

Morgan Stanley

INVESTMENT MANAGEMENT

# Morgan Stanley

## Value of Illiquid Assets in a Portfolio

November 2016



# Executive Summary

## Macro Backdrop

- Lower growth, lower rate environment for longer
- Heightened geopolitical risk will increase market volatility and tighten financial conditions
- Demographic shifts and technology change is disrupting traditional real estate usage

## The Case for Real Estate

 <p>Strong absolute and relative performance</p>	 <p>Stable, predictable cash flow</p>	 <p>Lower volatility</p>	 <p>Inflation hedging characteristics</p>	 <p>Diversification</p>
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## Investment Strategy

- Market cycle normalizing, real estate returns decelerating but still more attractive than alternatives
- Liquidity remains robust, pricing ahead of fundamentals in most markets
- Attractive investment opportunities can be accessed in each region via alternative business model

Notes  
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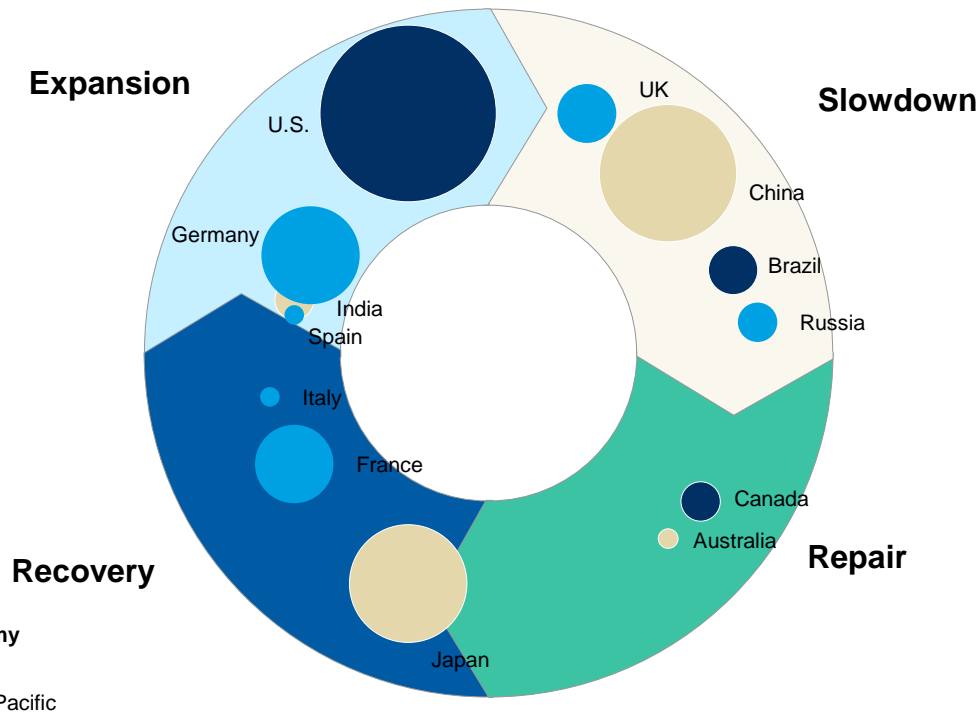
SECTION 1

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# Global Macro Backdrop

# Economic Cycles

## Major Economies at Various Stages in the Cycle



**Notes**

The market cycle positioning framework is the outcome of the use of an internal tool being developed by MSREI based on a consistent set of real estate metrics available on a country-by-country basis. It is aimed to help identify drivers of market performance, market positioning relative to prior cyclical peaks and troughs, turning points and implications for investing strategies. It is updated on a quarterly basis in line with the release of macroeconomic and commercial real estate data. The tool uses a mix of real estate fundamentals and capital markets metrics that are generally available in applicable countries (including rent, occupancy, cap rates and spreads and liquidity and values metrics). The majority of the metrics are based on "actuals", versus relying on forecast data. Note that other outcomes could result if different inputs or assumptions are made. The market cycle positioning constitutes a "forward looking statement." Due to various risks and uncertainties, actual events or results may differ materially from those reflected or contemplated in such forward-looking statement.

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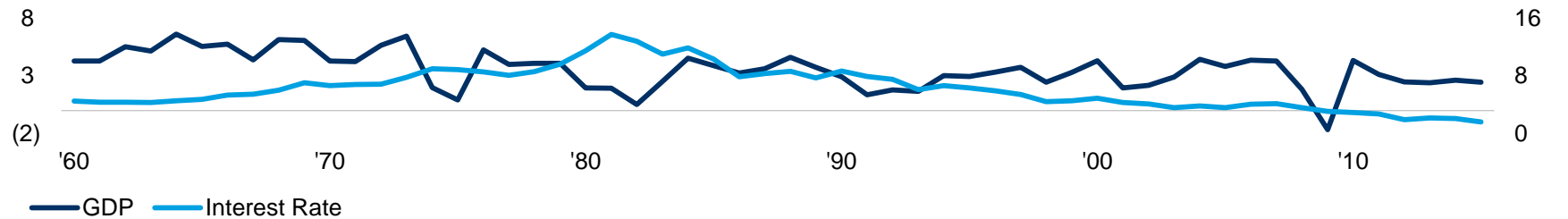
# Macro environment

