

# Articles

## HOMEOWNERSHIP 2.0

*Lee Anne Fennell\**

INTRODUCTION.....	1048
I. THE ELEMENTS OF HOMEOWNERSHIP .....	1053
A. <i>Homeownership as Consumption</i> .....	1054
B. <i>Homeownership as Investment</i> .....	1059
C. <i>Decoupling Initiatives, Past and Present</i> .....	1063
II. INTRODUCING H2.0.....	1070
A. <i>Configuring H2.0</i> .....	1071
B. <i>Disaggregating Onsite and Offsite Influences</i> .....	1073
C. <i>Advantages for Homeowners</i> .....	1078
D. <i>Off the Rack or Build from Scratch?</i> .....	1082
III. COGNITIVE IMPLICATIONS .....	1088
A. <i>Barriers to Acceptance</i> .....	1088
B. <i>Potential for Misuse</i> .....	1095
IV. LOCAL PARTICIPATION AND POLITICS.....	1098
A. <i>Homeowner Collective Control</i> .....	1098
B. <i>Investors and Local Governance</i> .....	1103
V. OTHER SOCIETAL IMPACTS.....	1109
A. <i>Stability and Stickiness in Housing Markets</i> .....	1109
B. <i>Competitive Consumption</i> .....	1111
C. <i>Autonomy and Conformity</i> .....	1113

---

\* Professor of Law, University of Chicago Law School. For very helpful comments and questions on earlier drafts, I thank Michael Abramowicz, Amitai Aviram, Shyam Balganes, Yun-Chien Chang, Christopher Fennell, William Fischel, Tom Ginsburg, Todd Henderson, Claire Hill, Larissa Katz, Richard McAdams, Mark Nadel, Jonathan Nash, Eduardo Peñalver, Ezra Rosser, Richard Schragger, Lior Strahilevitz, David Weisbach, Noah Zatz, and participants in the 2007 Midwestern Law and Economics Association Meeting, the 2008 annual meeting of the American Law and Economics Association, and workshops at the University of Chicago Law School, the Institute of Government and Public Affairs at the University of Illinois at Chicago, and Queen's University Faculty of Law. Catherine Kiwala provided excellent research assistance. All errors are mine.

VI. AVENUES FOR FURTHER RESEARCH.....	1114
A. Tailored Risk-Bearing: H3.0 and Beyond.....	1114
B. Government's Role.....	1115
C. Beyond Housing.....	1117
CONCLUSION.....	1118

## INTRODUCTION

Current legal arrangements make homeowners high-stakes gamblers.<sup>1</sup> Homebuyers routinely take on crushing debt loads to put large sums of money into risky, undiversified ventures that are utterly out of their personal control—local housing markets.<sup>2</sup> That these markets typically post positive returns over time offers little comfort to those caught on the downside of housing market volatility. Moreover, because rights to these expected gains are priced into the home, many would-be buyers are priced out of the market.<sup>3</sup> The shortcomings of the homeowner's investment package have not escaped notice, and for decades scholars and innovators have tried to devise better ways to manage the upside and downside risks of owning a home.<sup>4</sup> Derivatives markets for such risk have recently begun to emerge,

<sup>1</sup> See Robert J. Shiller, *American Casino*, ATLANTIC MONTHLY, Mar. 2005, at 33, 34 (discussing how consumers' exposure to market risk, including home price volatility, "threatens to transform the United States into a nation of gamblers").

<sup>2</sup> See, e.g., William A. Fischel, *Why Are There NIMBYs?*, 77 LAND ECON. 144, 146 (2001) (likening a home purchase to the use of nearly all one's assets to invest in "a single firm that produced one product in a single location"); Walter Updegrave, *The Right Size House*, CNNMONEY.COM, July 16, 2004, [http://money.cnn.com/2004/07/16/pf/expert/ask\\_expert/index.htm](http://money.cnn.com/2004/07/16/pf/expert/ask_expert/index.htm) ("[A] house is inherently an undiversified asset. You own a house in one city in one neighborhood on one block.").

<sup>3</sup> See *infra* Part II.C.3 (discussing how transferring upside risk could make housing more affordable).

<sup>4</sup> See, e.g., ANDREW CAPLIN ET AL., HOUSING PARTNERSHIPS: A NEW APPROACH TO A MARKET AT A CROSSROADS (1997); ROBERT J. SHILLER, MACRO MARKETS: CREATING INSTITUTIONS FOR MANAGING SOCIETY'S LARGEST ECONOMIC RISKS (1993) [hereinafter SHILLER, MACRO MARKETS]; Matityahu Marcus & Michael K. Taussig, *A Proposal for Government Insurance of Home Values Against Locational Risks*, 46 LAND ECON. 404 (1970); *infra* Part I.C. (surveying some of the past and proposed models for rearranging risk). Recent examples include Home Value Protection, <http://www.syracusesni.org/equitysite/index.html> (last visited Feb. 18, 2008) (pilot program in Syracuse, New York, offering home equity insurance); REX & Co., <http://www.rexagreement.com> (last visited Feb. 18, 2008) (U.S. investment firm that has recently begun offering funds in exchange for a share of home equity); Equity Finance Mortgage, <http://www.efm.info/> (last visited June 29, 2008) (presenting a shared equity mortgage product offered by Rismark International through Australia's Adelaide Bank); Advanced e-Financial Technologies, Inc., SwapRent, <http://www.swaprent.com/> (last visited June 29, 2008) (presenting a product that would let homeowners toggle to and from an "economic renting" mode in which some or all of the upside and downside home price risk would be offloaded). See also RICK JACOBUS & JEFFREY LUBELL, CTR. FOR HOUS. POLICY, POLICY BRIEF, PRESERVATION OF AFFORDABLE HOMEOWNERSHIP: A CONTINUUM OF STRATEGIES (2007), available at [http://www.nhc.org/pdf/chp\\_se\\_strategies\\_0407.pdf](http://www.nhc.org/pdf/chp_se_strategies_0407.pdf) (surveying a range of home equity arrangements designed to deliver affordable homeownership); Marjorie Ramseyer Bardwell & James Geoffrey Durham, *Transfer Fee Rights: Is the Lure of Sharing in Future Appreciation a Flawed Concept?*, 21 PROB. & PROP. 24,

due in large part to the collaborative efforts of Karl Case, Robert Shiller, and Allan Weiss.<sup>5</sup>

As the technical capacity to slice, dice, and trade homeownership risk advances, this Article steps back to examine how a reduced-risk version of homeownership fits together with property theory, human cognition, and the social dynamics of neighborhoods and metropolitan areas. To explore these questions, I present a new tenure form—Homeownership 2.0 or “H2.0”—that seeks to unbundle optimally certain investment components from the core homeownership package.<sup>6</sup> Central to my approach is a distinction between parcel-specific influences on home values, which the homeowner is in a good position to personally control or insure against (“onsite factors”), and influences on home values that emanate from beyond the four corners of the parcel, such as neighborhood changes and larger housing market trends (“offsite factors”). I argue that only those value changes relating to onsite factors are essential to the homeownership bundle as it exists today. Historical inertia in property forms has kept offsite impacts in the homeowner’s standard package, but requiring homeowners to invest in these factors as a matter of course is no more sensible than forcing them to invest in some other random, localized venture with variable returns. H2.0 thus offers a reduced-risk alternative to traditional homeownership.

