TIMING IS EVERYTHING
INVESTING IN SECONDARY REAL ESTATE MARKETS

Thursday November 6 24 2014 Tulsa Trends Conference
National Association of Industrial and Office Properties

Sam Chandan PhD
Chandan Economics & The Wharton School of the
University of Pennsylvania
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ENERGY PRICES AND THE TULSA ECONOMY

Oil Prices (West Texas Intermediate Crude) and Change From Year Earlier in Tulsa Employment

Source: Federal Reserve, Energy Information Administration, Bureau of Labor Statistics
SECONDARY MARKET QUESTIONS FOR 2015

1. LOCAL ECONOMIES  HEADWINDS OR TAILWINDS
2. INTEREST RATES  ASKING THE WRONG QUESTION
3. FUNDAMENTALS  BUILDING MOMENTUM
4. CAPITAL  ARE WE PEAKING
Historical Business Cycles in the United States 1945 — Present

Current Expansion
5.4 Years

Source: Chandan Economics; National Bureau of Economic Research
The Business Cycle

Probability of Recession

Source: Federal Reserve Bank of New York
The graph shows the annualized number of new homes sold in thousands from 1963 to 2011. The peak occurred around 2005-2006 with over 1,389,000 homes sold annually. The lowest point was around 2011 with just over 467,000 homes sold annually. The data is sourced from the Commerce Department.
Source: Chandan Economics; Bureau of the Labor Statistics
Wage Rigidity – Share of Job Stayers With No Wage Change

Source: Federal Reserve Bank of San Francisco
1. Investor and lender density are important differentiators for primary and secondary markets

2. Secondary markets’ risk-reward tradeoff is not always efficient

3. Flexibility in timing acquisitions and dispositions is critical in secondary market returns; buy early, buy long, or have an uncanny sense of timing
Great Treasury Bull Run

Long-term decline in the Treasury yield has dominated its cyclical movements, limiting the efficacy of any cyclical analysis.
The right question for our industry is not the timing of the interest rate shift but the resilience of prevailing asset prices and current loan structures in higher risk-free yields.

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<th>2014</th>
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<th>2016</th>
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<tbody>
<tr>
<td>CPI Inflation (EOY YOY)</td>
<td>1.8%</td>
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<td>WSJ Consensus</td>
<td>1.9%</td>
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<td>10-Year Treasury Yield (EOY)</td>
<td>2.5%</td>
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<td>WSJ Consensus</td>
<td>2.8%</td>
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<td>Fannie Mae</td>
<td>2.6%</td>
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<td>Freddie Mac</td>
<td>2.4%</td>
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Cumulative Recession Probability

- < 5%
- 10 – 15%
- 25% – 30%

Source: Chandan Economics, WSJ Consensus, Fannie Mae, and Freddie Mac Projections as of October 2014
Office and Industrial Cap Rate Percentage Point Spreads Over 10-Year Treasuries

Source: Federal Reserve, NCREIF, Chandan Economics
SOURCES OF NEW INVESTMENT

Change in Availability of Capital by Equity Source

Prospects by Investment Category
- Value-Add Investments
- Development
- Opportunistic Investments
- Core Plus Investments
- Core Investments
- Distressed Properties
- Distressed Debt

Source: PwC Emerging Trends in Real Estate 2014
Net Percentage of Domestic Banks Tightening Standards for Commercial Real Estate Loans

Survey reports are not contemporaneous with underwriting quality and loan performance by vintage

Source: Federal Reserve, Chandan Economics; Note: As of Q4 2013, value is average for construction, commercial, and multifamily loans
FINANCING TRENDS

Net Percentage of Lenders Projecting Easing Underwriting Standards

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<tr>
<th>Product Type</th>
<th>Multifamily</th>
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Source: RELA-Chandan Survey of Commercial Real Estate Lender Sentiment 2014

Share of Lenders Projecting Increase in Loan Commitments

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Source: RELA-Chandan Survey of Commercial Real Estate Lender Sentiment 2014
Credit Migration Flags and Value Pressures in Underwriting
Apartment Income Underwriting Ratio
Underwritten NOI as a Share of Most Recently Reported NOI

Source: Chandan Economics; Note: YTD through mid-August 2014; Based on properties with secured financing $1M+; actual and underwritten NOI observed for a subset of transactions only.
Space Markets

4. Secondary market values are more dependent on property fundamentals
5. Inflexions in secondary markets are no easier to anticipate
6. Industry concentration exaggerates the upside and downside of the most coveted secondary markets
(LEADING) CANARIES IN A COAL MINE

1. Net inflows of cross-border capital
2. Increase in transaction velocity
3. Lower amortization on lower debt yields
4. Increase in lender density and overlap
5. Asset-based lending on stabilized properties
FORWARD LOOK

• Adaptation to changing space use patterns across all property types, including smaller apartment units with more common spaces.

• Lenders giving ground on underwriting as competitive overlaps increase. Growth in available debt outpacing growth in qualified borrower pool.

• More lending in more places to more borrowers, benefiting construction, secondary markets, and non-core, non-stable properties.
FORWARD LOOK

• Stable short-term **growth outlook subject to exogenous shocks;** long-term growth challenges remain largely unaddressed

• Moderate economic growth, improving labor markets, and marginally higher interest rates imply **more limited appreciation rates;** capital costs offset by income gains
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