The Economic Outlook for the U.S. and Michigan for 2017:

Implications for Supply Chain Firms

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Themes for 2017 Outlook

- The tension between structural and cyclical economic growth
- Absent unforeseen changes, the Congressional Budget Office has the US economy growing at 2% for as far as the eye can see. According to this scenario, trend growth has downshifted.
- Why is faster growth hard to come by?
  - Demographics, we are getting older, prime-work age population is declining as a share of population
  - Productivity is in a rut. The last productivity spurt largely reflected the take up of IT in the economy. Incremental gains from IT have been smaller. Need a next big thing to push productivity back up?
  - Boost from higher educational attainment has peaked.
  - All of these are structural factors and can mute the impact of cyclical policies.
- Counter-vailing force--The return of fiscal policy?
- New growth pattern isn't just a US issue

What Won't Change From 2016

- Employment gains should hold and unemployment rate will stay low.
- Rest of the world economy won't grow particularly quickly.
- Consumer will still be the key. Right now they say they are very confident.
- U.S. Household wealth will continue to break records.
- Raising interest rates will still face some headwind from loose monetary policy in the rest of the world.

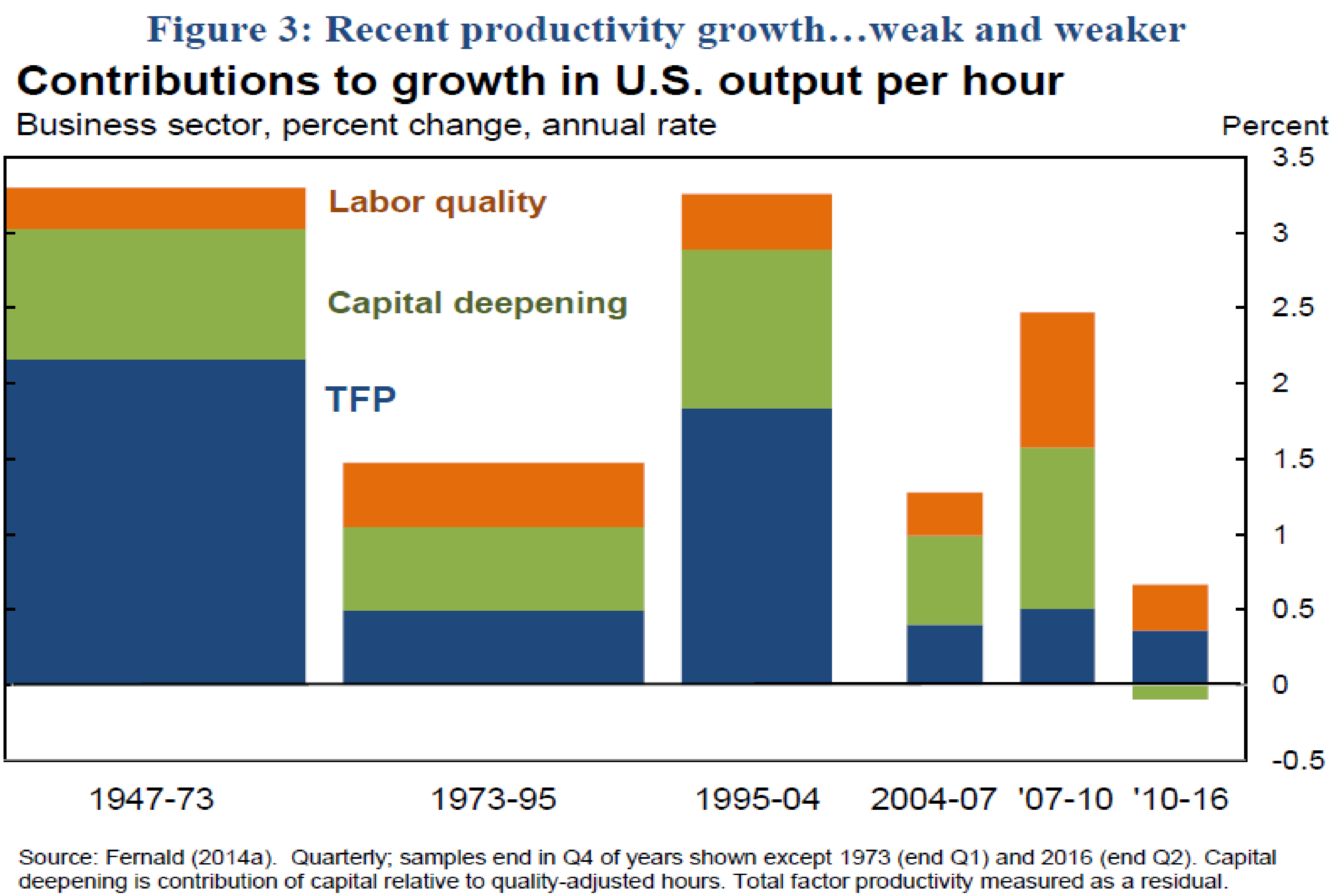
The "New Normal" for Aggregate Growth?

