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A New Framework for Condominium Structural Safety Reforms

Stewart E. Sterk & Reid K. Weisbord*

Forty years after the widespread popularization of residential condominium ownership in the United States, millions of Americans now live in aging, densely occupied structures that are subject to little (if any) ongoing regulation of structural safety. Most structural safety requirements are imposed and enforced at the time of initial construction, thus relegating questions of how to maintain a building's structural integrity to individual owners and the mechanisms of condominium governance. However, reliance on voluntary action by unit owners too often falters because the divided ownership characteristic of the condominium form deters associations from investing in preventive maintenance. Postponement of critical repairs is especially likely when structural safety risks are neither visibly apparent nor easily understood without structural engineering expertise. But tragically, the failure to address structural deterioration can be a deadly mistake, as demonstrated by the 2021 collapse of Champlain Towers South in Surfside, Florida.

This Article tackles the problem of structural deterioration in the large and growing stock of aging residential condominiums. It argues that building codes should be reformed to mandate periodic structural safety certifications, while also recognizing that regulation alone may be insufficient to ensure completion of expensive structural repairs when individual owners are unwilling or unable to pay for them. After explaining how property law's prioritization of liens impedes condominium associations from developing innovative strategies for financing critical structural repairs, the Article proposes reforms that would incentivize the development of a debt market to enable associations to finance those repairs while allowing cash-strapped owners to remain in their homes.

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INTRODUCTION

On June 24, 2021, at 1:23 a.m., a large section of the twelve-story Champlain Towers South condominium building in Surfside, Florida, collapsed from a catastrophic structural failure.¹ Given the late hour, many occupants were home and asleep when the building collapsed—timing that tragically contributed to an astonishing loss of life.² Approximately thirty-six residents escaped portions of the building that remained intact, but ninety-eight people inside the collapse zone perished.³ Rescue workers frantically searched through the remaining forty-foot pile

1. Marie-Rose Sheinerman, Samantha J. Gross, Bianca Padro Ocasio, Douglas Hanks & Daniel Chang, *99 Feared Missing in Rubble of Collapsed Condo in Surfside as Search, Vigil Continue*, MIA. HERALD, June 24, 2021, at 2A.

2. *See id.*

3. *See id.*

of rubble for two weeks, staffing an intensive twenty-four-hour operation, but recovered no additional survivors.⁴ The Champlain Towers incident is among the worst building collapse tragedies in the United States.

The cause of the Champlain Towers collapse remains under investigation by local, state, and federal authorities, including the National Institute of Standards and Technology, which received a congressional appropriation of twenty-two million dollars to conduct a technical evaluation under the National Construction Safety Team Act.⁵ Governmental studies will take years to complete,⁶ but the evidence known to date suggests that a combination of design flaws and deferred maintenance were likely contributing factors. Preliminary reporting has cited, among several possible causes, the installation of reinforcement steel bars that exceeded the maximum allowed ratio to concrete, a weakening of bonds between the reinforcement steel and concrete, abnormally soft concrete, and unusual amounts of standing water in the area where the collapse began.⁷ It was also undisputed that the 136-unit building, completed in 1981, had accumulated a long record of complaints about the structural integrity of its common elements during its forty-year history.⁸

In 2018, for instance, following numerous resident complaints about pervasive water infiltration, the condominium association commissioned a structural engineering field study that identified evidence of widespread concrete

4. Madeline Holcombe & Eric Levenson, *Surfside Condo Rubble Search and Rescue Will Transition to Recovery Operation*, CNN (July 8, 2021, 1:30 AM EDT), <https://www.cnn.com/2021/07/07/us/miami-dade-building-collapse-wednesday/index.html> [<https://perma.cc/T6VB-E7YN>].

5. See *Champlain Towers South Collapse: Background*, NATL. INST. STANDARDS & TECH. (Apr. 5, 2022), <https://www.nist.gov/disaster-failure-studies/champlain-towers-south-collapse-ncst-investigation/background> [<https://perma.cc/88UP-NCXF>]; *Feb. 18, 2022, Update: NIST Champlain Towers South Investigation Adds New Expert Team Members*, NATL. INST. STANDARDS & TECH. (Feb. 22, 2022), <https://www.nist.gov/news-events/news/2022/02/feb-18-2022-update-nist-champlain-towers-south-investigation-adds-new> [<https://perma.cc/CU33-TL55>] (“NIST received \$22 million in supplemental funding from Congress to support the investigation.”).

6. See Tanya Brown-Giammanco, *NIST’s Investigations of Structural Disasters: What We Do and Why They Can Take Years to Complete*, NATL. INST. STANDARDS & TECH. (Mar. 23, 2022), <https://www.nist.gov/blogs/taking-measure/nists-investigations-structural-disasters-what-we-do-and-why-they-can-take> [<https://perma.cc/CV8W-QDNC>].

7. See Ben Conarck, Aaron Leibowitz & Sarah Blaskey, *Feds’ Video Shows ‘Astronomical’ Corrosion, Crowded Rebar in Champlain Towers Debris*, MIA. HERALD (Aug. 26, 2021, 11:46 AM), <https://www.miamiherald.com/news/local/community/miami-dade/miami-beach/article253740853.html> [<https://perma.cc/CZQ5-FDEU>]; Sarah Blaskey & Sohail Al-Jamea, *See Where Experts Identified an ‘Initiation Point’ of the Condo Collapse — in the Garage*, MIA. HERALD (Jan. 25, 2022, 4:20 PM), <https://www.miamiherald.com/news/local/community/miami-dade/miami-beach/article252487373.html> [<https://perma.cc/FE5Z-FFC3>].

8. See Complaint ¶ 30, *Giannitsopoulos v. Champlain Towers S. Condo. Ass’n, Inc.*, No. 2022-03172-CA-01 (11th Cir. Feb. 17, 2022) (on file with authors) (“In 2001, a building resident filed a lawsuit against the Association alleging property damage caused by water entering her unit through ‘cracks in the outside wall of the building.’ The complaint alleged that the Association ‘failed to repair or negligently repaired’ the ‘common elements of the outside walls of the building.’ No action was taken.”).

deterioration throughout the complex.⁹ That study also found that waterproofing below the pool deck and entrance drive was in need of complete replacement because the “failed waterproofing [wa]s causing major structural damage to the concrete structural slab below these areas.”¹⁰ The report attributed the failure to an architectural design flaw: “Since the reinforced concrete slab is not sloped to drain, the water sits on the waterproofing until it evaporates. This is a major error in the development of the original contract documents prepared by [the architects and structural engineers].”¹¹ The report warned that “[f]ailure to replace waterproofing in the near future will cause the extent of the concrete deterioration to expand exponentially,” advising further that repairs would “be extremely expensive,” be “disruptive,” and “create a major disturbance to the occupants of this condominium building.”¹² When the building abruptly collapsed three years later, a long-delayed fifteen-million-dollar renovation project was underway,¹³ but the concrete restoration phase had not yet begun.¹⁴

In wrongful death claims filed by survivors of the victims against numerous parties, plaintiffs alleged that the condominium association had been “placed on actual notice of the deplorable conditions” and that building maintenance personnel had “personally witnessed concerning amounts of [up to two feet of] sea water accumulating in the garage during high ocean tides.”¹⁵ Plaintiffs also sued developers of the neighboring residential tower, which had been under construction from 2016 to 2020, for “[c]onducting activities . . . that produced dangerous and damaging vibrations, despite knowing that such vibrations would foreseeably cause damage to adjacent structures, including [Champlain Towers]” and for “[c]hoosing to utilize a vibratory hammer to drive sheet piles on the project site, despite knowing that said pile driving activities would emit dangerous and destructive vibrations that

9. See E-mail from Frank Morabito, President, Morabito Consultants, to Maggie Manrara, Treasurer, Champlain Towers South Condominium, Structural Field Study Report [hereinafter Structural Field Study Report] (Oct. 8, 2018) (<https://www.wfla.com/wp-content/uploads/sites/71/2021/06/8777-collins-ave-structural-field-survey-report.pdf> [<https://perma.cc/2V75-EH3A>]).

10. *Id.* at 7.

11. *Id.*

12. The report also identified “signs of distress/fatigue” in the parking garage levels, including “[a]bundant cracking and spalling of varying degrees . . . in the concrete columns, beams, and walls.” The report noted “[s]everal sizable spalls” and “instances with exposed, deteriorating rebar.” *Id.*

13. See Nicholas Nehamas & Jay Weaver, *Construction of Luxury Condo Just Feet Away Weakened Frail Champlain Towers, Lawsuit Says*, MIA. HERALD (Nov. 17, 2021, 3:54 PM), <https://www.miamiherald.com/news/local/community/miami-dade/miami-beach/article255872896.html#storylink=cpy> [<https://perma.cc/9QLM-XMDH>].

14. Sarah Blaskey & Aaron Leibowitz, *‘Major Error’ was Flagged in 2018 Inspection Report of Collapsed Building Near Miami Beach*, MIA. HERALD (Jan. 25, 2022, 4:22 PM), <https://www.miamiherald.com/news/local/community/miami-dade/miami-beach/article252385083.html#storylink=cpy> [<https://perma.cc/2F9S-JGU4>] (noting that “at the time of the collapse repairs on the roof were underway, but concrete restoration had not yet begun”).

15. Complaint ¶¶ 26–27, *Giannitsopoulos v. Champlain Towers S. Condo. Ass’n, Inc.*, No. 2022-003172-CA-01, (11th Cir. Feb. 17, 2022) (on file with authors).

would foreseeably penetrate and damage the Building.”¹⁶ Plaintiffs further alleged that developers of the neighboring tower had

improperly obtained the right to build higher than originally entitled, bought a public street that is [*sic*] just a few feet from [Champlain Towers’] foundation, sloped a foot path causing water to pour into [Champlain Towers], which corroded the structural supports of [Champlain Towers], and used large tractor cranes to drive 40-foot sheet piles into the ground only about 10 feet away from [Champlain Towers’] south foundation wall.¹⁷

In the months following the collapse, the remaining portions of Champlain Towers South were demolished and, after the two-acre site was cleared,¹⁸ the land was sold to a Dubai developer for \$120 million.¹⁹ A receivership for the victims recovered thirty million dollars under the condominium association’s property insurance policy and eighteen million dollars from the association’s liability carriers.²⁰ The receivership later recovered more than one billion dollars in settlement funds from various developers, engineering firms, and security companies.²¹

The Champlain Towers tragedy initially prompted calls to tighten building safety regulations,²² a call answered by the Florida legislature’s rapid enactment of new building recertification requirements.²³ Elsewhere, however, proposed federal legislation has stalled, while the sense of urgency to enact reforms at the state level

16. *Id.* ¶ 123.

17. Complaint ¶ 63, *Tobar v. Champlain Towers S. Condo. Ass’n, Inc.*, No. 21-27161-CA-01, (11th Cir. Dec. 17, 2021) (on file with authors).

18. *See* Order Granting Receiver’s Renewed Motion for Entry of an Order Authorizing Miami-Dade County to Dispose of Rubble the County Has Deemed as Having Less Significant Evidentiary Value, *In re: Champlain Towers South Collapse Litigation*, No. 2021-15089-CA-01, (11th Cir. Mar. 6, 2022) (on file with authors).

19. *See* Order Authorizing Sale of Property and Granting Relief, *In re: Champlain Towers South Collapse Litigation*, No. 2021-15089-CA-01, (11th Cir. June 1, 2022) (on file with authors). *See also* Patricia Mazzei, *Lawsuits Over Tragedies Can Drag On. Not in the Florida Condo Collapse*, N.Y. TIMES (Sept. 3, 2022), <https://www.nytimes.com/2022/09/03/us/surfside-condo-collapse-judge.html> [<https://perma.cc/7FKY-9QDB>].

20. Order Preliminarily Approving “Allocation Settlement Agreement” at 4, *In re: Champlain Towers South Collapse Litigation*, Case No. 2021-15089-CA-01, (11th Cir. Mar. 6, 2022) (on file with authors).

21. *See* Plaintiffs’ Motion for Preliminary Approval of Additional Class Action Settlement and Certification of Settlement Class at 2, *In re: Champlain Towers South Collapse Litigation*, No. 2021-15089-CA-01, (11th Cir. Aug. 8, 2022) (on file with authors). *See also* Patricia Mazzei, *Lawsuits Over Tragedies Can Drag On. Not in the Florida Condo Collapse*, N.Y. TIMES (Sept. 3, 2022), <https://www.nytimes.com/2022/09/03/us/surfside-condo-collapse-judge.html> [<https://perma.cc/7FKY-9QDB>].

22. *See* Joey Flechas & Douglas Hanks, *Condo Law, Insurance, Oversight, Engineering. Surfside Collapse Could Change a Lot*, MIA. HERALD (Nov. 29, 2022 1:00 PM), <https://www.miamiherald.com/news/local/community/miami-dade/article252802458.html> [<https://perma.cc/MRF4-3DRH>]; Aaron Leibowitz & Ben Conarck, *Surfside Became Known For Deadly Condo Collapse. Now the Town Looks to Champion Reforms*, MIA. HERALD (Apr. 21, 2022 12:39 PM), <https://www.miamiherald.com/news/special-reports/surfside-investigation/article260342100.html> [<https://perma.cc/H7LW-5EF4>].

23. FLA. STAT. § 553.899 (2023).

has largely dwindled.²⁴ Meanwhile, new concerns about the structural safety of other aging condominium towers continue to emerge.²⁵

This Article examines the problem of structural failure in residential housing, with a particular focus on high-rise condominium buildings. Catastrophic building disasters like the collapse of Champlain Towers South are rare, but conditions of serious structural deterioration that can lead to catastrophes like Champlain Towers are all too common.²⁶ Physical symptoms of structural deterioration are often hidden inside interior walls, ceilings, and floors, and, even when visible, residents without specialized knowledge of structural engineering may not recognize evidence of corrosion or decay as a threat to their building's structural integrity. Older condominium buildings were inspected for structural safety at the time of initial construction, but those inspections conformed to safety standards that were state-

24. See Securing Access to Financing for Exterior Repairs in Condos Act of 2022, 117th Congress, 2d Session, H. R. 7532 (2022), <https://www.congress.gov/bill/117th-congress/house-bill/7532/text> [<https://perma.cc/8R5F-UPUK>] (indicating no action on the bill, its introduction and referral to the House Committee on Financial Services, both on April 18, 2022).

25. See, e.g., Aaron Leibowitz, *Miami Beach Orders Immediate Evacuation of Condo Tower. Inspection Finds Structural Damage*, MIA. HERALD (Oct. 28, 2022 11:03 AM), <https://www.miamiherald.com/news/local/community/miami-dade/miami-beach/article267933272.html> [<https://perma.cc/H7FK-LHNE>] (noting that a “damaged concrete beam” endangered the 14-story condominium tower because the compromised column “might support the entire building structure”); Daniel Chang & Devoun Cetoute, *Miami Beach Condo Building Evacuated in Abundance of Caution After Building Damage Found*, MIA. HERALD (Jul. 7, 2021 4:07 PM), <https://www.miamiherald.com/news/local/community/miami-dade/miami-beach/article252562123.html> [<https://perma.cc/3FUEWB>] (reporting evacuation of three-story condominium); Devoun Cetoute & Rob Wile, *North Miami Beach Orders 10-story Condo Evacuated After Report Declares it Unsafe*, MIA. HERALD (Jul. 7, 2021, 2:58 PM), <https://www.miamiherald.com/news/local/community/miami-dade/north-miami/article252544473.html> [<https://perma.cc/6CWQ-PVQE>]. See also Laine Vitkevich, *Buildings to Strengthen Façade Inspection Process*, CITYLAND (Jan. 16, 2020) <https://www.citylandnyc.org/buildings-to-strengthen-facade-inspection-process/> [<https://perma.cc/VY6B-QV9P>] (noting that following the death of a pedestrian caused by a falling piece of building façade in New York City, a “[s]afety sweep of 1,331 facades found that 220 needed additional pedestrian protections”).

26. The high volume of litigation over liability for structural deterioration offers an anecdotal snapshot of the problem's frequency. As we will explain in Part III.A.3, *infra*, one of the most fiercely litigated issues of property insurance law is whether an insured owner may invoke coverage for building collapse insurance upon discovery of hidden structural deterioration within a building that has not yet completely fallen down. See, e.g., *Island Breakers v. Highlands Underwriters Ins. Co.*, 665 So. 2d 1084 (Fla. Dist. Ct. App. 1995); *Mercer Place Condo. Ass'n v. State Farm Fire & Cas. Co.*, 17 P.3d 626, 627 (Wash. Ct. App. 2000); 529 E. Broadway Condo. Tr. v. Vermont Mut. Ins. Co., 900 N.E.2d 913 (Mass. App. Ct. 2009); 130 Slade Condo. Ass'n, Inc. v. Millers Cap. Ins. Co., No. CIV.A. CCB-07-1779, 2008 WL 2331048 (D. Md. June 2, 2008); *Greenlake Condo. Ass'n v. Allstate Ins. Co.*, No. C14-1860 BJR, 2015 WL 11988945 (W.D. Wash. Dec. 23, 2015); *Ocean Winds Council of Co-Owners, Inc. v. Auto-Owners Ins. Co.*, 241 F. Supp. 2d 572, 573 (D. S.C. 2002); *Ames v. Nationwide Ins. Co.*, No. CIV. A. CV-01-235, 2002 WL 1335869 (Me. Super. June 5, 2002); *Sandalwood Condo. Ass'n at Wildwood, Inc. v. Allstate Ins. Co.*, 294 F. Supp. 2d 1315 (M.D. Fla. 2003); *Olde Colonial Vill. Condo. Council v. Millers Mut. Ins. Co.*, No. CIV.A.99C-06-187-FSS, 2002 WL 122885 (Del. Super. Ct.), *on reargument sub nom. Olde Colonial Vill. v. Millers Mut. Ins.*, No. CIV.A.99C-06-187-FSS, 2002 WL 1038825 (Del. Super. Ct. May 17, 2002); *Buczek v. Cont'l Cas. Ins. Co.*, 378 F.3d 284 (3d Cir. 2004); *Whispering Creek Condo. Owner Ass'n v. Alaska Nat. Ins. Co.*, 774 P.2d 176 (Alaska 1989).

of-the-art several decades ago and are likely out of date by modern standards. Of even greater concern is lack of follow-up structural inspections as buildings age.

Concern about residential building safety is not a new phenomenon, but the problem is no longer mostly confined to areas of urban blight, as it was in the twentieth century.²⁷ Today, tens of millions of Americans live in multifamily residential complexes located throughout the country. Recent estimates from the United States Census Bureau's American Housing Survey²⁸ document millions of units located in high-density, multilevel building configurations.²⁹ Within the residential high-rise segment, a substantial minority of units are individually owned as condominiums or cooperatives.³⁰

The condominium ownership form presents special safety problems. Responsibility for planning and funding structural safety repairs is almost entirely left to self-governing condominium associations managed by volunteer boards.³¹ These boards tend to cater to the interests of the owners who elected them, many of whom have short-term time horizons or liquidity deficits that lead them to favor minimizing owners' fees. Delaying major restoration projects reduces costs in the short-run and also spares residents the inconvenience of disruption associated with performing construction inside an occupied building. The long-term result is the gradual deterioration of often-unseen structural common elements (except in those rare cases where the median untrained eye perceives the building to be falling down).