The basic idea behind H2.0 is simple. At closing, a homebuyer is metaphorically presented with two dials that she may twist to adjust her ownership of upside and downside price volatility attributable to offsite factors. Under traditional homeownership arrangements, all of the downside risk and upside potential is assigned to the homeowner; in other words, both dials are stuck at 100% and do not adjust. Under H2.0, both dials are reset to 0% (or some other value) as a default matter with respect to offsite fac-

---

(May/June 2007) (discussing transfer fee rights that use covenants to retain some of the home’s future appreciation); Ian Ayres & Barry Nalebuff, *Price-Protect Your Home*, FORBES, Sept. 16, 2002, at 101.

<sup>5</sup> In spring 2006, futures and options based on housing indexes developed by Robert Shiller and Karl E. Case became tradable on the Chicago Mercantile Exchange (now CME Group). See *infra* Part I.C.4 (discussing these hedge instruments). These housing market derivatives grew out of many years of work by Shiller, Case, and Weiss. See, e.g., SHILLER, *MACRO MARKETS*, *supra* note 4, at 78–87; ROBERT J. SHILLER, *THE NEW FINANCIAL ORDER: RISK IN THE 21ST CENTURY* 118–20 (2003) [hereinafter SHILLER, *NEW FINANCIAL ORDER*]; Robert J. Shiller & Allan N. Weiss, *Home Equity Insurance*, 19 J. REAL ESTATE FIN. & ECON. 21 (1999) [hereinafter Shiller & Weiss, *Home Equity Insurance*]; Karl E. Case, Jr., Robert J. Shiller & Allan N. Weiss, *Index-Based Futures and Options in Real Estate*, 19 J. PORTFOLIO MGMT. 83 (1993). For a recent discussion of the history of, and future prospects for, these derivatives markets, see Robert J. Shiller, *Derivatives Markets for Home Prices* (NBER Working Paper No. 13,962, April 2008), available at <http://www.nber.org/papers/w13962.pdf> [hereinafter Shiller, *Derivatives Markets*].

<sup>6</sup> Although I describe it as a new tenure form, H2.0 would not require the creation of a new possessory estate. See *infra* Part II.D. Others working in housing policy have also employed the ubiquitous 2.0 suffix to reference new forms of homeownership. See Posting of National Housing Institute/Shelterforce, [nhi\\_press@nhi.org](mailto:nhi_press@nhi.org), to [colist@comm-org.wisc.edu](mailto:colist@comm-org.wisc.edu) (May 4, 2007), <http://comm-org.wisc.edu/pipermail/colist/2007-May/004667.html>.

tors, and can be adjusted by the homebuyer as desired.<sup>7</sup> In economic substance, the move from full risk-bearing to the H2.0 default position means that the homeowner compensates an investor to take on offsite downside risk, and an investor pays the homeowner for rights to offsite upside potential.<sup>8</sup> Under the default arrangement, however, the homeowner would simply encounter an interface that repriced the home to take account of these changes. She could then twist either or both dials to selectively add back in as much upside and downside risk relating to offsite factors as she wished to accept.

The moving parts inside H2.0—market mechanisms for offloading homeownership risk—are the ongoing work of others.<sup>9</sup> My focus here is not on perfecting the technical elements of these underlying risk transfer mechanisms, but rather on formulating a tenure package that is capable of delivering the benefits of these innovations to ordinary homeowners in a way that comports with property theory, human cognition, and the social goals of communities. Doing so, however, requires an understanding of how the underlying mechanisms would work and what their effects would be. Hence, H2.0 serves both as a prototype for how best to package homeownership risk transfers, and as a focal point for assessing the merits and demerits of the risk transfers themselves.

The many advantages and concerns associated with the H2.0 approach are spelled out below. For now, two points suffice. First, allowing homebuyers to transfer offsite factor volatility to investors offers an untapped opportunity to produce Pareto improvements.<sup>10</sup> For most U.S. households, the home is the single largest component of non-labor wealth.<sup>11</sup> Placing so

<sup>7</sup> The optimal default value is an open question, and one that interacts with other design choices, such as the treatment of inflation. See *infra* notes 102–08 and accompanying text (discussing some of these issues). Assumptions about the likely future housing consumption plans of the household also bear on the default design. See *infra* Part VI.A.

<sup>8</sup> For a simple example of how this might work, see *infra* text accompanying notes 100–03.

<sup>9</sup> See sources cited *supra* notes 4–5.

<sup>10</sup> See CAPLIN ET AL., *supra* note 4, at 89 (“Simple portfolio theory argues that there is scope for a Pareto improvement if the owner-occupant sells a proportion of their home’s asset value to a large, well-diversified financial institution.”). A Pareto improvement “makes at least one person better off and no one worse off.” RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 12 (7th ed. 2007).

<sup>11</sup> See WILLIAM A. FISCHEL, *THE HOMEVOTER HYPOTHESIS: HOW HOME VALUES INFLUENCE LOCAL GOVERNMENT TAXATION, SCHOOL FINANCE, AND LAND-USE POLICIES* 4 (2001); Brian K. Bucks, Arthur B. Kennickell & Kevin B. Moore, *Recent Changes in U.S. Family Finances: Evidence from the 2001 and 2004 Survey of Consumer Finances*, FED. RES. BULL., 2006, at A1, A22–23, available at <http://www.federalreserve.gov/pubs/oss/oss2/2004/bull0206.pdf> (“[H]ousing wealth is typically the largest component of families’ fungible wealth . . . .”); see also *infra* note 52 (discussing data from the 2004 Survey of Consumer Finances). Although human capital is typically a larger component of household wealth, it too is subject to significant volatility. See, e.g., JACOB S. HACKER, *THE GREAT RISK SHIFT: THE ASSAULT ON AMERICAN JOBS, FAMILIES, HEALTH CARE AND RETIREMENT AND HOW YOU CAN FIGHT BACK* 61–85 (2006) (discussing job insecurity); SHILLER, *NEW FINANCIAL ORDER*, *supra* note 5, at 107–10 (discussing risk in career-planning, using the example of a biotechnician pursuing an advanced degree). To the extent that local housing prices are correlated with the performance of the

many of the household's eggs in one basket not only runs counter to basic principles of portfolio diversification, but also motivates potentially costly basket-guarding behaviors.<sup>12</sup> Moreover, households that lack the financial wherewithal or risk tolerance to take on such a large investment simply cannot become homeowners. Facilitating transfers to investors, who can hold slices of housing risk within diversified portfolios, could produce substantial gains.

Second, it is possible to package the means for accomplishing these transfers not as stand-alone products for chipping away at traditional homeownership, but rather as a new and theoretically well-grounded alternative form of tenure. H2.0 represents a broad-spectrum response to a growing tension between the popular, boundary-oriented understanding of ownership and the reality of homeownership as it exists on the ground. As increasingly large percentages of home values are determined by conditions and events lying outside of the owned parcel, the idea that one can protect the value of one's property by fortifying and defending its boundaries has become absurd. Homeowners have responded by trying to control as many offsite factors as possible through measures like exclusionary zoning and private covenants. Yet these efforts often entail heavy social costs and offer little or no protection against many sources of home price fluctuation. H2.0 offers an alternative way of restoring the balance between exposure and control. Rather than expand control to align with investment exposure, homeowners can use H2.0 to scale down investment exposure to match their sphere of effective control.

