Housing Market Growing; Single-Family Lags

- Tax reform changes
- Macroeconomics post-tax reform
  - Signs of growth momentum
  - Signs of a future slowdown
- Housing demand and affordability
  - Demographics positive
- Supply-side headwinds
- State-level economic measures
- Forecasts
Tax Reform
Tax Reform – Policy Changes and Impacts

• Individual Taxpayers
  • Lower tax rates, with top rate of 37%
    • $1.2 trillion tax cut for rate reduction
  • Personal exemptions eliminated but standard deduction nearly doubles, child credit expands
    • $70 billion tax cut on net basis
• Housing deductions
  • Fewer itemizers, but offset by larger standard deduction
  • $750K cap for MID, second home rule retained
  • Property tax and income/sales SALT deduction capped at $10,000
• Capital gain exclusion for principal residences
  • Protected with the existing 2 of 5 year occupancy rule
Tax Reform – Policy Changes and Impacts

• Individual Taxpayers
  • AMT thresholds raised: $637 billion tax cut
  • Estate tax exemption amounts doubled to $11 million per person: $83 billion tax cut

• Business Taxpayers
  • Special pass-thru deduction of 20%: $415 billion tax cut
  • LIHTC and private activity bonds protected
  • Carried interest now has three-year holding period requirement
  • Business interest deduction protected for real estate
  • Active loss limit of $500K per year against passive income
  • Like kind exchange protected for real estate
  • Completed contract accounting rules protected and expanded
  • Water and sewer development fees may be higher
Tax Reform – Policy Changes and Impacts

• Economic impacts
  • GDP
    • Marked up 2018 forecast to 2.9%
    • Dynamic scoring model suggests 0.8% more GDP after 10 years
  • Business investment
    • 1.1% higher after ten years
  • Labor supply and employment
    • 0.6% higher
      • 0.9 million more workers in labor force
  • Reduced home price growth to a positive 2.9% growth rate in 2018
    • Proven to be incorrect - housing demand remains strong
Macroeconomics
Post-Tax Reform
**GDP Growth**

*Stronger growth expected post-tax reform*

Source: U.S. Bureau of Economic Analysis (BEA) and NAHB forecast.

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>1.5%</td>
</tr>
<tr>
<td>2017</td>
<td>2.3%</td>
</tr>
<tr>
<td>2018f</td>
<td>2.9%</td>
</tr>
<tr>
<td>2019f</td>
<td>2.7%</td>
</tr>
<tr>
<td>2020f</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

**Q/Q Percent Change, SAAR**
Expansion is Aging

Current expansion is 110 months old – second longest

Trough to Peak, Months

Signs of Sustained Growth
Lower Energy Costs
A “tax cut” that prevented a growth recession in 2016

Consumer Confidence Continues Positive Run

Index 1985=100, SA

Source: The Conference Board.
Tax Reform Boosts Potential GDP

Added economic efficiencies yield more room to grow

Source: Congressional Budget Office.
Corporate Profits Continue Rising

Source: U.S. Bureau of Economic Analysis (BEA) and NAHB forecast.
Tax Cuts Help Disposable Income Growth

Bonuses and wage growth will drive gains

Source: U.S. Bureau of Economic Analysis (BEA) and NAHB forecast.
Improving labor force participation key to future growth

<table>
<thead>
<tr>
<th>Year</th>
<th>Overall</th>
<th>Age 25-54</th>
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</thead>
<tbody>
<tr>
<td>2001</td>
<td>84%</td>
<td>81%</td>
</tr>
<tr>
<td>2002</td>
<td>83%</td>
<td>80%</td>
</tr>
<tr>
<td>2003</td>
<td>83%</td>
<td>80%</td>
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<tr>
<td>2004</td>
<td>83%</td>
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<td>2006</td>
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<tr>
<td>2007</td>
<td>82%</td>
<td>80%</td>
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<tr>
<td>2008</td>
<td>82%</td>
<td>80%</td>
</tr>
<tr>
<td>2009</td>
<td>81%</td>
<td>79%</td>
</tr>
<tr>
<td>2010</td>
<td>80%</td>
<td>78%</td>
</tr>
<tr>
<td>2011</td>
<td>79%</td>
<td>77%</td>
</tr>
<tr>
<td>2012</td>
<td>79%</td>
<td>76%</td>
</tr>
<tr>
<td>2013</td>
<td>78%</td>
<td>75%</td>
</tr>
<tr>
<td>2014</td>
<td>78%</td>
<td>74%</td>
</tr>
<tr>
<td>2015</td>
<td>78%</td>
<td>73%</td>
</tr>
<tr>
<td>2016</td>
<td>78%</td>
<td>72%</td>
</tr>
<tr>
<td>2017</td>
<td>78%</td>
<td>71%</td>
</tr>
<tr>
<td>2018</td>
<td>78%</td>
<td>70%</td>
</tr>
</tbody>
</table>

