The economy today, and some thoughts on the economy tomorrow

2017 Housing Forecast Program – HBA Austin

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McCombs School of Business
University of Texas at Austin
Map of my talk this morning

- The US Economy today, with a close look at jobs and interest rates and mortgage rates
- The World Economy today
- The Texas and Austin Economy
- A look at a few of the new president’s potential proposals on, (1) trade, (2) infrastructure spending, (3) taxes and tax rates
- A forecast for US economic growth and interest rates (this seems harder than some years I’ve done this...)}
US Recovery Began in June 2009

Change in Real GDP
Percent change at annual rate (seasonally adjusted)

- Fourth quarter 2008: Financial stabilization (TARP)

Source: Bureau of Economic Analysis.

CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

1% – 3% steady since 2010
Since early 2010 Employers have added roughly 200,000 jobs a month

![Monthly Change in Nonfarm Employment](Center on Budget and Policy Priorities)

*Source: Bureau of Labor Statistics.*
Unemployment Rate is under 5%
Unemployment Rate with discouraged and under-employed a bit higher, but much improved.
Unemployment count – how many people unemployed?

16 million

7 million

Source: U.S. Bureau of Labor Statistics
fred.stlouisfed.org
Total US Employment is now above the 2007 peak

138 million

145 million

Source: US. Bureau of Labor Statistics
fred.stlouisfed.org
Last couple of months are below our +200K/month rate, but still overall a strong 2016 for jobs in the US

**Monthly change in nonfarm payroll employment in the United States from November 2015 to November 2016 (in 1,000)**

<table>
<thead>
<tr>
<th>Month</th>
<th>Value (in 1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov '15</td>
<td>280</td>
</tr>
<tr>
<td>Dec '15</td>
<td>271</td>
</tr>
<tr>
<td>Jan '16</td>
<td>168</td>
</tr>
<tr>
<td>Feb '16</td>
<td>233</td>
</tr>
<tr>
<td>Mar '16</td>
<td>186</td>
</tr>
<tr>
<td>Apr '16</td>
<td>144</td>
</tr>
<tr>
<td>May '16</td>
<td>24</td>
</tr>
<tr>
<td>Jun '16</td>
<td>271</td>
</tr>
<tr>
<td>Jul '16</td>
<td>252</td>
</tr>
<tr>
<td>Aug '16</td>
<td>176</td>
</tr>
<tr>
<td>Sep '16</td>
<td>208</td>
</tr>
<tr>
<td>Oct '16*</td>
<td>142</td>
</tr>
<tr>
<td>Nov '16*</td>
<td>178</td>
</tr>
</tbody>
</table>

*Note: *Numbers for October and November 2016 are projected.

Source:

Additional Information:
And wages have started to increase a bit, growing well above inflation.

**Force Awakens**
The unemployment rate rose slightly in September. That was largely due to people finally coming off the sidelines and looking for work again, lured by rising wages and improving prospects.

**Unemployment rate**
Change since ‘11 in share of labor force that’s actively looking for work

- **Ages 25 to 54**
- All 16 or over

**Labor-force participation**
Change since ‘11 in share of population that is working or looking for work

- Ages 25 to 54
- All 16 or over

**Earnings and consumer prices**
Change from a year earlier

- Average hourly earnings (for all private employees)
- Inflation (ex. food and energy)
- Inflation (all items)

The jobless rate rose because the number of people actively looking for work (■) grew more quickly than the number of people who have jobs (□). Many job-seekers returned after dropping out of the labor force.
Asset prices have recovered in both real estate and the stock market

Residential Housing

Many healthy housing markets Now exceed 2007 highs.