This is a particularly apt historical moment for such a proposal.<sup>13</sup> Home values, after a run of increases, have shown themselves to be vulnerable to significant downward movement. At the same time, recent lending practices, especially in the subprime market, have injected price instability into the repayment schedules of millions of households.<sup>14</sup> As these two factors have converged to push significant numbers of U.S. homeowners to-

---

local labor market, the exposure of working homeowners is amplified. See CAPLIN ET AL., *supra* note 4, at 73–75 & figs.5.2–5.3 (discussing and illustrating the correlation between changes in wages and those in house prices).

<sup>12</sup> See *infra* Part IV.A.2.

<sup>13</sup> See Robert J. Shiller, *A Time for Bold Thinking on Housing*, N.Y. TIMES, Nov. 25, 2007, § 3, at 4 (arguing that the current housing price downturn indicates a need for innovation in housing, including better management of risk).

<sup>14</sup> See, e.g., EDWARD M. GRAMLICH, SUBPRIME MORTGAGES: AMERICA'S LATEST BOOM AND BUST 17–18 (2007) (explaining that subprime mortgages are typically adjustable rate mortgages that feature an initially low interest rate that is fixed for only two or three years; the mortgage then becomes adjustable and can reset to much higher interest rates); *id.* at 6 (observing that subprime mortgage originations grew from \$35 billion in 1994 to \$625 billion in 2005, representing a shift from less than five percent of all mortgage originations to twenty percent of all mortgage originations); James R. Hagerty & Ken Gepfert, *One Family's Journey into a Subprime Trap—Monteses May Lose House as Rate Resets, Credit Options Dry Up*, WALL ST. J., Aug. 16, 2007, at A1 (reporting that twenty percent of mortgages in 2006 were subprime loans, and discussing the impact of upcoming interest rate resets).

ward foreclosure, policymakers have scrambled to respond.<sup>15</sup> Among the questions that the subprime mortgage crisis has placed on the table is the wisdom of the national obsession with homeownership. What I propose here does not require turning away from homeownership as an ideal, but rather reconfiguring it so that it better delivers on its promise.

The Article breaks new ground in legal scholarship by exploring in a sustained and theoretically unified way the question of reconfiguring homeownership risk. Although other legal scholars have written about specific programs for altering home risk-bearing, the discourse has been fragmented and incomplete. Economists have offered detailed and sophisticated treatments of risk transfer mechanisms, but have left important questions of property theory and social policy unasked.<sup>16</sup> This Article differs from past work in that it rethinks homeownership from first principles and contemplates a reframing of the institution itself. Such a reframing has important, and heretofore unexplored, cognitive implications.<sup>17</sup> Using the H2.0 reformulation as a focal point, I trace a number of social consequences of home risk reconfiguration that have received little attention elsewhere—most notably, how changing the nature of homeownership risk might alter interactions at the neighborhood, municipal, and metropolitan scales and thereby change the face of local governance.<sup>18</sup>

The analysis proceeds in six parts. In Part I, I discuss the dual nature of homeownership as a source of consumption value and as an investment

---

<sup>15</sup> See, e.g., Mike Barris, *Foreclosure Filings Surged 75% in '07 as Subprime Mess Grew*, WALL ST. J., Jan. 29, 2008, at D3. Efforts to address the crisis are ongoing as of this writing. See, e.g., David M. Herszenhorn, *Approval Is Near for Bill to Help U.S. Homeowners*, N.Y. TIMES, June 25, 2008, at A1; Fed. Reserve Bank of Phila., *Foreclosure Prevention and Subprime Regulation*, BANKING LEG. & POL'Y 5, Oct.–Dec. 2007, at 5, available at <http://www.philadelphiafed.org/files/blk/blkp407.pdf> (detailing mortgage-related regulatory and legislative measures pending or acted on during the last quarter of 2007). One idea that has received consideration would involve the use of “negative equity certificates” as a refinancing tool. See David D. Kirkpatrick, *Plan to Help Homeowners Gains Steam*, N.Y. TIMES, Mar. 30, 2008, at A20. These certificates, which would entitle the lender to a payout in the event the home sold for more than the amount originally owed, would amount to a transfer of some of the home’s upside potential. See *id.*

<sup>16</sup> See, e.g., sources cited *supra* notes 4–5.

<sup>17</sup> See *infra* Part III. Some of the cognitive challenges associated with altering homeownership risk-bearing have received attention in existing work. See, e.g., SHILLER, *MACRO MARKETS*, *supra* note 4, at 17–30 (devoting a chapter to “psychological barriers” to products targeted at hedging major life risks, including loss of home value); Robert J. Shiller, *Radical Financial Innovation*, in *ENTREPRENEURSHIP, INNOVATION, AND THE GROWTH MECHANISM OF THE FREE-ENTERPRISE ECONOMIES* 306, 313–17 (Eytan Sheshinski, Robert J. Strom & William Baumol eds., 2007) (discussing framing and other cognitive obstacles to adoption of home equity insurance). But other issues taken up here, such as the cognitive effects of moving homeownership to a new default position, have not, to my knowledge, received attention.

<sup>18</sup> See *infra* Parts IV–V. My work builds in part on that of William Fischel, who has examined some aspects of these issues in the context of home equity insurance. See, e.g., FISCHEL, *supra* note 11, at 268–70.

vehicle<sup>19</sup> and discuss past and ongoing attempts to remove some of the upside or downside investment volatility from the homeownership bundle.<sup>20</sup> Part II explains how the new H2.0 package would unbundle the elements essential to homeownership from offsite investment risk factors and outlines its key advantages. Part III explores cognitive barriers to the acceptance of H2.0, as well as concerns that cognitive biases might lead consumers to misuse H2.0. Part IV examines the impact of the H2.0 ownership form on local governance and neighborhood collective action. Part V considers some additional societal implications of changing the content and meaning of homeownership, and Part VI suggests directions for further research.

Before beginning, a caveat is in order. Although this Article is organized around the H2.0 proposal, my project is not to persuade the reader that this specific proposal—or, indeed, any risk-altering proposal—should be adopted forthwith. Rather, I present H2.0 primarily as a means of starting a conversation. I have tried to distill from the many literatures touching on homeownership risk transfers the model that seems most promising on theoretical and cognitive grounds so that the possibility of realigning the risks of homeownership can be given a fair hearing. The Article offers reasons for both enthusiasm and skepticism about such a move. Whether H2.0 or some variation on it is ultimately successful, I hope that this Article will help to frame the relevant issues and advance dialogue about the best future of homeownership.

## I. THE ELEMENTS OF HOMEOWNERSHIP

If we believed that homeowners were affirmatively choosing to bet a hefty chunk of their household wealth on the fortunes of their local housing markets, then homeownership's current configuration would be fully satisfactory. Some such investments may be quite deliberate. For example, young households that plan to stay in the same local housing market as their housing needs grow may make an early investment in a home as a hedge

---

<sup>19</sup> See, e.g., Jan K. Brueckner, *Consumption and Investment Motives and the Portfolio Choices of Homeowners*, 15 J. REAL ESTATE FIN. & ECON. 159 (1997); Satyajit Chatterjee, *Taxes, Homeownership, and the Allocation of Residential Real Estate Risks*, BUS. REVIEW, FED. RES. BANK OF PHILA., Sept./Oct. 1996, at 3, 6, available at <http://www.phil.frb.org/files/br/sobr96sc.html> (“[A] home purchase really involves two distinct transactions bundled into one: the purchase of a house and the purchase of service benefits (comfort and shelter) that flow from the house.”); J.V. Henderson & Y.M. Ioannides, *A Model of Housing Tenure Choice*, 73 AM. ECON. REV. 98, 102 (1983) (“Durables such as housing may serve dual purposes for many consumers—as a consumption good and as an investment holding in a portfolio.”).