(CBO projection to 2026)

The primary culprit

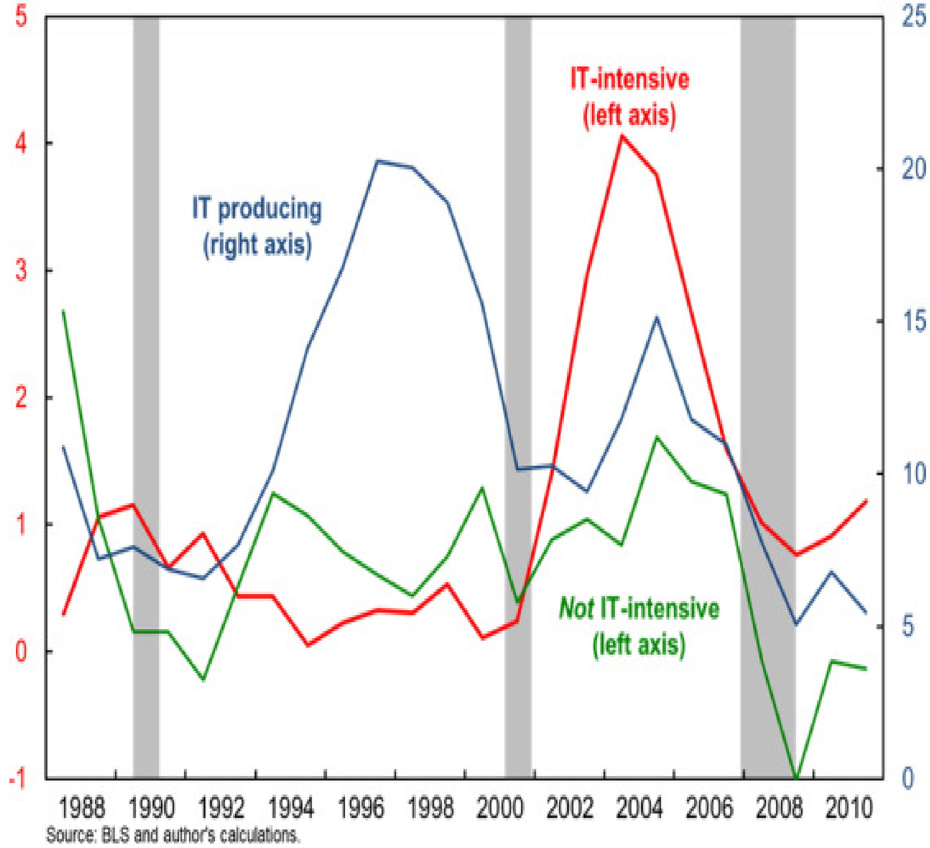
- Productivity growth or lack there of
  - Speed-limit for the economy
  - Productivity tends to go in disruptive waves
  - Last period of high productivity growth was the IT revolution
  - IT has played out in all but the consumer sector
  - Always a chance for a disruptive new technology
  - Evidence…