Deferred maintenance in aging condominiums is a problem of rapidly growing importance. Condominiums were not a common form of property ownership in the United States until the 1960s, and the explosion in condominium construction came much later. In 1980, around the time Champlain Towers was built, 9.6 million people lived in community associations, a category that includes both condominiums and homeowner associations.³² Over the next twenty years, that number more than quadrupled to 45.2 million.³³ As a result, by 2040, there will be about four times as many forty-year-old condominiums as there are today. The sheer volume of aging condominiums signals the increased potential for danger.

27. Cf. Richard E. Carlton, Richard Landfield & James B. Loken, Note, *Enforcement of Municipal Housing Codes*, 78 HARV. L. REV. 801, 804–20 (1965) (summarizing reasons for the chronic under-enforcement of local housing codes in the twentieth century).

28. See *American Housing Survey (AHS)*, U.S. CENSUS BUREAU (Oct. 12, 2023) <https://www.census.gov/programs-surveys/ahs.html> [<https://perma.cc/F2PD-XDP7>].

29. United States Census Data Table 1, Customized Query (2019) (created with American Housing Survey data from 2019) (on file with authors).

30. See *infra* Part I.

31. Cf. *Dobal v. Villas at S. Beach Condo. Ass'n, Inc.*, No. 3D22-1169, 2023 WL 4916026, at 2 (Fla. Dist. Ct. App. Aug. 2, 2023) (recognizing that “condominium association board members . . . are often volunteers contributing their time and talent to their community to address the vexing problems of administrating a condominium building”).

32. FOUND. CMTY. ASS'N RSCH., 2021–2022 U.S. NATIONAL AND STATE STATISTICAL REVIEW (2022), <https://foundation.caionline.org/wp-content/uploads/2022/09/2021-2CAIStatsReviewWeb.pdf> [<https://perma.cc/75F3-FG5J>].

33. *Id.*

While the marginal odds of dying in a catastrophic structural failure like Champlain Towers are low, millions of condominium owners face both physical and financial risks as a result of inadequate attention to structural problems.

More effective regulation offers at best a partial solution to the problem. Many unit owners may be unwilling or unable to bear the cost of structural remediation. Their opposition may stall mandated repairs. Even if the condominium surmounts that opposition, imposes special assessments on unit owners, and proceeds with repairs, the assessments may force financially strapped unit owners out of their homes. A more complete solution to condominium safety must focus on financing needed repairs.

Despite the significance and urgency of reforms to improve residential high-rise building safety, the topic has been almost entirely overlooked by property law scholars.³⁴ Since the Champlain Towers collapse, the issue has begun to attract attention, but the literature has only started to scratch the surface.³⁵ This Article fills that void. It proceeds as follows: Part I situates our discussion of condominium structural safety, first, by cataloging the size and quality of the current multifamily housing stock and, second, by describing some of the causes of structural failure in high-rise buildings, with a particular focus on concrete construction given its prevalence within the residential high-rise housing stock. Part II focuses on issues unique to condominium ownership to reveal why condominium owners might forgo the efficiency gains from promptly completing structural repairs in favor of deferring maintenance until the building poses a risk of imminent collapse. Part III offers a battery of practical options, funding mechanisms, and reform proposals to

34. For prior legal scholarship on the broader topic of building safety codes, see generally Bruce Ackerman, *Regulating Slum Housing Markets on Behalf of the Poor: Of Housing Codes, Housing Subsidies and Income Redistribution Policy*, 80 YALE L.J. 1093 (1971) (noting the concern among housing code enforcement officers that strict enforcement of building codes will cause landlords to pass on repair costs to tenants, thus making housing less affordable); Neil K. Komesar, *Return to Slumville: A Critique of the Ackerman Analysis of Housing Code Enforcement and the Poor*, 82 YALE L.J. 1175 (1973); Eric Damian Kelly, *Fair Housing, Good Housing or Expensive Housing? Are Building Codes Part of the Problem or Part of the Solution?*, 29 J. MARSHALL L. REV. 349 (1996); Ezra Rosser, *Rural Housing and Code Enforcement: Navigating Between Values and Housing Types*, 13 GEO. J. ON POVERTY L. & POL'Y 33 (2006).

Older literature promoted urban renewal programs that advocated for complete demolition of residential properties that did not comply with the housing code. Two scholars, for instance, argued that “Undoubtedly, the ultimate solution to the housing problems of the hard core slum does not lie in code enforcement, however defined. The only solution to that problem is demolition, clearance, and new construction.” See Judah Gribetz & Frank P. Grad, *Housing Code Enforcement: Sanctions and Remedies*, 66 COLUM. L. REV. 1254, 1256 (1966).

There is also scholarship on the related topic of occupational safety for workers employed in the construction industry. See, e.g., Marc Linder, *Fatal Subtraction: Statistical MIAs on the Industrial Battlefield*, 20 J. LEGIS. 99, 104 (1994) (noting that the construction industry “has accounted for 15 percent of all occupational fatalities (150,000 since 1933)—about three times the industry’s share of total employment”); Peter Puchalski, *Illinois Construction Negligence, Post-Structural Work Act: The Need for A Clear Legislative Mandate*, 36 J. MARSHALL L. REV. 531 (2003).

35. See Andrea J. Boyack, *Structural Precarity and Potential in Condominium Governance Design*, 75 ARK. L. REV. 291, 295 (2022) (identifying “three latent vulnerabilities inherent in the condominium governance structure: (1) over-protection of developers; (2) unwillingness of members to ensure optimal upkeep; and (3) association financial precarity”).

help ensure the structural integrity of aging condominium buildings while avoiding eviction of unit owners unable to afford the cost of special assessments imposed to pay for major repairs.

I. HIGH-RISE CONDOMINIUMS AND STRUCTURAL SAFETY

This Part provides a brief description of size and quality of the national multifamily housing stock to show that millions of Americans currently live in densely configured residential units that are not only aging but showing visible signs of deterioration. It then describes some of the causes of structural failure in high-rise buildings, with a particular focus on concrete construction, given its prevalence in the residential high-rise housing market.

A. The Multifamily Housing Stock

A large segment of the U.S. population resides in densely populated multifamily housing communities in which a single structure comprises multiple attached dwelling units. In 2019, the Census Bureau estimated the national housing stock to include nearly forty million multifamily residential units.³⁶ Multifamily buildings contain multiple attached residential units in varying degrees of density.³⁷ Density, in turn, usually comes in the form of high-rise construction: more than six million multifamily units are situated within multilevel structures containing four or more stories, and more than 2.5 million units are situated within structures with seven or more stories.³⁸ No one has conducted a precise count of how many Americans live in high-rise residential structures, but the available data suggests the population could easily run into the tens of millions.³⁹ A sizable minority of multifamily housing units are individually owned condominium and cooperative residences. The Census Bureau estimates that the national housing stock includes 8.3 million condominium and cooperative units, of which 3.4 million are situated within higher-density structures containing ten or more attached units.⁴⁰

36. See United States Census Data Table 1, Customized Query (2019) (created with American Housing Survey data from 2019) (on file with authors).

37. See *id.* (reporting that 16.3 million of those units are situated within structures containing at least ten attached units and 6.4 million units are situated within structures containing 50 or more attached units).

38. See *id.*

39. See United States Census Data Table 4, Customized Query (2019) (on file with authors) (reporting roughly 30 million attached rental units, including 14.5 million rental units situated within structures containing 10 or more attached units). Roughly half of multifamily units are occupied by more than one person. See *Household Characteristics*, NAT'L MULTIFAMILY HOUS. COUNCIL (Nov. 2023), <https://www.nmhc.org/research-insight/quick-facts-figures/quick-facts-resident-demographics/household-characteristics/> [<https://perma.cc/R7QE-9W39>] (noting that approximately 50% of apartment dwellers live alone, with the balance residing in multiple-member households).

40. See United States Census Data Table 1, *supra* note 36. The stock of co-owned condominium and cooperative units increased significantly beginning in the 1970s. In 1975, by contrast, the American Housing Survey counted approximately 987,000 condominium and cooperative units. See FREDERICK J. EGGERS & ALEXANDER THACKERAY, *ECONOMETRICA, INC., 32 YEARS OF HOUSING DATA* 9

An increasing number of high-rise condominium buildings are aging and show visible signs of deterioration. The American Housing Survey, for instance, reports that more than half of the multifamily units (dwellings situated within structures containing ten or more units) have been built since 1980, while the other 47% were built before 1980.⁴¹ The survey also estimates that 839,000 multifamily units have open cracks or holes, roughly 1.4 million units suffer from water leakage from inside the structure, and nearly one million units show signs of water leakage entering from outside the structure.⁴² From these figures, we extrapolate that millions of Americans currently live in high-density condominium complexes like the former Champlain Towers that are both aging and showing visible evidence of structural deterioration and that the number is certain to increase over the next two decades.⁴³

Table 1: 2019 Census Bureau Data⁴⁴	National multifamily housing stock (# units)	
	10+ unit structures	50+ unit structures
All	16.3 million	6.4 million
Year built: pre-1995	10.8 million	4.2 million
Year built: pre-1985	9.0 million	3.5 million
Year built: pre-1980	7.7 million	3.0 million
Open cracks or holes (interior)	839,000	312,000
Holes in floor (interior)	217,000	52,000
Water leakage from inside structure	1.4 million	503,000
Water leakage from outside structure	964,000	294,000

B. The Condominium Form

A condominium is a type of real estate in which “portions [of the premises] are designated for separate ownership and the remainder . . . is designated for common ownership solely by the owners of those portions.”⁴⁵ When establishing a condominium, the developer records a Declaration or Master Deed creating an association responsible for maintenance and repair of the condominium’s common

(2007), https://www.census.gov/content/dam/Census/programs-surveys/ahs/publications/32_Years_of_Hsg_Data.pdf [<https://perma.cc/G5WW-TENE>].

41. *Id.*

42. United States Census Data Table 2, Customized Query (2019) (on file with authors).

43. The Census Bureau’s survey collects data on the age and building condition of multifamily housing units but does not distinguish between units occupied by renters versus condominium owners.

44. United States Census Data Table 1, *supra* note 36; United States Census Data Table 2, *supra* note 42.

45. UNIF. CONDO. ACT § 1-103(9) (UNIF. L. COMM’N 2021).

elements.⁴⁶ The association is governed by an executive board elected by the unit owners.⁴⁷ The board's responsibilities include preparation of an annual budget, often subject to approval by the unit owners.⁴⁸ That budget sets the assessments unit owners must pay to cover the cost of maintaining the common elements. The board also has authority to impose special assessments, again subject to approval by the unit owners.⁴⁹

The defining feature of the condominium form—undivided ownership of common elements—comes with pros and cons. One benefit is that the shared responsibility for maintaining common elements can generate economies of scale for certain types of maintenance costs. For instance, the unit cost of maintaining a single roof that provides shelter for hundreds of individual condominium units may be lower than the unit cost of maintaining separate roofs for hundreds of individually owned single-family homes. Another benefit is that condominiums tend to simplify the burdens of homeownership by centralizing the day-to-day maintenance and management of common elements.⁵⁰ Condominium ownership also reduces the financial pain of extraordinary expenses by spreading the risk across multiple owners, and, when managed prudently, condominium associations accumulate reserve funds that reduce the frequency and size of special assessments imposed on individual owners for both foreseeable and unexpected maintenance costs.⁵¹

On the other hand, centralizing the maintenance and management of common elements does not always reduce the overall cost of homeownership because condominium complexes often contain expensive common elements (such as elevators, mechanical systems, gym facilities, etc.) or provide services (such as salaried doormen and janitorial staff) not typically found in single-family homes. Larger condominiums often hire management companies to supervise building services. It should not be surprising, then, that condominium fees tend to increase with the density of the condominium complex. Smaller buildings (ten to nineteen attached units) charge fees that are roughly half as much as larger buildings (fifty or more attached units).⁵² This is most likely because larger condominiums provide

46. See, e.g., UNIF. COMMON INT. OWNERSHIP ACT § 2-101(a) (UNIF. L. COMM'N 2021) (explaining creation of common interest communities); *Id.*, § 3-101 (mandating creation of an association); *Id.* § 3-107 (stating association bears maintenance obligation).

47. See, e.g., *id.* § 3-103(e)-(f). During the period before the developer has sold all condominium units, the declaration may provide for the developer to appoint members of the association board. *Id.* § 3-103(d).

48. The Uniform Common Interest Ownership Act (UCIOA) gives the board power to enact the budget, subject to disapproval by a majority vote of the unit owners. See *id.* § 3-123(a).

49. *Id.* § 3-123(b).

50. See UNIF. CONDO. ACT § 3-107(a) (UNIF. L. COMM'N 2021) (“[T]he association is responsible for maintenance, repair, and replacement of the common elements, and each unit owner is responsible for maintenance, repair, and replacement of the unit”).

51. Most states either require condominium associations to conduct a financial reserve study or provide statutory guidance for reserves. See *infra* Part III.B.1.

52. See United States Census Data Tables 1, 3, and 4, Customized Query (2019) (on file with authors).

more luxury amenities than smaller complexes. As a result, while condominiums usually simplify the burdens of homeownership, they do not necessarily reduce overall housing expenses. This is especially true for high-rise condominiums, as recent housing cost and mortgage indebtedness estimates suggest.⁵³ Already saddled with high recurring costs of condominium ownership, many owners find themselves financially unprepared for a large special assessment to pay for major common element repairs.

Table 2: 2019 Census Bureau Data ⁵⁴	Housing ownership, costs, mortgage debt, maintenance, taxes			
	Detached	10-to-19-unit structures	20-to-49-unit structures	50+ unit structures
Median total monthly housing costs (% of income, excluding zero or negative income)	20%	29%	30%	33%
Condominiums / Cooperatives (# units)	862,000	952,000	878,000	1,548,000
Presently outstanding mortgage debt (# units)	66,781,000	434,000	474,000	839,000
Median outstanding mortgage balance (\$)	\$140,000	\$128,000	\$145,000	\$180,000
Median monthly real estate taxes (\$)	\$208	\$142	\$218	\$273
Mean monthly real estate taxes (\$)	\$309	\$270	\$485	\$510
Median monthly homeowner or condominium association fee (\$)	\$42	\$292	\$400	\$570
Mean monthly homeowner or condominium association fee (\$)	\$87	\$340	\$598	\$829

53. See United States Census Data Table 3, *supra* note 52; United States Census Data Table 4, *supra* note 39.

54. See United States Census Data Table 1, *supra* note 36; United States Census Data Table 3, *supra* note 52; United States Census Data Table 4, *supra* note 39.

C. Structural Integrity in Concrete Construction

Concrete is the most abundantly produced human-made material on earth, supplying the primary building material used in most high-rise residential construction in the United States.⁵⁵ The widespread use of concrete in the multifamily housing segment helps explain why most structural failures in residential high-rise buildings, including Champlain Towers, involve concrete construction. In this Section, we devote special attention to the unique structural safety concerns implicated by high-rise concrete construction because of its prevalence in the residential housing sector. Since the typical law review readership has no formal training in structural engineering, we briefly summarize some basic principles of structural mechanics relevant to understanding the collapse of concrete high-rise buildings. We acknowledge that other common residential building materials, such as wood and steel frame construction, present their own unique structural challenges, but we largely confine our focus to concrete construction.⁵⁶

A structure is generally stable when it is capable of resisting the various forces exerted upon it, a principle implied by Newton's third law of motion holding that every action has an equal and opposite reaction.⁵⁷ Thus, for a structure to remain standing, load that is pushed and pulled by various forces (gravity, wind, earthquakes, etc.) must be supported by a foundation that counterbalances those forces (by pushing the load up or pulling it down).⁵⁸ If those opposing forces are out of balance, then the structure may collapse downward, sideways, or, in theory, take off upward.⁵⁹ A structure achieves vertical equilibrium when the foundation and structural members that push up the building's load are sufficient to withstand the forces of the structural elements pushing down.⁶⁰ This type of push resistance is known as compressive strength.⁶¹ A structure, however, must do more than merely resist weight by pushing up. A structure must also achieve the right amount of elasticity to hold its shape when subjected to forces that stretch or contract its

55. See *High Rise Structures*, CONSTRUCTOR, <https://theconstructor.org/structural-engg/high-rise-structures/5/> [<https://perma.cc/7TTH-DVQD>] (last visited Mar. 1, 2024) (noting that “residential tower blocks [in the United States] are usually constructed out of concrete”); James Mitchell Crow, *The Concrete Conundrum*, CHEMISTRY WORLD, Mar. 2008, at 62 (“Concrete is the single most widely used material in the world . . .”), https://www.rsc.org/images/Construction_tcm18-114530.pdf [<https://perma.cc/FR29-LZ23>]. Cf. STATISTA RSCH. DEP'T, *Number of Skyscrapers of Over 200 Meters of Height Worldwide in 2021, By Structural Material*, STATISTA (Aug. 8, 2023), <https://www.statista.com/statistics/319931/structural-materials-of-tall-buildings-worldwide/> [<https://perma.cc/HF3X-YQ7Q>] (“In 2021, most buildings of at least 200 meters of height were constructed with concrete as their structural material.”).

56. See, e.g., Keith Porter & Edward Thomas, *First the Earth Quakes, Then the Law Suits*, PROB. & PROP., Nov./Dec. 2019, 34, 34 (“Older steel-frame buildings built between about 1960 and 1994 pose a very high collapse risk in earthquakes, owing to unexpectedly brittle welds.”).

57. See J.E. GORDON, *STRUCTURES: OR WHY THINGS DON'T FALL DOWN* 34 (Da Capo Press ed., Penguin Books 2003)(1978).

58. *Id.*

59. *Id.*

60. *Id.* at 35.

61. *Id.*

building material.⁶² Tensile strength is a measure of resistance against tension, including stress (how hard the atoms inside a solid object are being pulled apart) and strain (how far apart the atoms inside a solid object are being pulled).⁶³ When a solid material fractures, the failure is usually caused either by tension stress or a stress known as shear, which is “the tendency for one part of a solid to slide past the neighboring part.”⁶⁴ A shear stress occurs when tension, compression, or both act at forty-five degrees, thereby causing the material to tear apart.⁶⁵ We can now apply these basic concepts of structural engineering to concrete construction.

Concrete is an artificial stone-like building material created through a chemical process that combines a cement binder, sand or aggregate, and water.⁶⁶ In concrete construction, wet concrete is poured into forms where it hardens into a solid state.⁶⁷ The forms usually can be removed after one day, but concrete can take from three weeks to a month to cure to full strength.⁶⁸ Once cured, concrete can serve as an incredibly strong and durable building material.⁶⁹ The enormous dome of the

62. *Id.* at 36.

63. *See* GORDON, *supra* note 57 at 49. Stress is a measure of force per unit area, such as pounds per square inch (PSI). Strain is a measure of deformation per unit length.

64. *Id.* at 246, 274.

65. *Id.* at 257.

66. The cement binder is made by heating limestone or other natural substances rich in calcium carbonate (such as seashells). Adding water to the charred remains triggers a chemical reaction that creates a substance called lime that hardens into applications such as plaster, whitewash, mortar, and concrete. Lime pastes have been used for thousands of years by cultures throughout the world; although, in Western Civilization, the ancient Romans were responsible for the most innovative and prodigious applications, namely, in concrete construction. *See* MARY SODERSTROM, *CONCRETE* 3, 6–9 (Univ. of Regina Press eds., 2020).