<sup>20</sup> I refer to homeownership as a “bundle” because it includes a number of distinct elements that may be separately valued by consumers. See *infra* Part I. This usage is distinct from the theoretical conceptualization of property as a “bundle of rights.” See, e.g., J.E. Penner, *The “Bundle of Rights” Picture of Property*, 43 UCLA L. REV. 711 (1996) (discussing and critiquing the “bundle of rights” view of property).

against future price increases; if home prices rise in the area, appreciation realized from the sale of the first home can help to fund the newly elevated prices of other homes.<sup>21</sup> But it seems likely that many homeowners gamble on the futures of their local housing markets only by accident, because existing institutional arrangements offer them no alternative.

Households desire homeownership for many reasons: it delivers a stable stream of housing consumption, a large degree of personal control over the residence, access to superior housing stock and public services, important tax advantages, and unparalleled social and status benefits.<sup>22</sup> Although the volatility of the home's value may be part of the appeal for some homeowners, for others it simply comes with the territory. As Andrew Caplin and his coauthors put it, "the current market does not allow a household to separate its housing investment decision from its housing consumption decision."<sup>23</sup> In Sections A and B, I examine homeownership's consumption and investment components, respectively. In Section C, I briefly survey some past and ongoing efforts to decouple these elements. This discussion sets the stage for the introduction of H2.0's version of homeownership in Part II.

#### A. Homeownership as Consumption

Households need not buy a home in order to consume housing; they can rent instead. The leasehold neatly separates consumption of housing from investment in housing—the landlord invests, while her tenants consume. We might think, then, that homeowners must be willing investors, or they would not enter into homeownership at all. This logic breaks down, however, if we think that the consumption streams available to tenants tend to be systematically inferior to those available to homeowners.<sup>24</sup> It is therefore worth examining how the homeownership brand of housing consumption differs from the leasehold variety.

A much-cited advantage of owning a home is the element of price protection it provides. In housing markets without rent control, tenants face significant uncertainty about how much their current housing will cost in

---

<sup>21</sup> See Lu Han, *The Effects of Price Uncertainty on Home Purchase Decisions Over the Life Cycle* 31–34 (Dec. 2005) (unpublished manuscript), available at [http://www.rotman.utoronto.ca/lu.han/life\\_cycle.pdf](http://www.rotman.utoronto.ca/lu.han/life_cycle.pdf) (discussing this hedging incentive); see also James Banks et al., *House Price Volatility and Housing Ownership Over the Life Cycle* 10 (Univ. Coll. London Discussion Paper in Econ. No. 04-09, 2004), available at [http://www.econ.ucl.ac.uk/papers/working\\_paper\\_series/0409.pdf](http://www.econ.ucl.ac.uk/papers/working_paper_series/0409.pdf) (discussing the "insurance" function of owner occupancy). I thank Michael Abramowicz for comments on this point.

<sup>22</sup> See, e.g., CAPLIN ET AL., *supra* note 4, at 24–28; *infra* Part I.A.

<sup>23</sup> CAPLIN ET AL., *supra* note 4, at 80.

<sup>24</sup> In addition, as explored in *infra* Part I.B, the fact that a homeowner desires to invest at some level in the housing that she consumes does not establish that she wishes to take on the full quantum of investment associated with both onsite and offsite risks.

future periods.<sup>25</sup> The rental amount is guaranteed to remain fixed only for the lease term, often a year or less, and may rise thereafter without warning. As advocates of rent control have noted, this uncertainty poses a threat to the plans of residents who wish to put down roots in a given area with an expectation of building a life there.<sup>26</sup> In contrast, the price paid for a home is fixed at the time of purchase, and will not rise thereafter.<sup>27</sup>

The homeowner's price protection, however, is far from absolute. The vast majority of homebuyers finance their purchases, and these credit arrangements can introduce price instability.<sup>28</sup> Homeowners' insurance, required by lenders, can spike upward in cost.<sup>29</sup> Property taxes can rise rapidly and unexpectedly.<sup>30</sup> Maintenance and repair costs can be large and unpredictable.<sup>31</sup> Finally, and perhaps most importantly, the homeowner may want or need to move. When she does, her ability to obtain housing elsewhere depends on the sales price of her current home, a value that is subject to great investment risk.<sup>32</sup>

Nonetheless, tenants face additional uncertainty that is different in kind. At least in the absence of limitations imposed by law, a landlord can sell the property, convert the property to some other use, or occupy it herself as a residence—all events that could physically dispossess the tenant at the end of her current lease term.<sup>33</sup> Moreover, a tenant's lease can be

<sup>25</sup> See Todd Sinai & Nicholas S. Souleles, *Owner-Occupied Housing as a Hedge Against Rent Risk*, 120 Q.J. ECON. 763 (2005).

<sup>26</sup> See, e.g., Margaret Jane Radin, *Residential Rent Control*, 15 PHIL. & PUB. AFF. 350, 359–63, 368–70 (1986) (discussing the significance of continued residence from personhood and community perspectives); Greg Smithsimon, *Rent Regulation: The Right Tool for the Right Job*, PLANETIZEN, May 14, 2007, <http://planetizen.com/node/24451> (suggesting that rent regulation's purpose is to provide housing stability).

<sup>27</sup> See, e.g., Sinai & Souleles, *supra* note 25, at 764 (discussing the home purchase as including “a hedge against rent risk”).

<sup>28</sup> See *supra* note 14 and accompanying text.

<sup>29</sup> See, e.g., Joseph B. Treaster, *Home Insurers Embrace the Heartland: Hurricane-Free Midwest Gets Discounts as Coast Is Shunned*, N.Y. TIMES, May 20, 2006, at C1 (reporting on premium increases and coverage refusals in coastal areas); Jim Yardley, *Texas Home Insurance Crisis Roils Residents and Top Race*, N.Y. TIMES, Oct. 4, 2002, at A1 (discussing rising premiums and termination of homeowners' insurance coverage in Texas, in part due to the cost of mold-related claims).

<sup>30</sup> Often, this is a function of changes in the property's underlying value that could, in theory, be tapped to meet the larger tax bill. However, accessing the equity to meet rising tax bills may be costly for homeowners.

<sup>31</sup> Although long-term maintenance contracts can shift some of these risks, the residual risk remains on the homeowner. A landlord's tenants may also ultimately bear the costs of repairs and maintenance, but they are likely to do so as a group so that the risks of particularly expensive repairs are pooled.

<sup>32</sup> The concern in this context would be with uncorrelated price changes in the housing market from which the homeowner is departing and the one that she is entering: if both sets of housing prices moved in tandem, the gain (loss) from the current home would offset (be offset by) the higher (lower) prices in the new housing market. See Sinai & Souleles, *supra* note 25, at 764; *infra* Part VI.A.

