Property Valuation and Financing Due Diligence
Where do resilience incentives fit in?

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High Performance Commercial real estate: Investment risk, Valuation & Financing

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Realizing Resilience – Incentives for Owners and Operators
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Resilience Investments - Parsing Loss Risks

Incentivization options: opportunities and hurdles
Focus: resilience value as viewed by banks, appraisers

Traditional areas of lending business focus

Inside the property line
- Buildings
- Businesses
- Property owners

Political, government

Outside the property line
- Community essential services continuity
- General public safety of life and limb
Incentivization targets to spur investment

For banking and appraisal considerations:

Inside the property line

- Real estate structures
  - Protect from destruction

- Business interruption
  - Impact risk varies by business use
  - Losses of similar $ magnitude to physical loss

Three options: buy insurance, self-insure or do nothing
Resilience upgrades create different types of value and risk

Economics of some threats are mostly actuarial

• Chance of and loss amount per extreme event
• Ready and waiting, but no material daily impact

Value today of future risk avoidance is not the primary purview of banks, appraisers

• Income Approach dominates market value
• Insurance actuarial analysis for singular events
Resilience value – “Waiting” & “Active”

- “Waiting impact” - protection in case of an event
  - Property quality, future proofing
  - Lower mortgage interest and lower bond “risk” bond
  - Relatively small cash flow influences
  - Increased value at sale; might be based on cost
  - Needs to be proven by market actors (buyers & sellers)

- Basically self-insurance

- Waiting plus “Active impact” – protection + cash flow
  - Every day cash flow, adds property value
  - PLUS single impact event protection
Resilient design as High Performance design

Energy management for resilience

- Healthful, efficient & continuous energy operation
- Cash flow, plus soft benefits, plus building value

Business continuity via on-site energy

- Resilience as a cash flow investment
- Importance of energy in operations

Wide area grid vs. Microgrids & District energy

- Distributed generation + storage
- Grid arbitrage
- Community energy
Business continuity economics

Business losses can be as great/greater than property losses

Business interruption insurance provides an investment yardstick of comparison

Energy loss is a major business risk
no internet, lights, heat

Economics of energy are changing – distributed generation, and storage
Resilience energy investment returns

- New reality of utility & building power management
- Replacing “back-up” power diesel generator with building integrated, grid tied always on dynamic power
- Numerous economically viable options becoming possible
  - Solar PV renewable; low carbon fuel cell, CHP co-gen, tri-generation
  - Dynamic grid interface: time of use pricing, demand response, demand charges, battery storage
- Focus on energy investment for business continuity
On-site Power + Storage Financing

Solar PV renewable and low carbon financing
Numerous choices – buy, lease, PPA
Incentives - Federal Investment Tax Credit, local incentives
  • DSIREUSA.org database
For solar PV, property market value impact available
  • PV Value software
Battery technology, availability
  • Tesla PowerWall – Elon Musk

Grid interface: demand response, utility rate management, peak shaving, demand charges
Highly regulated actors

- Residential moreso than commercial

Banks – must follow prudent lending guidelines

- Interest rate discounts must be justified
- Policy change complicated, expertise needed

Appraisers – research and follow market indications

- Value impacts must be market supported
- Residential oversight different than commercial

Innovative financing - PACE, OBR

- Different lending rules apply
Resilience investment risk analysis report

Must understand and clearly define threat
• Best done by experts in writing, property specific

Value impact analysis for:
1. During holding period
2. At an extreme event
3. At time of sale (price + liquidity)

Consider All Three Levels
• Access to loans, financing alone not sufficient
Expert, 3rd party reports are fundamental

Use of 3rd party reports is well established process in banking, appraisal

To deal with issues too complex for bankers, investors
- Contamination, environmental hazards - ESA Phase 1
- Repairs – what and how much - PCA
- Title reports, Appraisal reports
  - PV Value software for solar PV market value

Incentivize creation of the “Resilience Investment Report” standard format
Conclusions

- It’s complicated!
  - Site / threat specific
  - Diverse impacts
  - Inside and outside property line
    - Buildings, business interruption, life & limb
    - Energy management a key element

- Investment analysis mix of insurance actuarial, cash flow and increased value at sale

- Standardized, universally accepted reports, signed by qualified 3rd parties ultimate incentive
  - Conventional answer for loan/investment due diligence
Thank You!

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