Source: S&P Dow Jones Indices LLC
fred.stlouisfed.org

myfed.red/g/cgix
Asset prices have recovered in both real estate and the stock market

Moody's/RCA National Commercial Property Price Indices

Commercial Real Estate

Prepared by PacVentures Inc.
Asset prices have recovered in both real estate and the stock market.
And consumers feel good right now, getting back to that 2007 feeling.
Global interest rates are quite low, continuing a trend started many years ago (here, 1995)

Nominal 10-Year Sovereign Yields
Percent

Start recession

Source: National Sources via Haver Analytics.
Global Interest Rates are Historically Low: 10-year rates

Source: Bloomberg LP.
Truly historically low – UK rates: 1700 – today

Of historical interest
Bank of England base rate, %

Source: Bank of England

Economist.com
US Mortgage rates followed general rates down, as expected (1995–today)
With a recent dramatic uptick,
not unlike the uptick in 2013
And the uptick in 2010, all three followed by continued decline
Greenspan said “conundrum”, Bernanke said “savings glut”, all agree there is still plenty of fear.

Savings glut from 2 structural factors, which are related, and one recent factor:
1. Global Ageing population in richer nations saving for retirement;
2. Adding China to the world economy = a billion people with a 40% savings rate; “that’s a lot of new supply”.
3. The Great Recession scared people into saving more; less confidence in value of savings = save more.

The real deal
“World” real interest rate
Average ten-year inflation-indexed bond yield, %
G7 countries, excluding Italy

Sources: “Measuring the ‘world’ real interest rate”, by M. King and D. Low, NBER working paper, February 2014; The Economist
*The Economist estimate

Economist.com
Large supply of capital out there – Very large sovereign funds

The Economist, 9–24–16

The Economist, 9–24–16
Where are we today, getting close to ten years from the 2008 crashes?

- **Jobs have recovered**: the labor market continues to add close to 200,000 jobs per month, and wages are starting to rise, finally.
- **Asset prices have recovered**: home prices have for the most part recovered, and now exceed 2007 in good markets, commercial real estate has done great, stock market gains have been very good.
- **Interest rates are still low**, which is nothing to complain about, but does cause some pause in the overall rosy story about future economic growth.
Now I want to show you a bit of the world economy, then we’ll come back to the Texas and Austin economies

- World economy numbers, because we are not alone
  - ~ 1/3 of sales by S&P 500 companies are sales to international customers, exports
- Texas and Austin economy numbers
World population ~ 7.3 billion, of which ~ 2.7 (>1/3) are China and India

10 Most Populated Countries in the World
Population in Millions - June 30, 2016

- China: 1.4 billion
- India: 1.3 billion
- United States: 323 million
- Indonesia: 258 million
- Brazil: 206 million
- Pakistan: 192 million
- Nigeria: 186 million
- Bangladesh: 162 million
- Russia: 146 million
- Japan: 126 million

Euro Area ~ 338

7,340,093,980 world population estimated for June 30, 2016
Copyright © 2016, Miniwatts Marketing Group
## World GDP – 3 big GDP ‘regions’

<table>
<thead>
<tr>
<th>rank</th>
<th>country</th>
<th>2016 GDP (billions)</th>
<th>share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>United States</td>
<td>$18,558</td>
<td>25%</td>
</tr>
<tr>
<td>2</td>
<td>BRIC</td>
<td>$16,337</td>
<td>21%</td>
</tr>
<tr>
<td>3</td>
<td>EU total</td>
<td>$16,229</td>
<td>20%</td>
</tr>
</tbody>
</table>

*BRIC = Brazil, Russia, India, China  
  = BIG emerging economies*
World GDP – US, EU, China
(China is most of BRIC)

Nominal GDP
IMF WEO 2015

United States
EU
China
India
Japan
Brazil
Canada
Growth in World GDP – REGIONS
Where has it come from? BRICS

World GDP
Contribution to growth, percentage points

- Rich countries
- BRICs
- Other emerging markets

Sources: IMF; The Economist

*Estimates based on 58 economies representing 89% of world GDP. Weighted GDP at purchasing-power parity

Economist.com
Growth in World GDP – COUNTRIES
Where has it come from? CHINA and INDIA

World GDP
Contribution to growth, percentage points
- China
- India
- United States
- Britain
- All other countries

Total, % increase on a year earlier*

Sources: Haver Analytics; IMF; The Economist

*Estimates based on 55 economies representing 84% of world GDP. Weighted GDP at purchasing-power parity
China GDP growth (%), annual rates, measured quarterly: 2006 – today (2016)

CLEARLY SLOWING

China’s imports from the rest of the world are slowing, not helpful.