67. *See id.* at 3.

68. *See id.* Additives to cement, however, can shorten the curing time.

69. Insufficient curing time, however, can cause structural failure. In concrete construction, each level must cure adequately before it can safely carry the load of additional stories built above. Curing time, along with the labor costs incurred by waiting for concrete to cure, is an unavoidable cost of concrete construction. Developers therefore have economic incentives to minimize curing time to the greatest possible extent. Ultimately, however, concrete construction cannot be rushed because “[c]ement hydration is a chemical process that requires the presence of water over a relatively long period of time at a reasonable range of temperatures.” *See* PETER C. TAYLOR, *CURING CONCRETE* 1 (2014). For example, investigators have cited insufficient curing time as a leading factor contributing to the 1973 collapse of Skyline Plaza at Bailey’s Crossroads, Virginia. During construction of the 26-story apartment building, a concrete slab on the 24th floor collapsed, triggering a structural failure that cascaded downward all the way to the ground. Vertical shoring had been removed before the concrete slabs had reached sufficient strength. The 23rd floor slab that absorbed the initial impact of the collapse had only cured for four days at the time of the accident. As the project progressed, the builders accelerated the pace of construction, doubling from one floor per week to nearly twice that pace. Fourteen construction workers perished from the collapse. *See* Jeffrey Schellhammer, Norbert J. Delatte & Paul A. Bosela, *Another Look at the Collapse of Skyline Plaza at Bailey’s Crossroads, Virginia*, 27 J. PERFORM. CONST. FACIL. 354, 357, 359 (2013). Modern prefabrication techniques, however, can significantly accelerate the speed of concrete construction by allowing the curing process to be performed offsite prior to installation. *See* BUILDINGS, *Which is the better building material? Concrete or steel?* (May 31, 2005), <https://www.buildings.com/feature/article/10194216/which-is-the-better-building-material-concrete-or-steel> [https://perma.cc/S97W-674U] (noting that prefabricated concrete construction can be twice as fast as steel frame construction).

Roman Pantheon built 125 C.E., for instance, remains standing today as the largest concrete dome built without steel reinforcement.⁷⁰

Two innovations are largely responsible for the ubiquity of concrete in modern construction. The first technical development was the invention of “Portland” cement, a binder “produced by burning a finely ground artificial mixture containing essentially lime, silica, alumina, and iron oxide” at extremely high temperatures, approaching 3,000 degrees Fahrenheit.⁷¹ Portland cement is a hydraulic cement (capable of setting underwater) that can resist breaking under compression.⁷² Patented in 1824 by British inventor Joseph Aspdin, Portland cement was named for its resemblance to the popular natural stone quarried on the English island of Portland.⁷³ Today, Portland cement is one of the most widely used building materials.⁷⁴ In 2021, manufacturers in the United States produced more than ninety million tons of Portland cement.⁷⁵ Total estimates of global annual concrete production exceeds thirty billion tons.⁷⁶

The second technical development was the introduction of reinforced concrete in which iron or steel rods are embedded in wet concrete prior to curing.⁷⁷ The installation of metal bars (often called “rebar”) during the curing process allows the hardened mass to achieve tensile strength, meaning that the material can be elongated because it has strong resistance to breaking under tension.⁷⁸ As one expert

70. See Colin Schultz, *Why the Pantheon Hasn't Crumbled*, SMITHSONIAN MAG. (Dec. 16, 2014), <https://www.smithsonianmag.com/smart-news/scientific-reason-why-pantheon-hasnt-crumble-d-180953627/> [<https://perma.cc/RNW7-R9RJ>].

71. EDWIN C. ECKEL, PORTLAND CEMENT MATERIALS AND INDUSTRY IN THE UNITED STATES 17, U.S. DEP'T OF THE INTERIOR, (1913), <https://permanent.fdlp.gov/gpo58136/report.pdf> [<https://perma.cc/2KFV-LJQT>].

72. See *id.* See also AMY E. SLATON, REINFORCED CONCRETE AND THE MODERNIZATION OF AMERICAN BUILDING, 1900–1930, at 15 (Johns Hopkins University Press, 2001) (“When mixed with water and allowed to harden, cement creates a material of great compressive strength and, depending on its chemical composition, one that may also harden under water.”).

73. ECKEL, *supra* note 71, at 24.

74. See *Buildings & Structures*, PORTLAND CEMENT ASS'N, <https://www.cement.org/cement-concrete/paving/buildings-structures> [<https://perma.cc/ZGS8-DCXB>] (last visited Mar. 1, 2024).

75. MINERAL COMMODITY SUMMARIES 2022, U.S. DEP'T OF THE INTERIOR & U.S. GEOLOGICAL SURV. at 44 (2022), <https://pubs.usgs.gov/periodicals/mcs2022/mcs2022.pdf> [<https://perma.cc/4WZB-UPUC>].

76. See Editorial, *Concrete Needs to Lose Its Colossal Carbon Footprint*, 597 NATURE, 593 (2021).

77. Slaton, *supra* note 72.

78. See *id.* A structural engineering treatise explains the role of steel reinforcement in concrete construction as follows:

Concrete being weakest in tension, a concrete beam under an assumed working load will definitely crack at the tension side, and the beam will collapse if tensile reinforcement is not provided. Concrete cracks occur at a loading stage when its maximum tensile stress reaches the modulus of rupture of concrete. Therefore, steel bars are used to increase the moment capacity of the beam; the steel bars resist the tensile force, and the concrete resists the compressive force.

NADIM M. HASSOUN & AKTHEM AL-MANASEER, STRUCTURAL CONCRETE: THEORY AND DESIGN 76 (John Wiley & Sons, Inc., 2012). See also *Brown v. 44th St. Dev., LLC*, 5 N.Y.S.3d 692, 694 (N.Y. App. Div. 2015) (“Concrete is a material that is very strong in compression, but relatively weak

explains, “Steel reinforcement was a dramatic innovation of the 19th century. The steel bars add strength, allowing the creation of long, cantilevered structures and thinner, less-supported slabs. It speeds up construction times, because less concrete is required to pour such slabs.”⁷⁹ Reinforced concrete led to several technological innovations, including the development of earthquake- and fire-resistant buildings, building techniques that enabled the installation of horizontal concrete slabs without steel column framing, and less expensive substitutes for brick, terra-cotta, and steel-frame construction.⁸⁰ Reinforced concrete also led to new techniques in high-rise construction.⁸¹ According to the Portland Cement Association (one of the industry’s oldest cement trade associations), “A major advantage of concrete construction for high-rise buildings is the material’s inherent properties of heaviness and mass, which create lateral stiffness, or resistance to horizontal movement. Occupants of concrete towers are less able to perceive building motion than occupants of comparable tall buildings with non-concrete structural systems.”⁸² The optimal design for tall buildings is a combination of steel structure stiffened with a concrete core typically incorporated into the elevator shafts.⁸³

Concrete construction is sturdy and durable when properly designed and fabricated. Faulty engineering and substandard materials, however, can pose catastrophic risk. Fortunately, at least from a residential safety perspective, most structural failures attributable to design or construction flaws occur during the construction process.⁸⁴ In 2019, for instance, an eighteen-story Hard Rock Hotel project in New Orleans partially collapsed when, according to one structural engineer, “grossly undersized” supporting beams on the sixteenth floor gave way, pancaking⁸⁵ the concrete and steel structure.⁸⁶ A structural engineer who examined

in tension To compensate for this imbalance in concrete’s behavior, rebar is cast into it to carry the tensile loads.”).

79. Guy Keulemans, *The Problem with Reinforced Concrete*, CONVERSATION (June 17, 2016, 1:18 AM), <https://theconversation.com/the-problem-with-reinforced-concrete-56078> [<https://perma.cc/F4N9-QPP3>]. The installation of rebar, however, is itself a tedious process that tends to lengthen overall construction time.

80. See Slaton, *supra* note 72, at 17–18, 134.

81. HASSOUN & AL-MANASEER, *supra* note 78, at 11.

82. *Buildings and Structures*, *supra* note 74.

83. Cf. Chun-Man Chan, *Optimal Lateral Stiffness Design of Tall Buildings of Mixed Steel and Concrete*, 10 STRUCTURAL DESIGN TALL BUILDINGS, 155 (2001).

84. See Ravi Panwar, *3 Important Cases of Building Collapse Due to Poor Construction Management*, CONSTRUCTOR, <https://theconstructor.org/case-study/cases-building-collapse-poor-const-ruction/361451/> [<https://perma.cc/EDP5-R452>] (last visited Mar. 1, 2024).

85. The technical term for pancaking is “progressive collapse,” which structural engineers define as “a localized damage propagating throughout a structural system, which is triggered by an initial failure of critical structural element(s) caused by abnormal loads (fire, explosion, impact, etc.), eventually resulting in a partial or total collapse of the entire structural system disproportionate to the initial local failure.” See Guo Xuekang, Zhi Yang, Yi Li, Xinzeng Lu & Mengzhu Diao, *Progressive Collapse of Flat Plate Substructures Initiated by Upward and Downward Punching Shear Failures of Interior Slab–Column Joints*, 148 J. STRUCTURAL ENG’G 1 (2022).

86. See David Hammer, *‘300% Overstressed’ Beams Under 16th Floor Caused Hard Rock Collapse, Engineer Says*, 4WWL (Oct. 12, 2021, 7:18 PM), <https://www.wwtv.com/article/news/investi>

the Hard Rock Hotel wreckage estimated that the undersized columns were “300% overstressed.”⁸⁷ The collapse caused the death of two workers, and eighteen others were hospitalized.⁸⁸

A bad mix of concrete can also compromise vertical support members. In 2021, for instance, developers in Hong Kong announced plans to demolish a twin-tower fifty-seven-story condominium project as construction was nearing completion.⁸⁹ According to the municipal building department, “tests found substandard concrete was used in supporting columns and load-bearing walls in the two towers.”⁹⁰ Demolition of the almost-complete structures was a drastic measure, but one that averted potential structural failure.⁹¹ In both examples, developers failed to properly account for the enormous weight of concrete construction and the attendant need for adequate load support.

A common cause of collapse in concrete construction is structural failure known as “punching shear,” which occurs when a horizontal concrete slab fails near the joint where it meets a vertical column. In a punching shear failure, the horizontal slab collapses downward while leaving the column intact. The slab is sheared from the column, which appears to puncture the horizontal slab. One potential cause of punching shear, among many other types of structural failure, is the use of substandard or improperly mixed concrete. In 1971, for instance, a sixteen-story apartment project in Boston collapsed during construction in an accident that

gations/david-hammer/300-overstressed-beams-under-16th-floor-caused-hard-rockcollapse-engineer-says/289-beb109c6-9df6-43e5bc7b24952d99da42#:~:text=David%20Hammer,'300%25%20overstressed%20beams%20under%2016th%20floor%20caused%20Hard%20Rock,raise%20alarms%20about%20the%20design [https://perma.cc/8RZC-JKA4].

87. *See id.*

88. *See* Hannah Knowles & Derek Hawkins, *Two Dead, 18 Taken to a Hospital After Collapse at Hard Rock Hotel Construction Site in New Orleans*, WASH. POST (Oct. 13, 2019, 5:38 AM EDT), <https://www.washingtonpost.com/nation/2019/10/12/one-dead-taken-hospital-with-injuries-after-hard-rock-hotel-collapse/> [https://perma.cc/G8TH-W6XQ].

89. *See* Michelle Chan, *Hong Kong's New World to Demolish New Condo Towers Over Defects*, NIKKEI ASIA (Jul. 8, 2021, 9:51 PM JST), <https://asia.nikkei.com/Business/Markets/Property/Hong-Kong-s-New-World-to-demolish-new-condo-towers-over-defects> [https://perma.cc/WJ75-VKYQ].

90. *Id.*

91. Defective concrete is also relatively common in single-family residential construction. The Connecticut Supreme Court recently summarized the pervasiveness of one particular brand of defective concrete:

It is estimated that as many as 34,000 homes may be affected by defective concrete manufactured by Mottes. . . . According to a report commissioned by the state of Connecticut, the stone aggregate used in Mottes concrete between 1983 and 2010 contains significant amounts of pyrrhotite, a ferrous mineral that oxidizes in the presence of water and oxygen to form expansive secondary minerals that crack and destabilize the concrete, resulting in its premature deterioration.

Vera v. Liberty Mut. Fire Ins. Co., 228 A.3d 1009, 1010 n.2 (Conn. 2019). *See also* *Edwards v. Centex Real Est. Corp.*, 61 Cal.Rptr.2d 518, 522 (Cal. App. Ct. 1997).

investigators believe was caused by punching shear failure attributable to low strength concrete.⁹² Four construction workers died in the collapse.⁹³

Punching shear failure can also be caused by post-construction additions or modifications that do not conform to original architectural plans. In fact, improvised renovations have led to some of the most catastrophic structural failures of concrete construction. In 1989, for instance, a building initially planned as a four-story concrete apartment building in Seoul, South Korea, was converted mid-construction by the developer into a shopping mall development.⁹⁴ Disregarding warnings from his contractors, the developer added an unplanned fifth floor and removed support columns to accommodate escalators.⁹⁵ In 1995, those modifications proved fatal when the entire structure collapsed, killing more than 500 people.⁹⁶ In 2013, a similar tragedy occurred in Dhaka, Bangladesh, where the Rana Plaza Garment Factory collapsed, causing more than 1,100 casualties.⁹⁷ The concrete factory was originally designed as a retail development but was later converted into a factory outfitted with heavy machinery.⁹⁸ As part of the conversion, the building's owner illegally added four additional floors without a building permit.⁹⁹

Another type of structural failure in concrete construction is caused by uneven settling of the building below the foundation. Structural engineers must account for the extraordinary weight of concrete when determining the adequate amount of foundational support necessary to prevent settlement and sinking. Miscalculations can cause structural failure. The Millennium Tower in San Francisco is the most notorious recent example of uneven foundation settlement. The fifty-eight-story luxury condominium building opened in 2009 and, with a height of 645 feet, remains the tallest concrete structure in the city.¹⁰⁰ Despite being built atop mud

92. See Suzanne King & Norbert J. Delatte, *Collapse of 2000 Commonwealth Avenue: Punching Shear Case Study*, 18 J. PERFORMANCE CONSTRUCTED FACILITIES, 54, 59 (2004) (“Deficient concrete strength could be attributed to poor quality concrete, improper curing, or both. Tests indicated that the amount of cement in the concrete was sufficient, but records suggested that the maximum permissible slumps were consistently exceeded.”).

93. *Id.* at 54.

94. See Colin Marshall, *Learning from Seoul's Sampoong Department Store Disaster - a History of Cities in 50 Buildings, Day 44*, GUARDIAN (May 27, 2015, 9:27 EDT), <https://www.theguardian.com/cities/2015/may/27/seoul-sampoong-department-store-disaster-history-cities-50-buildings> [<https://perma.cc/MP9C-V7QR>].

95. *See id.*

96. *See id.*

97. See Sarah Young, *Fashion Revolution Week: What was the Rana Plaza disaster and why did it happen?*, INDEPENDENT (Apr. 23, 2020, 8:52 BST), <https://www.independent.co.uk/life-style/fashion/rana-plaza-factory-disaster-anniversary-what-happened-fashion-a9478126.html> [<https://perma.cc/TQ2Z-353C>].

98. *See id.*

99. See Julfikar Ali Manik & Jim Yardley, *Building Collapse in Bangladesh Leaves Scores Dead*, N.Y. TIMES (Apr. 24, 2013), <https://www.nytimes.com/2013/04/25/world/asia/bangladesh-building-collapse.html?hp> [<https://perma.cc/CS5U-L726>].

100. Aria Bendix, *A Sinking, Leaning 58-Storey Skyscraper in San Francisco Has Now Developed a Crack in One Window*, SCI. ALERT (Sept. 6, 2018), <https://www.sciencealert.com/a-sinking-58-storey-skyscraper-in-san-francisco-now-has-a-massive-crack> [<https://perma.cc/NGL9-TRTC>].

and clay, the original architectural plans did not call for installation of underground pilings down to the bedrock.¹⁰¹ Within the first ten years of construction, one side of the building sunk almost twenty inches, causing the structure to tilt noticeably.¹⁰² While the exact cause remains bitterly contested, repairs are estimated to cost between \$200 million and \$500 million.¹⁰³ However, when a similar problem plagued a thirty-one-story concrete condominium tower in Texas, the developer opted to demolish the nearly completed structure rather than attempting to repair the sinking foundation.¹⁰⁴

Concrete construction can also fail gradually over time when structural members are not adequately protected from moisture and water infiltration. As noted above, the innovation of steel reinforcement allowed builders to greatly improve concrete's tensile strength, but concrete-encased reinforcement rods can degrade when exposed to corrosive elements. As one commentator explains:

[W]hen embedded in concrete, steel is hidden but secretly active. Moisture entering through thousands of tiny cracks creates an electrochemical reaction. One end of the rebar becomes an anode and the other a cathode, forming a “battery” that powers the transformation of iron into rust. Rust can expand the rebar up to four times its size, enlarging cracks and forcing the concrete to fracture apart in a process called spalling, more widely known as “concrete cancer.”¹⁰⁵

Crack formations from internal and external stress are therefore inevitable as concrete weathers over time.¹⁰⁶ A common cause of reinforcement steel corrosion is chloride contamination within the surrounding concrete, a problem exacerbated by the infiltration of salt from de-icing treatments and marine environments.¹⁰⁷

101. See Gregory LaHood, *Millennium Tower San Francisco: Untangling the Litigation Web*, 39 CONSTR. LAW. 35 (2019).

102. *Id.* at 35.

103. *Id.* at 42.

104. See Nadine M. Post, *Faulty Tower's Implosion Presents Many Challenges*, ENG'G NEWS-REC. (Oct. 7, 2009), <https://www.enr.com/articles/52-faulty-tower-8217-s-implosion-presents-many-challenges> [<https://perma.cc/KT3L-9MW7>].

105. Guy Keulemans, *The Problem with Reinforced Concrete*, CONVERSATION (June 17, 2016, 1:18 AM EDT), <https://theconversation.com/the-problem-with-reinforced-concrete-56078> [perma.cc/F4N9-QPP3].

