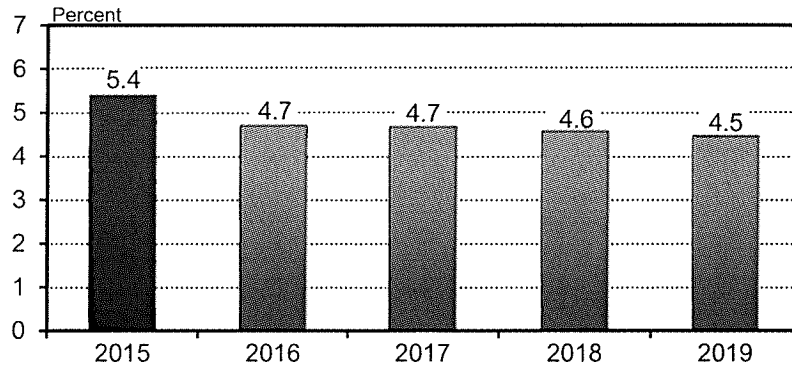
Change in Jobs by Industry Sector (Thousands of jobs)

	2014q4 to 2015q4	2015q4 to 2016q4	2016q4 to 2017q4	2017q4 to 2018q4	2018q4 to 2019q4
Total jobs	70	83	34	53	49
Manufacturing	14	6	-9	-1	-1
Construction	5	7	8	9	8
Prof. & bus. svcs.	14	26	16	18	18
Health svcs.	13	12	7	6	4
Trade, trans., util.	7	0	7	11	9
Government	2	6	0	1	1

RSQE: January 2017



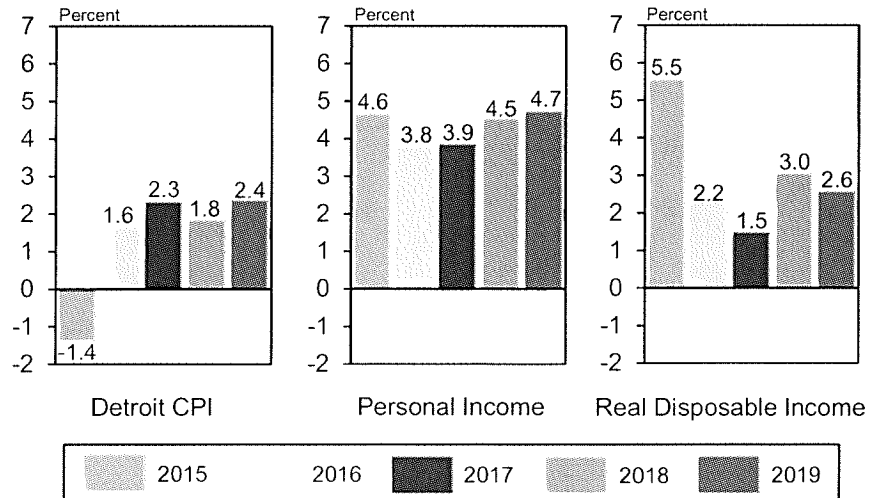
Michigan Unemployment Rate 2015–19



4th Quarter Unemployment Rate				
5.1	4.8	4.7	4.5	4.4
4th Quarter Labor Force Participation Rate				
60.4	61.4	61.2	61.3	61.5

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Michigan Inflation and Income Growth



RSQE: January 2017

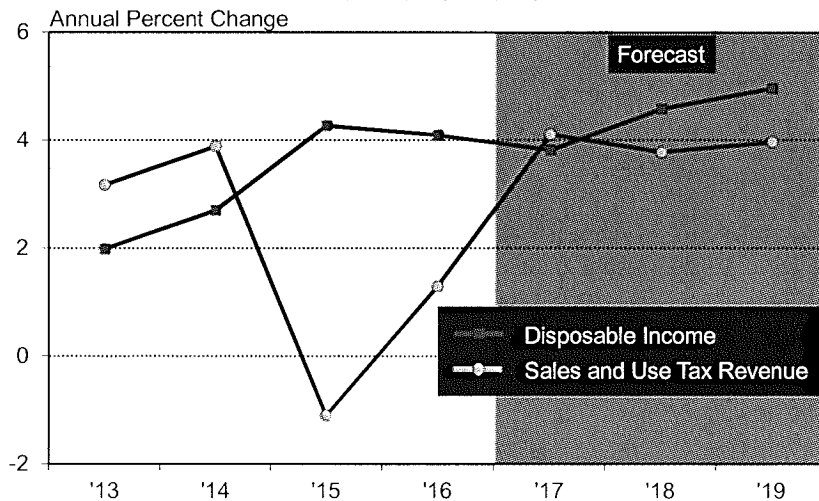
RSQE Forecast – State Revenues by Fiscal Year (Millions of dollars)