<sup>33</sup> See, e.g., Cara Solomon, *Seniors Shoved Aside by Condo Conversions*, SEATTLE TIMES, Aug. 13, 2007, at A1 (discussing how landlords' decisions to convert properties to condominiums create hardships for displaced tenants). See generally Florence Wagman Roisman, *The Right to Remain: Common*

voided and her home unexpectedly lost if the property she is renting goes into foreclosure.<sup>34</sup> In contrast, all homeowners possess something very valuable—the option to remain in their current homes for as long as they wish, provided they make the necessary mortgage and tax payments. This option is not absolute—it can be overridden by the government through eminent domain or nullified by factors that make continued habitation impossible, such as natural disasters<sup>35</sup>—but it is quite robust. Indeed, the reaction to *Kelo v. City of New London*<sup>36</sup> demonstrates the degree to which ordinary people value the option to stay put, and how strongly the notion of homeownership is associated with that option.

In addition, renters often face rather severe constraints on their autonomy with regard to matters such as pet keeping, decorating, and landscaping. They may also face restrictions on adding occupants to the household or subleasing the property.<sup>37</sup> Although the autonomy of homeowners over such matters also has become increasingly limited as common interest communities featuring tight restrictions have gained market share,<sup>38</sup> owners still generally enjoy greater latitude than renters in choosing how to use and modify the property.

Further, tenants typically confront a constrained housing choice set relative to homebuyers. Most of the single-family housing stock in the country is owner-occupied, and owners tend to sell their homes when they

---

*Law Protections for Security of Tenure: An Essay in Honor of John Otis Calmore*, 86 N.C. L. REV. 817 (2008) (discussing potential legal reforms for delivering greater security of tenure to tenants).

<sup>34</sup> See Kelly Evans, *Tenants Pay as Landlords Default—Foreclosures Void Leases, Bring Eviction Notices; Bigger-Building Benefit*, WALL ST. J., Nov. 23, 2007, at A2 (reporting that the rise in foreclosures has led to thousands of evictions, and explaining that in many jurisdictions, a foreclosure voids the lease; the tenant may be forced to vacate on as little as thirty days' notice). Recently introduced bills would attempt to address this concern. See Protecting Tenants at Foreclosure Act of 2008, S. 3034, H.R. 5963, 110th Cong., 2d Sess. (2008).

<sup>35</sup> See John A. Lovett, *Property and Radically Changed Circumstances*, 74 TENN. L. REV. 463 (2007) (discussing property rights in the wake of Hurricane Katrina).

<sup>36</sup> 545 U.S. 469 (2005) (holding that the “public use” requirement of the Fifth Amendment’s Takings Clause was met where private residences were condemned to redevelop an economically distressed area); see, e.g., Daniel H. Cole, *Why Kelo Is Not Good News for Local Planners and Developers*, 22 GA. ST. U. L. REV. 803 (2006) (discussing the backlash against the *Kelo* decision).

<sup>37</sup> The law places some limits on these restrictions. For example, the federal Fair Housing Act protects families with children against discrimination, and thus would typically protect the right of parents to add their own children, or children who are in their custody, to the household. See 42 U.S.C. §§ 3602(k), 3604 (2000).

<sup>38</sup> See, e.g., Paula A. Franzese, *Does It Take a Village? Privatization, Patterns of Restrictiveness and the Demise of Community*, 47 VILL. L. REV. 553, 555–56 (2002) (giving examples of restrictions placed on property owners in common interest communities governing matters such as landscaping, exterior aesthetic choices, and even some aspects of dress and conduct); Zach Rawling, *Reevaluating Leasing Restrictions in Common Interest Developments: Rejecting Reasonableness in Favor of Consent* (2007) (unpublished manuscript), available at [http://works.bepress.com/zach\\_rawling/3](http://works.bepress.com/zach_rawling/3) (discussing restrictions on leasing properties in common interest communities to tenants).

move rather than offer them for rent.<sup>39</sup> Moreover, rental houses are likely to receive less care and attention, on average, from their owners and occupants, making it less likely that pristine homes will appear on the rental market.<sup>40</sup>

At least in theory, many of the disadvantages of renting could be resolved contractually through different lease provisions. Residential leases could be extended to terms lasting several decades, for example, and could delegate to the tenant free choice on a wide array of matters that customarily have been left to the discretion of homeowners. Although contractual provisions alone would not expand the spectrum of available rental housing, if leaseholds became increasingly attractive along the dimensions just suggested, we might expect tenants to bid up rents and eventually trigger an expansion in the supply of housing stock available for rent. But important moral hazard problems remain.<sup>41</sup> In addition, there are two important advantages to owning that improved leasehold terms would not address.

---

<sup>39</sup> 2005 American Housing Survey data indicate that 88.15% of the nation's single-family detached homes occupied year-round are owner-occupied; the figure is 86.24% when all year-round occupied one-unit homes, both detached and attached, are included. See U.S. CENSUS BUREAU, U.S. DEP'T OF COMMERCE, AMERICAN HOUSING SURVEY FOR THE UNITED STATES: 2005, at 1 tbl.1A-1 (2006), available at <http://www.census.gov/prod/2006pubs/h150-05.pdf> (providing the figures from which the percentages above were calculated). At the time of the survey, most (96.67%) owner-occupied homes were reported as "not on the market." For those owner-occupied homes on the market for which detailed data existed indicating whether the home was on the market for sale only, for rent, or for sale or rent, the great majority (93.55%) were "for sale only." See *id.* (calculated from figures in the Occupied, Owner column in the section entitled "Homes Currently for Sale or Rent"). Those percentages do not cover vacant homes; a separate set of figures indicates that vacant single-family detached homes are about one and one-half times as likely to be on the market "for sale only" than to be offered for rent. See *id.* (calculated from figures in the Vacant-For-Rent and Vacant-For-Sale-Only columns in the section entitled "Units in Structure").

<sup>40</sup> The tenant might be expected to neglect the owner's long-term interests in the property, while the owner might be expected to neglect aspects of the tenant's consumption stream that do not affect the property's value over the long run. The result is a "double moral hazard problem" in which both parties exert less than optimal effort on the property. See Derek K.Y. Chau, Michael Firth & Bin Srinidhi, *Leases with Purchase Options and Double Moral Hazard*, 33 J. BUS. FIN. & ACCT. 1390, 1391 (2006) (describing the "double moral hazard problem inherent in leases" and suggesting that a purchase option would resolve it); see also Henderson & Ioannides, *supra* note 19, at 99–102 (describing and modeling the "rental externality"). A "lemons" dynamic may amplify this phenomenon. See George A. Akerlof, *The Market for "Lemons": Quality, Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488 (1970). Tenants who cannot tell *ex ante* whether a given rental is high-quality or low-quality will only be willing to pay for an average-quality rental. Because tenant price resistance makes it unprofitable for landlords to offer high-quality rentals, the average quality of rentals will drop. Likewise, if tenants have unobservable characteristics that determine how much care they will take of the home, landlords will gravitate toward price-amenity combinations that will be profitable when average-care tenants move in. Because these price-amenity combinations are not as attractive to high-care tenants, high-care tenants will have an incentive to become homeowners. See Robert D. Dietz & Donald R. Haurin, *The Social and Micro-Level Consequences of Homeownership*, 54 J. URB. ECON. 401, 422 (2003) (citing Henderson & Ioannides, *supra* note 19).