China’s main imports are mechanical and electrical products (34%) and high tech goods (23%).
Also one of the biggest consumers of commodities.
Hope is they grow and buy more from all of us, but lately that’s not happening, or at least not growing at all, even shrinking a little.
China GDP per capita ($6,416)
2006 – today (2016)

US GDP/capita ~ $53,000
India GDP growth (%), annual rates, measured quarterly: 2006 – today (2016)

Not Slowing as much, but much smaller;
China GDP ~ $11T, India GDP ~ $2T
India GDP per capita ($1,805)
2006 – today (2016)

US GDP/capita ~ $53,000
EU GDP growth (%), annual rates, measured quarterly: 2006 – 2016

Source: WWW.TRADINGECONOMICS.COM | EUROSTAT

1% – 2%
EU Unemployment Rate – 2006 – 2016, quarterly measures

SOURCE: WWW.TRADINGECONOMICS.COM | EUROSTAT
Spain Unemployment Rate – 2006 – 2016, quarterly measures

**Graph:**
- **Title:** Spain Unemployment Rate
- **Years:** 2006 to 2016
- **Unemployment Rates:**
  - 2006: 5%
  - 2008: 10%
  - 2010: 15%
  - 2012: 20%
  - 2014: 25%
  - 2016: 30%

**Notes:**
- 27% and 20% are highlighted.
- Source: [TradingEconomics.com](http://www.tradingeconomics.com) | National Statistics Institute (INE)
Spain GDP growth (%), annual rates, quarterly measures: 2006 – 2016

Starting to GROW 2%–3%
Greece Unemployment Rate – 2006 – 2016

Source: www.tradingeconomics.com | National Statistical Service of Greece

Not yet better ...
German Unemployment Rate – 2006 – 2016

GERMANY UNEMPLOYMENT RATE

SOURCE: WWW.TRADINGECONOMICS.COM | FEDERAL STATISTICS OFFICE

4%
German economy is growing, but slowly

GERMANY GDP GROWTH RATE

SOURCE: WWW.TRADINGECONOMICS.COM | FEDERAL STATISTICAL OFFICE
France Unemployment Rate – 2006 – 2016

10%

Source: www.tradingeconomics.com | INSEE, France
French economy also growing slowly

FRANCE GDP GROWTH RATE

SOURCE: WWW.TRADINGECONOMICS.COM | INSEE, FRANCE
So far, not much terrible effect or fallout

On the contrary, the main effect so far has been that the British currency, the pound, fell against world currencies by about 10%, and fell against the dollar by about 15%, and

- that made British goods cheaper abroad, which helped British exports and manufacturing, and
- made vacations to Britain (London) cheaper for foreign travelers; I read there’s been an uptick in tourism and tourist spending, at least on luxury goods in London, since Brexit and the currency fall
World Economy Summary

- **China slowing** – don’t know if we’ll ever see the 10% growth rates from 10 years ago
- **Brazil and Russia are hurting** – commodities and oil both down with China’s weakening
- **EU growth is spotty** – Germany still strong, France is middling, Greece still sick, Spain starting to rally
- **GOING FORWARD WORLD RISKS** – continuing weakness in China, the beginnings of EU growth (primarily Spain’s pick-up) runs out of gas, Brexit turns into a mess and the beginning of the end of easy world trade even between rich nations
Now let’s talk Texas Economy – but first, let’s get some Texas-scale

