



Climate Risk and Investment Risk: A Perspective from an Institutional Investor

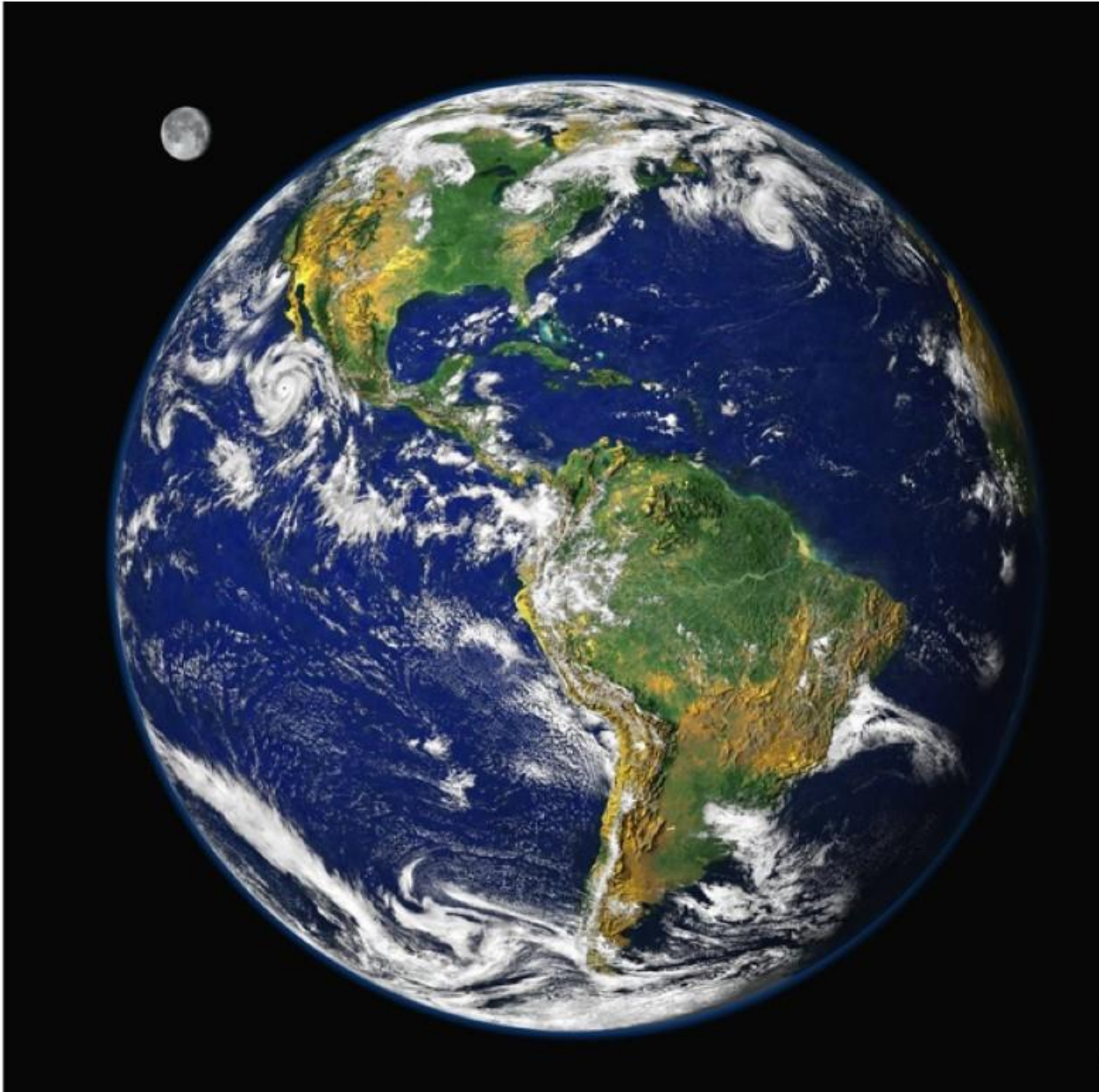
Presentation to:

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HEITMAN

A REAL ESTATE INVESTMENT MANAGEMENT FIRM



“A hotter planet means more drought, more famine, more extreme weather events, more property damage, and more dislocation of humanity than any of us have seen in our lifetimes. We cannot know when on the calendar these disasters will arrive but we can be confident that they will.”