## Low Growth, Lower Rates for Longer

### World Economic Growth

GDP Growth & Interest Rates

YoY GDP, %

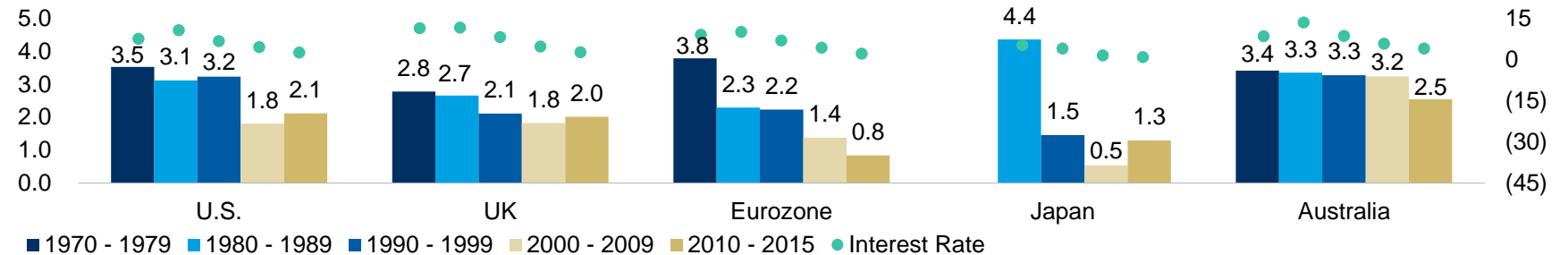


Source: World Bank, OECD, MSREI Strategy, data as of September 2016

### Global Growth by Decade

Annualized GDP & Average 10-Year Government Bond Yield

GDP Growth Rate, %



Source World Bank, OECD, MSREI Strategy, data as of September 2016

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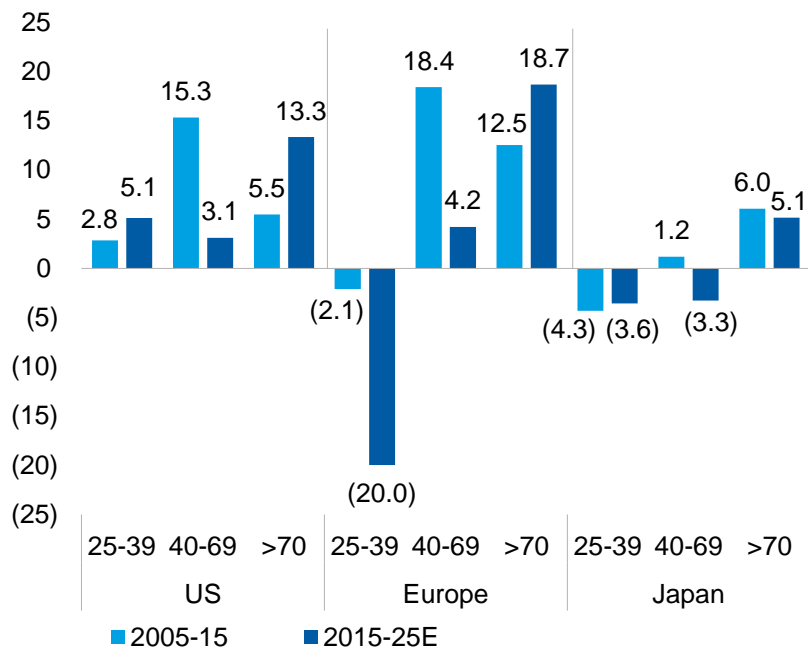
# Demographic Trends

## Aging Population and Urbanization

### Aging Demographics

2005-2025E, Change in Population by Age Cohort

Change in Population, MM people

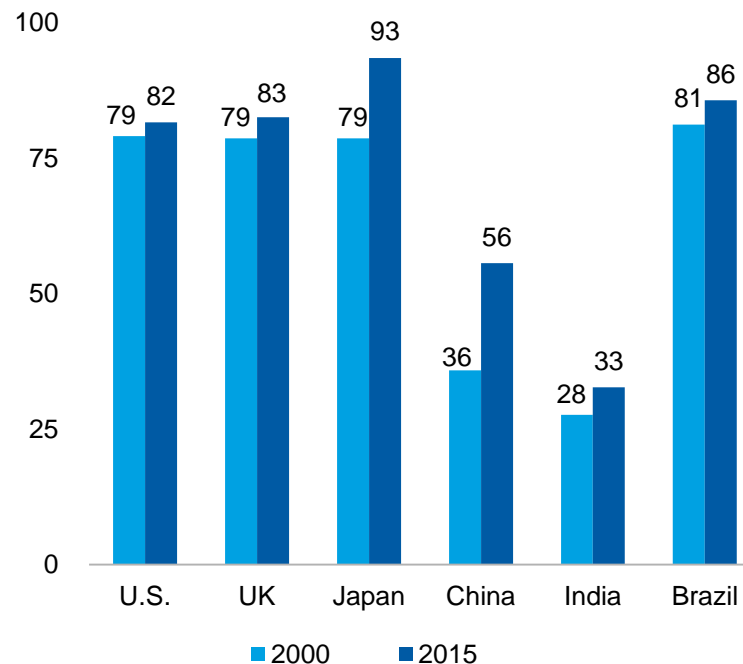


Source: UN Population Division, World Population Prospects, 2015 Revision

### Urban Populations

Share of Population Living in Urban Setting

%



Source UN World Urbanization Prospects, MSREI Strategy, as of September 2016

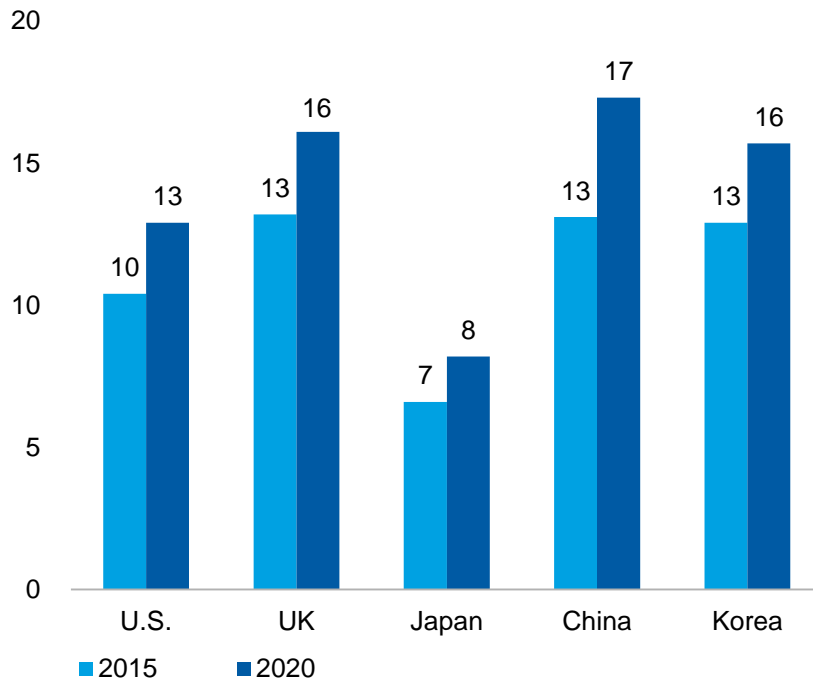
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# Technology Disruptors

