Is the Commercial Real Estate Market Sustainable?

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Is the Commercial Real Estate Market Sustainable?

I. Investment Speculation
   • Bitcoin or Florida land rush
II. Capital Markets (supply of and demand for capital)
   • Equity
   • Debt
III. GDP
   • Demand for space
IV. Construction
   • Supply of space
V. Rates
   • Employment Growth, pushing inflation
Speculation
The irrational bidding up of asset prices
Commercial property prices have rebounded and hit new highs . . . .

Source: Green Street Advisors and Graaskamp Center for Real Estate

Five Year Property Appreciation Rate Comparison

Source: Green Street Advisors and Graaskamp Center for Real Estate
however, recent property cap rates, while at all time lows, but are stable.

Cap Rates

Source: Real Capital Analytics, July 2018.
Speculative Bubble

- Commercial real estate price appreciation has moderated over the past three years (lowering the possibility of a speculative bubble)
- Property cap rates are at all time lows (enhancing a possible bubble)
- Solid NOI growth has justified part of the price inflation (lowering the possibility of a speculative bubble)

In summary, while commercial real estate is roughly fully priced, it is not over priced relative to risk spreads for other asset classes), and is not likely in a speculative bubble.
Capital Markets
The market for investment capital
Commercial Real Estate Equity Investment
commercial transaction levels are moderating . . . .

QUARTERLY SALES OF LARGER ($2.5 MILLION+) COMMERCIAL/MULTIFAMILY PROPERTIES
Billions of dollars, Properties and portfolios $2.5 million and greater

Source: Q1 2018 Mortgage Bankers Association’s Commercial/Multifamily Quarterly Databook
...... the 2012-2017 price increases look different than the 2002-2007 price increases . . . .

High Net Worth Individual's Investment Sentiment for Real Estate for 2018

<table>
<thead>
<tr>
<th>Year</th>
<th>Increase</th>
<th>Remain the Same</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>59%</td>
<td>32%</td>
<td>9%</td>
</tr>
<tr>
<td>2017</td>
<td>55%</td>
<td>36%</td>
<td>9%</td>
</tr>
<tr>
<td>2018</td>
<td>55%</td>
<td>36%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Source: NREI, December 2017, “Continuing to Cash in,” p. 20, and Graaskamp Center for Real Estate
Pension fund investment volume is in real estate is likely to remain strong.

**Same Return, Increasing Risks: Portfolio Mix needed for a 7.5% Return**

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S. Fixed Income</th>
<th>U.S. Large Cap</th>
<th>U.S. Small Cap</th>
<th>Non-U.S. Equity</th>
<th>Real Estate</th>
<th>Private Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>52%</td>
<td>20%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>8%</td>
</tr>
<tr>
<td>2005</td>
<td>5%</td>
<td>5%</td>
<td>14%</td>
<td>12%</td>
<td>13%</td>
<td>22%</td>
</tr>
<tr>
<td>2015</td>
<td>12%</td>
<td>13%</td>
<td>22%</td>
<td>33%</td>
<td>12%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Source: Callan and Associates, Risky Business, September 2016 and Graaskamp Center for Real Estate
Why the increase in riskier assets? The Actuarial Funded Ratio (AFR) has dropped from 103% in 2002 to 72% in 2016.

While the annual required contribution as a percent of payroll has grown from 6.7% in 2001 to 17.6% in 2013.

. . . . institutional investors are increasing their planned allocation to real estate . . . .
Global private equity has stepped back a bit, however has dry power $136 billion in 2017 compared with $120 billion in 2016.

Source: WSJ, 1/3/18, page B7 and Prequin
Commercial Real Estate Debt Investment
Big picture, total U.S. debt levels have stabilized as a percent of GDP . . . .

Source: Federal Reserve and Marquette University
<table>
<thead>
<tr>
<th>Period</th>
<th>3-Year</th>
<th>5-Year</th>
<th>10-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial through 2017Q3</td>
<td>5%</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>Commercial through 2008Q4</td>
<td>11%</td>
<td>12%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Source: Federal Reserve Flow of Funds and Graaskamp Center for Real Estate.
year-over-year cumulative construction lending growth

Panel A: Construction Loans

Source: Mortgage Bankers Association, Commercial Multifamily Real Estate Finance, 2018Q1.
as banks reveal solid discipline, tightening lending standards (HVCRE restrictions?)
With low charge-off rates, banks are making money and will stay in the game.

Sources: Federal Reserve Economic Data and Graaskamp Center for Real Estate
Capital Markets Bubble

• Institutional, private equity, and wealthy investors are likely to continue to invest in commercial real estate

• The lending market will be robust, with greater competition from a lack of CMBS and other refinance loans

• Property underwriting fundamentals are stable-to-good, with some apartment overbuilding

In summary, the markets will be awash in debt, especially looking for income producing product (as opposed to construction loans) with modest pricing pressure.
GDP
(creating demand for space)
Since the Great Recession, GDP has grown at a modest 2.1%. At 110 months it is the second longest of the 33 economic cycles since 1854 . . . .

Sources: Federal Reserve Economic Data and Graaskamp Center for Real Estate
GDP growth is largely impacted by two things: Thing One is employment growth.

