Financial Incentives for Pre-Disaster Mitigation

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Lending & Investment Standards  
(Residential, Commercial, Government)

Strategy: Document value-add of resiliency in loan and investment underwriting for commercial, government and residential properties. Use ratio and (for commercial and government projects) discounted cash flow (DCF) analysis.

- Added resilience increases real estate values by improving cash flows.
  - Increases revenues (reduces potential business interruption.)
  - Reduces expenses (maintenance, energy costs, insurance premium expense.)
  - Reduces capital replacement expenditures over time.
  - Reduces investment risk and discount rates.
  - All other factors being equal, increases cash flows (commercial and government buildings) and sales prices (commercial and residential properties).

Hypothetical ratio analysis

**Loan to value ratio (LVR)**

Example: 75% loan to value ratio required by lender or bondholders

- No resilience: Project valued at $100 million / Residential: $100,000
  - Loan amount at 75% LVR = $75 million / Residential = $75,000
- Resilience: Project value increases 10% = $110 million / Residential: $110,000
  - Loan amount at 75% LVR= $82.5 million / Residential: $82,500

Borrower benefits; can get more debt financing

OR

- Loan remains at $75 million / Residential: $75,000 = 68.2% LVR (permanent lender has more security)

**Debt coverage ratio (DCR) (commercial and government projects only)**

Example: 1.25x debt coverage ratio required by lender or bondholders.

- Annual loan payment = $1 million
  - No resilience: Project cash flow is $1.25 million. DCR= 1.25x
  - Resilience: increases cash flow by 10% = $1.375 million DCR=1.375x (better permanent lender security)

OR

- DCR= 1.25x = $1.1 million loan payment (borrower benefits; can get more debt financing)
Lending and Investment Standards: Who Benefits?

Who benefits?

- **Building owners** (higher cash flows or buyer demand, higher building value = additional debt financing; higher sale price)

- **Permanent lenders** (financial institution; bond holders) = better security at a given level of debt

Requirements

- **Actionable resiliency standard/s.** (LEED for resiliency.)

- **Industry/consumer education.** (Banking/finance; commercial real estate; banking; public finance; homeowners.)

- **Valuation methodologies to measure impact of resiliency.**
  A) Commercial & residential buildings: appraisal standards. (Appraisal Foundation, Appraisal Institute, RICS, Appraisal Subcommittee of FFIEC)
  B) Government Projects: Buy in from the bond rating agencies (Moody’s, Standard & Poor’s, Fitch)
Insurance Industry Incentives
(Residential, Commercial & Government Buildings)

- Commercial/government prototype:
  A) Green building insurance since 2006 (Fireman’s Fund).
  Insures rebuilding to LEED or other green standard with premium discount. Now offered by most major carriers.

- Residential prototypes:
  A) Legislatively required insurance discounts for retrofitted homes
     - FL: Wind storm resistance (up to 42% discount)
     - CA: 5% discount for EQ retrofits
  B) Discounts for resilience certified homes: Fortified Standard (AL, MS, NC, SC)
     - C) Carrier based program: State Farm: premium discount for hail resistant roofing (27 states)

Strategy: expand and mainstream use of insurance incentives (discounts, credits) for residential (property insurance) and commercial buildings (property and business interruption insurance).

Requires:
- Actionable resiliency standard/s.
- Education programs for insurers, insurance regulators, owners of homes, commercial property and government facilities.
- Buy-in from insurance community and property owners.
Fannie Mae/ Freddie Mac Incentives (Residential)

- **Prototype, Single-Family**: Fannie Mae Home Style Renovation Loan (HSR); Freddie Mac Renovation Mortgage
- **Prototype, Multi-Family**: Fannie Mae 10 basis point reduction on interest rates for green-certified projects.

**Strategy:**
1. Explicitly incorporate resiliency strategies in Fannie Mae and Freddie Mac renovation loan programs.
2. Extend Fannie Mae multi-family interest rate reductions to projects meeting resiliency strategies.