**IF TEXAS WERE A STORAGE UNIT**

**WHAT COUNTRIES COULD YOU STORE IN IT?**

[Image of a storage unit with a map of Texas]
If Texas were a Storage Unit

At 261,231 square miles of land area, Texas could store the UK’s 93,410 square miles 2.8 times.
If Texas were a Storage Unit

Texas could store France, the 41st largest country, with room to spare.
If Texas were a Storage Unit

You could almost fit Germany's 134,623 square miles inside Texas twice.
If Texas were a Storage Unit

10 European Countries

That's right: you could fit all 10 of these countries inside Texas at one time, and still have room.
Texas economy – post-recession > overall US growth

DFW GDP growth outpaces the US by over 30% from 2001 - 2016

- When people think of a strong economy, top of mind is Texas. The Texas economy accounted for 6.3% of US GDP in 2001, and has since risen to just over 8% based on our 2016 estimate.
- When indexed, each major individual Texas market outpaced US GDP growth by an average of 46% over the same period, partly driven by energy-related gains earlier in this cycle.
- Since the 2007-08 recession, DFW’s GDP grew by 50%, with the four major Texas markets growing by 47% – far and away ahead of the US at 26%. With energy not a significant driving factor for DFW, the outlook is for continued strength in the period ahead.

Source: Bureau of Economic Analysis; Economy.com; JLL Research
Texas Economy – Employment growth has been the best in the US

Change in Nonfarm Employment

Legend:
- TX
- CA
- NY
- FL
- IL

30%
20%
10%
0%
-10%
Recently, the drop in crude prices has caused some pain in Texas.
US rig count drop has been dramatic (as it should with lower prices)

Note: Global production and consumption are estimates by the International Energy Agency. Source: Bloomberg L.P.
Texas unemployment rates increasing a bit, more in Houston

Unemployment Rates
Seasonally Adjusted

Source: Federal Reserve Bank of Dallas, Local Area Unemployment Statistics (LAUS).
Overall Texas Job Growth has been good over the last year 2016; Dallas (3.3%) and Austin (2.0%) have been quite strong.
Austin job growth has been steady at a rate of about 40,000 jobs added per year.

**Nonfarm Payroll Jobs**
**Year-Over-Year Change**

![Graph showing Nonfarm Payroll Jobs Year-Over-Year Change from 2006 to 2016 for Austin MSA and Texas.](source: Texas Workforce Commission, CES.)
## Austin employment 2014–2016

### ECONOMIC INDICATORS
DECEMBER 2016

<table>
<thead>
<tr>
<th>Employees on Non-Farm Payrolls</th>
<th>Austin MSA</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td></td>
<td>917,500</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td>959,300</td>
</tr>
<tr>
<td>2015 YTD</td>
<td></td>
<td>954,160</td>
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<tr>
<td>2016 YTD</td>
<td></td>
<td>989,540</td>
</tr>
<tr>
<td>2015 Sep</td>
<td></td>
<td>964,400</td>
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<tr>
<td>2015 Oct</td>
<td></td>
<td>977,100</td>
</tr>
<tr>
<td>2016 Sep</td>
<td></td>
<td>992,300</td>
</tr>
<tr>
<td>2016 Oct</td>
<td></td>
<td>998,300</td>
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</tbody>
</table>
## Austin job growth 2014–2016

### Employees on Non-Farm Payrolls

<table>
<thead>
<tr>
<th></th>
<th>Difference</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Austin MSA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014-2015</td>
<td>41,800</td>
<td>4.6%</td>
</tr>
<tr>
<td>YTD 2015-2016</td>
<td>35,380</td>
<td>3.7%</td>
</tr>
<tr>
<td>Oct ‘15-Oct ‘16</td>
<td>21,200</td>
<td>2.2%</td>
</tr>
<tr>
<td>Sep ‘16-Oct ‘16</td>
<td>6,000</td>
<td>0.6%</td>
</tr>
<tr>
<td>Sep ‘16-Oct ‘16 Sea. Adj.</td>
<td>1,800</td>
<td><strong>0.2%</strong></td>
</tr>
</tbody>
</table>
Why do some cities have job growth and some cities have none?