<sup>41</sup> See *supra* note 40.

First, homeowners enjoy significant federal income tax benefits that tenants do not receive. Homeowners pay no tax on imputed rent,<sup>42</sup> yet can deduct their major expenses (mortgage interest and property taxes) if they itemize.<sup>43</sup> In addition, homeowners can receive up to \$250,000 in tax-free gains on the sale of their home (\$500,000 for a married couple).<sup>44</sup> Their renting counterparts, in contrast, must pay rent with after-tax dollars to landlords who receive no analogous exclusion for gains on sale.

It might seem at first that the tax implications of homeownership should play no role in deciding whether to introduce a new tenure form because tax policy could be manipulated directly if doing so were deemed socially desirable. For example, eliminating the tax advantages of homeownership altogether might spur development of the types of enhanced leasehold alternatives discussed above, closing the consumption gap between owning and leasing.<sup>45</sup> But the complete elimination of homeownership's tax advantages probably lies outside the realm of current political possibility.<sup>46</sup> Absent such a sweeping reform, leaseholds are less likely to evolve in ways that will fill the consumption gap. The introduction of a new tenure form—a new category into which households could self-select—could be essential in facilitating the more limited reform of extending tax advantages to a broader spectrum of the population.

Perhaps even more important to the dominance of homeownership is the tremendous psychological and cultural importance of owning one's own

<sup>42</sup> Imputed rent—the amount of rental income that the home would generate if it were rented out—is taxed in some other countries, such as Italy, Norway, and Denmark. See, e.g., William G. Gale et al., *Encouraging Homeownership Through the Tax Code*, 115 TAX NOTES 1171, 1172–73 & n.3 (June 18, 2007); see also Chatterjee, *supra* note 19, at 4–5 (discussing the significance of the nontaxation of imputed rent).

<sup>43</sup> 26 U.S.C. §§ 163(h), 164 (2000) (providing for the deductibility of mortgage interest and property taxes). The fact that only those taxpayers who itemize can receive the mortgage interest deduction makes this feature of the tax code quite regressive in its operation, and also calls into question its presumed positive effect on increasing the rate of homeownership. See Gale et al., *supra* note 42, at 1178–81.

<sup>44</sup> 26 U.S.C. § 121. This tax advantage can be claimed only once every two years, and certain conditions must be met regarding the ownership and use of the home. See *id.* Losses on the primary residence are not deductible. See *id.*

<sup>45</sup> See Chatterjee, *supra* note 19, at 6–7 (suggesting that “[i]n the absence of a tax advantage to owner-occupants, the market would tend to ‘unbundle’ housing services from the home purchase transaction so that “[t]he household that most values the services of a house will rent it from those best able to bear the financial risks of homeownership”).

<sup>46</sup> More limited reforms may well be imaginable, however. See, e.g., Gale et al., *supra* note 42. Eliminating the mortgage interest deduction, a common policy target, might not produce all of the desired effects on its own given the ability of some households (especially those with high incomes) to finance their home purchases through other means (say, by paying cash) while still enjoying the core tax advantage—nontaxation of imputed rent. See James R. Follain & Lisa Sturman Melamed, *The False Messiah of Tax Policy: What Elimination of the Home Mortgage Interest Deduction Promises and a Careful Look at What it Delivers*, 9 J. HOUSING RES. 179 (1998); Chatterjee, *supra* note 19, at 4–5 (providing an example that illustrates this point).

home. At least outside of metropolitan areas like New York where renting is common among all social strata, ownership is the ideal to which most households in the United States aspire.<sup>47</sup> Renting, in contrast, is widely viewed as a transitional phase.<sup>48</sup> Here, too, we must ask what underlies the impulse toward ownership. The desire for a stable option—a place that is one's home for as long as one chooses to stay there—is certainly part of the story. The other advantages noted above also likely play a role. But there seems to be something essential about claiming a place as one's own that cannot be reduced to these practical benefits. That essential element of ownership, I argue, is bound up with the onsite investment facet of homeownership.<sup>49</sup>

If a sense of ownership requires some level of investment, no leasehold can fully replicate the consumption experience of homeownership. Whether we should encourage people to develop and sustain a taste for ownership is, of course, a separate question. Longer and better leaseholds and reform of homeownership's tax advantages are worthy goals, and ones that might in the long run help to produce a society that is less enamored of ownership. But taking the world as we find it, with strong social and governmental pressures pushing households toward ownership, there is a large gap on the tenure spectrum that the leasehold cannot answer.<sup>50</sup>

### B. Homeownership as Investment

Homebuyers do not just purchase a consumption stream, they also make an investment.<sup>51</sup> This investment is typically the single largest one in the household's portfolio,<sup>52</sup> and it is often heavily leveraged.<sup>53</sup> Do home-

---

<sup>47</sup> See, e.g., Gale et al., *supra* note 42, at 1171 (observing that “[o]wning one’s home is widely viewed as an integral part of the American Dream,” and that “Americans are taught from an early age to aspire to homeownership”).

<sup>48</sup> See, e.g., CONSTANCE PERIN, *EVERYTHING IN ITS PLACE: SOCIAL ORDER AND LAND USE IN AMERICA* 53 (1977) (describing renters as occupying a category that is “by definition one of transition in American axioms about the sequence of life”); Sheila Klebanow, *How Much is Enough? A Psychological Overview of Money and the Middle Class*, in *MONEY AND MIND* 3, 6–7 (Sheila Klebanow & Eugene L. Lowenkopf eds., 1991) (“For many, homeownership connotes solidity, stability, self-esteem, putting down roots, and making a commitment to oneself, or to marriage and family.”).

<sup>49</sup> See *infra* Part I.B.

<sup>50</sup> William Fischel similarly observes, in arguing for home equity insurance as a response to exclusionary homeowner tendencies, that the alternative of “[r]educing home-ownership is an unlikely policy.” William A. Fischel, *An Economic History of Zoning and a Cure for Its Exclusionary Effects*, 41 *URB. STUD.* 317, 334 (2004).

<sup>51</sup> See *supra* note 19.

<sup>52</sup> See *supra* note 11. According to the 2004 Survey of Consumer Finances, the median net worth of a homeownership family in the United States was \$184,400. Bucks, Kennickell & Moore, *supra* note 11, at A8 tbl.3. The value of the median primary residence was \$160,000. *Id.* at A23 tbl.8B. The median amount of home equity for a homeownership family was \$86,000 in 2004, *id.* at A28 n.36, making the ratio between median home equity and the median net worth of a homeownership family .467.

owners seek out this level of investment exposure, or do they merely tolerate it in order to obtain a preferred consumption stream? Because households cannot presently offload unwanted home price volatility, it is difficult to determine the relative proportions of eager and reluctant gamblers among American homeowners. However, economic analysis suggests that the linkage of housing consumption and housing investment produces a binding constraint on portfolio choice that yields inefficient results.<sup>54</sup> In other words, homeowners would invest differently—and more efficiently—if they had full freedom to allocate their investment dollars between housing and non-housing investments.