Labor Productivity Growth

Tax reform lifting above recent trend

Source: U.S. Bureau of Labor Statistics (BLS) and NAHB forecast.
Signs of Future Slowdown
Government Deficits Growing
Post-tax reform deficits add up to 30 basis points to 10-year Treasury rate

Source: U.S. Treasury Department and Bureau of Economic Analysis (BEA) and NAHB forecast.
Tight Labor Market

How low can unemployment go?

Unemployment Rate
Job Openings Rate

Source: U.S. Bureau of Labor Statistics (BLS) and NAHB forecast.
Cumulative Change in Employment by Age Group

Mind the Gen-X gap

Rising Producer Prices

12-month Percent Change, SA

Consumer and Core Inflation

Inflation pressures building

Source: U.S. Bureau of Labor Statistics (BLS) and NAHB forecast.

Core PCE

CPI

Percent, SAAR

79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Target Federal Funds Rate

Fed will continue to raise rates

Source: Federal Reserve data and NAHB forecast.

Federal Funds Rate

10-year Treasury

Source: Federal Reserve data and NAHB forecast.
30-Year Fixed Rate Mortgage and 10-Year Treasury Rates will rise due to Fed policy and tight labor markets

Source: Federal Reserve and Freddie Mac data and NAHB forecast.

October 31, 2016

Source: Federal Reserve and Freddie Mac data and NAHB forecast.
Flattening Yield Curve

*Necessary, but not sufficient, indicator of recession*

Composite Index of Leading Indicators, (Index 2010=100, SA)

Source: U.S. Board of Governors of the Federal Reserve System (FRB), the Conference Board and NAHB forecast.
Housing Demand and Affordability
Household Balance Sheets

A shift in debt away from mortgages

% of Disposable Inc., SA

Source: U.S. Board of Governors of the Federal Reserve System (FRB).
Consumer Debt

Rise in student and auto loans

Source: Federal Reserve Bank of New York.
Existing Home Sales

Low inventory

Months’ Supply (Months, NSA)

Thousands

Existing Home Sales: Single-Family & Condo & Co-op, (Ths., SAAR)

Existing Home Inventory

Number of homes available for sale: Single-Family & Condo & Co-op, (Ths., NSA)

Source: National Association of Realtors (NAR).
S&P/Case-Shiller National US Home Price Index

Prices growing faster than income

Source: S&P Dow Jones Indices LLC; CoreLogic, Inc. and NAHB forecast.
Housing Affordability – NAHB/Wells Fargo HOI

70% of homes sold in Palm Bay-Melbourne-Titusville MSA were affordable in Q1 2018

Source: NAHB/Wells Fargo Housing Opportunity Index.
Simulating Future Affordability Conditions

HOI in Palm Bay-Melbourne-Titusville MSA declines more than 10% due to higher rates and costs/prices despite rising incomes.