Take a Look Where the Jobs Were Created

Article & Sources: http://howmuch.net/articles/job-growth-usa-2015
Academic paper studying drivers of job growth in cities

Urban Vibrancy and Corporate Growth *

Casey Dougal
Kenan-Flagler School of Business, University of North Carolina at Chapel Hill

Christopher A. Parsons
Rady School of Management at the University of California, San Diego

Sheridan Titman
McCombs Business School, University of Texas at Austin

‘We find that a firm’s investment (capex) is highly sensitive to the investments of other firms headquartered nearby, even those in very different industries…’

Location is a statistically significant factor in explaining corporate investment and growth; *where* matters

Successful companies create and attract capable employees and managers, who spread their talents and success through the local economy. Bodes well for us here in Austin.
So now time to look a little ahead, starting with some of the new policies we’ve all been hearing about from the new administration

1. Trade Policy
2. Infrastructure Spending
3. Tax rates
Trade Policy

- The new administration seems to be betting “that a tougher approach to China, Mexico, and other trading partners – including the imposition of import duties – could boost some U.S. firms without kicking off a trade war or raising the price of imports.” [WSJ, William Mauldin, 12/4/17]

- My own view – I don’t like it. I think we should remember that China and Mexico are also growing customers, not just competitors. And I don’t think the strongest economy in the world needs protection from anyone, least China and Mexico.
Infrastructure Spending

- Government spending on roads, bridges, clean water, airports, electricity grid,
- These projects should create new jobs and likely boost growth at least in the short run while the money is being spent.
- My own view – overall, I like it, and it might help productivity. But I worry that –
  - At our current 4.8% unemployment these projects will need to pay high wages to compete against private sector, and this could start a wage-price inflation move
  - “deficit-neutral”? it seems unlikely that we could get all these new things without having to borrow a bunch of money and increase the deficit
Tax Rates

First, let me show you a chart of some tax rates across countries, but also tell you that after US firms take all their deductions and tax shield strategies they pay about the same percentage as European firms.
Mr. Trump has proposed lowering the US corporate tax rate to 15%, where Paul Ryan has a plan that includes a 20% corporate rate.

My own view – I view corporate taxes as a tax on wealth creation, the engines of the economy, and I do not like the fact that we have the highest corporate tax rate and I agree it should be lower.

That said, if this administration thinks it’s going to cut taxes and spend money and not increase deficits it needs to look at both the Great Society (LBJ) and the great defense spending increase (Reagan), both recent history, one contributed to inflation, the other to large deficits.
What should we make of the positive market reaction since election? Based on history, maybe not much.