At the same time, the homeownership consumption stream is, by definition, one that allows the owner to view herself *as* an owner. I have suggested that some level of investment is necessary to enjoy in an authentic manner the consumption good of homeownership. But how much? Clearly, the personal shouldering of all risks cannot be a prerequisite to our understanding of ownership. Homeowners typically carry insurance against casualty losses that offloads risks that they cannot efficiently bear, yet no one would suggest that an insured home is any less fully “owned.” Similarly, most homeowners have a mortgage on the property that places some investment risk on the lender,<sup>55</sup> yet the title of “homeowner” is not called into question.

A better way of understanding the homeowner’s relationship to risk is found in the notion of the property holder as the “residual claimant”—a

---

<sup>53</sup> For homeownership families with mortgages, the median amount of debt secured by the primary residence was \$95,000 in 2004. *Id.* at A29 tbl.11. That same year, roughly seventy percent of the debt of all families was for purposes of purchasing a primary residence. *Id.* at A32 tbl.12. This somewhat understates the significance of the home debt burden for homeownership families because that figure includes families that do not own a home at all. On the other hand, the attribution of all of this debt to the “purpose” of buying a home does not account for the fact that many families use debt financing of the home to free up money elsewhere, and hence avoid other forms of debt. *Id.* at A31–32.

<sup>54</sup> See, e.g., CAPLIN ET AL., *supra* note 4, at 85 (observing that there is a “major indivisibility” in the market for homes that “forces owners to tie their housing consumption decision to their asset accumulation and portfolio decisions”); Brueckner, *supra* note 19, at 176 (modeling the constraint of homeownership on the investment choices of homeowners and concluding that “when the constraint is binding, the optimal portfolio of the homeowner is inefficient in a mean-variance sense, reflecting overinvestment in housing”); Stephen Day Cauley et al., *Homeownership as a Constraint on Asset Allocation*, 34 J. REAL ESTATE FIN. & ECON. 283, 309 (2007) (finding that, under reasonable assumptions, “homeowners would require a 6% increase in total net worth to achieve the same utility level as an individual not facing the asset allocation constraint,” and suggesting that the figure could rise as high as 25% in some regions); Henderson & Ioannides, *supra* note 19, at 111 (examining the significance of the “dual role of housing as a consumption and investment good” in determining tenure choice, and the possibility that households will “‘distort’ their investment and consumption choices and owner-occupy rather than rent”).

<sup>55</sup> In the event of default, lenders may not be able to sell the home for enough money to cover the outstanding mortgage debt, especially in a falling market. See, e.g., James R. Hagerty, *Mortgage Woes Force Banks to Take Hits to Sell Homes*, WALL ST. J., May 14, 2007, at A2. Although the lender can attempt to recover any shortfall from the homeowner (unless the loan is nonrecourse), homeowners in such a position may declare bankruptcy. See Robert J. Shiller & Allan N. Weiss, *Moral Hazard in Home Equity Conversion*, 28 REAL ESTATE ECON. 1, 13–14 (2000).

party who bears any property-related risks that have not been placed on others through contracts or legal rules.<sup>56</sup> That formulation, however, does not reveal anything about the kinds of risk (if any) to which a homeowner must remain exposed in order to be regarded as, and to view herself as, the property's owner. To approach the problem from a different angle, consider Henry Smith's explanation of why owners are residual claimants in the first place.<sup>57</sup> Smith observes that a residual claim captures difficult-to-measure contributions.<sup>58</sup> Thus, the party whose inputs are "hardest to measure" will be treated as the residual claimant or owner—the one who gets whatever outcomes remain after all the other, easier-to-measure claims have been sorted out.<sup>59</sup>

To translate these ideas to the homeownership context, it is helpful to distinguish between sources of property value fluctuation that are within the household's control and sources of property value fluctuation that are out of the household's control.<sup>60</sup> The former relate to the household's own day-to-day inputs, which typically are difficult for others to measure accurately. Indeed, this very difficulty in measurement would present moral hazard problems if responsibility for outcomes under the household's control were to be shifted to third parties.<sup>61</sup> The idea that factors under the household's control produce the residual for which it bears responsibility fits well with the intuition that investment in the gains and losses that accompany the household's own choices lie at the core of homeownership.<sup>62</sup>

---

<sup>56</sup> See YORAM BARZEL, *ECONOMIC ANALYSIS OF PROPERTY RIGHTS* 78–80 (2d ed. 1997); see also WILLIAM MARKBY, *ELEMENTS OF LAW* 159 (6th ed. 1905) (explaining that even though specific rights may be removed from ownership, "[h]owever numerous and extensive may be the detached rights, however insignificant may be the residue, it is the holder of this residuary right whom we always consider as the owner"); Henry E. Smith, *Property and Property Rules*, 79 N.Y.U. L. REV. 1719, 1795–97 (2004) (applying and explaining the idea of a property owner as "the holder of the residual claim").

<sup>57</sup> See Smith, *supra* note 56, at 1795–97.

<sup>58</sup> *Id.* at 1796.

<sup>59</sup> See *id.* at 1796–97.

<sup>60</sup> See, e.g., JOHN EMMEUS DAVIS, NAT'L HOUS. INST., *SHARED EQUITY HOMEOWNERSHIP: THE CHANGING LANDSCAPE OF RESALE-RESTRICTED, OWNER-OCCUPIED HOUSING* 65 (2006), available at <http://www.nhi.org/policy/SharedEquity.html> ("[T]he bulk of [home appreciation] is usually caused by societal factors outside of the homeowner's control, including public investment in the city as a whole, private investment in the surrounding neighborhood, changes in the regional economy, and changes in the way that residential real estate is regulated, financed, and taxed.").

<sup>61</sup> See Shiller & Weiss, *supra* note 55, at 5–11 (discussing moral hazard with respect to multiple decisions about the home, including maintenance, improvement, and marketing and sale of the home); *infra* Part II.B.

<sup>62</sup> Of course, homeowners can and do enter into contracts with maintenance companies, landscapers, interior designers, and the like with respect to onsite factors, and these contracts may shift enumerated risks in various ways (say, through warranties). See, e.g., BARZEL, *supra* note 56, at 115–17 (discussing the example of a refrigerator warranty). But the owner is responsible for orchestrating these arrangements (or delegating their orchestration) and bears the outcomes that remain after the contractual dust settles.

In contrast, it seems evident that homeowners need not speculate on local, regional, or national movements in housing prices to enjoy a genuine sense of ownership, just as they need not gamble on fires or natural disasters in order to be true owners. If there were no cost-effective way to disaggregate the impacts of these factors from homeowners' own difficult-to-measure inputs, we might nonetheless be required to make these risks part of the owner's residual package. If local housing indexes and other mechanisms can accomplish disaggregation at reasonable cost, however, the off-loading of those risks that lie out of the household's control would not seem to present any intrinsic threat to the notion of ownership.<sup>63</sup> To be sure, some homeowners will wish to take on the risk associated with home price movements outside their control, just as they might wish to engage in any other outside investment opportunity. But a household should not be required to purchase what amounts to a specific number of shares in a localized and undiversified index fund—the local housing market—simply because it desires a particular level of housing consumption.