	Actual 2016 ^P	Forecast		
		2017	2018	2019
GFGP revenue	10,007	10,325	10,752	10,918
(% change)	(0.1)	(3.2)	(4.1)	(1.5)
Earmarked state SAF revenue	12,112	12,508	12,954	13,435
(% change)	(2.9)	(3.3)	(3.6)	(3.7)

^PPreliminary

RSQE: January 2017

Growth of Michigan Disposable Income And Sales and Use Tax Revenue Fiscal 2013-2019



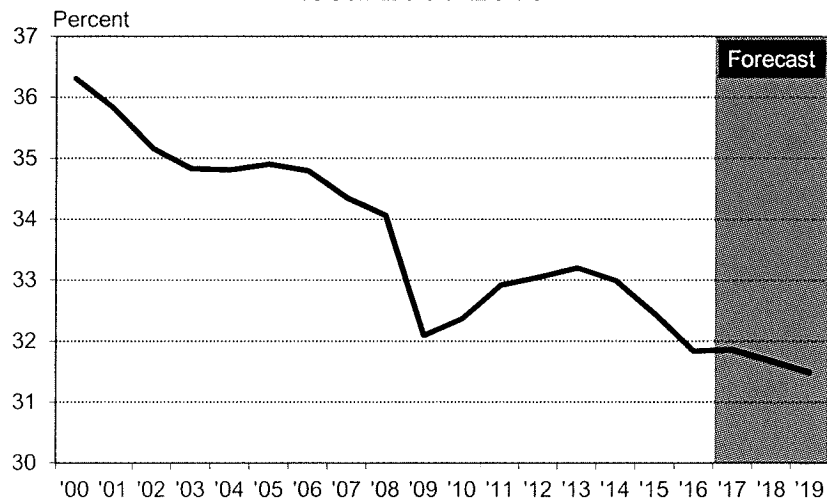
RSQE: January 2017

Components of Michigan Sales and Use Tax Revenue Growth Fiscal 2016 (preliminary)

Growth in disposable income	4.1%
Less:	
1. Increase in saving rate	0.3%
2. Decrease in gas prices	1.6%
3. Shift from goods to services	0.9%
Growth in sales and use tax revenue	1.3%

RSQE: January 2017

Taxable Share of Michigan Personal Consumption Fiscal 2000-2019



RSQE: January 2017

State Revenues by Fiscal Year
(Millions of dollars, except as noted)

	Actual	RSQE Forecast		
	2016 ^P	2017	2018	2019
<u>General Fund General Purpose</u>				
Personal income tax	6722	6977	7330	7307
(% change)	(4.3)	(3.8)	(5.1)	(-0.3)
Consumption taxes	2340	2180	2217	2279
(% change)	(0.1)	(-6.8)	(1.7)	(2.8)
Sales	1156	1204	1257	1311
Use	889	684	667	672
Other consumption	296	292	294	296
Business taxes	394	705	748	871
(% change)	(-50.6)	(79.0)	(6.1)	(16.4)
MBT/SBT/Corporate income	45	267	297	407
Other business	349	438	452	464
Other GFGP taxes	83	85	91	104
GFGP tax revenue	9540	9947	10386	10561
(% change)	(-0.6)	(4.3)	(4.4)	(1.7)
Nontax revenue	467	378	367	357
GFGP revenue	10007	10325	10752	10918
(% change)	(0.1)	(3.2)	(4.1)	(1.5)
<u>School Aid Fund</u>				
SAF taxes	11224	11608	12050	12529
(% change)	(2.2)	(3.4)	(3.8)	(4.0)
Lottery transfer	889	901	904	906
(% change)	(13.4)	(1.3)	(0.3)	(0.2)
Earmarked state SAF revenue	12112	12508	12954	13435
(% change)	(2.9)	(3.3)	(3.6)	(3.7)
<u>Addendum</u>				
Gross sales and use taxes	8761	9121	9466	9841
(% change)	(1.3)	(4.1)	(3.8)	(4.0)

^P Preliminary

RSQE: January 2017