<table>
<thead>
<tr>
<th>Year</th>
<th>Election to inauguration</th>
<th>Inauguration to next election</th>
<th>First elected term</th>
</tr>
</thead>
<tbody>
<tr>
<td>1928</td>
<td>13.3%</td>
<td>-71.6%</td>
<td>Herbert Hoover</td>
</tr>
<tr>
<td>1932</td>
<td>-19.3%</td>
<td>194.0%</td>
<td>Franklin D. Roosevelt</td>
</tr>
<tr>
<td>1948</td>
<td>-7.2%</td>
<td>58.7%</td>
<td>Harry S. Truman</td>
</tr>
<tr>
<td>1952</td>
<td>6.3%</td>
<td>82.1%</td>
<td>Dwight D. Eisenhower</td>
</tr>
<tr>
<td>1960</td>
<td>3.6%</td>
<td>49.3%</td>
<td>John F. Kennedy</td>
</tr>
<tr>
<td>1964</td>
<td>-10.3%</td>
<td>34.9%</td>
<td>Lyndon B. Johnson</td>
</tr>
<tr>
<td>1968</td>
<td>-7.6%</td>
<td>19.7%</td>
<td>Richard Nixon</td>
</tr>
<tr>
<td>1976</td>
<td>-0.1%</td>
<td>25.3%</td>
<td>Jimmy Carter</td>
</tr>
<tr>
<td>1980</td>
<td>2.0%</td>
<td>29.4%</td>
<td>Ronald Reagan</td>
</tr>
<tr>
<td>1988</td>
<td>4.2%</td>
<td>46.5%</td>
<td>George H. W. Bush</td>
</tr>
<tr>
<td>1992</td>
<td>3.2%</td>
<td>64.8%</td>
<td>Bill Clinton</td>
</tr>
<tr>
<td>2000</td>
<td>-6.2%</td>
<td>-15.8%</td>
<td>George W. Bush</td>
</tr>
<tr>
<td>2008</td>
<td>-19.9%</td>
<td>77.4%</td>
<td>Barack Obama</td>
</tr>
</tbody>
</table>

*Data through Friday  †Data through 10 a.m. Monday in New York  ‡Died in first term
Sources: Thomson Reuters (yield, cyclicals): Birinyi Associates, WSJ calculations (performance)

THE WALL STREET JOURNAL
IMF World Economic Outlook – update January 2016

FUTURE GROWTH RATES

Growth will pick up more gradually than projected in fall 2015, especially in emerging market and developing economies.

Global Economy

Global demand and activity remain subdued, as three key transitions continue to influence the global outlook (see transitions below).

Advanced Economies

A continued modest recovery should gradually close the output gap between real vs. potential GDP.

Emerging Market & Developing Economies

China’s slowdown and rebalancing, lower commodity prices, and other strains in some larger emerging market economies are likely to weigh down growth prospects.

%  

2015  2016  2017

3.1  3.4  3.6

4.0  4.3  4.7
IMF outlook updated October 2016

2. World GDP Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>World</th>
<th>AEs</th>
<th>EMDEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995–2007</td>
<td>3%</td>
<td>1.5%</td>
<td>4%</td>
</tr>
<tr>
<td>1995–2015</td>
<td>4%</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td>2%</td>
<td></td>
</tr>
</tbody>
</table>
Why are Advanced Economies Growing so slowly (1%–2%)?
Labor Productivity drives growth, and is now much lower in Advanced Economies.

A Return to the Ordinary
Mean labor productivity growth in seven leading industrialized countries®

5%

Year-to-year change in productivity

THE WALL STREET JOURNAL.

96 U.S., Canada, France, Germany, Italy, Japan and the U.K.
Source: Organization for Economic Cooperation and Development
Updated productivity growth through 2016, US only, same bad picture

Change in Productivity
Five-year rolling period

Source: Federal Reserve Bank of St. Louis; U.S. Bureau of Labor Statistics

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Near-term drivers for forecast

- Infrastructure spending, if not done too wastefully, should increase growth in the US
  - However, employment is already very tight, and trying to find more workers for infrastructure projects might start an inflationary wage-price move

- Lower tax rates should increase near-term growth, but coupled with infrastructure spending, will likely increase federal deficit (and may lead to higher interest rates through crowding out?)

- Protectionism and a trade war would of course slow down growth – roughly 1/3 of S&P500 company sales (revenues) are exports to international markets.
I expect higher GDP growth, higher wage growth, probably leads to higher interest rates and a stronger dollar, which serve to slow-down the above growth effects, but all in I bet we hit 3% GDP growth in 2017, with mortgage rates between 4% and 5%, and continued healthy job growth and real estate in Austin and Texas, where we are on a serious roll.

All bets are off if the new President starts a trade war with protectionist tariffs on foreign goods; other countries will almost surely retaliate and we’ll all get hurt in the end – let’s hope that doesn’t happen.
Thank-you for your time and attention