Sources of Productivity Growth



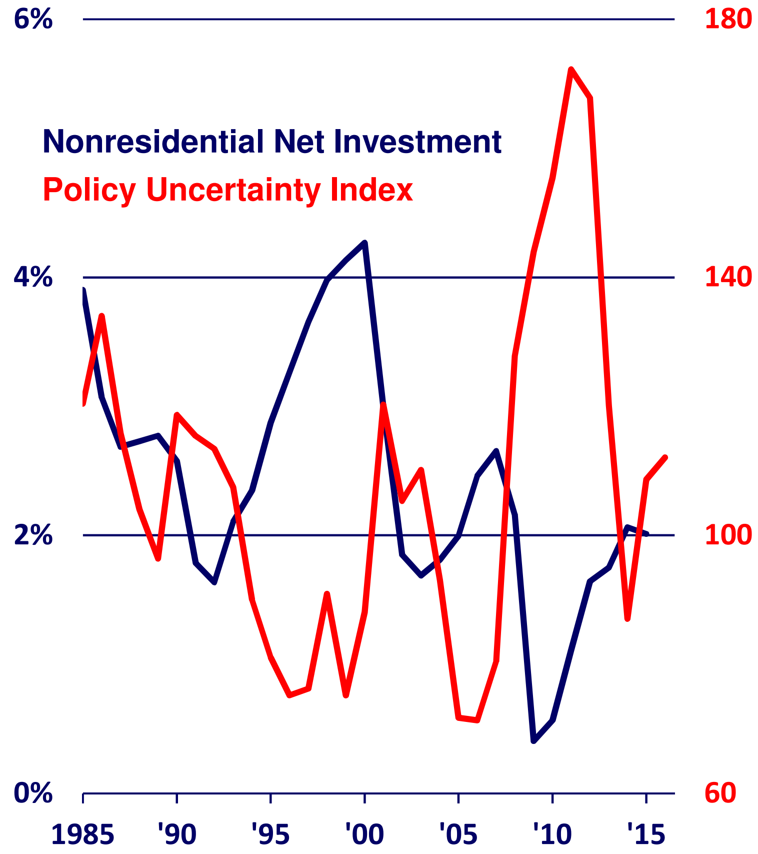
Productivity, Investment, and Uncertainty

Industry TFP Growth by Subgroup
(annual percentage change, 4-yr MA)



Notes: Fernald (2014) Top panel decomposes TFP for "narrow business" (i.e., excluding natural resources, construction, and FIRE) into TFP for IT producing, IT-intensive-using, and non-IT-intensive industries.

Nonresidential Investment and Policy Uncertainty
(percent and index)



Source: Data from the Bureau of Economic Analysis and "Measuring Economic Policy Uncertainty". (2012). Scott R. Baker, Nicholas Bloom, and Steve Davis. Data accessed via Haver Analytics.