“The investment profession needs to incorporate these new realities into our analysis in order to help efficiently allocate capital in a world where the effects of climate change are increasing. **Climate change will impact every company and every investor on earth.**”

From **Climate Change Analysis in the Investment Process**, CFA Institute, 2020

Our Work on Climate Change Began In Part Because Real Estate Is About...

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Location

Location

Location

The Location of Choice has been Coastal for Centuries

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40% of the globe's population lives in coastal locations. These same locations dominate institutional real estate portfolios



Rising Sea Levels Pose Risk to Institutional Real Estate Investors

TOP 50 NPI METRO AREAS AND DEGREE OF SEA-LEVEL RISE RISK



67%
of NCREIF Property Index value, or

\$360 billion,
is in metro areas whose primary cities are among the

20% most exposed
to sea-level rise in the United States.

Source: Heitman and ULI, with analytical support from Four Twenty Seven

Dangers Range from Event Risks to Long-Term Existential Threats



**PHYSICAL
DAMAGE**



**INSURANCE
PREMIUM
REPRICING/
AVAILABILITY**



**TAX INCREASES
TO FUND
INFRASTRUCTURE**



**INVESTMENT LIQUIDITY
REDUCED/ REPRICED**



**ECONOMIC &
DEMOGRAPHIC
DAMAGE**



**ABANDONMENT OF
RISKIEST/LEAST-
RESILIENT LOCATIONS**



Isn't Risk Covered By Insurance?

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Time horizon: 1-year insurance premiums vs. 5- to 20-year investment horizon

Insurance protection against physical damages but not against lost investment value