106. See *id.*

107. See Gareth K. Glass, Bharti Reddy & Les A. Clark, *Making Reinforced Concrete Immune From Chloride Corrosion*, 160 PROC. OF THE INST. OF CIV. ENG'RS – CONSTR. MATERIALS, 155, 155 (2007); See also *Blocker v. ConocoPhillips Co.*, No. CIV-17-248-G, 2019 WL 9757604, at *4 (W.D. Okla. May 13, 2019) (crediting expert opinion “that chloride and sulfate penetration into a concrete and rebar foundation will accelerate its corrosion”). In *City of Minneapolis v. Architectural All.*, the plaintiff municipality alleged that an architect retained to design a city maintenance facility acted negligently by submitting plans that called for inadequate concrete encasement of the reinforcement steel. An expert for the city opined that the spalling or delamination of the concrete floor resulted from corrosion of steel reinforcement bars (rebar) within the concrete slab. The rebar corrosion was caused by chloride ions. The chloride ions, which come from de-icer salts deposited by vehicles entering the

Rebar corrosion can also be caused by a failure to encase the reinforcement steel with a sufficient depth of concrete.¹⁰⁸ Design defects that fail to properly expel water can also accelerate the corrosion of concrete, especially when standing water accumulates into puddles and ponds on concrete surfaces.¹⁰⁹ Although reinforced concrete can deteriorate in any environment, the dangers are magnified in coastal areas where the high concentration of airborne chlorides and higher relative humidity accelerate the rate of corrosion.¹¹⁰

Structural engineers have developed a taxonomy to describe various types of crack formations.¹¹¹ Corrosion cracks, for instance, occur when moisture penetrates the concrete surface and infiltrates the embedded steel reinforcement rods.¹¹² When moisture corrodes the steel reinforcement, the rebar begins to rust; the rust, in turn, causes the rebar to delaminate from the surrounding concrete as it swells in size; the swelling, in turn, leads to further crack formations in the concrete.¹¹³ Without remediation, crack formations can cause spalling of concrete sections from the building, which further exposes steel reinforcement rods to the elements, thus causing additional rust corrosion.¹¹⁴ Unless abated, this vicious cycle will eventually cause the structure to fail. In 2011, for instance, a twenty-five-story apartment tower in Seattle was demolished after post-tensioning cables were corroded beyond repair from moisture infiltration that entered from outside the building.¹¹⁵

facility, penetrated the concrete and eventually reached the rebar because of inadequate concrete cover. . . . As rebar corrodes, it expands, exerting pressure on the concrete, which eventually causes the concrete to fracture and leads to spalling or delamination. *City of Minneapolis v. Architectural All.*, No. A05-1909, 2006 WL 2348084, at *1 (Minn. Ct. App. Aug. 15, 2006).

108. See *Council of Unit Owners of Sea Colony E., Phase III Condo., ex rel Ass'n of Owners v. Carl M. Freeman Assocs. Inc.*, No. C.A. 86C-AU-52, 1988 WL 90569, at *2 (Del. Super. Ct. Aug. 16, 1988) (attributing the rusting of steel reinforcement to a defectively designed “concrete cover [that] was not of sufficient depth to keep moisture from reaching the rebars”).

109. See *Square at Key Biscayne Condo. Ass'n v. Scottsdale Ins. Co.*, No. 13-24222-CIV, 2014 WL 11946882, at *6 (S.D. Fla. Dec. 15, 2014) (describing the deterioration of steel reinforcements “caused by water intrusion that occurred subsequent to, and as a result of, inadequate construction”).

110. See Kyriacos Neocleous, Andreas Christofe, Athos Agapiou, Evagoras Evagorou, Kyriacos Themistocleous & Diofantos Hadjimitsis, *Digital mapping of corrosion risk in coastal urban areas using remote sensing and structural condition assessment: case study in Cyprus*, 8 OPEN GEOSCIENCES 662, 662 (2016).

111. See HASSOUN & AL-MANASEER, *supra* note 78 at 239–40 (describing main cracks, secondary shrinkage cracks, secondary flexural cracks, secondary corrosion cracks, etc).

112. See *id.*

113. See *id.*

114. See *id.*; See also ARNON BENTUR, SIDNEY DIAMOND & NEAL S. BERKE, *STEEL CORROSION IN CONCRETE: FUNDAMENTALS AND CIVIL ENGINEERING PRACTICE* at 2 (Taylor & Francis Group, 2011).

115. See Susan Kelleher, *Tower's flaws were surprise to City Hall - Crumbling high-rise Owner doesn't have to alert city to woes after project is built*, SEATTLE TIMES at A1 (May 4, 2010).

Water infiltration can corrode other elements of structural cement. In 2014, a New York cooperative building imposed thirty million dollars in assessments to repair an exterior brick facade that began to collapse after rainwater infiltrated the mortar underneath. See Robin Finn, *The Killer Assessment*, NEW YORK TIMES at RE1 (June 15, 2014), <https://www.nytimes.com/2014/06/15/realestate/village-co-op-gets-hit-with-30-million-assessment.html> [<https://perma.cc/L8SF-USTC>].

Exterior rust stains are visual indications of delamination, but sound testing (using hammers or chains) and electromagnetic investigation can be performed to detect and measure the extent of latent steel corrosion.¹¹⁶ Repairing corroded rebar may include some or all of the following measures:

- Treatment of the steel to remove rusting layers and adding additional steel if the cross-section loss was heavy. Sometimes a protective coating is applied to the steel.
- Application of repair mortar or concrete to replace the damaged concrete that was removed. The repair mortar or concrete serves to protect the steel by both physical means (i.e., preventing ingress of deleterious substances) and by chemical means (providing repassivation).¹¹⁷ Repassivation can also be obtained by electrochemical methods. Sometimes a primer layer is applied at the interface between the old, sound concrete exposed around the steel and the repair mortar or concrete.
- To enhance the protection provided by the mortar or concrete, external membranes may be applied over the repaired section or over all of the concrete surface.
- The repair mortar or concrete may also be applied in combination with the establishment of a cathodic protection system.¹¹⁸

Structural concrete restoration, however, is complex and potentially dangerous when performed incorrectly.¹¹⁹

Concrete warrants special attention because it is so widely used in residential condominium construction and poses unique risks of structural failure when improperly maintained or inspected. Other common building materials, however, are also vulnerable to deterioration and decay. For instance, many low-rise multistory condominiums feature wood frame construction that is susceptible to rot and infestation. In one example, described by a court as “a homeowner’s nightmare,” “inadequate ventilation and various construction defects [within] the unfinished crawlspace beneath the [condominium] building [became] a breeding

116. See BENTUR ET AL., *supra* note 114 at 176.

117. Repassivation is “a key process that controls the performance of corrosion resistant alloys.” Huibin Ke & Christopher D. Taylor, *First-Principles Modeling of the Repassivation of Corrosion Resistant Alloys: Part I. O and Cl Adsorption Energy*, J. ELECTROCHEMICAL SOC’Y July 24, 2020.

118. BENTUR ET AL., *supra* note 114 at 177–178.

119. In 2023, a construction fatality at a New Jersey condominium high rise occurred during concrete restoration work when an eighth floor balcony pancaked, killing a worker on the floor below. The entire tower was temporarily declared unsafe but later cleared for occupancy following a comprehensive structural inspection. An investigation into the cause of the collapse is ongoing. See Maddy Vitale & Donald Wittkowski, *Spinnaker in Sea Isle Reopens Tower After Fatal Balcony Collapse*, SEA ISLE NEWS (March 24, 2023), <https://seaislenews.com/spinnaker-sea-isle-reopens-tower-fatal-balcony-collapse/> [https://perma.cc/VL8B-AXTW].

ground for wood-destroying fungus.”¹²⁰ That condition caused damage that left some units with floors sagging by “as much as 6 inches” and rendered the building uninhabitable.¹²¹ Metal framed construction is likewise vulnerable to collapse, particularly when structural elements are compromised by rust. For example, a six-story condominium in Maryland was evacuated after structural columns buckled from rust corrosion, causing noise that sounded “like a truck had hit the building.”¹²²

II. WHY MIGHT CONDOMINIUM OWNERS FORGO EFFICIENT STRUCTURAL REPAIRS

Champlain Towers South collapsed. Fortunately, collapses like this one are rare. Buildings, however, are not forever. Sometimes, they are poorly designed or poorly built.¹²³ But, as noted above, even properly constructed buildings can deteriorate over time.¹²⁴ Is the possibility of structural deterioration cause for legal intervention? Property owners have financial incentives to make repairs whenever the benefits generated by those repairs exceed their cost. Among those benefits is a reduction in potential liability to persons injured as a result of structural deterioration. It is, of course, true that a landowner’s decision to allow a building to deteriorate puts third parties at risk, particularly tenants and visitors. But a regime that holds owners liable for avoidable structural collapses should lead property owners to internalize the costs of allowing their buildings to deteriorate.¹²⁵ No one other than the owner has comparable incentives to ensure that buildings are kept in optimal repair.

120. *Olde Colonial Vill. Condo. Council v. Millers Mut. Ins.*, No. CIV.A.99C-06-187-FSS, 2002 WL 122885, at *1–2 (Del. Super. Ct.), *on reargument sub nom.* *Olde Colonial Vill. v. Millers Mut. Ins.*, No. CIV.A.99C-06-187-FSS, 2002 WL 1038825 (Del. Super. Ct. May 17, 2002).

121. *Id.* at *1.

122. *130 Slade Condo. Ass’n.*, 2008 WL 2331048, at *1.

123. See Kumalasari Wardhana and Fabian C. Hadipriono, *Study of Recent Building Failures in the United States*, 17 J. PERFORMANCE CONSTRUCTED FACILITIES 151, 152 (2003) (discussing deficiencies in design and construction as causes for building collapse). A Miami Herald report strongly suggests that the Champlain Towers building was both poorly designed and poorly built. The architect and engineer who designed building had “histories of cutting corners.” The engineer oversaw design and construction of a parking garage that began falling as soon as it was completed, and the architect’s license had previously been suspended for “gross incompetence” when two billboards he designed blew over in a hurricane. The columns under the collapsed part of the tower violated building code requirements at the time, although building department officials, inspectors, and private engineers had concluded that it was safe and code compliant. See Sarah Blaskey, Sohail Al-Jamea, Rachel Handley, David Newcomb, Aaron Leibowitz, Ben Conarck & Aaron Albright, *House of Cards: How Decades of Problems Converged the Night Champlain Towers Fell*, MIA. HERALD, (December 30, 2021), <https://www.miamiherald.com/news/special-reports/surfside-investigation/article256633336.html> (hereinafter Miami Herald Report).

124. Wardhana & Hadipriono, *supra* note 123, at 154 (discussing deterioration and maintenance deficiencies as causes of building collapse). Moreover, changes to the structure after initial construction may contribute to instability. For instance, at Champlain Towers, when the pool deck needed resurfacing, contractors piled new layers of decorative concrete on top of the old, adding weight and obscuring warning signs of the building’s instability. See Structural Field Study Report, *supra* note 9 at 9.

125. Cf. Henry E. Smith, *Property and Property Rules*, 79 N.Y.U. L. REV. 1719, 1755 (2004) (noting that one of the purposes of property is to internalize the costs and benefits of an asset’s uses on the owner).

Nevertheless, there are reasons to believe that property owners may discount the possibility of structural deterioration, increasing the prospect of tragedies like the one that befell Champlain Towers. Some of the phenomena that cause this discount are common to all property owners, but a number are peculiar to condominiums. In this Part, we examine these phenomena.

A. Discount for Low Probability/High Consequence Events

Considerable evidence suggests that people generally discount events that occur with very low frequency even if those events could cause cataclysmic harm.¹²⁶ There are a number of explanations for the discount. First, the possibility that the event might occur might never enter into one's consciousness.¹²⁷ If I am not aware that my house might fall down, I am not in a position to guard against that eventuality. Second, even if one knows that a remote risk exists, the cost of obtaining the information necessary to assess the risk may seem excessive in light of the risk's apparent remoteness.¹²⁸ Third, risk aversion and even risk neutrality may disappear when people are confronted with a sufficiently remote risk.¹²⁹

The behavior of California landowners confronted with earthquake risk illustrates the tendency to discount low-probability events. The Northridge earthquake devastated parts of California in 1994. In the aftermath of the earthquake, 31% of California landowners purchased earthquake insurance.¹³⁰ By 2016, however, the percentage of California landowners with earthquake insurance had dropped below 11%.¹³¹ The risk of earthquake did not change during that twenty-year period. For most landowners, investigating the magnitude of the risk would have been cost-prohibitive; even experts could not estimate the risk with precision.¹³² When the Northridge quake was on their mind, many owners bought insurance; as memories of Northridge faded, many residents perceived the risk as too remote to guard against.

126. See Adam F. Scales, *A Nation of Policyholders: Government and Market Failure in Flood Insurance*, 26 MISS. C. L. 3, 9-10 (2007).

127. See Howard Kunreuther and Mark Pauly, *Rules Rather than Discretion: Lessons from Hurricane Katrina*, 33 J. RISK & UNCERTAINTY (SPECIAL ISSUE ON NATURAL DISASTER RISKS) 101, 107 (2006) (noting that events may not appear on one's radar screen until a disaster occurs).

128. *Id.* at 105 (noting that potential hazard victims perceive the cost of getting information about low probability, high consequence events as high relative to the expected benefits).

129. *Cf. Id.* at 106 (noting that when probability of a disaster is lower than a threshold level of concern, owners do not worry about taking protective measures like purchase of insurance).

130. See *Summary of 1996 Residential Market Totals*, CAL. DEP'T OF INS. (May 2002), <http://www.insurance.ca.gov/0400-news/0200-studies-reports/0300-earthquake-study/1996-2000/upload/1996-Summary-Data.pdf> [<https://perma.cc/75ZW-VJMQ>].

131. *Earthquake Premium and Policy Count Data Call*, CAL. DEP'T. OF INS., (July 19, 2017), http://www.insurance.ca.gov/0400-news/0200-studies-reports/0300-earthquake-study/upload/EQ2016_SummaryWA.pdf [<https://perma.cc/4H7V-6K84>].

132. See, e.g., Kyriazis Pitolakis, *Earthquake Risk Assessment: Certitudes, Fallacies, Uncertainties and the Quest for Soundness*, in 2 PERSPECTIVES ON EUROPEAN EARTHQUAKE ENGINEERING AND SEISMOLOGY (Atilla Ansel ed., 2015) 59, 61–65 (discussing difficulties with earthquake modelling).

Most municipalities have building codes,¹³³ require architectural plans for new construction, and mandate inspection of new buildings during construction.¹³⁴ Why? The prospect of building collapse is remote. While anyone commissioning a new building has incentives to ensure that it is safe and stable without any municipal intervention, most owners would not think about the possibility of building collapse and would not, in any event, have an architect's expertise or the knowledge to assess whether contractors have adhered to the architect's plans. If left to their own devices, owners might not devote resources to educate themselves about the risks of building failure. These government requirements are designed to overcome the inclination of owners to ignore remote risks.

Until the Champlain Towers disaster, the possibility that an established building would collapse was not on the radar of most building owners. Similar to the behavioral response that usually follows other shock-inducing events like earthquakes, hurricanes, and natural disasters, the Champlain Towers collapse has provoked considerable concern about the structural integrity of older buildings, especially along the seacoast where natural forces are most likely to lead to deterioration.¹³⁵ But that concern may well fade as time passes, at least until a comparable collapse occurs.

B. *Why Focus on Condominiums?*

Structural safety problems arise in single-family homes, in office buildings, and in rental apartment buildings. Discounting for low-probability events is not unique to condominium owners. Yet much of the coverage of the Champlain Towers collapse emphasized that the building was a condominium. And there are a number of reasons to be more concerned about structural safety issues in condominium buildings than in other buildings.

Although single-family homes may face structural issues, those homes are, on average, smaller in size, and the physical load the structures must support will generally be smaller, reducing the likelihood of collapse. In addition, the impact of the collapse of a single home is likely to be smaller; in the worst case, destruction would affect the owner's family (and potential guests). Perhaps most important, the owner of a single-family home is more likely to be attuned to any signs of structural difficulty than the owner of one condominium unit in a multiple-unit building. A detached dwelling unit concentrates the costs and benefits associated with a

133. One estimate is that 10,000 jurisdictions have building codes. Sara C. Galvan, Note, *Rehabilitating Rehab Through State Building Codes*, 115 YALE L.J. 1744, 1747 (2006).

134. For instance, in New York City, a licensed professional engineer or registered architect must submit construction plans, and the work is subject to inspection. See *Obtaining a Permit*, N.Y.C. DEP'T OF BLDGS, <https://www1.nyc.gov/site/buildings/industry/obtaining-a-permit.page> [<https://perma.cc/349S-JHF5>] (last visited Mar. 1, 2024).

135. See *Surfside Condo Collapse: What We Know So Far*, PRAC. ENG'G (Aug. 17, 2021), <https://practical.engineering/blog/2021/8/13/surfside-condo-collapse-what-we-know-so-far> [<https://perma.cc/JL4R-AA9K>] (noting that reinforced concrete is particularly subject to deterioration in coastal areas.)

resource in a single owner unlike a condominium, which diffuses those costs and benefits among many owners, none of whom may have the same incentive to monitor the resource.¹³⁶ Thus, the owner of a single-family house has optimal incentives to monitor for structural integrity in ways that the owner of a single condominium unit within a 100-unit building does not.

Rental apartment buildings present the same potential for collapse and injury as condominiums, but rental apartment buildings have a residual owner—the landlord—who will bear most of the financial consequences associated with building failure. If a building is destroyed due to structural failure, the landlord loses the building's income stream, and the landlord may also be liable to tenants for both financial losses and personal injury resulting from the failure.¹³⁷ Because the consequences of building collapse are concentrated on the landlord, the landlord has strong incentives to monitor the building for structural defects. Ultimately, the landlord is in the optimal position to determine what repairs, if any, should be made and, if conditions warrant, whether the building should be replaced altogether.

The sale of a single-family home or an apartment building provides a discrete occasion for ascertaining the building's structural integrity. Because a prospective purchaser contemplates buying the entire building, the purchaser has considerable incentive to commission a building inspection.¹³⁸ That inspection should reveal any serious structural defects. By contrast, when a buyer purchases a single unit in a multi-story condominium, the inspection is likely to focus on deficiencies in that unit; no individual purchaser has enough of a stake to justify the cost of a structural inspection of the entire building.¹³⁹

A host of other problems arise when a building is held in condominium ownership, problems which are not imposed on single-family homeowners or rental landlords. Among those are agency costs, the different time horizons and liquidity profiles of multiple owners, and distortions created by the voting rights of unit owners.

136. See, e.g., Thomas W. Merrill, *The Demsetz Thesis and the Evolution of Property Rights*, 31 J. LEGAL STUD. S331, S332 (2003); Henry Smith, *Exclusion Versus Governance: Two Strategies for Delineating Property Rights*, 31 J. LEGAL STUD. S453, S468 (2002).

137. See RESTATEMENT (SECOND) OF PROPERTY (LANDLORD AND TENANT) §17.6 (AM. L. INST. 1977); *Scott v. Garfield*, 912 N.E.2d 1000, 1006 (Mass. 2009) (upholding jury verdict for friend of tenant against landlord when a railing on a second-floor porch gave way).

138. Many standard-form real estate contracts include a contingency clause allowing the buyer to cancel the contract if the inspection proves unsatisfactory. See, e.g., JESSE DUKEMINIER, JAMES E. KRIER, GREGORY S. ALEXANDER, MICHAEL S. SCHILL & LIOR JACOB STRAHILEVITZ, *PROPERTY* at 557 (9th ed. 2018) (including professional inspection clause from multi-board residential real estate contract).

139. For instance, the International Association of Certified Home Inspectors offers the following Scope of Condominium Inspection Clause: "You understand that we will inspect only your condominium unit. Our inspection will not include any inspection of common areas or other spaces you do not own. We may offer comments concerning our observations of common areas as a courtesy. You agree that any comments concerning common areas, or any lack of comments concerning common areas, shall not give rise to any claim against us." *Scope of Condominium Clause*, INTER'L ASS'N OF CERTIFIED HOME INSPECTORS, <https://www.nachi.org/common-areas.html> [<https://perma.cc/7SYZ-EUKZ>] (last visited Mar 1, 2024).