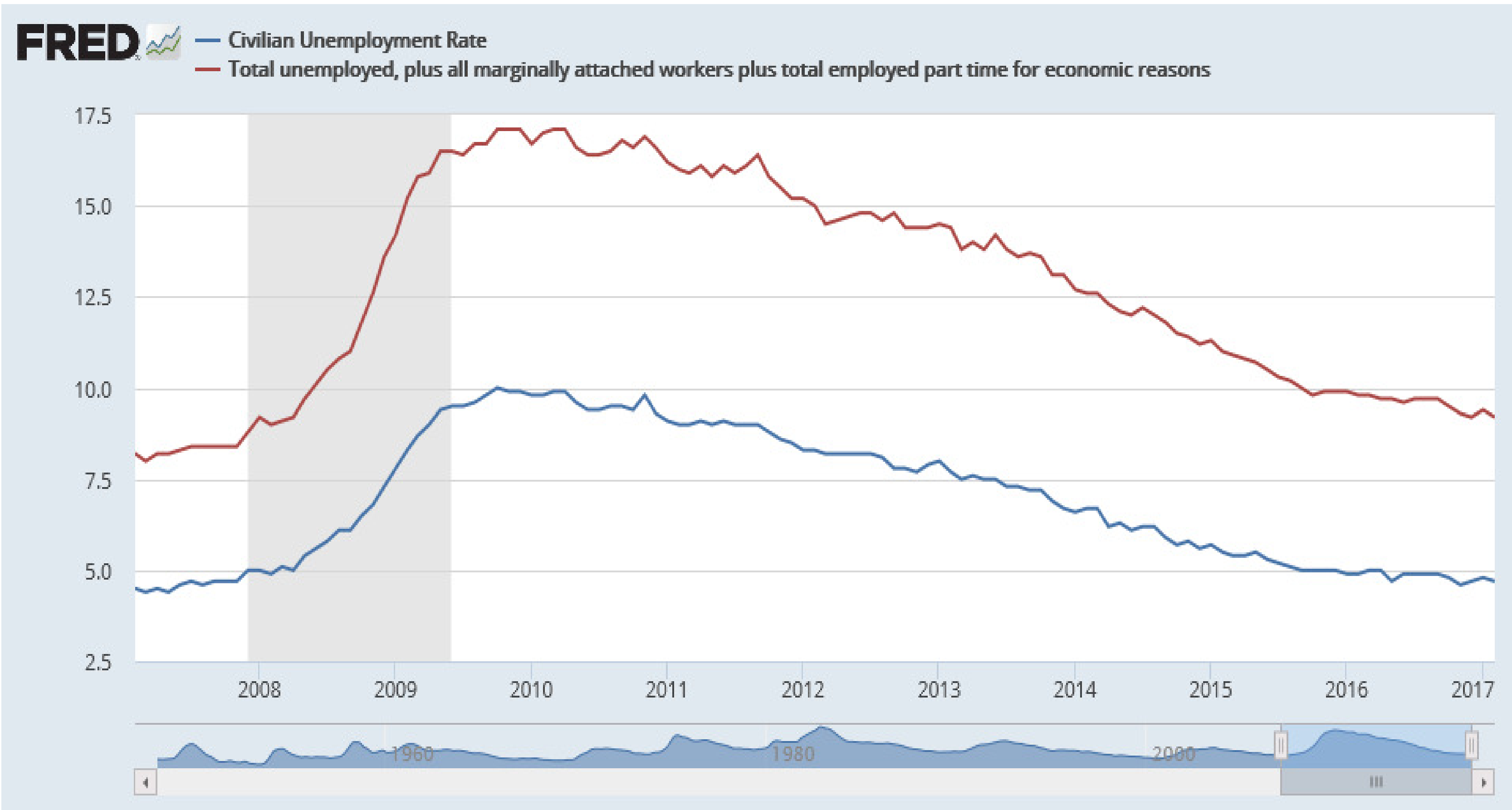
Sluggish World Growth?