Distribution of MSAs by change in the HOI using forecast prices, income, and interest rates:

- Declines of more than 10%: 37%
- Declines of 5 to 10%: 25%
- No change to 4% decline: 36%
- Gain of 1 to 5%: 1%

Source: NAHB/Wells Fargo Housing Opportunity Index.
Supply-Side Headwinds
Since January 2017, Random Lengths Framing Composite Price Index up 55%

Building Materials – OSB

Since January 2017, OSB increased 26.8%

Index 1982=100, NSA

Since January 2017, gypsum products increased 10.1%
Elevated count of unfilled construction jobs

Construction Sector Productivity

Lagging overall economy

Index, 1993 = 1

Construction Worker Productivity

Overall Worker Productivity

National Association of Home Builders
Regulatory Costs Rising – Up 29% Over Last 5 Years

Total effect of building codes, land use, environmental and other rules

Regulatory Costs as a Share of Home Price

- **Lower Quartile**
  - During Construction: 4.0%
  - During Development: 7.9%
  - Total: 14.0%*

- **Average**
  - During Construction: 9.7%
  - During Development: 14.6%
  - Total: 24.3%

- **Upper Quartile**
  - During Construction: 12.7%
  - During Development: 18.8%
  - Total: 30.3%*

*For quartiles, construction and development costs do not sum to the total.
Source: NAHB/Wells Fargo HMI survey, assumptions described in the Appendix.
Government Regulations as a Share of Multifamily Development Costs

- Cost increases from changes to building codes over the past 10 years: 7.1%
- Development requirements that go beyond the ordinary: 8.4%
- Fees charged when building construction is authorized: 5.4%
- Cost of applying for zoning approval: 5.3%
- Other (non-refundable) fees charged when site work begins: 5.5%
- Cost of complying with OSHA requirements: 2.3%
- Others: 7.3%

Note: * For quartiles, all types of costs do not sum to the total.
Source: NAHB/Wells Fargo HMI survey.
Continuing Growth in Regulatory Requirements
Currently 24% price of a newly-built home

New Solar requirement in California

- Almost all new homes by 2020 must have solar panels
- Add $8,000 to $12,000 per home
- Save $700 in energy cost a year
- 14-15 year payback period
- Costs fall harder on entry-level and first time buyers
A Local Look
Florida Real GDP Growth

Q/Q Percent Change (annualized), SAAR

[Graph showing Florida Real GDP Growth from Q1 2005 to Q4 2017 with Q/Q Percent Change (annualized), SAAR on the y-axis and years from 2005 to 2017 on the x-axis.]
### Population Growth

Brevard County population grew faster than national and statewide rates in recent years

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>U.S.</strong></td>
<td>0.8%</td>
<td>0.7%</td>
<td>0.8%</td>
<td>0.7%</td>
<td>0.8%</td>
<td>0.7%</td>
<td>0.7%</td>
<td></td>
</tr>
<tr>
<td><strong>Florida</strong></td>
<td>1.0%</td>
<td>1.3%</td>
<td>1.3%</td>
<td>1.3%</td>
<td>1.6%</td>
<td>1.9%</td>
<td>1.6%</td>
<td></td>
</tr>
<tr>
<td><strong>Brevard County</strong></td>
<td>0.3%</td>
<td>0.1%</td>
<td>0.5%</td>
<td>0.6%</td>
<td>1.0%</td>
<td>1.9%</td>
<td>2.0%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

Population growth in thousands for the United States, Florida, and Brevard County from 2010 to 2017:

- **United States** range: 18,846 - 20,984
- **Florida** range: 1.0% - 1.9%
- **Brevard County** range: 0.3% - 2.0%

The population in Brevard County grew faster than the national and statewide rates in recent years.
Payroll Employment

Palm Bay-Melbourne-Titusville MSA above pre-recession peak

Thousands, SA

Florida

Palm Bay-Melbourne-Titusville MSA

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18

Thousands, SA

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

5,700 6,200 6,700 7,200 7,700 8,200 8,700 9,200 9,700 10,200 10,700

89% 89% 89% 101% 109%
Existing House Price Index

Palm Bay-Melbourne-Titusville MSA below pre-recession peak

Relative to Pre-recession Peak

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>Florida</th>
<th>Palm Bay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recession-era Low</td>
<td>81%</td>
<td>55%</td>
<td>49%</td>
</tr>
<tr>
<td>Current</td>
<td>110%</td>
<td>92%</td>
<td>89%</td>
</tr>
</tbody>
</table>

United States
Florida
Palm Bay-Melbourne-Titusville MSA
Forecasts
Household Formation