## eCommerce and Digitization

### E-Commerce Growth Blurs Retail and Industrial

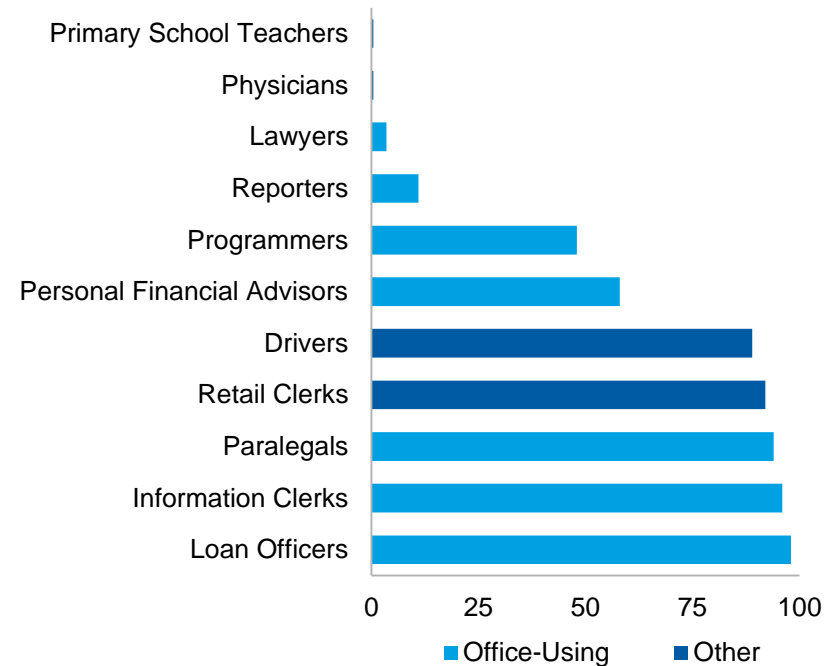
E-Commerce as a percentage of total retail sales (%)



Source: Morgan Stanley Research, Euromonitor, Forrester, national government data sources, data as of January 2016

### Increasing Digitalization of Jobs

Probability of a Job Becoming Automatable, %



Source: University of Oxford, Morgan Stanley Research, as of August 2016

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# The Case For Real Estate

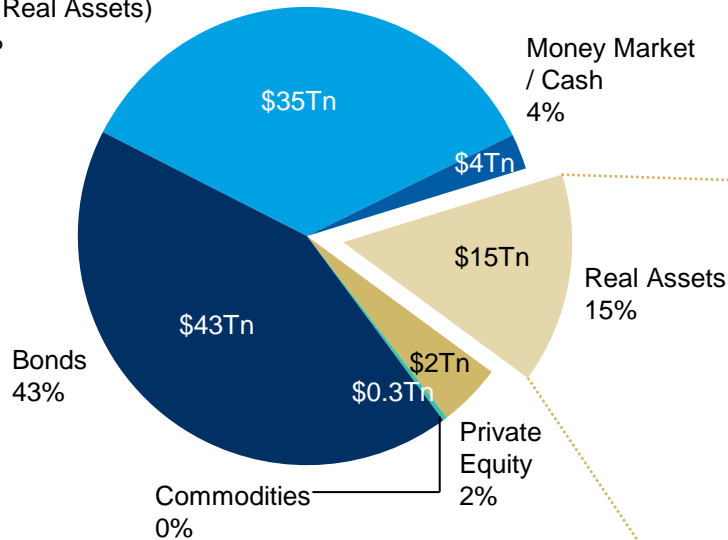


# Opportunity Set <sup>(1)</sup>

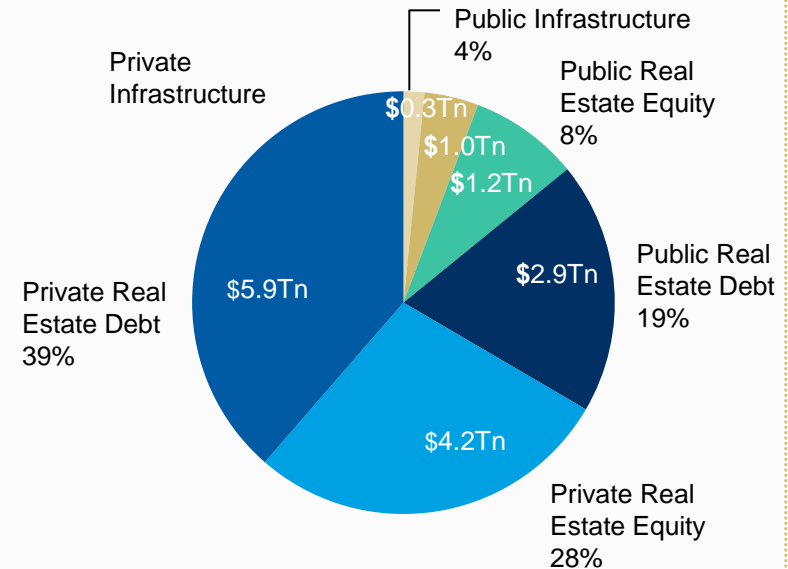
## Large Investable Universe Across Public and Private Domains

### Investable Universe (\$101Tn) <sup>(1)</sup>

Global Public Equity  
(ex. Real Assets)  
35%



### Real Assets (\$15Tn) <sup>(1)</sup>



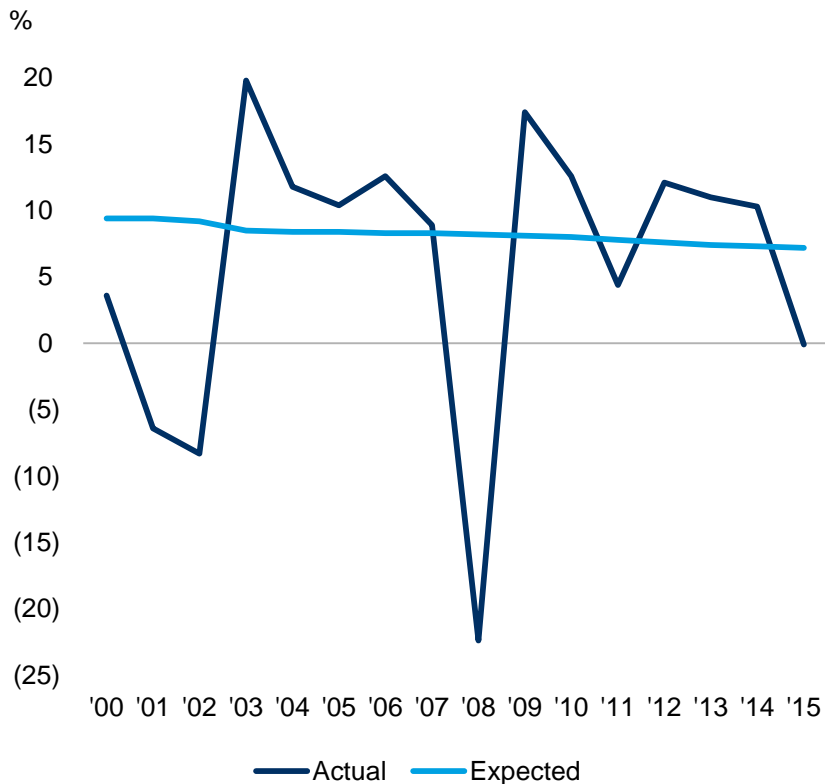
Notes  
1. Aon Hewitt, data as of June 2014