(IMF World Economic Outlook, October, 2016)
annual percent change in output

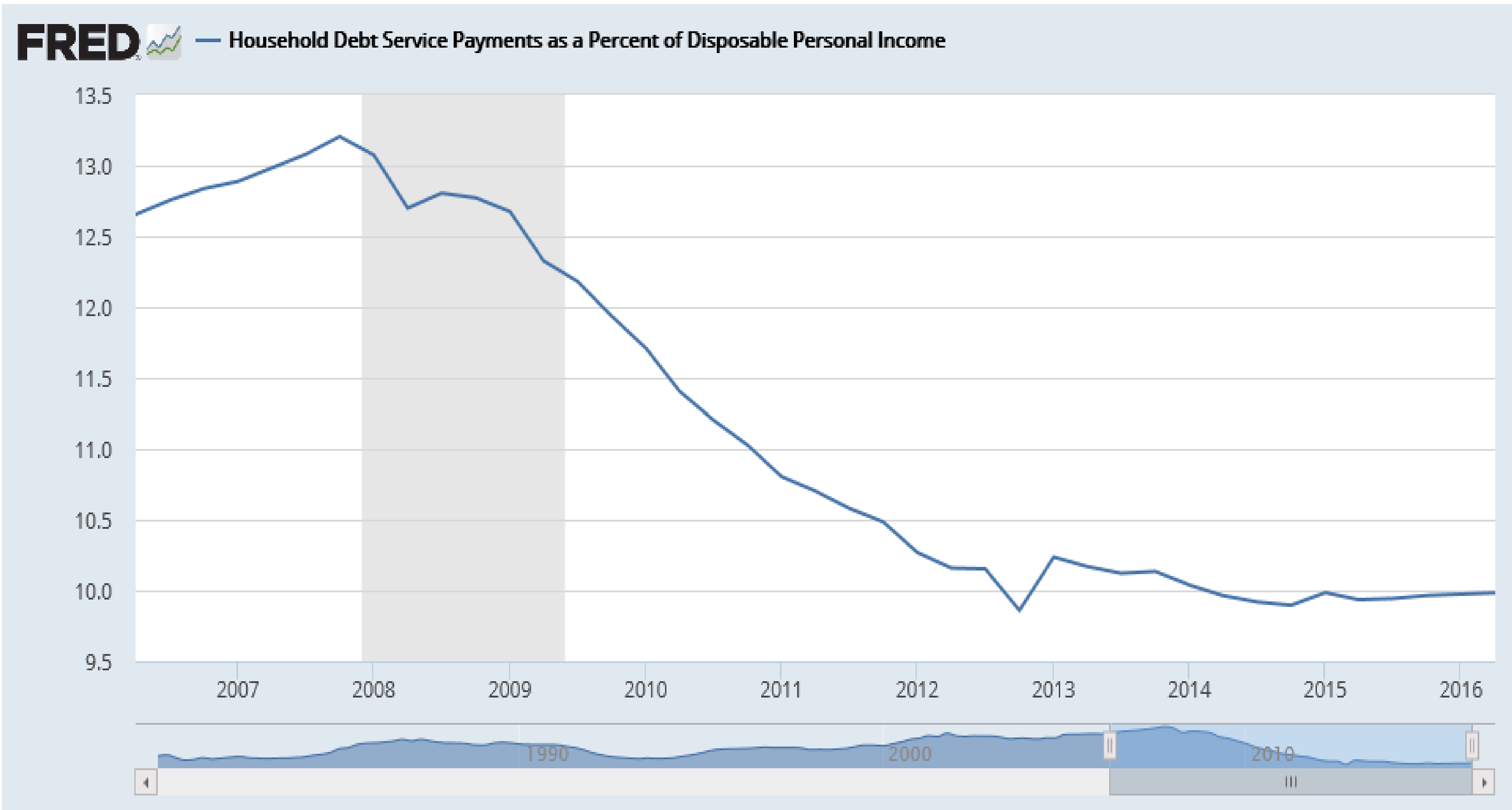
	2016	2017	2021	Average 1998-2007
US	1.6	2.2	1.6	3.0
Euro	1.7	1.5	1.5	2.4
Japan	0.5	0.6	0.6	1.0
All Advanced	**1.6**	**1.8**	**1.7**	**2.8**
Russia	-0.8	1.1	1.5	5.8
China	6.6	6.2	5.8	9.9
India	7.6	7.6	8.1	7.1
All Emerging and Developing	**4.2**	**4.6**	**5.1**	**5.8**
World	**3.1**	**3.4**	**3.8**	**4.2**

Employment Continues to Improve While Unemployment falls to 4.7%

Still, the U-6, While Improving is Higher Than We Would Like, (9.2)



Households have deleveraged



Key to Consumer Spending--Atlanta Fed Wage Tracker Shows Wage Gains of 3.2%

(January, 2017)

The Current Forecast

- Last FOMC (December, 2016) central tendency projection for GDP growth in 2016 is 1.8 to 1.9%. Long-run 1.8% to 2.0%. Faster growth in 2017 at 1.9 to 2.3%
- inflation is running well below target. CPI and core have seen either declines or minimal growth. FOMC forecast has PCE at 1.5% in 2016. Long-run estimate is at 2%, with 2017 projected at 1.7% to 2.0%.
- FOMC forecast has unemployment 4.7% to 4.8% (2016), 4.5 to 4.6 % (2017). Long-run—4.7% to 5.0%
- Fed policy. December, 2016 was the second quarter point increase since 2008. Big issue will be the pace of potential future increases to get to “normalization” (now 2.9%). Latest meeting suggests possibility of 3 hikes in 2017.