Climate Risk = Investment Risk

CLIMATE RISKS

Capital Markets

- Reduced investor interest
- Reduced exit value
- Higher loan rates

Rental Revenue

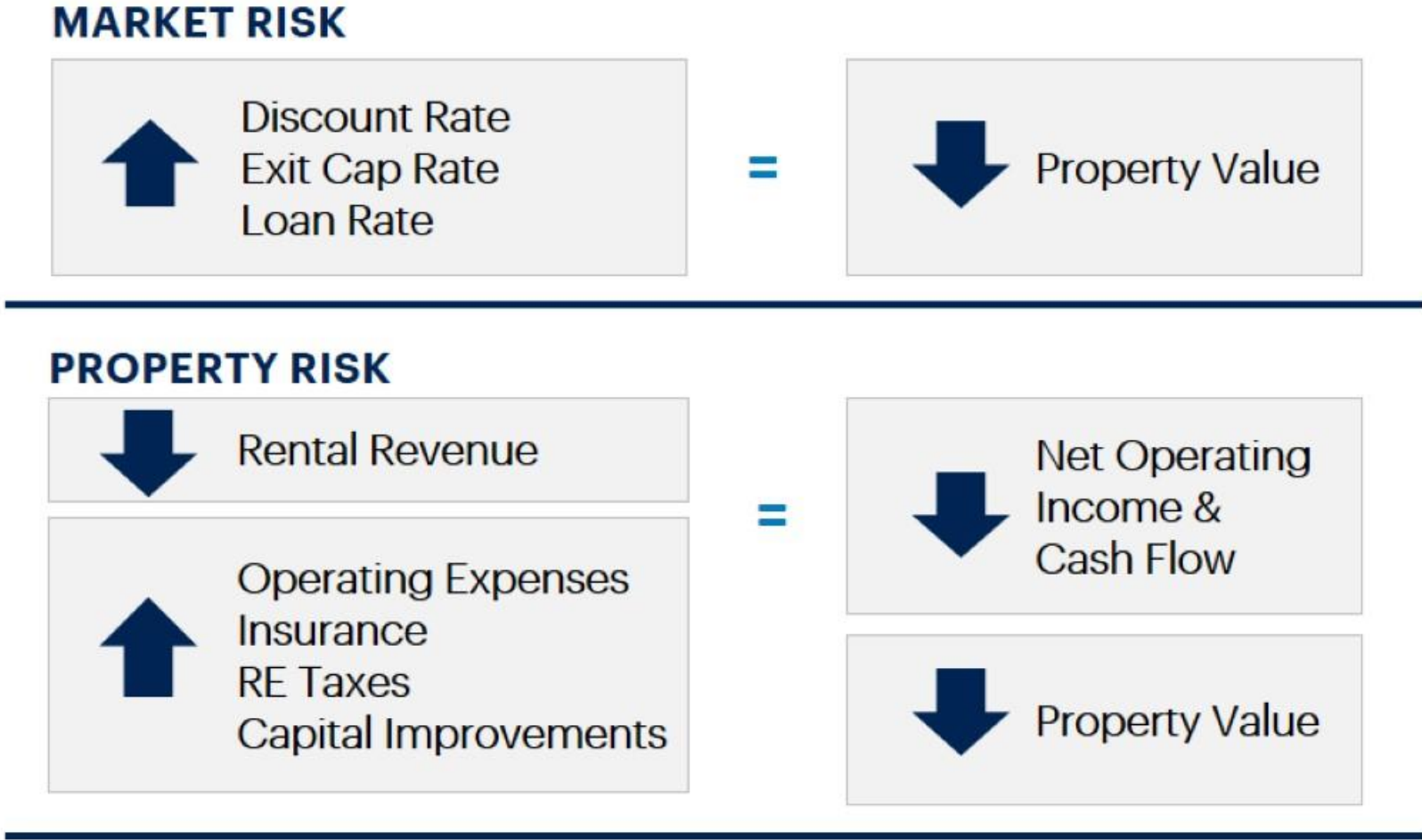
- Reduced occupier demand

Operating Expenses

- Increased operating expenses (maintenance and resource costs)
- Increased insurance cost
- Increased real estate taxes