C. Agency Costs

The first agency cost problem condominiums face arises out of the condominium board's representation of the unit owners. Although board members are typically unit owners themselves,¹⁴⁰ their alignment with the interests of the other owners is not perfect. Board members typically serve as volunteers,¹⁴¹ which limits their financial incentive to act with the diligence unit owners might prefer. The fiduciary duties board members owe to unit owners are designed to harmonize board interests with those of the unit owners, but courts have developed deferential standards of review, recognizing how difficult it would be to get board members to serve if they faced liability for taking controversial actions.¹⁴² Whether characterized as a "reasonableness" rule¹⁴³ or an adaptation of the corporate "business judgment rule,"¹⁴⁴ these doctrines insulate board members from liability for decisions that might be harmful to particular—or all—unit owners. Under the business judgment rule, for instance, a condominium board's reliance on the advice of a professional engineer regarding the remediation of structural defects may render complaints about the association's corrective measures "not actionable."¹⁴⁵

Of course, condominium boards hire managing agents and others to handle many tasks, which could include evaluation of safety and other structural risks.¹⁴⁶ But those engagements generate their own agency costs. Agents hired to assess building safety only bear potential liability when they incorrectly conclude that a building is safe, not if they erroneously conclude that a building is at risk. Board members, therefore, may be understandably reluctant to act on the basis of their recommendations.

Condominium board members are incomplete agents in another sense: they may not have authority to take certain actions—including imposition of a special

140. In California, a person who is not a member of the association is disqualified from nomination as a candidate for the board unless the person is nominated by the developer during a period of developer control. CAL. CIV. CODE §5105(b)-(b)(1) (West 2024). In most other states, there is no statutory ban on non-members sitting on the condominium board, but the condominium bylaws may specify board qualifications.

141. See W.B. King, *Bankrolling the Board*, COOPERATORNEWS N.Y., (Sept. 2015) <https://cooperatornews.com/article/bankrolling-the-board> [<https://perma.cc/E63A-WNXV>] (noting long-standing practice of volunteer board members). In Florida, statute proscribes payment of officers and board members unless the condominium's bylaws provide for payment. Fla. Stat. §718.112(2)(a)(1) (2023). In other states, statutes may be silent, but bylaw provisions proscribe compensation.

142. See, e.g., *Lamden v. LaJolla Shores Clubdominium Homeowners Ass'n*, 980 P.2d 940, 954 (Cal. 1999) (noting that one of the advantages of judicial deference is "enhancement of the incentives for essential voluntary owner participation in common interest development governance.").

143. See, e.g., RESTATEMENT (THIRD) OF PROPERTY (SERVITUDES) § 6.13(1) (AM. L. INST. 2000).

144. See, e.g., *In re Levandusky v. One Fifth Ave. Apartment Corp.*, 553 N.E.2d 1317 (N.Y. 1990) (adopting business judgment rule for review of co-op and condominium board decisions); *Oberillig v. W. Grand Towers Condo. Ass'n*, 807 N.W.2d 143 (Iowa 2011).

145. See *Headrick v. Stonepark of Dunwoody Unit Owners Ass'n*, 771 S.E.2d 382, 387 (Ga. Ct. App. 2015).

146. See, e.g., UNIF. COMMON INT. OWNERSHIP ACT, §3-102(a)(3) (UNIF. L. COMM'N 2021) (authorizing boards to hire managing agents and other employees); CAL. CIV. CODE §5375 (West 2024) (mandating disclosures by prospective managing agents).

assessment—without at least silent approval of a majority of unit owners.¹⁴⁷ So, even if board members concluded that certain repairs were in the interest of unit owners, they could not implement those repairs over the objection of some number of unit owners.

D. Different Time Horizons

To pay for expensive structural repairs, a condominium board must ultimately obtain support from the unit owners. Even if the board has authority to impose a special assessment without unit owner approval,¹⁴⁸ unit owners have power to replace the board (and effectively undo any assessments) if the requisite majority of owners oppose the assessment.¹⁴⁹

A unit owner who expects to remain in the condominium for the long haul may weigh the wisdom of an expensive structural repair differently from an owner who does not expect to remain for as long. The risk of collapse over the next thirty years will inevitably be greater than the risk over the next five years, both because the time frame is longer and because the structure is likely to deteriorate further as time passes. As a result, a building with a large elderly population may be resistant to making repairs that would seem reasonable to other unit owners.

Of course, in a perfect market, the structural condition of the condominium would be reflected in the market value of all individual units.¹⁵⁰ As a result, each unit owner would feel the economic consequences of structural risk. But a perfect market rests on perfect information,¹⁵¹ and if the condominium never commissions a study of the building's structural integrity, potential buyers might not know whether the building has structural issues. Perhaps more important, elderly condominium residents may not be focused on market value; they may have no intention of selling and may be more concerned about keeping annual costs within their means.¹⁵² As a result, they may oppose efficient structural repairs.

147. For instance, in California, a condominium board may not impose a regular assessment that is more than 20% greater than the previous year's assessment and may not impose a special assessment exceeding 5% of the association's budgeted gross expenses without the approval of the membership. CAL. CIV. CODE §5605(b) (West 2024).

148. Unlike California, which requires approval of large special assessments by a majority of the membership, *id.*, most states do not require a vote of the members. The Uniform Common Interest Ownership Act requires the board to call a meeting of the unit owners. UNIF. COMMON INT. OWNERSHIP ACT, §§3-123(a)–3-123(b) (UNIF. L. COMM'N 2021). The board's assessment is ratified unless a majority of unit owners vote to disapprove. *Id.* Even if the governing statute does not require unit owner approval, the association bylaws may require that approval.

149. For instance, in Florida, “any member of the board of directors may be recalled and removed from office with or without cause by a majority of the total voting interests.” FLA. STAT. ANN. §720.303(10)(a)(1) (West 2023).

150. *See generally* Smith, *supra* note 125 at 1755 (2004) (noting that a property owner, in seeking to maximize property value, operates as “a broker between the present and the future” if future values are capitalized into present price.)

151. *See* GEORGE P. STIGLER, THE THEORY OF PRICE 87 (3d ed. 1966) (“A perfect market is one characterized by perfect knowledge on the part of traders.”).

152. The Life Cycle Hypothesis, developed most extensively by Nobel Prize Economist Franco Modigliani, suggests that individual savings and consumption patterns can be explained primarily by a

E. Different Equity Stakes

Most condominium owners finance their purchases with mortgage loans. The equity any unit owner has in her unit is the difference between the value of the unit and the remaining balance on the owner's mortgage loan. But that amount will be different for each condominium owner. A recent purchaser who financed 90% of her purchase price will have significantly less equity in her unit than a long-time resident of an equivalent unit whose mortgage loan balance is only 30% of the unit's value.

Suppose now that structural repairs would cost 20% of the condominium's value, an amount that would have to be shared among all unit owners. Although the cost would be painful to all owners, the owner with more equity has more incentive to support the repair than the owner who has financed almost all of the purchase price. The high-equity owner would lose a substantial investment if the building were to collapse while the low-equity owner might not, either because the mortgage loan was a non-recourse loan¹⁵³ or because the owner had few other assets for the mortgage lender to pursue. Leaving aside the potential for immediate building collapse, if the structural deficiencies reduce the value of all units by 25%, the high-equity owner will find it in her economic interest to support the repair while the lower-equity owner might not. Of course, it would be in the interest of the lower-equity owner's mortgage lender to have the repair made, but the mortgage lender typically has no say in who sits on the condominium board or what expenditures the condominium makes.

F. Disparity Between Unit Value and Voting Rights

When the condominium developer establishes the condominium, the governing documents allocate both voting rights and responsibility for condominium expenses.¹⁵⁴ Although some condominiums have a one unit, one vote rule, most larger condominiums allocate voting rights and expenses in proportion to the perceived value or size of the units.¹⁵⁵ Once the documents establish the

desire to assure the availability of adequate resources during one's lifetime, and that the bequest motive is not an important factor in wealth accumulation. See Franco Modigliani, *Life Cycle, Thrift and the Wealth of Nations*, NOBEL PRIZE, 146–147 (1985), <https://www.nobelprize.org/uploads/2018/06/modigliani-lecture.pdf> [<https://perma.cc/86D9-EJQ6>]. If the Life Cycle Hypothesis holds, it explains why increased market value may be of limited importance to elderly unit owners concerned about preserving consumption opportunities during their own lifetimes.

153. In about a quarter of American states, all mortgages are essentially nonrecourse mortgages, which means that the lender's remedies are limited to the mortgaged property but not the personal assets of the mortgagor. Ron Harris & Asher Meir, *Non-Recourse Mortgages – A Fresh Start*, 21 AM. BANKR. INST. L. REV. 119 (2013). States make mortgages nonrecourse by prohibiting recovery of any deficiency following a foreclosure. *Id.* at 124–25.

154. For instance, UCIOA requires that a condominium declaration allocate to each unit “a fraction or percentage of undivided interests in the common elements and in the common expenses of the association, and a portion of the votes in the association.” UNIF. COMMON INT. OWNERSHIP ACT, §2-107(a) (UNIF. L. COMM'N 2021).

155. See *id.*, Comment 2 (noting that most condominium statutes require a single common basis, usually related to the value of the units, to be used in the allocation of common elements interests,

allocation, it generally cannot be changed without the unanimous approval of the unit owners.¹⁵⁶ But although voting rights and responsibility for expenses may be fixed for the life of the condominium, the relative value of the units is not fixed. Over the course of several decades, some owners may make extensive and expensive improvements to their units while others may allow their units to deteriorate.

Unit owners whose units have deteriorated have voting power in excess of the relative market value of their units. They have incentives to use that voting power to oppose projects, including structural repairs, that will generate positive value for the condominium as a whole but that may produce more cost than benefit for owners whose units have not maintained their value. Consider for instance a \$50,000 project that will generate \$70,000 in increased value for the ten-unit condominium. If the condominium's governing documents allocate 10% responsibility to a particular owner but the owner's unit now has only 6% of the condominium's value, the unit owner has an economic incentive to oppose the project, which will cost her \$5,000 but will generate only \$4,200 in increased value to her.

G. Liquidity Issues

Elderly owners who bought their units in the distant past when prices were lower may simply lack the liquid assets to pay a special assessment earmarked to ensure a building's structural integrity. Liquidity issues, however, are not confined to the elderly. Owners who purchased their units recently may have stretched their budgets to afford the monthly mortgage payments and condominium maintenance assessments. A significant additional expense might push them towards default. And many owners who fall into neither category may simply be living at the limit of their resources. Conversely, some owners may have savings available to pay for important structural repairs.

This disparity in unit owner liquidity can easily lead to disputes about what repairs, if any, to make and, ultimately, to board decisions to put off essential structural repairs. If owners were concerned only about the market value of their investments, unit owners who could not afford value-preserving repairs would sell their units to buyers with the resources to pay for those repairs. For most owners, however, the unit is not just an investment but also a home.¹⁵⁷ Selling the unit would entail a loss in subjective value, not to mention the out-of-pocket costs associated

voting rights, and expense liabilities, and indicating that UCIOA departs from those requirements by permitting each of the allocations to be made on different bases).

156. See, e.g., UNIF. COMMON INT. OWNERSHIP ACT §2-117(d) (UNIF. L. COMM'N 2021), providing that an amendment to the declaration may not "change the allocated interests of a unit, in the absence of unanimous consent of the unit owners."

157. Margaret Radin popularized the notion that a person's home was a special strand of property because the "home is affirmatively part of oneself." Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957, 992 (1982).

with moving.¹⁵⁸ For these owners, accepting the risk associated with structural deterioration will sometimes be the preferable alternative.

A condominium might attempt to ameliorate liquidity issues by borrowing to cover the cost of essential repairs. Condominium borrowing, however, is no panacea. First, the condominium's declaration may or may not authorize borrowing. Even if it does authorize borrowing, it may require the condominium board to surmount procedural hurdles, such as public meeting or approval by vote of the unit owners. Second, unlike single-family homeowners, rental landlords, or co-operatives, a condominium does not own real property that can be used as security for a mortgage.¹⁵⁹ The only security the condominium can offer is a stream of assessment payments from unit owners.¹⁶⁰ Those assessments, however, would have to increase to cover ordinary expenses plus interest and principal payments on the loan. Moreover, the additional assessments—unlike the interest payments on a home equity loan or line of credit—would not be tax deductible to the unit owner.¹⁶¹ As a result, for unit owners who could qualify for and afford payments on a home equity line, condominium borrowing would be an inferior mechanism for financing needed repairs. For those who cannot afford additional payments, borrowing would not solve the liquidity problem.

III. MECHANISMS FOR ENSURING SAFE CONDOMINIUMS—WHILE AVOIDING EVICTIONS

As the previous Part demonstrates, condominium owners and boards have had inadequate incentives to monitor and address safety issues within their buildings. This Part addresses mechanisms for overcoming owner resistance to costly inspections and repairs. Of course, some of that resistance results from

158. See Abraham Bell and Gideon Parchomovsky, *Taking Compensation Private*, 59 STAN. L. REV. 871, 885 (2007) (noting that perfect substitutes for a family home may rarely be found on the market); Stewart E. Sterk and Mitchell L. Engler, *Property Tax Reassessment: Who Needs It?*, 81 NOTRE DAME L. REV. 1037, 1073 (2006) (noting loss of subjective value when liquidity problems force a long-term resident to relocate).

159. See generally Matthew J. Leeds and Joel E. Miller, *Condominium Act Addition Gives New York Board of Managers Effective Borrowing Ability*, 72 ST. JOHN'S L. REV. 135, 146 (1999) (noting that because units belong to the unit owners, a board has no power to encumber them, and also noting that NY statute precluded creation of liens against the common elements).

160. See e.g., UNIFORM COMMON INT. OWNERSHIP ACT §3-102(a)(8) (UNIF. L. COMM'N 2021); TEX. PROP. CODE ANN. §82.102(f) (West, 2023) (authorizing borrowing and assigning as collateral the association's right to future income, including the right to receive assessments); N.Y. REAL PROP. L. §339-jj (McKinney, 2024) (authorizing borrowing and assignment of right to future common charges).

161. See Community Associations Institute, *Condominium Safety Public Policy Report: Reserve Studies and Funding, Maintenance, and Structural Integrity* (2021) at 42 (noting that community association loans do not typically meet qualifications for tax deduction because the loan is not secured by the tax filer's home); See also Michael H. Schill et al, *The Condominium versus Cooperative Puzzle: An Empirical Analysis of Housing in New York City*, 36 J. LEG. STUD. 275, 283 (2007) (noting that co-ops, unlike condos, can use tax-deductible debt to finance building-wide improvements, which generates fewer transaction costs than assessing each individual owner who could then borrow to pay for those improvements).

financial incapacity, and we close by developing approaches that would encourage financially strapped condominium owners to support safety-oriented repairs and that would enable them to stay in their homes.

A. Ensuring Properties are Inspected

1. Legislation

Before Champlain Towers, no state mandated periodic safety inspection of existing condominium buildings. Structural inspections, to the extent required, were imposed by municipal building codes. In Illinois, for instance, the state Condominium Property Act¹⁶² does not require periodic post-construction inspections for structural safety,¹⁶³ nor are known structural defects among the required disclosures imposed upon the owner in a resale of a condominium unit.¹⁶⁴ At the municipal level, post-construction inspection requirements often focus on the structural integrity of building facades. In Chicago, for instance, buildings eighty feet or greater in height are subject to periodic visual facade inspections, an ordinance covering roughly 2,000 buildings in the city.¹⁶⁵ But other potential structural failures are governed by discretionary review and inspection.¹⁶⁶ Similarly, New York City mandates periodic facade inspections for buildings of six or more stories,¹⁶⁷ but “there is currently no law, either in New York City or elsewhere in New York State, that mandates inspection and repair of the interior structural elements of any size of building.”¹⁶⁸

Prior to the Champlain Towers collapse, two Florida counties—Miami-Dade and Broward—did require inspections of buildings in existence for forty years, with reinspection at ten-year intervals. Miami-Dade’s ordinance was enacted in response

162. 765 ILL. COMP. STAT. ANN. 605/1 (West, 2023), *et seq.*

163. See A.J. Sidransky, *Structural Integrity Inspections: What Does Your State Require?*, COOPERATORNEWS N.J., <https://nj.cooperatornews.com/article/structural-integrity-inspections> [<https://perma.cc/Z9WS-W9MC>] (last visited Mar. 1, 2024).

164. See 765 ILL. COMP. STAT. ANN. 605/22.1.

165. See CHICAGO, ILL., MUNICIPAL CODE §§ 13-196-031–13-196-039 (2020); see also *Chicago Facade Ordinance Summary*, FACADE ORDINANCE <https://www.facadeordinance.com/assets/images/pages/pdfs/chicago-facade-ordinance-summary.pdf> [<https://web.archive.org/web/20171102082409/https://www.facadeordinance.com/assets/images/pages/pdfs/chicago-facade-ordinance-summary.pdf>] (last visited Mar. 1, 2024).

166. See Chicago, Ill. Municipal Code § 13-196-030 (2020) (“If there is any doubt as to the structural stability of any building or structure, or parts thereof, the building commissioner may require the owner to have the building or structure, or parts thereof, to be examined by a licensed architect or registered structural engineer employed by the owner, agent or person in charge, possession or control of any such building, structure, or part thereof.”).

167. Façade Inspection and Safety Program (FISP) (formerly known as Local Law 11), N.Y.C., N.Y., 1 RCNY § 103-0-04 (“Periodic Inspection of Exterior Walls and Appurtenances of Buildings”).

168. Adam Leitman Bailey & John M. Desiderio, *Florida Building Disaster Should Set Off Alarm Bells in New York City*, PROB. & PROP., July/August 2022, at 4, 6.

to the collapse of a thirty-year-old office building in downtown Miami.¹⁶⁹ Broward's ordinance was enacted in 2005, becoming effective the following year.¹⁷⁰ Both ordinances applied to buildings forty years or older regardless of condominium status, however, both laws exempted single-family homes and other smaller buildings.¹⁷¹ Enforcement of these ordinances, however, was nearly nonexistent. In 2020, the Miami Unsafe Structures Division had a single inspector, at a time when 1300–1500 forty-year recertifications became due each year.¹⁷² As a result, as of July 8, 2021, 6,400 cases were pending with the Division, 2,582 of which involved buildings tagged as unsafe.¹⁷³ The Unsafe Structures Panel, which met once a week for four hours, was adjudicating twenty-five to thirty cases per month.¹⁷⁴

In response to the Champlain Towers collapse, Florida has enacted a state-wide recertification statute.¹⁷⁵ The statute specifically targets condominium and cooperative buildings and requires “milestone” structural inspections, which include inspection of load-bearing walls and the primary structural members and systems of the building.¹⁷⁶ All condominium and cooperative buildings three stories or more in height must undergo a milestone inspection at the end of the building's thirtieth year, except that buildings located within three miles of a coastline must be inspected at the end of the building's twenty-fifth year.¹⁷⁷ The statute requires reinspection every ten years.¹⁷⁸

The Florida legislature, however, left enforcement of the statutory mandate to local officials.¹⁷⁹ Because it did not mandate local staffing, the new legislation left municipalities scrambling to clear a large backlog of recertifications.¹⁸⁰ Local officials may not be eager to impose costly repair requirements on local voters. As a result, the effectiveness of the state statute remains somewhat speculative. To date, other states have been slow to follow Florida's lead, although there has been a trickle of legislative action. In Virginia, for instance, the legislature recently directed an

169. Linda Robertson, Douglas Hanks, Samantha J. Gross & Martin Vassalo, *Miami-Dade Discusses Reform in Wake of Condo Collapse*, MIA. HERALD (June 29, 2021), <https://www.govtech.com/em/safety/miami-dade-discusses-reform-in-wake-of-condo-collapse> [<https://perma.cc/JV9W-B6GN>].