# Asset Allocation Trends

With Returns Falling Below Targets, Fund Flows into Alternatives are Expected to Accelerate

## Expected & Actual Return on Assets

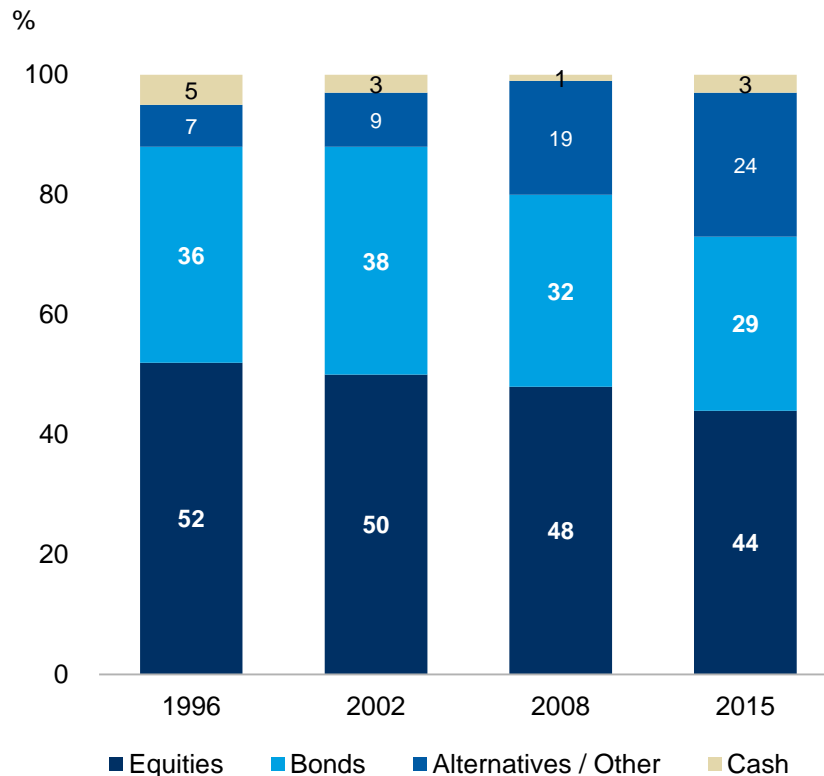
Return on Assets for Largest 100 U.S. Defined Benefit Plans



Source: Milliman, MSREI Strategy, data as of September 2016

## Pension Asset Allocation

U.S. only



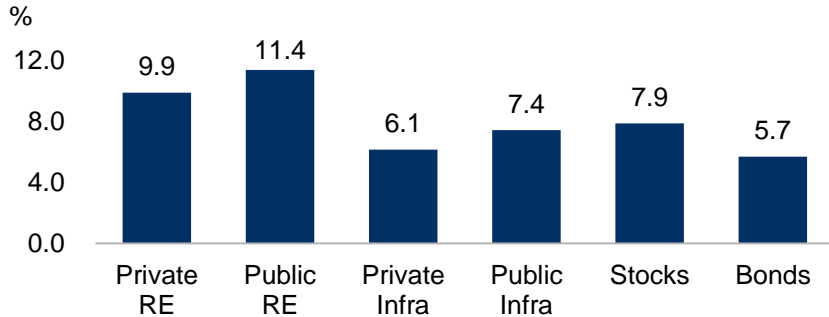
Source: Willis Towers Watson, data as of 2016

Notes  
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# Returns, Volatility and Liquidity

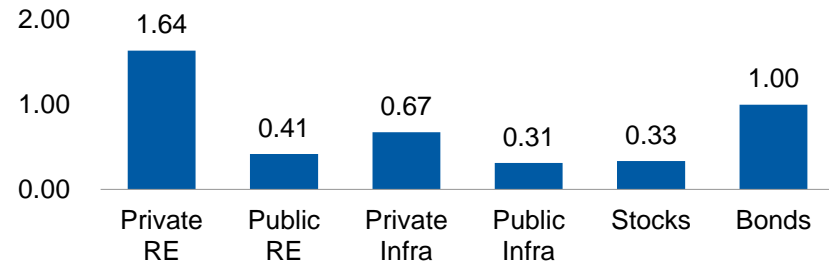
## Higher Risk Adjusted Returns with Lower Liquidity

### Total Return, CAGR (last 20 years) <sup>(1)(2)(3)</sup>



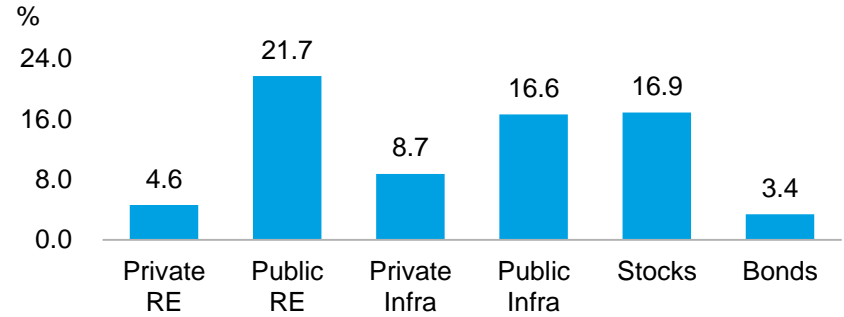
Source: Bloomberg, NCREIF, NAREIT, Standard & Poors, Preqin, Barclays, data as of October 2016

### Sharpe Ratio <sup>(5)</sup>



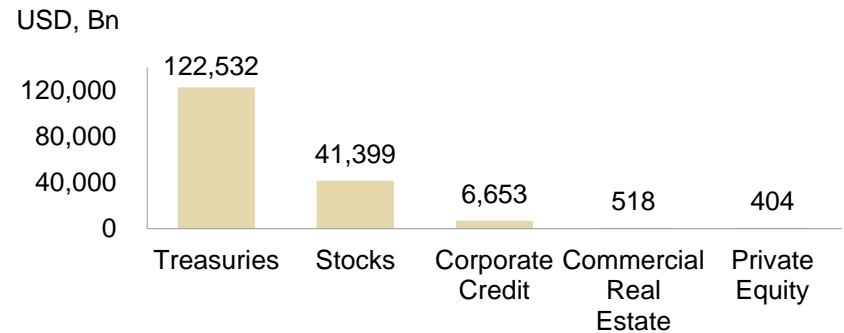
Source: Bloomberg, NCREIF, NAREIT, Standard & Poors, Preqin, Barclays, data as of October 2016

### Standard Deviation <sup>(4)</sup>



Source: Bloomberg, NCREIF, NAREIT, Standard & Poors, Preqin, Barclays, data as of October 2016