Capital Improvements

- Increased capital expenditures

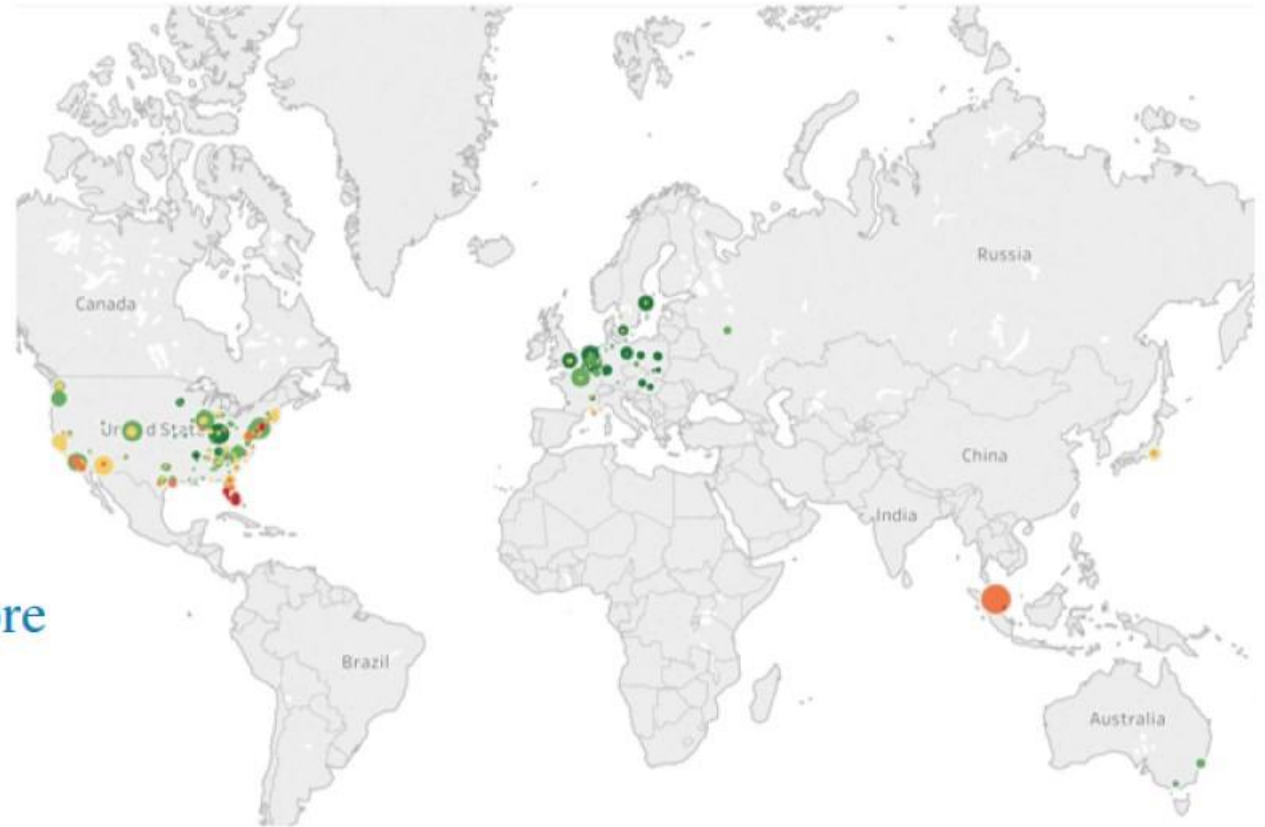


Heitman Property Risk Screening for new acquisitions and assets under management on each of the following risks:

- Flood
- Hurricanes / Typhoons
- Sea level rise
- Wildfires
- Water stress
- Heat stress
- Earthquakes

Heitman Due Diligence is expanded if risk score for the potential investment goes above risk threshold.

Onsite due diligence further investigates the risk, building codes and property conditions such as height over flood zone. For earthquake, an additional seismic study is conducted to determine scenario expected loss (SEL)



We Aggregate Asset Risk to Assess Portfolio-Level Climate Risk

PERCENT OF AUM VULNERABLE TO RISKS

19%	Floods
0%	Sea Level Rise
4%	Hurricanes & Typhoons
0%	Earthquakes
0%	Heat Stress
11%	Water Stress

THE FUND'S CLIMATE RISK ANALYSIS

- **Floods:** The fund currently has a locational high risk AUM exposure of 19%. This risk is dispersed across the United States across four assets. One asset in San Diego is the main driver of this risk and represents ~11% of the total AUM exposed. The remaining ~8% is scattered across three assets in the Midwestern region (Illinois (1) and Wisconsin (2)).
- **Hurricanes & Typhoons:** The fund currently has a locational Red Flag AUM exposure of 4%. This risk is concentrated in one asset in Wilmington, North Carolina.
- **Water Stress:** The fund currently has a locational Red Flag AUM exposure of 11%. This risk is concentrated in one asset in San Diego

NEW EQUITY OR DEBT INVESTMENT BRIEFS INCLUDE AN ASSESSMENT OF:

Asset-Level Climate Risk

Market-Level Climate Risk

Portfolio-Level Climate Risk

FACTORS TO CONSIDER:

Climate risk faced by asset/market

Local preparedness for climate risk

Investment structure – debt or equity

Investment hold period

Market growth trajectory

Market risk premium available