170. See BROWARD CO. BD. OF RULES AND APPEALS, 40 YEAR BUILDING SAFETY PROGRAM, at 5.84 (2015) <https://www.broward.org/CodeAppeals/Documents/40YBSI-INFO-Rev.6-15.pdf> [<https://perma.cc/QWG4-DSFS>].

171. *Id.*

172. MIAMI-DADE CO. GRAND JURY, FINAL REPORT, at 14 (Dec. 15, 2021) https://miamisao.com/wp-content/uploads/2021/12/GRAND-JURY_202112151434-1.pdf [<https://perma.cc/V2PE-EWK8>].

173. *Id.*

174. *Id.* at 15.

175. Fla. Stat. Ann. §553.899 (West 2023).

176. Fla. Stat. Ann. §553.899(2)(a) (West 2023).

177. Fla. Stat. Ann. §553.899(3) (West 2023).

178. *Id.*

179. Fla. Stat. Ann. §553.899(10) (West 2023) (“A local enforcement agency may prescribe timelines and penalties with respect to compliance with this section.”).

180. See Sasha Jones, *New Requirements Could Impact Overloaded Milestone Inspection System*, NBC MIA. (Jul. 9, 2022), <https://www.nbcmiami.com/news/local/new-requirements-could-impact-overloaded-milestone-inspection-system/2801714/> [<https://perma.cc/2J3A-2WFFY>].

administrative agency to establish a work group “to study the adequacy of current laws addressing standards for structural integrity and for maintaining reserves” in common interest communities.¹⁸¹

Second to Florida, the other jurisdiction that has most proactively pursued building safety reforms is the densely populated coastal state of New Jersey. In 2021, Jersey City, the state’s second-largest city with a large concentration of high-rise residential buildings, amended its municipal code to require initial and periodic structural integrity inspections of concrete buildings exceeding six stories.¹⁸² The new ordinance requires “visual structural inspection . . . of foundations, balconies, all structural members, and waterproofing” every ten years “by a licensed architect or engineer.”¹⁸³ Failure to perform necessary structural repairs empowers the city “to shut down any buildings that pose an imminent threat to the safety and welfare of the occupants.”¹⁸⁴ At the state level, a bill¹⁸⁵ introduced in 2022 would go even further by addressing both the need for structural inspections¹⁸⁶ as well as the necessity of funding the resulting repairs.¹⁸⁷ The bill would exempt the structural inspector from “any civil liability for injury associated with any inspection” performed “in good faith and pursuant to the protocols adopted by the American Society of Civil Engineers, or similar protocols by another nationally recognized structural engineering association.”¹⁸⁸

2. *Fannie Mae and Freddie Mac*

Condominium lenders have not historically been terribly concerned with the risk that their security might disappear when the building that houses the mortgaged unit falls apart. First, lenders typically require unit owners to insure their units and name the lender as a payee on the homeowner’s policy.¹⁸⁹ Second, lenders would often sell of their mortgages on the secondary market, reducing their risk if a building were to subsequently collapse.¹⁹⁰

181. Act of Apr. 11, 2022, ch. 421, 2022 Va. Laws 740.

182. JERSEY CITY, N.J., MUN. CODE § 254-45(F) (2022).

183. *Id.*

184. *Id.*

185. S. 2760, 220th Leg., 2022–2023 Sess. (N.J. 2022).

186. *Id.* §4(a)(2) (requiring periodic structural inspections on a scheduled timeline keyed to the building’s age or within “60 days after there is observable damage to the primary load bearing system”).

187. *Id.* §7 (requiring performance and funding of “a capital reserve study which shall determine or assess the adequacy of the [common interest community] association’s capital reserve funds to meet the anticipated costs of replacement or repair of the capital assets of a common interest community that the association is obligated to maintain”); and *id.* § 8 (requiring performance of “a reserve study including a 30-year funding plan in order to ensure that the association has adequate reserve funds available to repair or replace the capital assets located on the common elements and facilities that the association is obligated to maintain without need to create a special assessment or loan obligation”).

188. *Id.* § 5.

189. See Steven M. Klepper, *Whose Conception of Insurance?*, 162 U. PA. L. REV. 83, 88–89 (2013).

190. One of the criticisms of the secondary mortgage market is that lenders who resell their mortgages lack incentives to screen out risky loans. See Ryan Bubb & Prasad Krishnamurthy, *Regulating*

In the wake of the Champlain Tower collapse, Fannie Mae and Freddie Mac have changed the calculus facing mortgage lenders. Fannie Mae and Freddie Mac are government-sponsored entities that buy mortgage loans from the banks that originate them.¹⁹¹ They then package and resell mortgages on the secondary market.¹⁹² In late 2021, both entities announced that they would not buy condominium mortgage loans on the secondary market unless the lender establishes that the project meets eligibility requirements designed to ensure that the project is safe and structurally sound.¹⁹³ The two entities developed a “voluntary” in-depth questionnaire—to be filled out by the condominium board or management company—detailing the condominium’s efforts to ensure that the building is safe and structurally sound.¹⁹⁴ Because Fannie and Freddie are the largest purchaser of mortgage loans, and because lenders want to ensure the marketability of their loans, lenders have balked at making condominium loans unless accompanied by the requisite questionnaire.¹⁹⁵

Fannie Mae’s intervention may ultimately have more impact than state legislation.¹⁹⁶ If lenders are not willing to lend without the safety data Fannie Mae demands, condominiums will find their units largely unmarketable unless they provide that data.¹⁹⁷ On the other hand, early evidence suggests that the uncertainties surrounding the questionnaires may be creating unwarranted headaches for mortgage borrowers.¹⁹⁸ This problem is not restricted to prospective

Against Bubbles: How Mortgage Regulation Can Keep Main Street and Wall Street Safe – From Themselves, 163 U. PA. L. REV. 1539, 1568–69 (2015).

191. See generally Richard E. Mendales, *The Fall and Rise of Fannie and Freddie: Securitization After the Meltdown*, 42 UNIF. COM. CODE L.J. no. 1, art. 2, 2009.

192. *Id.*

193. See *Lender Letter (2021-14)*, FANNIE MAE (Oct. 13, 2021), <https://singlefamily.fanniemae.com/media/29411/display> [<https://perma.cc/8PCT-JA9F>]; *Bulletin 2021-38: Temporary Condominium and Cooperative Project Requirements and Topic 5600 Reorganization*, FREDDIE MAC (Dec. 15, 2021), <https://guide.freddiemac.com/app/guide/bulletin/2021-38> [<https://perma.cc/E3SU-TTTH>].

194. The questionnaire, Form 1076, informs the associations that it has been sent on behalf of a mortgage applicant and that the “mortgage lender needs this information to determine the eligibility of the project for mortgage financing purposes.” See *Fannie Mae Form 1076/Freddie Mac Form 476: Condominium Project Questionnaire – Full Form*, FREDDIE MAC (Dec. 2021), https://sf.freddiemac.com/docs/pdf/forms/condo_questionnaire_form_full.pdf [<https://perma.cc/P7NT-CS85>].

195. At the same time, many condominium boards have been unwilling to fill out the questionnaire out of fear of liability for incorrectly answered questions. The result, in a significant number of cases, has been disapproval of mortgage loans for condominium purchasers for reasons other than building safety. See *Fannie Mae & Freddie Mac Lending Guidelines for Condominiums and Housing Cooperatives Impact Survey: Survey Results as of March 2022*, CMTY. ASS’NS INST. (Mar. 2022), <https://www.caionline.org/Documents/Fannie%20Freddie%20Impact%20Survey%20Results%20March%202022%20Final.pdf> [<https://perma.cc/244U-2WNB>].

196. See Andrea J. Boyack, *American Dream in Flux: The Endangered Right to Lease a Home*, 49 REAL PROP. TR. & EST. L.J. 203, 257 (2014) (noting that the underwriting requirements of the government-sponsored entities and the FHA can make or break a common interest community project).

197. Fannie Mae and Freddie Mac restrictions on the percentage of non-owner-occupied units have, in the past, had a significant effect on the marketability of units in common interest communities with a high percentage of rented units. See *id.* at 256–59.

198. *Id.*

purchasers. Existing owners who need to borrow to finance structural improvements may face a catch-22: they cannot borrow because of the conditions in the building, and they cannot cure the conditions without financing.¹⁹⁹

3. Insurance Requirements

Condominium associations typically maintain property insurance for common areas and individual units (excluding improvements and personal property within individual units), liability insurance, and fidelity insurance.²⁰⁰ Insurance companies, in turn, have strong economic incentives and bargaining leverage to demand that older condominium buildings comply with structural safety standards.²⁰¹ When setting the price of premiums, for example, insurers incentivize policy holders to take precautions against natural disasters, including hurricanes and earthquakes, by reducing premiums “if the policyholder invests in one or more strategies that reduce the amount of loss that will occur should the loss-producing event happen.”²⁰² When insurers conclude that landowners have not sufficiently reduced risk, they may withdraw from a market altogether, making property unmarketable unless the government rescues the property owner at the expense of taxpayers or other property owners.²⁰³ In other contexts, insurers may even play a role in creating incentives that reduce the incidence of police misconduct.²⁰⁴ Preliminary evidence suggests that property insurance companies have good reason to provide similar incentives for condominium owners to invest in structural safety.²⁰⁵ Prior to Champlain Towers, however, the insurance industry’s prevailing strategy seemed to

199. See Boyack, *supra* note 35, at 75.

200. In some states, condominium associations are required by law to maintain property, liability, and fidelity insurance when commercially available. See UNIF. CONDO. ACT §§ 3-113(a)–3-113(b) (UNIF. L. COMM’N 2021).

201. When insurers do engage in risk-reducing efforts, however, they have a tort law duty to act with reasonable care. See Kyle D. Logue, *Encouraging Insurers to Regulate: The Role (If Any) for Tort Law*, 5 UC IRVINE L. REV. 1355, 1366 (2015) (“There is indeed a well-settled doctrine within American tort law that insurers who engage in the active regulation of their insureds’ behavior—through inspection, instruction, standard setting, etc.—owe a duty of reasonable care not only to their insureds, but also to any other reliant third parties.”).

202. See Robert H. Jerry, II, *Managing Hurricane (and Other Natural Disaster) Risk*, 6 TEX. A&M L. REV. 391, 410 (2019); Donald T. Hornstein, *Lessons from U.S. Coastal Wind Pools About Climate Finance and Politics*, 43 B.C. ENV’T AFFS. L. REV. 345, 350 (2016); Daniel Marshall, *An Overview of the California Earthquake Authority*, 21 RISK MGMT. & INS. REV. 73, 103 (2018).

203. For instance, Florida has established a public corporation to provide affordable insurance in hurricane-prone areas. The statute empowers the insurer to impose surcharges on future policies to cover deficits that might arise from current payouts. See FLA. STAT. ANN. § 627.351(6)(b)(3) (West 2023). The result is a subsidy to owners in storm-prone areas, at the expense of those in safer areas. See Stewart E. Sterk, *Mitigating Catastrophic Risk for Landowners*, 74 HASTINGS L.J. 869, 878 (2022).

204. See John Rappaport, *How Private Insurers Regulate Public Police*, 130 HARV. L. REV. 1539, 1573–87 (2017).

205. Insurers often have better information than policyholders about which precautions would meaningfully reduce their risk. See Kenneth S. Abraham & Daniel Schwarcz, *The Limits of Regulation by Insurance*, 98 IND. L.J. 215, 237 (2022). Especially in Florida, where rate changes for insurance coverage are particularly salient, the rate signals sent by insurance companies may have effects on prospective purchasers. *Id.* at 241.

favor litigating denial of coverage for collapse claims rather than encouraging condominium owners to invest in preventative measures to avert structural failure.²⁰⁶

Most property insurance policies include coverage for losses caused by collapse when the insured structure fails unexpectedly, but not for damage caused by visible, progressive deterioration.²⁰⁷ The scope of collapse coverage often turns on how (or whether) the policy defines the term “collapse.” In a Florida case, for example, a sixteen-unit wood-framed condominium complex filed a claim upon discovery of structural caving caused by rot and termite damage.²⁰⁸ The policy defined collapse as “an abrupt falling down or caving in of a building or any part of a building with the result that the building or part of the building cannot be occupied for its intended purpose.”²⁰⁹ But the policy expressly excluded coverage for repairing structural elements that were merely in danger of collapse.²¹⁰ Whether the structural caving was abrupt or a condition caused by progressive deterioration was a factual question for a jury.²¹¹

Courts have not settled on a uniform definition of collapse for purposes of property insurance coverage, but the majority rule requires insurers to cover “any serious impairment of structural integrity that connotes imminent collapse threatening the preservation of the building as a structure or the health and safety of occupants and passers-by.”²¹² As one court explained:

206. See, e.g., *Heritage Prop. & Cas. Ins. Co. v. Condo. Ass’n of Gateway House Apartments*, 344 So. 3d 52 (Fla. Dist. Ct. App. 2021) (illustrating that insurer sought to avoid coverage based on condominium’s failure to provide minutes of board meetings); *Villagio at Estero Condo. Ass’n v. Am. Cap. Assurance Corp.*, No. 2D20-1414, 2021 WL 1432160 (Fla. Dist. Ct. App. April 16, 2021) (showing that after initially conceding coverage, insurer claimed fraud and deemed claim void). Homeowner insurance claims in Florida have disproportionately resulted in litigation. In 2021, fewer than 7% of all homeowners’ claims were opened in Florida, but 76% of all nationwide homeowners’ suits were opened in Florida. FL. OFF. OF INS. REGUL., *Property Insurance Stability Report, July 1, 2023*, at 4 (2023), https://flor.com/docs-sf/default-source/property-and-casualty/stability-unit-reports/july-2023-isu-report.pdf?sfvrsn=8566a813_2 [<https://perma.cc/T28M-VGFH>].

207. See Steven Plitt & Joshua D. Rogers, *An Overview of What Constitutes Collapse for Purposes of Property Insurance Coverage Involving Hidden Decay*, 37 CAL. INS. L. & REG. REP. NL, July 2015, at 1 (“Standard homeowner and business property policies provide coverage for collapse only where caused by certain specified events.”). It remains to be seen whether the Champlain Towers collapse will prompt insurance carriers to exclude or modify coverage for when a building collapses.

208. *Raintree Vill. Condo. No. 11 Ass’n v. Great Am. Ins. Co. of N.Y.*, No. 8:13-CV-656-T-30 AEP, 2013 WL 5304054, at *1 (M.D. Fla. Sept. 20, 2013).

209. *Id.*

210. The policy declaration provided:

A building or any part of a building that is in danger of falling down or caving in is not considered to be in a state of collapse. A part of the building that is standing is not considered to be in a state of collapse, even if it has separated from another part of the building, and/or it shows evidence of cracking, bulging, sagging, bending, leaning, settling, shrinkage or expansion. *Id.*

211. *Id.* at 6.

212. *Buczek v. Cont’l Cas. Ins. Co.*, 378 F.3d 284, 290 (3d Cir. 2004) (describing this approach as the “majority rule”). See also *Queen Anne Park Homeowners Ass’n v. State Farm Fire & Cas. Co.*, 352 P.3d 790, 794 (Wash. 2015) (interpreting “collapse” to mean “substantial impairment of structural integrity” that rises to the level of “an impairment so severe as to materially impair a building’s ability to remain upright”).

Some courts have insisted on seeing ruins, holding that a collapse has not occurred unless the structure has fallen to the ground, in whole or in part. More authorities hold otherwise, that a collapse provision can be invoked even if the structure still stands. This court broadly perceives a legal trend away from all-or-nothing formalism. It would be easy if a collapse always involved a building's actually falling down. But in a society like ours, which features complicated building codes and enlightened standards of care, simple expedience is less virtuous. Today, a structural engineer's laptop or a building inspector's citation book can render a building as functionally useless as a sinkhole or an earthquake can. If it comes down to it, requiring a disaster before a payout under a collapse provision is not in anyone's interest. That includes insurers.²¹³

Thus, a building inspector's declaration that a "complex was in a life-threatening condition and in imminent danger of collapse" constituted a "collapse" for purposes of insurance coverage.²¹⁴ As another court explained:

When the condition of a building is such that its basic structure or its substantial integrity is materially impaired, it can no longer perform its function, and it is in immediate danger of complete collapse, the building is in a state of collapse within the meaning of the collapse provisions of this insurance policy. When, as here, such collapse is caused by a condition covered by the policy, the insurer is liable to the insured for the collapse of the building.²¹⁵

Under that standard, then, the question becomes whether a given condition of hidden decay rises to the level of "imminent" collapse.²¹⁶

To avoid creating a moral hazard, property insurance policies that cover structural collapse usually exclude losses caused by decay unless the condition was hidden and not previously known to the insured.²¹⁷ Without that exclusion, insurers

213. *Olde Colonial Vill. Condo. Council v. Millers Mut. Ins. Co.*, No. CIV.A.99C-06-187-FSS, 2002 WL 122885, at *7 (Del. Super. Ct. Jan. 28, 2002), *on reargument sub nom.* *Olde Colonial Vill. v. Millers Mut. Ins.*, No. CIV.A.99C-06-187-FSS, 2002 WL 1038825 (Del. Super. Ct. May 17, 2002).

214. *Whispering Creek Condo. Owner Ass'n v. Alaska Nat'l Ins. Co.*, 774 P.2d 176, 181 (Alaska 1989). *See also* *Auto Owners Ins. Co. v. Allen*, 362 So.2d 176 (Fla. Dist. Ct. App. 1978); *Sherman v. Safeco Ins. Co. of Am.*, 716 P.2d 475 (Colo. App. 1986).

215. *Whispering Creek Condo. Owner Ass'n*, 774 P.2d at 181.

216. In *Buczek*, for instance, the court of appeals reversed a district court finding that "even a risk that might be a one in ten, or one in twenty year risk, is still a very serious and imminent risk." 378 F.3d at 290–91. *See also* *Stephan v. Transp. Ins. Co.*, 140 F. App'x 340, 342 (3d Cir. 2005) (noting that the district court's imminent danger finding in *Buczek* was reversed because "such a threat is not imminent and cannot serve to support a finding of 'collapse'" and that "[t]here is no meaningful distinction between *Buczek* and this case").