### 2015 Transaction Volume



Source: SIFMA, Real Capital Analytics, World Bank, Pitchbook, data as of October 2016

**Notes**

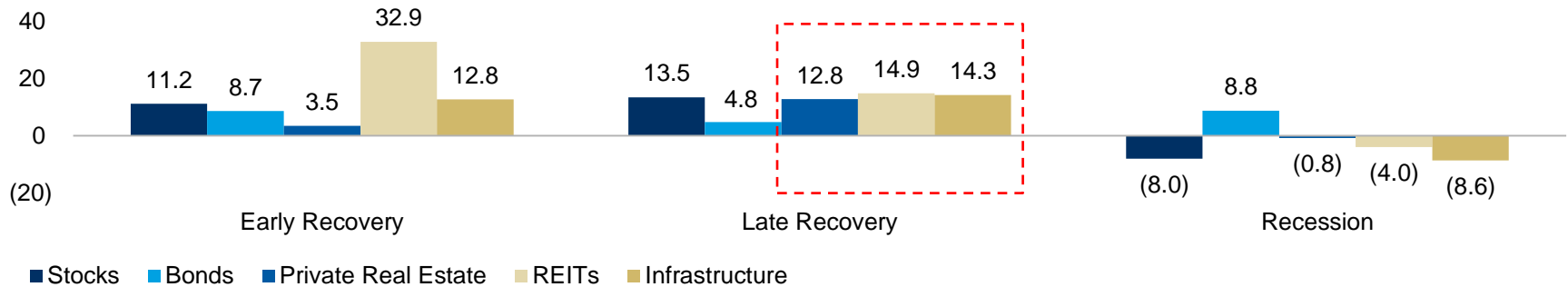
1. Based upon total return on a quarterly basis as of 1Q 2016.
2. Past performance is not necessarily indicative of future results.
3. The historical returns reflected above are included solely for the purpose of contrasting returns across asset classes and for providing information regarding such asset classes over certain time periods. The historical returns are not intended to, and do not, reflect the historical performance of investment opportunities sponsored by MSREI, and should not be interpreted as indicative of the future performance of any fund sponsored by MSREI. Returns shown do not take into account fees, incentive compensation and expenses associated with such investments and which reduce returns. When comparing asset classes, keep in mind that each has differences. Due to the appraisal methods for valuing real estate, there may be inherent issues when comparing real estate to other asset classes. Stocks can be more volatile than fixed income securities.
4. Standard Deviation measures the annual variation in returns.
5. Sharpe Ratio represents returns per unit of risk (and is formally defined as total return less risk free return, over standard deviation).

# Cycle Performance

## Outperformance During Late Recovery and Inflationary Market Periods

### Asset Class Returns Over the Cycle <sup>(1)</sup>

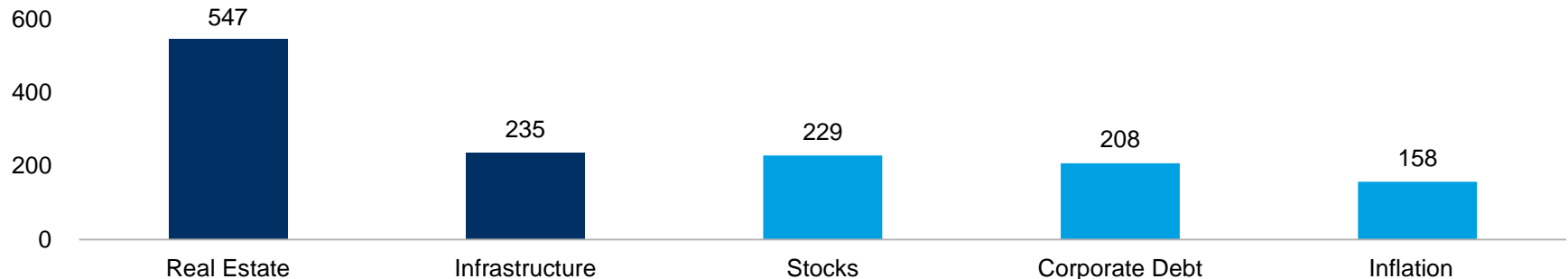
Average Returns over Each Phase of the Cycle, 1991 – 2016 (%)



Source: Bloomberg, NCREIF, MSREI Strategy, data as of 2Q 2016

### Real Returns During Periods of High Inflation

Cumulative Total Return, 1973 – 1985 (%)



Source: Bloomberg, NCREIF, MSREI Strategy, data as of 2Q 2016

Notes

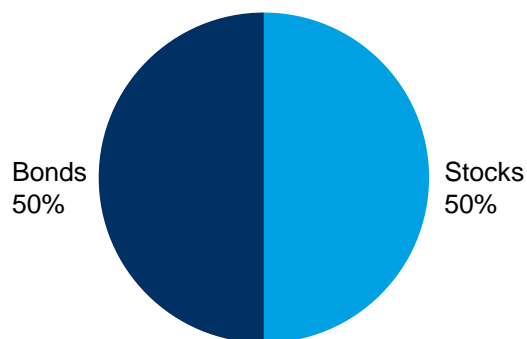
1. Recessions as defined by NBER; Early Recovery defined as first two years after a recession; Late Recovery defined as the rest of the business cycle

# Sector Diversification and Portfolio Optimization

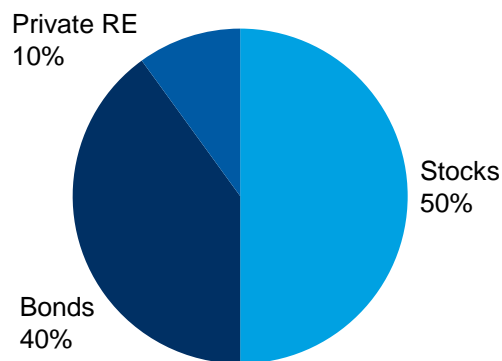
## Real Asset Allocation Accretive to Portfolio Risk/Return Profile

Illustrative purposes only

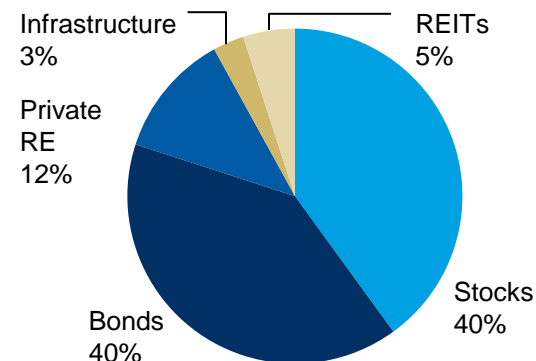
**Portfolio 1**



**Portfolio 2**



**Portfolio 3**



### Hypothetical Portfolio Performance

1990 to 2Q 2016

	Portfolio 1	Portfolio 2	Portfolio 3
<b>Historical Return (%)</b>	9.3	9.4	9.6
<b>Volatility (%)</b>	3.7	3.8	3.7
<b>Sharpe Ratio</b>	2.25	2.26	2.34
<b>Max Loss (%)</b>	(22.1)	(23.7)	(23.9)
<b>Inflation Beta</b>	0.32	0.48	0.63

Source NCREIF, NAREIT, Standard & Poors, Barclays Capital, S&P Dow Jones, Preqin, Bloomberg, MSREI Strategy, data as of 2Q 2016.