Demand for home ownership strengthening

Y/Y Change in Household Count, Thousands, NSA

Owner-Occupied

Renter-Occupied

Source: U.S. Census Bureau (BOC): Housing Vacancies & Homeownership.
Homeownership Rate

Source: U.S. Census Bureau (BOC): Housing Vacancies & Homeownership.
Nearly two-decade high for builder confidence

Source: Census Bureau and NAHB/Wells Fargo HMI survey.
Single-Family Starts

Modest growth ahead

Thousands of units, SAAR

<table>
<thead>
<tr>
<th>Year</th>
<th>Units</th>
<th>“Normal”</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-2003</td>
<td>1,343,000</td>
<td>“Normal”</td>
</tr>
<tr>
<td>2015</td>
<td>712,000</td>
<td></td>
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<tr>
<td>2016</td>
<td>784,000</td>
<td>10%</td>
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<tr>
<td>2017</td>
<td>851,000</td>
<td>9%</td>
</tr>
<tr>
<td>2018</td>
<td>909,000</td>
<td>7%</td>
</tr>
<tr>
<td>2019</td>
<td>959,000</td>
<td>5%</td>
</tr>
<tr>
<td>2020</td>
<td>1,003,000</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: Census Bureau and NAHB forecast.

Trough to Current:
Mar 09 = 353,000
May 18 = 936,000
+165%

80% fall

2018Q1: 66% of “Normal”
2020Q4: 76% of “Normal”

Source: Census Bureau and NAHB forecast.
National average single family starts bottomed out at 27% in early 2009 and reached 66% of normal in 2018Q1.

Source: Census Bureau.
Single-Family Building Permits – Florida and Brevard County

Number of Units

Source: U.S. Census Bureau (BOC).
Single-Family Permits 12-Month Growth Rate

Rank
- Red: Growth Rate < 0
- Yellow: 0 < Growth Rate < U.S.
- Green: Growth Rate > U.S.
Home Prices of New and Existing Homes

Wide gap since 2012

Median Sales Price Difference

1990-2008 Avg: $20,000

New Homes

Existing Homes
Typical New Home Size

Decline after market shift

Square Feet

SF Starts: Median Floor Area

SF Starts: Median 1 Year MA

99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18
Multifamily Housing Starts

Leveling off

1995-2003 331,000 "Normal"
2015 394,000
2016 393,000 0%
2017 356,000 -9%
2018 377,000 6%
2019 354,000 -6%
2020 351,000 -1%

Source: Census Bureau and NAHB forecast

Thousands of units, SAAR

Avg=344,000

Trough to Current:
4th Q 09 = 82,000
1st Q 18 = 427,000 +421%

2018Q1: 129% of "Normal"
2020Q4: 105% of "Normal"

Source: Census Bureau and NAHB forecast
National average multifamily starts bottomed out at 25% in late 2009 and were 129% of normal in 2018Q1.
Multifamily Building Permits – Florida and Brevard County

Source: U.S. Census Bureau (BOC).
Residential Remodeling

Strong market conditions

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>11%</td>
</tr>
<tr>
<td>2017</td>
<td>17%</td>
</tr>
<tr>
<td>2018f</td>
<td>7%</td>
</tr>
<tr>
<td>2019f</td>
<td>8%</td>
</tr>
<tr>
<td>2020f</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: Census Bureau and NAHB forecast.
The Age of the Housing Stock

Typical home is almost 40 years old

- 38% of homes are 45 years old or more in 2015.
- 32% of homes are 45 years old or more in 2005.
- In 2015, 12% of homes are 35-45 years old.
- In 2005, 15% of homes are 35-45 years old.
- In 2015, 16% of homes are 25-35 years old.
- In 2005, 13% of homes are 25-35 years old.
- In 2015, 15% of homes are 15-25 years old.
- In 2005, 15% of homes are 15-25 years old.
- In 2015, 17% of homes are 5-15 years old.
- In 2005, 16% of homes are 5-15 years old.
- In 2015, 9% of homes are 5 years old or less.
- In 2005, 3% of homes are 5 years old or less.

Source: NAHB (National Association of Home Builders)
Thank you

Questions?
rdietz@nahb.org
@dietz_econ