Sources: Federal Reserve Economic Data, Department of Labor, and Graaskamp Center for Real Estate
and Thing Two is labor productivity, Things One and Two are trending slower . . . .

Sources: Federal Reserve Economic Data, Department of Labor, and Graaskamp Center for Real Estate
GDP growth by component
Primary Components of GDP Growth

Sources: Federal Reserve Economic Data and Marquette University
why are household’s spending? The wealth effect, and net worth is back . . . .

Sources: Federal Reserve Economic Data and Marquette University
household liabilities growth remains low.

Sources: Federal Reserve Economic Data and Marquette University

1997-2007 CAGR = 9.65%
2007-2017 CAGR = 0.81%
leaving consumers with dry power
.... and confidence.
Why the continued GDP growth? Business investment will re-emerge . . . .

Sources: Federal Reserve Economic Data
. . . . corporate profits are strong and will grow with lower tax rates . . . .
Economic Growth (demand for space)

• GDP never hit a period of rapid growth post-Great Recession
• GDP will not take off like a rocket ship because of the Tax Act
• Consumers have high net worth, modest debt and low debt service payments, and will continue to be the stable force behind GDP growth
• Business investment will push growth by about 0.4-0.6%

In summary, both consumption and business spending is well positioned for the coming 12-18 months
Is new construction creating an oversupply of space. . . .

Construction Put in Place by Property Type

Average - $188 billion

Sources: U.S. Census and Graaskamp Center for Real Estate
Real Construction Put in Place by Property Type (2016=100)

Average - $225 billion

Sources: U.S. Census and Graaskamp Center for Real Estate
.... same chart as the previous slide but accounting for population growth – do you evidence of a supply bubble!

Sources: U.S. Census and Graaskamp Center for Real Estate
Employment and Inflation
95 months of employment growth, the longest in history averaging 196,000 monthly jobs . . . .

Source: Federal Reserve Economic Data and Graaskamp Center for Real Estate
low unemployment and higher wages have increased labor force participation.

Sources: Federal Reserve Economic Data
The labor force has more than doubled since 1967, with similar low initial unemployment claims.
the job market has dramatically tightened.

Sources: Federal Reserve Economic Data and Marquette University
... wages have outpaced inflation since 2012 ...
... low unemployment push up wages, increasing inflation....

Sources: Federal Reserve Economic Data and Graaskamp Center for Real Estate
Other Factors Impacting Inflation and Interest Rates
Quantitative easing in reverse
trade wars, lumber and other commodity increases are pushing up prices.

Sources: Federal Reserve Economic Data
Wage inflation is emerging

• 3.9% current unemployment rate is the lowest in 16 years (at or below full employment)
• 95 months of month-over-month job growth limits the candidate pool
• 18.9 million jobs is the largest job growth in a U.S. expansion
• 180 weeks of initial unemployment claims remaining below 300,000
• College educated worker pool is fully employed

In summary, about 70% of everything we purchase is labor and labor rates will increase in the coming year.
Summary of the Economy and the Commercial Lending Market in 2018

The Economy:
• Consumers remains confident, businesses have lower taxes
• Very tight labor market, expect wage inflation
• Fed will raise rates 3-4 times in 2018 flattening out the yield curve
• Early-2020 the economy will stall out

Commercial Real Estate Lending:
• Real estate fundamentals remain strong
• Supply of debt is larger than the demand, competition on terms
• Flattening yield curve, and active GSEs, moderate pricing pressure
• Higher rates and a step up in cap rates in late-2019/early-2020, will stall out the real estate markets
The State of the Economy, Homeownerhips and Housing Affordability

I. Housing Demographics

II. Homeownership

III. Housing Affordability
Millennials plan to marry and have kids, just like previous generations . . . .

Median age at first marriage: 1890 to present

Source: U.S. Census.
and households have changed, only 20% of households are married with children.

Source: U.S. Census.
. . . . household formation is overwhelmingly minority, the current white, non-Hispanic birth rate is 1.8 per woman. . . .

Change in household formation 2010-2030 (in millions)

... demand for housing (household formation) is 1.5+ million housing units per year (including removals of 150,000-300,000 units per year). ... 

Source: Joint Center for Housing Studies, Updated Household Projections: 2015-2035, p. 17.
and the supply of housing units is not keeping up with demand . . . .
Although Increasing Somewhat, Construction of Modest-Sized Housing Remains Limited

Source: Joint Center for Studies of Harvard University, *State of the Nation’s Housing Market, 2018*, Figure 10, page 10.
Milwaukee is similarly challenged with an inadequate supply of housing.

Homebuilding was down about 6% in Metropolitan Milwaukee during the first half of 2018.

According to MTD data:

- The number of new permits were issued in Metro MKE was 684, down from 728 in 2017
- The average size of a new home is 2,976, up from 2,796
- The average value of a new home was $376,768, 9% more than $346,092 in 2017

In short, fewer, larger, and pricier homes for Milwaukee.