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SECTION 3

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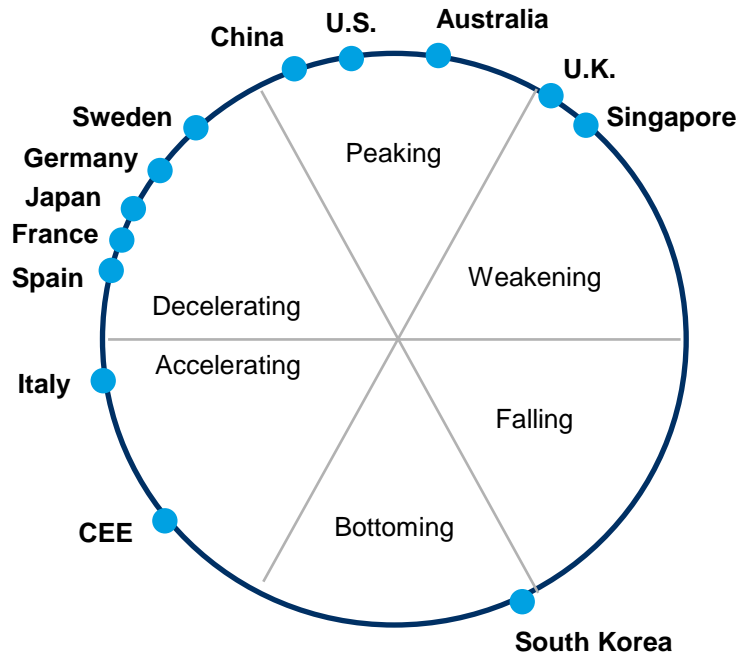
# Real Estate Investment Strategies

# Market Cycle

## Divergent Market Cycle and Returns

### Office Market Cycle <sup>(1)</sup>

2Q'16



Source: CBRE-EA, PMA, NCREIF, RCA, Bloomberg, MSREI Strategy, data as of 2Q 2016

**Notes**

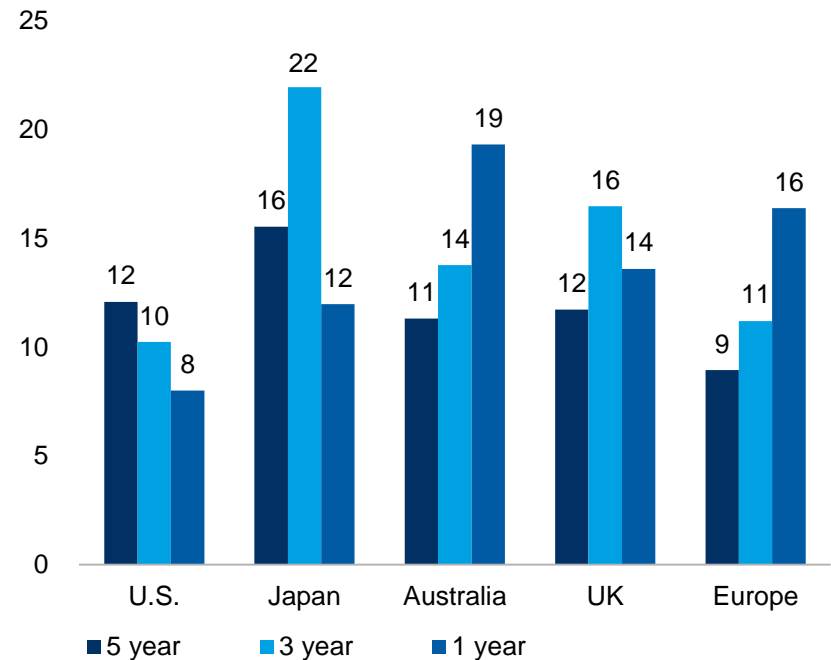
1. The market cycle positioning framework is the outcome of the use of an internal tool being developed by MSREI based on a consistent set of real estate metrics available on a country-by-country basis. It is aimed to help identify drivers of market performance, market positioning relative to prior cyclical peaks and troughs, turning points and implications for investing strategies. It is updated on a quarterly basis in line with the release of macroeconomic and commercial real estate data. The tool uses a mix of real estate fundamentals and capital markets metrics that are generally available in applicable countries (including rent, occupancy, cap rates and spreads and liquidity and values metrics). The majority of the metrics are based on "actuals", versus relying on forecast data. Note that other outcomes could result if different inputs or assumptions are made. The market cycle positioning constitutes a "forward looking statement." Due to various risks and uncertainties, actual events or results may differ materially from those reflected or contemplated in such forward-looking statement.

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### Property Returns

Private Market Office Returns (%)