The wild card--potential impact of fiscal policy

- Many forms—tax cuts, infrastructure, defense spending
- Issues to consider
  - Deficit impact
  - Who benefits? Marginal propensity to consume
  - Impact on monetary policy/inflation—do interest rates rise? Impact on interest rate sensitive purchases like homes and cars
  - Timing? Actions require legislative action, also timing relative to the condition of the economy (tight employment/rising interest rates?)
  - Unintended consequences—example state and muni-debt,
    - Lower marginal tax rates will lower the incentive for high income earners to buy muni-debt
    - Caps or outright elimination of tax-free state and local debt issuance could raise state and local borrowing costs

Turning to Michigan

- State has certainly benefitted from a strong auto rebound. Further product mix has also been good for domestic firms as trucks and SUVs have been the stars.
- Fiscal conditions at the state level have stabilized although certain local governments are still under pressure.
- Western Michigan has really gained traction. Grand Rapids was recently named to a list of best places to live.
- Employment recovery since the end of the recession has picked up but still below US levels.

Job Recovery—U.S. and Midwest

	Recovery Rate (% of jobs recovered since the end of the recession)
Illinois	105.1
Indiana	140.6
Iowa	217.5
Michigan	129.1
Wisconsin	138.8
U.S.	**193.2**

Michigan Job Recovery vs the US

(December, 2016)

	Michigan			U.S.		
	Losses during recession (in 000s)	Performance during the recovery (in 000s)	Recovery rate	Losses during recession (in 000s)	Performance during the recovery (in 000s)	Recovery rate
All industries	-407	525	129.1%	-7,393	14,283	193.2%
Construction	-37	30	80.1%	-1,534	684	44.6%
Education, Health	7	59	n/a	689	3,358	n/a
FIRE	-15	27	179.1%	-461	528	114.5%
Government	-3	-44	n/a	200	-353	n/a
Information	-5	2	38.9%	-228	-35	-15.4%
Leisure	-25	55	218.7%	-474	2,561	540.3%
Manufacturing	**-163**	**163**	**100%**	-2,020	549	27.2%
Other services	-7	5	62.2%	-144	345	239.6%
Prof. and Business Svs.	-91	173	191.2%	-1,615	4,067	251.8%
Trade, Transport and Utilities	-68	55	81.0%	-1,806	2,579	142.8%

Survey Views on the Michigan Economy

- 5th Annual Economic Outlook Survey—Baker Strategy (https://www.bakerstrategy.com/)
- Topline results—business expectations are good. On a 10 point scale (10 being excellent), Michigan businesses rate their prospects at 7.4 for the first 6 months of 2017, 7.6 for the year and 7.5 for the next 3 years.
- Michigan businesses are also bullish on their local community (7.8), region (7.8) and state (7.6)

Other results

- 58% expect to hire more people
- 66% expect to grow within the state
- 43% expect to make a capital expenditure

Greatest challenge for 2017

- 67% attracting and retaining top talent
- 47% healthcare costs
- 36% finding skilled labor
- 33% simpler regulation

Overall views on Michigan

(10 point scale, 10=excellent)

Great state for raising a family	7.9
Great state for young professionals	6.8
Great place to start or grow a business	6.9
Has a strong, vibrant economy	6.2
Is business friendly	6.9
Is on the right track	6.8
Has effective government leaders	5.8

Potential Risks for Michigan

- Auto cycle appears to be slowing. Inventory is building (70 days, highest since 2009) and incentives are up (average of $3800 per vehicle, up $400 since last year). However the age of the fleet is still old and if wages rise, positive employment will still provide demand.
- NAFTA reset. Cross border supply chains have been established with NAFTA in mind so adjustment will be difficult. Further the issue of a border adjustment tax looms. U of M has forecasted a drop of 5% in private sector jobs if a trade war erupts
- Continued sporadic problems with local municipalities. How does the state intervene?
- Michigan has been deferring infrastructure investment---needs to catch up. Moody's estimates the annual investment gap for transportation, water and communications at $4 billion (transportation alone is $2.7 billion).

Supply Chain Firms

- Auto slow down could trim growth but few predict a crash.
- Real estate cycle may also be slowing so implications for office furniture demand.
- Logistics is still hot…warehouse and distribution centers are big as e-commerce continues to expand.
- Supply chains with foreign exposure may face an uncertain future…trade adjustment might trigger high tariffs. Lots of policy uncertainty.

Conclusions

- US economy has structural headwinds that will act to limit potential growth. The key will be the role of productivity in changing that dynamic.
- Short-term outlook looks okay, GDP growth in the 2 to 2.5% range, continued gains in labor, some wage pick up.
- Consumer will be key to 2017. Right now they are confident.