Since the Great Recession, the supply of finished lots has significantly contracted nationwide:
- Land loans subject to greater lender scrutiny and reserve requirements (HVCRE and Basel III)
- Land development has a long lead time and is volatile limiting equity investment
- Many land developers went bankrupt during the Great Recession
- Many construction workers left the profession and many small construction companies failed

In short, limited supply of lots, limited supply of construction workers, limited number of construction companies, yields a limited supply of new homes
Homeownership
Property prices remain near or below 2006Q3 prices . . .

**Home Price Change From 2006 Q3 Through 2017 Q4**

United States: 4.1%

Since 2007 homeownership and homeownership rates have declined.

Source: Joint Center for Housing Studies, The State of the Nation’s Housing: 2017, p 20.
fewer owner-occupied units are pushing up house price appreciation . . .

One Year Home Price Change as of 2017 Q4

... six million homes went from owner-occupied to renter occupied ...
Wisconsin beat U.S. house price appreciation at 6.5% in 2017.

Source: Wisconsin REALTORS Association, interactive webpage: https://www.wra.org/Resources/Property/Wisconsin_Housing_Statistics/
price changes in 2017 varied significantly across price point

Percent Change in Sales From a Year Ago by Price Range

2017 transaction volume in Wisconsin was up 1.4% over 2016.

Source: Wisconsin REALTORS Association, interactive webpage:
https://www.wra.org/Resources/Property/Wisconsin_Housing_Statistics/
2017 Wisconsin foreclosures were the lowest in 17 years.

Source: Wisconsin REALTORS Association, interactive webpage: https://www.wra.org/Resources/Property/Wisconsin_Housing_Statistics/
The Problem: Low national inventory levels, 3.5 month supply of for-sale housing.

Housing Supply at the National Level

The Local Problem: Low inventory levels, a 3.5 month for-sale housing in Wisconsin . . . .

Source: Wisconsin REALTORS Association, interactive webpage: https://www.wra.org/Resources/Property/Wisconsin_Housing_Statistics/
benefit of the Problem: Fewer average days on market . . . .

.... echo ... six million homes went from owner-occupied to renter occupied ...
Source: The Brookings Institution U.S. migration still at historically low levels, census shows, William Frey, November 20, 2017
people are aging in place.

Source: The Brookings Institution U.S. migration still at historically low levels, census shows, William Frey, November 20, 2017
however, the upper Midwest is more affordable than the rest of the U.S.

Median Home Prices in Most Western Metros Are Five Times Greater than Incomes

Source: Joint Center for Studies of Harvard University, *State of the Nation’s Housing Market, 2018*, Figure 13, page 12.
... and there will be pent up demand from couples marrying later.

Source: HousingEconomics.com, NAHB, Missing Young Adult Households, Natalia Siniavskiaia, February 4, 2016.
Housing Affordability
The dream of successive generations making more money than their parent’s generation is fading (the dream 30 years later) . . . .

Source: Richard Reeves and Eleanor Krause, Raj Chetty in 14 Charts: Big findings on Opportunity and Mobility We Should All Know, Brookings, January 11, 2018.
a college education is highly correlated with family income, often limiting upward mobility for lower-income families. . .

Source: Richard Reeves and Eleanor Krause, Raj Chetty in 14 Charts: Big findings on Opportunity and Mobility We Should All Know, Brookings, January 11, 2018.
and mobility from the lower fifth of the income distribution to the top fifth is lower in the U.S. than in other countries.

Source: Richard Reeves and Eleanor Krause, Raj Chetty in 14 Charts: Big findings on Opportunity and Mobility We Should All Know, Brookings, January 11, 2018.
Homeownership rates are down across all age cohorts except the 65-75 cohort.

Homeownership Rates by Age, 1995-2014

. . . . further, the net worth for lower two-fifths of the household is very low . . . .

Source: Joint Centers for Housing Studies at Harvard, *State of the Nation’s Housing, 2016.*
FICO scores increased during and since the Great Recession.

Source: Housing Finance at a Glance: June 2015, Urban Institute, Goodman et al.
. . . . .credit scores over the past five years . . . .

young adults have weak credit scores.

FICO Score Distribution by Age Group in 2013

Source: Federal Reserve Bank of New York.

low-income households have high housing burdens and are unable to save for homeownership or retirement . . .

Nearly Half of Renter Households and a Quarter of Owner Households Are Cost Burdened

Share of Households with Cost Burdens (Percent)

Source: Joint Center for Studies of Harvard University, State of the Nation’s Housing Market, 2018, Figure 32, page 31.
many low income renters are severely burdened, with more than 50% of their household incomes going to housing payments.

- 20.8 million renters are rent burdened with greater than 30% of their household income used to pay housing costs
- 11.0 million renters are severely rent burdened with greater than 50% of household income going to housing payments
- Fully 80 percent of renters earning less than $30,000 were cost burdened in 2016, including 55 percent with severe burdens.

Single Family Summary

• Single family appreciation rates will outpace inflation

• Single family lending is available, but fairly tightly allocated given that we are nine years into an economic expansion

• The shortage of single-family housing units is likely to persist for the coming 24 months

• Incomes and housing opportunities are bifurcating, with many of the bottom income tiers housing or severely housing burdened