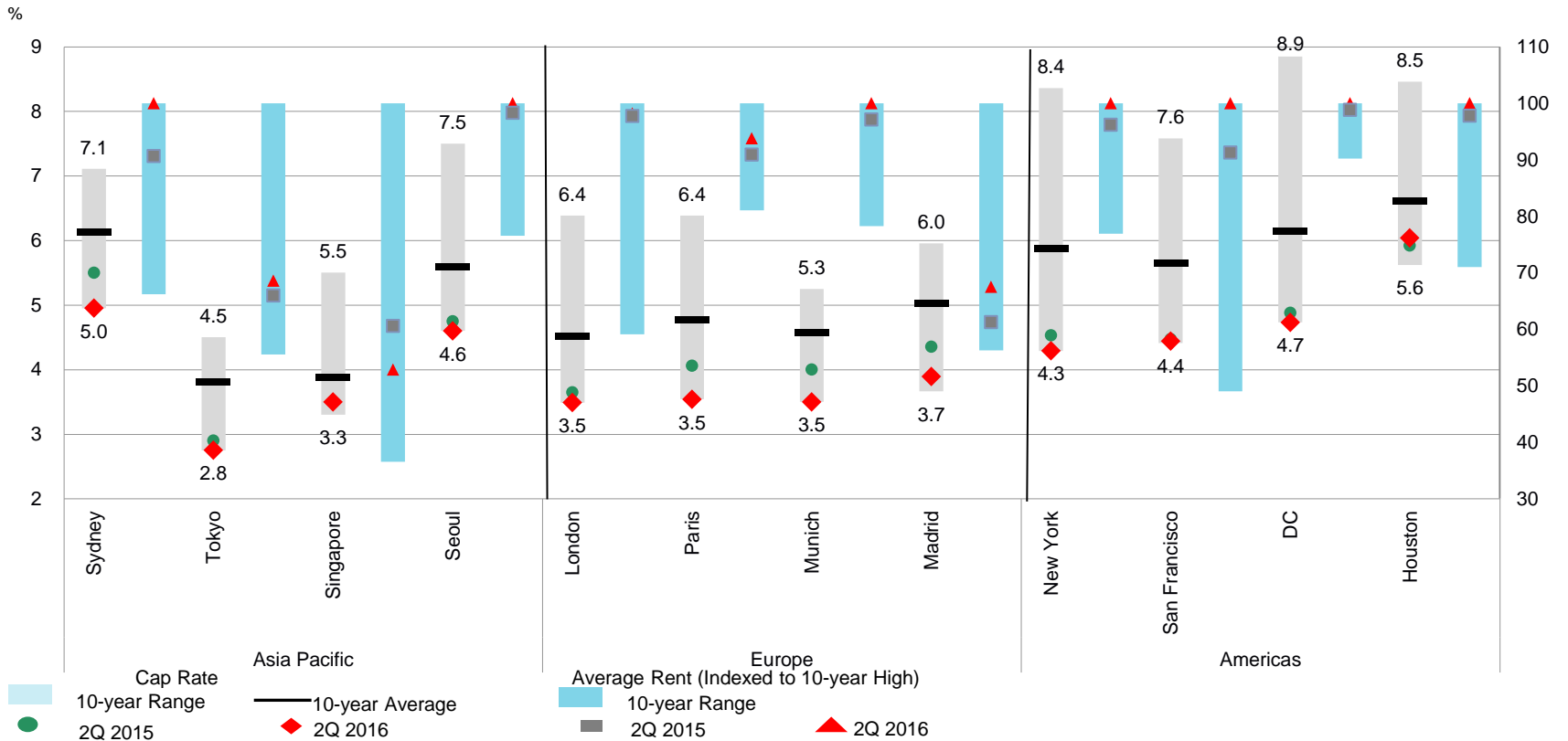
Source: CoStar, PMA, MSREI Strategy, data as of 2Q 2016

# Global Market Comparison

## Rent and Cap Rate versus Peak

### Office Cap Rates & Rent Levels

10-Year Range & Current



Source CoStar, PMA, MSREI Strategy, data as of 2Q 2016.

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## Global Diversification Accretive to a Portfolio

	United States	France	Germany	United Kingdom	Australia	China	Japan	Hong Kong	South Korea	Singapore
United States	100%	53%	38%	52%	36%	5%	21%	22%	15%	23%
France		100%	64%	55%	24%	(7%)	32%	34%	30%	31%
Germany			100%	49%	9%	14%	38%	38%	25%	29%
United Kingdom				100%	44%	9%	33%	27%	23%	27%
Australia					100%	3%	5%	(0%)	7%	25%
China						100%	8%	27%	(2%)	13%
Japan							100%	38%	36%	25%
Hong Kong								100%	46%	58%
South Korea									100%	33%
Singapore										100%

### Hypothetical Portfolio Performance<sup>(1)</sup>

2001 to 2015

	Portfolio 1	Portfolio 2	Portfolio 3
<b>Composition</b>	100% Europe	100% US	40% Europe/40% Asia/20% US
<b>Historical Return (%)</b>	6.7	8.3	7.5
<b>Volatility (%)</b>	4.7	9.7	5.1
<b>Sharpe Ratio</b>	1.12	0.71	1.10
<b>Max Loss (%)<sup>(2)</sup></b>	(5.4)	(25.3)	(7.6)

Source CoStar, PMA, MSREI Strategy, data as of 2Q 2016.

Notes

1. U.S. based on IPD U.S. All-Property Index, Europe based on IPD Pan European All-Property Index, Asia based on IPD All-Property Indices for Japan, Australia, and South Korea weighted by annual IPD reported market cap.

2. Max portfolio loss is an additional measure of downside portfolio risk and measures the largest single drop from peak to trough in the value of a portfolio (including both income and value loss).

Provided for illustrative purposes only and not intended to represent the performance of any MSREI investment. There can be no assurance that any portfolio will achieve comparable results. Diversification does not eliminate the risk of future loss.

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# Global Real Estate Environment & Opportunities

## Regional Market Themes

### UNITED STATES

- Recovery uneven, interest rates expected to remain lower longer
- Volatility = tighter financing conditions
- Fundamentals holding as new supply remains muted in most markets
- Capital flows robust, yields stabilizing
- Pricing divergence between prime and non-prime due to debt availability

### EUROPE

- Post Brexit, growth expected to moderate
- Geopolitical tensions heightened
- ECB and BoE QE programs expanding
- Yield spreads between core and non-core markets still exist

### ASIA

- Japan: Rent recovery accelerating despite slow growth economy
- Australia: GDP growth steady, property fundamentals remain robust in Sydney/Melbourne
- China: heightened volatility as economy transitions and slows. Debt levels remain a concern

## Targeted Investment Strategies by Region

### UNITED STATES

- Value-add / Repositionings
- Select new developments
- Recapitalizations

### EUROPE

- Defensive / cash flow investments
- Core in non-core markets
- Recapitalization / distressed opportunities
- Value-add / Repositionings

### ASIA

#### Developed markets

- Value-Add / Repositionings
- Defensive / cash flow investments

#### Growth markets

- Development partnerships

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## Case Study

### Mixed Use Asset in Vienna



#### Transaction Background

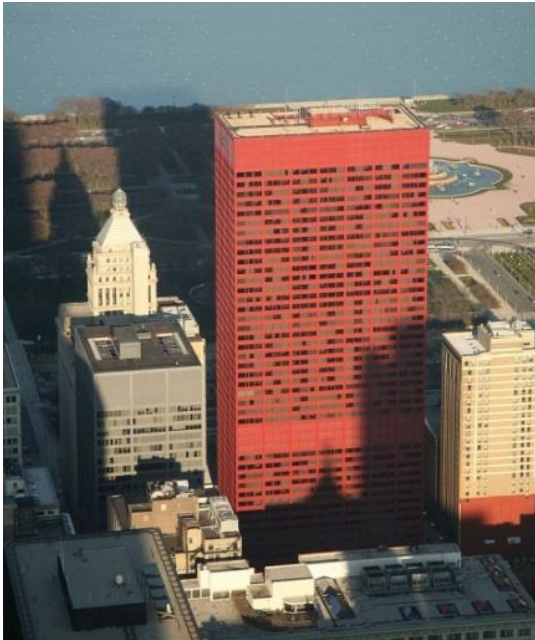
- Austria's first town-in-town concept combining office and residential with shopping and entertainment
- Purchased for €330MM (\$427MM)