217. *See, e.g.*, *Ass'n of Unit Owners of Nestani v. State Farm Fire & Cas. Co.*, 670 F. Supp. 2d 1156, 1162 (D. Or. 2009) (covering for collapse caused by "hidden decay of a supporting or weight-bearing structural member of the building"), *aff'd sub nom.* *Ass'n of Unit Owners of Nestani-A Grecian Villa v.*

would effectively assume liability for the insured's failure to properly maintain the property, thereby creating incentives for property owners to forego routine repairs in hope of obtaining insurance coverage. Courts have acknowledged that concern, cautioning that "collapse coverage should not be converted into a maintenance agreement."²¹⁸ Given the potentially astronomical liability for insurance companies that provide building-collapse coverage, carriers would seem to have strong incentives to draft collapse coverage provisions with precision, clarity, and intentionality. Oddly enough, that does not seem to be the case.

Indeed, while it is common for property insurance to cover losses caused by hidden decay and to exclude losses caused by rot or corrosion, policy declarations often fail to expressly define these critical terms. In a recent case arising from a partial concrete collapse due to rebar corrosion, for example, the contested policy covered losses caused by hidden decay, but the policy document did not expressly define the term "decay."²¹⁹ Citing several prior cases in which the same insurance carrier had litigated policies that failed to define the same term, the court chided the insurer for having "once again 'chose[n] at its peril to leave the term 'decay' undefined and unrestricted."²²⁰ In another case involving a structural collapse caused by advanced corrosion of steel reinforcement bars inside the building's concrete beams and columns, the property insurance policy covered losses arising from collapse caused by "[d]ecay that is hidden from view, unless the presence of such decay is known to an insured prior to collapse."²²¹ The policy expressly excluded coverage for damage caused by "corrosion"²²² but failed to define either "decay" or "corrosion," leading the court to conclude that both terms were ambiguous.²²³ Ambiguous language in an insurance policy is usually construed against the insurance carrier that drafted the contract.²²⁴

State Farm Fire & Cas. Ins. Co., 434 F. App'x 579 (9th Cir. 2011); *Sandalwood Condo. Ass'n v. Wildwood, Inc. v. Allstate Ins. Co.*, 294 F. Supp. 2d 1315, 1319 (M.D. Fla. 2003) (coverage provision requiring proof that "the damage to the structural integrity . . . was not visible[.]" that the condominium association "neither knew nor should have known of the structural damage with sufficient time to allow for repairs before it reached the stage of 'collapse[.]'" and that the "insured [took] reasonable steps to correct damage before it undermine[d] the structural integrity of the building").

218. *Ocean Winds Council of Co-Owners, Inc. v. Auto-Owner Ins. Co.*, 565 S.E.2d 306, 308 (S.C. 2002).

219. *Peoria Prop. Invs. LLC v. Cincinnati Indem. Co.*, No. 19-CV-1198-JES-TSH, 2021 WL 2598756, at *9 (C.D. Ill. Apr. 15, 2021).

220. *Id.*

221. *Certain Underwriters at Lloyd's Subscribing to Pol'y No. WDO-10000 v. KKM Inc.*, 215 S.W.3d 486, 491 (Tex. App. 2006).

222. *Id.* at 491.

223. *Id.* at 494. Contributing to the ambiguity, another provision expressly excluded coverage of damage caused by "decay" while another clause expressly provided coverage for collapse "caused by . . . decay that is hidden from view." *Id.* See also *Whispering Creek Condo. Owner Ass'n v. Alaska Nat'l Ins. Co.*, 774 P.2d 176, 180 (Alaska 1989) ("The term 'hidden decay' is not defined in the policy.").

224. In a recent Massachusetts case, for instance, experts attributed the collapse of a historic church ceiling to a "progressive failure of the fasteners used to attach the layers of ceiling to the ceiling joists due to the weight of the ceiling." See *Easthampton Congregational Church v. Church Mut. Ins. Co.*, 916 F.3d 86, 90 (1st Cir. 2019). The insurance policy generally excluded losses caused by collapse,

Insurers paid out most of the one-billion-dollar wrongful death settlement arising out of the Champlain Towers collapse, as well as much of the eighty-three-million-dollar settlement for property damages suffered by Champlain Towers unit owners.²²⁵ Although no single insurer accepted responsibility for the entire loss,²²⁶ the payouts have impacted the industry, which responded by increasing property insurance rates.²²⁷ The expectation is that property insurers will routinely require unit owners seeking insurance for older units to submit structural inspection reports as a condition for obtaining coverage.²²⁸

Condominium owners will have to comply with insurance demands because, even if state law does not require the condominium association to maintain property insurance, homeowners insurance is almost universally a condition for mortgage

including collapse caused by faulty construction, but the policy provided “additional coverage” for “collapse . . . caused by . . . [d]ecay that is hidden from view, unless the presence of such decay is known to an insured prior to collapse.” *Id.* at 89. The policy failed to define the term “decay,” which the court concluded was ambiguous as used in the contract. *Id.* at 91–92. Noting that “the word ‘decay’ could plausibly be read to mean either ‘progressive decline’ or ‘rot,’” the court sided with the insured’s definition (progressive decline) because state law required that ambiguities be construed strictly against the insurer. *Id.* at 92–93. *See also* Square at Key Biscayne Condo. Ass’n, Inc. v. Scottsdale Ins. Co., No. 13-24222-CIV, 2014 WL 11946882, at *5 (S.D. Fla. Dec. 15, 2014) (“Ambiguities are interpreted liberally in favor of the insured and strictly against the insurer who prepared the policy. . . . Exclusionary clauses are typically read strictly and in a manner that affords the insured the broadest possible coverage.”); *Karas v. Liberty Ins. Corp.*, 228 A.3d 1012, 1020 (Conn. 2019) (“Any ambiguity in the terms of an insurance policy must be construed in favor of the insured because the insurance company drafted the policy”).

225. *See Surfside Condo Families and Survivors Reach \$1B Settlement with Insurers, Others*, INS. J. (May 12, 2022), <https://www.insurancejournal.com/news/southeast/2022/05/12/667335.htm> [<https://perma.cc/B7KL-VCY8>]. Some of the settlement for the unit owners was to come from the proceeds of sale of the property. *Id.*

226. The insurer for the security firm responsible for the Champlain Towers safety systems paid for about half of the settlement, with smaller amounts for insurers associated with the building’s engineers and architects, insurers for the developers and contractor of an adjacent condominium that had allegedly contributed to the collapse, and the town of Surfside. *See id.* The professional liability insurers for the law firm that advised the Champlain Towers board also agreed to pay \$1 million. *Id.*

227. *See Lidia Dinkova & Katherine Kallergis, \$1B Surfside Settlement Signals Condo Association, Construction Insurance Premium Hikes*, THE REAL DEAL, (June 7, 2022, 3:37 PM), <https://therealdeal.com/miami/2022/06/07/1b-surfside-deal-signals-condo-association-construction-insurance-premium-hikes/> [<https://perma.cc/4RJ8-K37J>] (noting that many master condo associations saw premiums double, and unit owners saw them rise an average of 30 to 40% in the months following the Champlain Towers collapse); Kimberly Miller, *Florida Condos Start to See Impact of Surfside Collapse*, CORCORAN DWELLINGS (July 8, 2022, 2:04 PM), <https://www.dwellingwell.com/blog/are-your-condo-fees-going-up/> (noting rise in insurance rates and increased reliance on state-run insurance program) [<https://perma.cc/ZBR6-F9W7>].

228. *See* Scott McDonald, *Florida Building Insurers Now Demanding Inspections Within 45 Days, or Else*, NEWSWEEK (July 2, 2021, 11:44 PM EDT), <https://www.newsweek.com/florida-building-insurers-now-demanding-inspections-within-45-days-else-1606614> [<https://perma.cc/MJA2-WYDQ>]; Fernando Alvarez, *How Champlain Towers Could Impact Condo Insurance in 2022*, PROPERTYCASUALTY 360 (Feb. 11, 2022, 8:00 AM), <https://www.propertycasualty360.com/2022/02/11/how-champlain-towers-could-impact-condo-insurance-in-2022/?slreturn=20231011180723> [<https://perma.cc/R51B-EV6W>] (predicting that insurer will be firm in requiring that building owners complete updates).

loan eligibility.²²⁹ Failure to procure insurance could put unit owners in default on their mortgages. Moreover, all unit owners—even those who do not have outstanding mortgage loans—would find a dramatic decrease in the marketability of their units if mortgage money were unavailable.

From an insured's perspective, implementation of a stricter building safety recertification regime may, in a limited class of cases, permit recovery of the cost of repairing damage to a building's structural integrity. Under policies that provide collapse coverage for damage caused by hidden decay, inspections that reveal corrosion that renders the building in imminent danger of collapse will, in most states, allow the condominium association to collect on a property insurance claim only if the hidden decay was severe enough to place the building at imminent risk of collapse. Hidden decay that does not rise to the level of imminent danger of collapse will not be covered by a collapse provision, leaving the condominium owner on the hook for the repair costs. Once the insured conducts an inspection that uncovers decay, any subsequently issued policy will not cover further deterioration, even if the building falls into a condition of imminent danger, because the condition that led to the damage was known to the association.²³⁰

From an insurer's perspective, an inspection provides protection against future liability for building collapse. First, the insurer may choose not to insure unless and until the condominium cures any decay the inspection reveals. Second, if the insurer does issue a policy that protects against hidden defects, the insurer may escape liability for collapses or deterioration that result from defects known to the condominium at the time it bought the policy. The insurer's protection is not absolute; if the inspection gives the building a clean bill of health, the policy will typically cover the condominium for defects the inspection did not reveal. Nevertheless, the bottom line is that, whether or not inspections are required by law, insurers have a financial incentive to insist on periodic inspections that would reveal structural difficulties and to require the condominium to address those difficulties as a condition for issuance or renewal of a policy.

4. *Overinvestment in Inspection and Repair?*

Inspection and repair, whether mandated by statute, by insurers, or by lenders, would counteract the inclination of condominium boards to overlook structural problems. But would such mandates result in overinvestment? Consider the incentives facing an engineer conducting an inspection. If the engineer gives the building a clean bill of health, the engineer faces potential liability if structural

229. See, e.g., INS. INFO. INST., *Can I Own a home Without Homeowners Insurance?*, <https://www.iii.org/article/can-i-own-home-without-homeowners-insurance> [<https://perma.cc/FW94-C5TD>] (last visited Mar. 2, 2023) (noting that banks and mortgage lenders typically require homeowners insurance coverage).

230. See *S.O. Beach Corp. v. Great Am. Ins. Co. of N.Y.*, 305 F. Supp. 3d 1359, 1367 (S.D. Fla. 2018) (“Courts hold that insureds with knowledge of pre-existing deterioration cannot recover for damage caused by the worsening of that deterioration.”), *aff’d*, 791 F. App’x 106 (11th Cir. 2019).

problems emerge and cause harm.²³¹ By contrast, the engineer faces no comparable liability if the engineer identifies issues that cast doubt on the building's safety.²³² If regulators, insurers, or lenders respond to those identified issues by insisting that the condominium take action, the result may be overinvestment in repairs. Even the inspection procedure, which is likely to be far less costly than the repairs themselves, presents an asymmetric-risk problem for the engineer. Consider the Florida statute, which requires only a visual inspection in Phase One of the newly mandated milestone inspection.²³³ The inspection will only proceed to the more intensive (and expensive) Phase Two if the visual inspection reveals "any substantial structural deterioration."²³⁴ From a liability perspective, the engineer faces no risk if the engineer determines that a Phase Two inspection is necessary, but not so if the engineer decides that the visual inspection was sufficient. A municipality conducting statutorily mandated inspections may face similar incentives to avoid liability unless state law provides sovereign immunity.²³⁵

Market forces, however, may mitigate the risk of overly pessimistic inspection reports. First, an engineer who develops a reputation for making such reports risks losing business to firms more likely to give the condominium a friendly report. Second, absent statutory indemnification as contemplated by legislation proposed in New Jersey, engineers may insist on contract provisions absolving them from liability to the condominium and indemnifying them against claims by third parties. Such provisions should adequately address the asymmetric liability issue.²³⁶ At the

231. Beyond fear of liability, a favorable evaluation of a building's structural integrity could adversely affect the engineer's reputation if the building subsequently fails. *Cf.* Andrew K. Jennings, *Follow-Up Enforcement*, 70 DUKE L.J. 1569, 1592 (2021) (noting that monitors have an incentive to provide excessive mediation to avoid criticism if the monitored firm recidivates).

232. Such a finding may trigger an ethical obligation to report structural safety concerns to residents or the municipality. *See* Elizabeth J. Hubertz, *Public Interest, Professional Bargains: Ethical Conflicts Between Lawyers and Professional Engineers*, 31 WASH. U. J.L. & POL'Y 83, 100 (2009) (noting that the National Society of Professional Engineers' "Board of Ethical Review has interpreted the NSPE Code to provide that the duty regarding the safety of the public may trump considerations of client confidentiality or loyalty")(footnote omitted).

233. FLA. STAT. ANN. §553.899(7)(a) (West 2022).

234. FLA. STAT. ANN. §553.889(7)(b) (West 2022). The phase two inspection "may involve destructive or nondestructive testing" and "may be as extensive or as limited as necessary to fully assess areas of structural distress[.]" *Id.*

235. *See generally* Ferdinand F. Stone & Andrew Rinker Jr., *Governmental Liability for Negligent Inspections*, 57 TUL. L. REV. 328 (1982–1983); Deborah L. Markowitz, *Municipal Liability for Negligent Inspection and Failure to Enforce Safety Codes*, 15 HAMLIN J. PUB. L. & POL'Y 181 (1994). In Rhode Island, for instance, a building inspector's actual knowledge of code violations may give rise to a special relationship with the homeowner that places the municipality outside the scope of sovereign immunity, but the state supreme court has "emphasize[d] that a building inspector's visiting a site to ensure compliance with a building code would not be sufficient to establish a special duty. A municipality should not be the general insurer of every construction project within its limits." *Quality Ct. Condo. Ass'n v. Quality Hill Dev. Corp.*, 641 A.2d 746, 751 (R.I. 1994).

236. *Cf.* Darryl J. Levinson, *Making Government Pay: Markets, Politics, and the Allocation of Constitutional Costs*, 67 U. CHI. L. REV. 345, 352 (2000) (suggesting that indemnification might address the asymmetric incentives facing street-level government officials in a regime imposing potential liability for constitutional torts).

same time, provisions insulating engineers from liability should limit the incidence of slipshod inspections because engineers have incentives to maintain their professional reputations.²³⁷

B. Paying for Identified Repairs

Once an inspection reveals structural defects, the condominium must figure out whether, and how, to pay for the needed repairs. This Section identifies the alternatives.

1. Regular Assessments

Ideally, the condominium will have maintained reserves sufficient to cover maintenance and repair issues as they arise.²³⁸ A condominium builds up reserves by setting regular annual assessments at a level sufficient to account for the building's depreciation over time.²³⁹ When buildings are in good repair, however, unit owners tend to balk at assessments designed to cover issues that might arise years or decades in the future. Some owners may reasonably conclude that they would be better off investing the money saved by lower assessments, leaving them in a better position to pay for repairs when needed. Others may prefer to use savings from lower assessments for other purposes. Moreover, condominium board members, who are themselves owners, may shy away from regular assessments that raise the ire of their neighbors—especially because residents may believe that reserves are being used to fund unnecessary projects favored by board members.²⁴⁰ Failure to accumulate adequate reserves through regular assessments, however, can leave the condominium woefully unprepared to deal with structural repairs. For instance, a few months before the collapse, the president of Champlain Towers South's association board reportedly told residents that \$15 million was needed to perform structural repairs but that there was only \$700,000 in the reserve fund.²⁴¹

237. Cf. Daniel B. Kelly, *Toward Economic Analysis of the Uniform Probate Code*, 45 U. MICH. J. L. REFORM 866, 879 (noting that even without malpractice liability, maintenance of professional reputation should discipline lawyers to exercise reasonable care).

238. See *Reserve Studies and Reserve Management*, FOUND. FOR CMTY. ASS'N RSCH., at 5 (2020), <https://foundation.caionline.org/wp-content/uploads/2017/06/bprs.pdf> [<https://perma.cc/4833-2KC7>] (noting that every association should have cash in a separate account to fund necessary repairs or replacement projects).

239. See Phillip Livingston, *Homeowners association reserve study guide*, CONDO. CONTROL (Feb. 28, 2024), <https://www.condocontrol.com/template/homeowners-association-reserve-study/> [<https://perma.cc/KZX9-T237>].

240. Cf. Lisa Iannucci, *Making Special Assessments Work*, COOPERATORNEWS N.Y. (Mar. 2017), <https://cooperatornews.com/article/making-special-assessments-work> [<https://perma.cc/NG9L-MSEN>] (noting that if the number one goal of a board is to keep themselves in office, they might be tempted to keep the building's maintenance costs down in order to stay in the good graces of residents).

241. See Adam Leitman Bailey & John M. Desiderio, *The Surfside Condo Collapse: Lessons for New York*, N.Y. ST. BAR ASS'N (Aug. 21, 2021) https://nysba.org/the-surfside-condo-collapse-lessons-for-new-york/#_ednref3 [<https://perma.cc/QD86-E99R>].

Concerns about inadequate condominium reserves have led many states to enact reserve requirements.²⁴² Several states require condominium boards to conduct periodic reserve studies.²⁴³ Some require boards to prepare budgets that make adequate provisions for reserves.²⁴⁴ Still others require both a study and a budget that funds reserves.²⁴⁵ In some states, however, the requirement of a funded reserve is rendered illusory by a provision allowing unit owners to vote not to fund the reserve account.²⁴⁶

None of these statutes, however, impose sanctions for failure to conduct the study or for failure to maintain adequate reserves. Instead, they rely largely on disclosure to unit owners,²⁴⁷ presumably on the optimistic assumption that owners will recognize that maintaining appropriate reserves is in their interest. Moreover, a clear majority of states do not require either a study or funded reserve.²⁴⁸

As a matter of best practices, reserve studies and well-funded reserves appear to be the best way to ensure that funds are available to make necessary structural repairs. Finding the appropriate governmental sanction for failure to conduct a reserve study or to fund adequate reserves presents a significant challenge. Ordering occupants to vacate a building appears draconian without some evidence of structural decay. Calibrating fines to create the appropriate incentives presents its own difficulties. Fines on board members would discourage service on boards; fines on unit owners leave less funding available to complete needed repairs.²⁴⁹

When reserves prove inadequate to finance structural repairs needed to ensure building safety, the condominium faces three alternatives: occupy the building in unsafe condition (unless local regulators issue a vacate order), terminate the condominium, or impose a special assessment.

242. Most of these statutes were enacted in response to the 2008 financial crisis, which left many condominiums in financial distress. *See generally* Boyack, *supra* note 35, at 75.

243. *See, e.g.*, CAL. CIV. CODE § 5550 (West, 2024); UTAH CODE ANN. § 57-8-7.5 (West, 2023).

244. *See, e.g.*, CONN. GEN. STAT. ANN. § 47-88 (West, 2023); MICH. COMP. LAWS ANN. § 559.205 (West, 2024); MICH. ADMIN. CODE R. § 559.511 (2023).

245. *See, e.g.*, DEL. CODE ANN. tit. 25 § 81-205(14) (West, 2023); NEV. REV. STAT. §§ 116-3115, 116-31152 (2022).