**Requires:**
- Actionable resiliency standard/s for single-family and multi-family housing.
- Resiliency education and buy-in from Fannie Mae, Freddie Mac, participating lenders, multi-family property owners and homeowners.
PACE: Property Assessed Clean Energy (Residential & Small Commercial Buildings)

- Prototype: voluntary state/local programs for energy-efficient/green retrofits of residential and commercial property.
- Authorized in 31 states and the District of Columbia
- Add retrofit loan costs to property tax bill and repay loans through tax collection process. Default on retrofit loan creates superior tax lien (first in collection priority). Improves lender security.
- Loans supplied by government entity or participating lender.
- Requires state enabling legislation and creation of state or local program.
- **Strategy:** Resiliency based PACE programs (consider extending current PACE initiatives to include additional resiliency strategies)
- **Requires:**
  - Actionable resilience standards for commercial and residential buildings.
  - Education of state and local officials and private lenders
  - Amendment or passage of state enabling legislation and expansion or creation of local programs and financing partnerships.
Contractor Based Financing
(Residential & Smaller Commercial Buildings)

• “Master” contractor or finance company develops retrofit financing program that is executed through partner subcontractors.

• Prototype: Residential home improvement market
  --Financing company partners with contractor to offer financing through unsecured loans (widespread)

• Prototype: small commercial energy retrofit market
  --Joule Assets ($270 million program for smaller commercial retrofits; $90 million initial deployment)

• Requires:
  -Actionable resiliency standards (residential and small commercial)
  -Education and buy-in from contractors, master contractors and financing companies.
Small Business Administration (SBA) Programs (Small Commercial Buildings)

• **SBA loan guarantee programs** for commercial real estate: $300 billion through Q4 2013

• Major SBA loan guarantees for real estate:
  - **7(a):** ~$20 billion/year. Working capital loans to small businesses. Can be used for building construction and retrofit.
  - **CDC/504:** ~4 billion/year. Fixed asset loans for land, buildings, equipment, including construction and retrofit. Implemented through CDCs (community development corporations).

• **Strategy:** Expand SBA loan guarantee programs to incorporate resiliency retrofits.

• **Requires:**
  - Actionable resiliency standards for small commercial buildings.
  - Buy in from SBA, SBA lenders and small business owners.
  - Desirable: Upward adjustment of SBA loan guarantee authority by Congress. (Small Business and Appropriations Committees.)
  - Note: NIBS has also recommended that these programs incorporate energy retrofit lending in a January 2015 report:
Corporate Bond Ratings
(Large Businesses/Commercial Facilities)

• Higher corporate bond ratings for corporations that use resiliency strategies for leased and owned property.
• Applies largely to companies whose facilities are concentrated in a high risk geographic area or region.
• Requires:
  - Actionable resiliency standard/s for commercial real estate.
  - Resiliency implementation by corporations.
  - Use of resiliency information by corporate bond rating agencies.
Resilience-Based REITs (Large Commercial Buildings)

- REITs (real estate investment trusts): publicly-traded real estate funds with $1.8 trillion in assets—principally commercial real estate—under management.
- REITs: leaders in energy efficiency to reduce ongoing operating expenses, improve rental performance and earn higher returns.
- The mainstreaming of resilience strategies for commercial properties would allow REITs to improve cash flows and yields by increasing revenues (higher tenant demand) and reducing expenses (maintenance, capital replacement, insurance).
- **Strategy:** encourage REIT investment in resiliency.
- **Requires:**
  - Actionable resiliency standard/s for commercial buildings.
  - Demonstrated case studies showing that resiliency improves operating performance.
  - Education of REIT sponsors.
- Strategy can also be used by private equity real estate funds.
Incentivization Strategy Requirements

• **Actionable resiliency standards** for residential and commercial properties across the U.S. (Expand Fortified standard?)

• **Valuation and underwriting standards** for resiliency

• **Differentiation by real estate sector**
  - Residential
  - Small commercial buildings
  - Large/investment grade commercial
  - Government facilities

• **Industry and consumer education and buy in**
  - Early adaptors: example projects
  - Mainstreaming follows

• **Desirable: Adoption of resiliency standards in building codes**
Thank You

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