#### Key Investment Considerations

- Austria's most visited shopping and entertainment center, with 14 MM annual visitors
- Property has its own railway station
- Investment located in Austria, one of the few "AAA" rated countries and in Vienna, one of the highest per-capita GDP cities in Europe

## Case Study

### Class B Office in Chicago



#### Transaction Background

- Seller , which built the property as its corporate headquarters, was selling in anticipation of a relocation. Seller to initially leaseback its current space

#### Key Investment Considerations

- Attractive Basis
- Strong In-Place Cash Flow
- Optionality – Asset can be re-leased as office or redeveloped into a mixed-use asset with residential in the tower
- Best-in-Class Partner with Proven Track Record
- Well-Maintained Institutional Quality Asset
- Market Dynamics – Historically low new supply, continued suburban to urban migration, robust technology employment growth and conversion of obsolete office space to alternate uses have combined to help drive absorption and push rental rates

# Business Model Considerations

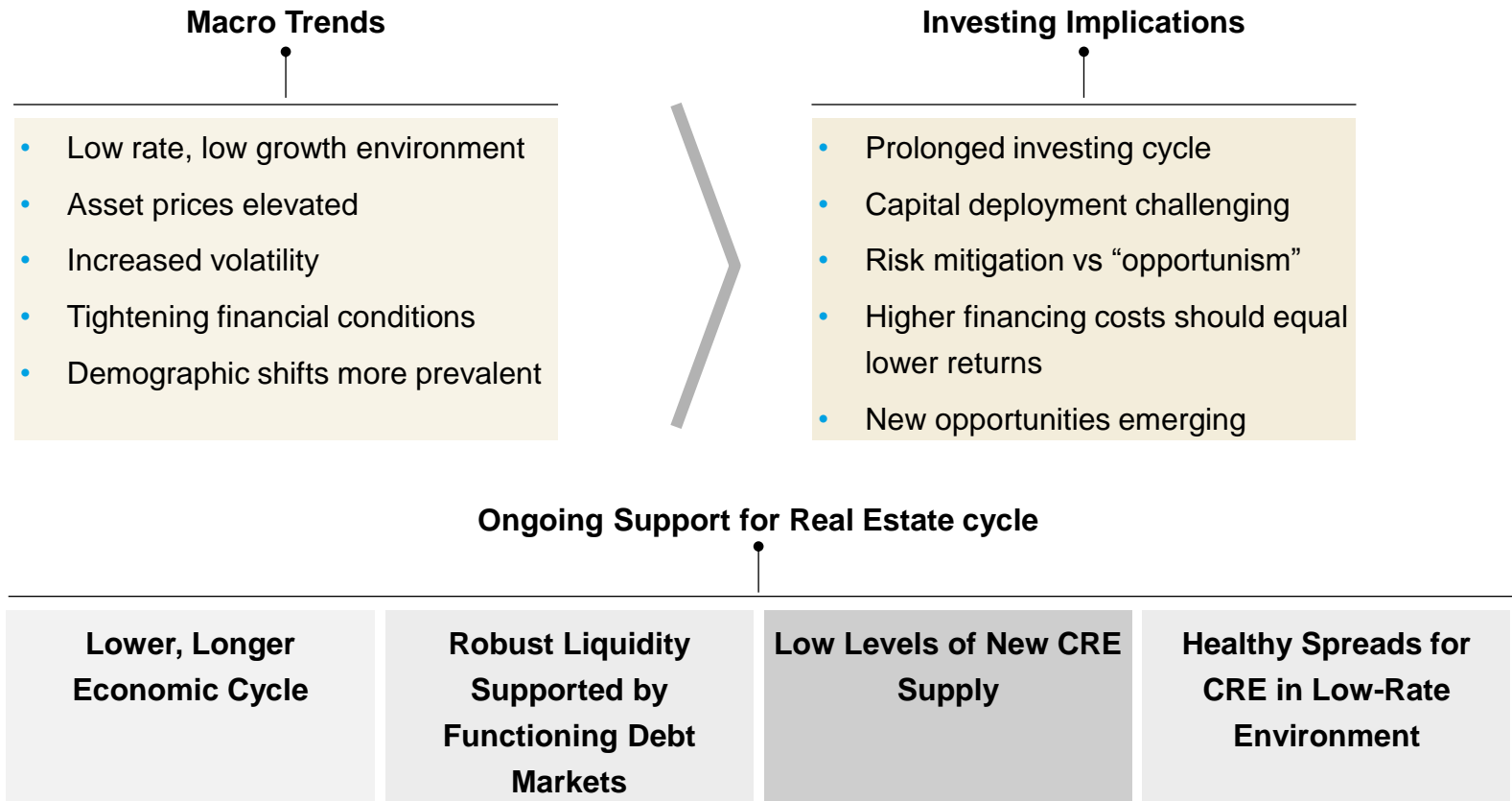
## Range of Options to Access Real Assets

Model	Separate Accounts	JVS / Co-Invests	Commingled Funds
Description	<ul style="list-style-type: none"> <li>• Direct property investing</li> </ul>	<ul style="list-style-type: none"> <li>• Targeted investment strategy where multiple investments by style / regional location are made</li> </ul>	<ul style="list-style-type: none"> <li>• Open-ended or closed-ended commingled funds</li> </ul>
Pros	<ul style="list-style-type: none"> <li>• Greater control over style and property selection</li> <li>• Liquidity is driven by the control features of the investor</li> <li>• Ability to craft investment guidelines and strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Can provide access to better deal economics</li> <li>• Relationship-driven; targeted strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Can access a greater range of strategies</li> <li>• Predefined terms, often exceeding five-years for closed-end funds, allow the fund manager sufficient time to execute complex investing strategies</li> </ul>
Cons	<ul style="list-style-type: none"> <li>• Access to property markets and strategies limited by real estate allocation size</li> <li>• Managers may have inherent conflict on property allocation</li> </ul>	<ul style="list-style-type: none"> <li>• Generally requires larger real estate allocation</li> <li>• Shared ownership limits liquidity</li> <li>• Liquidation of existing investments often governed by pre-agreed termination date</li> </ul>	<ul style="list-style-type: none"> <li>• Closed-end funds have limited liquidation options, typically only end of fund</li> </ul>

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# Conclusion

## Summary Trends and Implications



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