246. *See* OHIO REV. CODE ANN. § 5312.06 (West, Westlaw through File 12 of the 135th Gen. Assemb. (2023–2024)). Effective December 31, 2024, Florida's similar provision precludes the unit owners from eliminating reserves for issues identified in a structural integrity reserve study. FLA. STAT. § 718.112(2)(f)(2)(a) (2023).

247. *See, e.g.*, CONN. GEN. STAT. ANN. § 47-264(5) (West, 2023); DEL. CODE ANN. tit. 25 § 81-409 (West, 2023).

248. For a survey of reserve study requirements, by state, see *Reserve Requirements and Funding*, CMTY. ASS'NS INST. <https://www.caionline.org/Advocacy/Priorities/ReserveStudy/Pages/default.aspx> [<https://perma.cc/R3QH-36M7>] (last visited Mar. 2, 2024).

249. *See* Boyack, *supra* note 35, at 75 (noting that accountability may chill willingness to serve on a condominium board).

2. Continued Operation in Unsafe Condition

Continued operation in unsafe condition is the condominium's default position. It requires no action by the board and no vote by the shareholders. But, besides the obvious safety risk, this alternative also puts many unit owners at risk of mortgage default. As already noted, their mortgage agreements will typically require them to maintain insurance.²⁵⁰ If insurers decline to provide insurance in light of an adverse safety report, the mortgagee may have the option to foreclose.²⁵¹ Whether the mortgagee would do so may depend on the economic status of the building.

3. Termination of the Condominium

When the cost of structural repairs approaches or exceeds the aggregate value of the condominium units, termination of the condominium may be the most sensible outcome. Termination may be particularly desirable when the land on which the condominium sits is attractive to developers.²⁵² If developers would pay to buy the land free of the condominium, owners might be better off terminating, even if the value of their units exceeds the cost of structural repairs.

Termination of a condominium is a complex process governed by a combination of state statute and the condominium declaration. In some states, statutes mandate a supermajority vote before a residential condominium can be terminated.²⁵³ In other states—Texas, for instance—100% of resident owners must vote for termination unless the condominium's declaration reduces that percentage to a percentage not less than 80%.²⁵⁴ In California, termination requires 100% approval.²⁵⁵

Obtaining the requisite supermajority typically makes it difficult to terminate a residential condominium. Longtime residents may be unwilling to give up their homes even when a developer offers an attractive financial package. Termination is

250. See INS. INFO. INST., *supra* note 229.

251. See, e.g., *Pezzimenti v. Cirou*, 466 So. 2d 274 (Fla. Dist. Ct. App. 1985). In California, a statute expressly provides that a mortgagee may accelerate the maturity date of the principal and interest on a loan and may exercise any power of sale contained in the mortgage agreement for the failure of the mortgagor to pay insurance premiums. CAL. CIV. CODE § 2924.7(a) (West, 2024). The statute was enacted to repudiate prior cases that had denied mortgagees the right to foreclose for nonpayment of insurance premiums when the failure did not impair the mortgagee's security. See *Cal. Fair Plan v. Bektor*, No. B160299, 2003 WL 22883998, at *3 (Cal Ct. App. Dec. 8, 2003) (noting that legislature had intended to abrogate prior holdings). By contrast, in some states, courts have declined to permit foreclosure for a mortgagor's temporary failure to maintain insurance. See, e.g., *Kaminski v. London Pub, Inc.*, 301 A.2d 769 (N.J. Super. Ct. App. Div. 1973).

252. See Deborah Acosta, *Some Miami Area Condo Prices Under Pressure a Year After Surfside Building Collapse*, WALL ST. J. (June 28, 2022, 11:21 AM ET), <https://www.wsj.com/articles/some-miami-area-condo-prices-under-pressure-a-year-after-surfside-building-collapse-11656429690> [http://perma.cc/CTC7-KQPD] (noting that developers in the Miami area are offering to buy older buildings to demolish them and build luxury towers in their place).

253. See, e.g., UNIF. COMMON INT. OWNERSHIP ACT § 2-118 (UNIF. L. COMM'N 2021) (80% unless the declaration requires a larger percentage); VA. CODE ANN. § 55.1-1937(B) (West, 2023) (four-fifths or such larger majority as the condominium instruments may specify).

254. TEX. PROP. CODE § 82.068(a) (West, 2023).

255. CAL. CORP. CODE § 8724 (West, 2024).

probably most feasible when most of the owners use the condominium as a second home, as is the case with many Florida beachfront condominiums,²⁵⁶ or where a single owner owns most of the units.²⁵⁷ For most condominiums, termination is not a realistic option.

4. Special Assessments

When the condominium has inadequate reserves, the primary mechanism for making structural repairs is imposition of a special assessment. As its name suggests, the special assessment is not a regular annual charge designed to cover the condominium's ordinary expenses, but instead a one-time assessment (which may extend over multiple years) to cover extraordinary expenses like structural repairs. Unless unit owners are primed for the possibility of a special assessment well in advance, special assessments present a planning problem for most unit owners because they generate unanticipated spikes in living costs.²⁵⁸ Many owners may not have the cash on hand or borrowing capacity to cover those costs.²⁵⁹

From the standpoint of the condominium board, the special assessment generates two related problems. First, unit owners with limited resources may act to scuttle any special assessment. In some states, statutes explicitly authorize the unit owners to vote to reject any capital expenditure approved by the condominium board.²⁶⁰ The board may have emergency power to act even in the face of opposition by unit owners, but such action may require a supermajority of the

256. See Melea VanOstrand, *Developers Are Swooping in as More Waterfront Condo Owners Consider Termination*, DAILY BUS. REV. (July 8, 2022, 2:35 PM), <https://www.law.com/dailybusinessreview/2022/07/08/developers-are-swooping-in-as-more-waterfront-condo-ownersconsidertermination/> [https://perma.cc/L7G8-96VD].

257. For instance, in *Howe v. Links Club Condominium Ass'ns*, 823 S.E.2d 439, 455 (N.C. Ct. App. 2018), a single entity acquired title to 80% of the condominium units and then contracted to sell the entire condominium to an affiliated entity. The court denied a motion to dismiss a breach of fiduciary duty complaint by the minority unit owners who had alleged that the board, acting in self-interest, had failed to obtain an adequate price for the condominium.

258. See Kevin Koushel & Martin Schwartz, *2022 Legislature Responds to Champlain Towers South Tragedy*, JD SUPRA (June 3, 2022), <https://www.jdsupra.com/legalnews/2022-legislature-responds-to-champlain-3449058/> [https://perma.cc/AA4C-DX9K] (noting that assessment increases will be particularly difficult on owners struggling to meet monthly payments).

259. Some have also argued that financing expensive repairs through special assessments is unfair to unit owners who bought their units after the depreciation that led to the repairs had already started. See, e.g., Joel L. Tax, *What's Wrong With Special Assessments*, RESERVE DATA ANALYST <https://www.rdanorthwest.com/reserve-study-professionals/knowledge-corner/whats-wrong-with-special-assessments/> [https://perma.cc/UBK3-N3RK] (last visited Mar. 2, 2024). The argument assumes, however, that the building's current state of repair is not capitalized into the price of the individual units. If disrepair is capitalized into price, purchasers who buy after depreciation starts will have paid less for their units to reflect the likelihood of a future special assessment. And it does appear that the potential for future special assessments has a significant impact on condominium unit prices, at least with respect to older condominium units in the Miami Beach area, where prices have declined markedly since the Champlain Towers collapse. See Acosta, *supra* note 252.

260. See, e.g., UNIF. COMMON INT. OWNERSHIP ACT § 3-123(b) (UNIF. L. COMM'N 2021); 68 PA. STAT. AND CONS. STAT. ANN. § 3303(b) (West, 2023).

board.²⁶¹ In most states, whether the board may enact a special assessment depends on the authority provided in the condominium declaration; if the declaration requires approval by unit owners, the board must comply with that requirement. But even if neither statute nor the declaration restrict the board's power to impose a special assessment, unit owners may have the power to replace board members,²⁶² effectively thwarting the special assessment and preventing the repairs the assessment was designed to refinance.

The second problem is that even if unit owners do not block a special assessment, cash-strapped owners may not pay their assessments.²⁶³ Failure to pay places even greater burdens on other owners. The association does have remedies available against delinquent owners: imposition of a lien on the delinquent unit²⁶⁴ and ultimately foreclosure of the lien.²⁶⁵ These remedies, however, have significant downsides. Foreclosure evicts long-term residents from their homes. At the same time, failure to foreclose might, in many states, cause the condominium lien to expire,²⁶⁶ leaving nondelinquent owners to bear the entire burden of the repairs.²⁶⁷ And even if the lien does not expire, nondelinquent owners may have to wait years to recover the money they paid as a result of nonpayment by delinquent owners.

C. Potential Remedies

Although pressures from lenders and insurers incentivize unit owners to support assessments for structural repairs, those incentives may not be adequate to generate support from owners with short-term time horizons or from those with serious liquidity issues. Moreover, those owners may be more concerned about losing their homes than about the impact of structural defects on the safety and marketability of their units. This Section examines potential remedies designed to increase their support for structural repairs and to protect them from loss of their homes.

1. Federal Loan Insurance

Condominium unit owners without the funds to pay a large special assessment might prefer to pay the assessment over time. But unit owners who have reached

261. See, e.g., UNIF. COMMON INT. OWNERSHIP ACT § 3-125 (UNIF. L. COMM'N 2021) (two-thirds vote required).

262. See, e.g., UNIF. COMMON INT. OWNERSHIP ACT § 3-122 (UNIF. L. COMM'N 2021); FLA. STAT. ANN. § 718.112(l) (2023) (authorizing recall and removal of board members with or without cause).

263. See Marvin J. Nodiff, *Avoiding the Special Assessment Trap*, CMTY. ASS'N MGMT., <https://communityassociationmanagement.com/c33-financial-matters/c36-special-assessments/avoiding-the-special-assessment-trap/> [https://perma.cc/BE6T-HY4A] (last visited Mar. 2, 2024) (noting that opponents of a special assessment may encourage others not to pay, leading the board to realize it doesn't have enough support for a project).

264. See, e.g., UNIF. COMMON INT. OWNERSHIP ACT, § 3-116 (UNIF. L. COMM'N 2021).

265. *Id.*, § 3-116(k).

266. See *id.*, § 3-116(f) ("A lien for unpaid assessments is extinguished unless proceedings to enforce the lien are instituted within [three] years after the full amount of the assessments become due.").

267. See Boyack, *supra* note 35, at 75.

their credit limits may have difficulty borrowing additional money. To address the problem, two Florida members of Congress have introduced the “SAFER in Condos Act of 2022.”²⁶⁸ The proposed legislation would expand federal mortgage insurance coverage of loans obtained to pay for a “non-regular assessment charged by the governing body of the condominium project to the unit owner to cover costs of a future rehabilitation, alteration, repair, improvement, or replacement of any common system, infrastructure, facility, feature, portion, or area serving the project.”²⁶⁹ If enacted, the proposed legislation would provide federally backed financing for individual condominium unit owners to borrow funds necessary to pay assessments imposed for structural repairs.²⁷⁰

The proposed statute would augment other provisions authorizing federal loans. The federal home rehabilitation program, for instance, authorizes the Federal Housing Authority to insure rehabilitation loans extended to homeowners for the purchase and rehabilitation of certain existing residential structures.²⁷¹ Likewise, the federal property improvement program authorizes federal insurance for qualifying property improvement loans.²⁷²

Although the proposed statute would make it easier for unit owners to borrow, increased borrowing does not help those unit owners who are already stretched to the limit by their existing mortgage obligations. The additional payments associated with a new loan may not be sustainable for residents on fixed incomes. Especially in an environment with rising interest rates, the proposed bill does not address the affordability problem that faces some percentage of condominium owners.

2. Reverse Mortgages

Homeowners, including condominium unit owners, are eligible for Home Equity Conversion Mortgages (known more colloquially as Reverse Mortgages) if they are sixty-two or older and have significant equity in their homes.²⁷³ With a Reverse Mortgage, the lender makes payments to the homeowner, either periodically or as needed by the owner,²⁷⁴ in return for increasing equity in the

268. H.R. 7532, 117th Cong. (2022).

269. *Id.* § 2.

270. See C. Scott Canady, *Federal Legislation Supports Condo Structural Repairs, Helps Owners Finance Special Assessments*, CMY. ASS’NS INSTITUTE (Apr 19, 2022), <https://advocacy.caionline.org/federal-legislation-supports-condo-structural-repairs-helps-owners-finance-special-assessments/> [<https://perma.cc/K2ZE-PZYT>].

271. 12 U.S.C. § 1709(k).

272. 12 U.S.C. § 1703.

273. Congress authorized the Secretary of Housing and Urban Development to provide mortgage insurance for qualified “elderly homeowners.” 12 U.S.C. §§ 1715z-20(a)–(b). HUD has issued regulations governing the “Home Equity Conversion Mortgage (HECM) insurance program.” 24 C.F.R. §§206.3–206.211 (2017). Proprietary reverse mortgages, not insured by HUD, may also be available in some states. See, e.g., *Reverse Mortgages: What You Need to Know*, N.Y. ST https://www.dfs.ny.gov/consumers/help_for_homeowners/reverse_mortgages [<https://perma.cc/VT62-TAQS>] (last visited Mar. 2, 2024) (discussing differences between HECMs and proprietary reverse mortgages).

274. 24 C.F.R. § 206.19 (2017).

home. When the owner sells or dies, the lender recoups that equity.²⁷⁵ A Reverse Mortgage would enable an older unit owner with a short-term time horizon and liquidity issues to make special assessment payments for structural repairs. The availability of a reverse mortgage should more favorably dispose an eligible owner to assessments for structural repairs. And, of course, reverse mortgage payments would enable an eligible owner to avoid default on assessments and subsequent foreclosure. Unlike a home equity loan or home equity line of credit, the unit owner does not make periodic repayments to the lender.

Not every financially challenged owner will qualify for a Reverse Mortgage. First, if the unit owner is under sixty-two, the owner will be ineligible.²⁷⁶ Second, if the property is already subject to a mortgage, the unit owner will have to pay off the existing mortgage.²⁷⁷ That may limit the attractiveness of the Reverse Mortgage.

Unit owners may not know of the availability of Reverse Mortgages. Condominium boards might have to take the lead in educating unit owners as a mechanism for building support for structural repairs.

3. *Postponed Collection of Assessments and Super Liens*

Condominium boards could accommodate cash-poor unit owners by promising to postpone collection of special assessments until transfer of the unit. Postponing payment would relieve financial anxiety and permit owners to stay in their homes.²⁷⁸ In effect, the condominium could take a lien on the unit, with a promise not to foreclose on the lien until transfer. A lien, however, would not address the condominium's immediate need for funds to pay for structural repairs. One possible solution to that cash crunch would be for the condominium to liquidate the lien by selling it to other unit owners or to investors on a secondary market. The purchaser of the lien would be entitled to the principal amount of any assessment, together with accrued interest, at the time the unit is transferred. The purchaser would be acquiring an instrument that resembles a zero-coupon bond,²⁷⁹ albeit with an uncertain maturity date.

Implementing this solution would require two significant changes. First, time limitations on enforcement of condominium liens would have to be extended or eliminated. By the terms of some condominium statutes, the condominium's lien for common charges expires after a set period of time—often three years—if the

275. 24 C.F.R. § 206.27(c) (2017) (outstanding loan balance becomes due when a borrower dies and the property is not the principal residence of at least one surviving borrower).

276. 12 U.S.C. §§ 1715z-20(b)(1), (d)(2).

277. See N.Y. St., *supra* note 273 (noting that reverse mortgage lenders will require that mortgage proceeds be used to pay off any first mortgage).

278. One New York co-op faced with a crumbling structure that required thirty million dollars to repair adopted a plan that permitted shareholders who could show hardship to pay their assessment over ten years. With that option, the plan obtained the support of the shareholders. Finn, *supra* note 115.

279. A zero-coupon bond is one that pays no interest until maturity. See generally *The One-Minute Guide to Zero Coupon Bonds*, FINRA (Oct. 20, 2022), <https://www.finra.org/investors/insights/zero-coupon-bonds> [https://perma.cc/FC4P-NWRE].

condominium does not act to foreclose on the lien.²⁸⁰ No sensible lender would take a lien as security if the lender was not entitled to foreclose until transfer, and if the lien might expire before transfer. To make sale feasible, states would have to modify the rule on expiration of condominium liens.

Second, condominium liens for structural repairs would have to be treated as super liens, enjoying priority even over first mortgage liens. The value of a condominium lien depends to a considerable extent on the equity the unit owner has in her unit. A first mortgage on a unit ordinarily enjoys priority over the condominium's lien for common charges.²⁸¹ The interest of any purchaser of the condominium's lien, therefore, would be subordinate to the interest of any first mortgagee. If the unit owner has a \$320,000 mortgage on a condominium worth \$400,000, the unit owner's equity is \$80,000. If the special assessment approaches \$80,000, any purchaser of a special assessment lien takes the risk that ultimate sale of the property will not yield enough to pay off the first mortgage and satisfy the condominium lien. Many jurisdictions do provide condominium associations with a "super lien"—one that enjoys priority even over first mortgages—but that super lien is typically limited to "the unpaid assessments for common expenses, not to exceed six months for each budget year of the association, as based on the periodic budget adopted by the association[.]"²⁸² It is not clear that a duly adopted special assessment would qualify under the statutory language.

A super lien for safety-related structural repairs would not be unfair to first mortgage lenders. If the condominium did not make the repairs, the lender's security would be at risk because of two related factors: first, the possible collapse of the building and destruction of the units and second, the diminished market for units in a building perceived to present significant safety risks (and the potential future assessments to mitigate those risks). Structural repairs would ameliorate those risks. If the condominium holds a super lien for assessments earmarked for those structural repairs, the lender is no worse off than if the repairs were not made. Of course, from the lender's perspective, the optimal alternative would be for the condominium to make the repairs without having a super lien, allowing the lender to free ride on expenditures made by the condominium. Loss of the ability to free ride, however, should not weigh heavily on any fairness scale.

Moreover, the potential loss to any lender from a condominium super lien would be directly correlated to the riskiness of the loan that lender made. A lender who required the unit owner to make a significant down payment would bear far less risk than a lender who financed unit owner's entire purchase price. So long as the unit owner has substantial equity in the unit, both the holder of the first mortgage lien and the holder of the condominium lien will generally be insulated against loss.

280. UNIF. COMMON INT. OWNERSHIP ACT § 3-116(f) (UNIF. L. COMM'N 2021)

281. *Id.* §3-116(b)(2).

282. *Id.* §3-116(c).

CONCLUSION

Condominium safety is an issue of importance to millions of Americans. The Champlain Towers tragedy is a painful reminder that dangers not apparent to the untrained eye may impair the structural integrity of high-rise buildings, and that condominium boards, if let to their own devices, may blind themselves to the attendant risks.

The tragedy has alerted governments, insurers, and mortgage bankers to the importance of building inspections. But inspections alone do not ensure that condominium associations will devote the resources necessary to address structural issues—in part because of the affordability constraints facing a percentage of unit owners. Creative approaches to condominium finance may increase the willingness of financially strapped owners to support needed repair—and may also enable them to remain in their homes.