Indeed, it would be mere happenstance if a household's optimal investment in local home price movements turned out to precisely correspond to the purchase price of the home that the household presently wishes to consume. That observation has implications that run in two directions. The analysis thus far has emphasized that some households may wish to accept less risk associated with offsite factors than is required by the traditional homeownership package. But other households (including some who do not own their own homes) might wish to invest at a greater level in a given local housing market than would be feasible through the traditional homeownership model. Consider the possibility discussed above that a home purchase within a given housing market might serve as a hedge against price increases within that same market.<sup>64</sup> In a period of rapidly rising home prices, a household might feel pressured to buy earlier than they otherwise would and obtain a more expensive house than they otherwise would in order to "lock-in" their purchasing power.<sup>65</sup> Decoupling consumption and investment would relieve such pressures by permitting people to purchase housing market futures and options without actually purchasing housing.

More generally, housing market futures and options enable investors to invest in more owner-occupied housing than they personally wish to consume. Investors can already invest in more housing than they wish to consume, of course, but only by entering into a landlord-tenant relationship,

---

<sup>63</sup> Whether disaggregation can be made sufficiently accurate and cheap to be worthwhile is a separate question. Although the development of local indexes has made such disaggregation more feasible, difficulties remain. See *infra* Part II.B. The point of the textual statement is simply that homeownership itself would not require acceptance of these offsite risks if mechanisms existed to parcel them out to investors.

<sup>64</sup> See *supra* text accompanying note 21.

<sup>65</sup> See Banks et al., *supra* note 21, at 9–11.

with its attendant moral hazards.<sup>66</sup> Investment in owner-occupied housing, which presumes the presence of an owner-occupant who can be trusted to keep up the house to the investor's standards, presently can only be achieved if the investor occupies the property herself. Thus, just as current arrangements require homeowners to invest fully if they want to consume owner-occupied housing, investors must consume housing themselves if they want to invest in owner-occupied housing. A market that enables some homeowners to consume beyond their investments would also allow other homeowners (or non-homeowners) to invest in more owner-occupied housing than they wish to consume. The fact that our current system of homeownership tethers consumption of housing to full investment in housing creates not one but two sources of potential suboptimality in homeownership.<sup>67</sup>

### C. *Decoupling Initiatives, Past and Present*

If decoupling some portion of investment risk from homeownership is such a good idea, one may well ask, why do not mechanisms already exist for accomplishing it?<sup>68</sup> There are two answers. First, quite a few such mechanisms *do* exist, albeit in limited forms, and this Section surveys some of them. Second, to the extent that these mechanisms have failed (so far) to attract widespread adoption by homeowners and institutions, there are plausible explanations. For one thing, the profusion of varying designs and an accompanying fragmentation of analysis has kept these programs from finding a firm theoretical footing. In addition, the challenges that face attempts to alter homeownership are not insubstantial and are likely to require significant investments in design, development, and experimentation—all of which take time and money. As Robert Shiller has observed, such financial innovations may represent public goods that the private market would be expected to undersupply.<sup>69</sup>

---

<sup>66</sup> See, e.g., Chau, Firth & Srinidhi, *supra* note 40, at 1391 (describing moral hazards for both tenant and landlord).

<sup>67</sup> Past treatments have suggested that the linkage of investment and consumption in housing produces an inefficiency only when consumption demand exceeds investment demand, and not in the opposite case. See, e.g., Henderson & Ioannides, *supra* note 19, at 104 & n.3 (describing the problem as amounting to a “one-directional indivisibility”).

<sup>68</sup> See, e.g., CAPLIN ET AL., *supra* note 4, at xiii (“If this is such a good idea, why has nobody done it already?”); Fischel, *supra* note 50, at 335 (“[I]f home equity insurance is the answer, why have the creative people who do real estate development and finance not come up with it on their own?”).

<sup>69</sup> See SHILLER, *MACRO MARKETS*, *supra* note 4, at 207–08. As Shiller explains, the innovator bears all of the cost and risk of developing a new financial market, while rivals can enter (and historically have entered) quickly thereafter to claim a share of the benefits. *Id.* at 207. This does not mean that financial innovations cannot occur—clearly, they can and do—but only that the benefits must be sufficiently large and the costs sufficiently low to make it worthwhile for an innovator to make an investment in a market whose benefits will be shared by others. *Id.* at 208. Based on this analysis, Shiller argues for public subsidization of innovative new markets. *Id.*

Below, I briefly discuss four models for explicitly altering the investment component of homeownership—a far from exhaustive survey, but one that is sufficient to offer a sense of the range of approaches.<sup>70</sup> Each of these models modifies the way in which changes in a home's market value translate into changes in homeowner payoffs. Under traditional homeownership, there is a one-to-one relationship between market value changes and changes in homeowner payoffs (setting aside bankruptcy protection, nonrecourse loans, and the like).<sup>71</sup> For each dollar that the home increases or decreases in value, the homeowner's payoff changes in the same direction by exactly one dollar.<sup>72</sup> The devices discussed below reduce (sometimes to zero) the positive or negative impact of changes in market value on the homeowner's payoff, either across all possible values or within some range.<sup>73</sup>

1. *Equity Insurance Programs.*—In 1978, the Village of Oak Park, Illinois pioneered an “equity assurance program” in an effort to forestall “white flight” in response to anticipated racial changes in the neighborhood.<sup>74</sup> The program promised to cover property value losses under specified circumstances.<sup>75</sup> The principle was identical to that behind Federal Deposit Insurance Corporation (FDIC) insurance: by reassuring people that

---

<sup>70</sup> Some additional arrangements implicitly accomplish a degree of decoupling. For example, rent control and other tenant protections can be viewed as attempts to provide a consumption experience that is closer to that of a homeowner without the accompanying investment. In addition, a portion of downside investment risk is effectively decoupled from homeownership through bankruptcy protection and other devices or practices (such as legal prohibitions on recourse against the borrower's other assets, nonrecourse loans, or loan balance forgiveness upon foreclosure) that keep homeowners from bearing the full brunt of home value losses. See Shiller & Weiss, *supra* note 55, at 3. These protections have become quite significant in the current housing market downturn, as some homeowners who have invested little or no money in their homes exercise the option simply to walk away from the loss by defaulting on the mortgage. See, e.g., John Leland, *Facing Default, Some Abandon Homes to Banks*, N.Y. TIMES, Feb. 29, 2008, at A1. Reverse mortgages are typically nonrecourse loans, and hence build in downside protection. See Shiller & Weiss, *supra* note 55, at 3.

<sup>71</sup> See Shiller & Weiss, *supra* note 55, at 13–14.

<sup>72</sup> The relationship between home value and the owner's equity in the home can therefore be depicted as a straight line with a slope of one. *Id.* at 12–13 & fig.1.

<sup>73</sup> These changes can be graphically depicted as changes in the slope of the line that represents traditional homeownership. See *id.* at 13–15 & figs.2–4; *supra* note 72.

<sup>74</sup> Maureen A. McNamara, *The Legacy and Efficacy of Homeowner's Equity Assurance: A Study of Oak Park, Illinois*, 78 NW. U. L. REV. 1463, 1467–68 (1984).

<sup>75</sup> The Oak Park program would pay homeowners for eighty percent of any loss on resale after five years of enrollment in the plan if the house sold below the applicable appraised value and the drop in value was not attributable to metropolitan-area value changes or to damage or loss to the individual property. *Id.* at 1468–69; Shiller & Weiss, *Home Equity Insurance*, *supra* note 5, at 32–33. Oak Park has not experienced a significant home price decline since the program was implemented, and no claim has been made under the program. *Id.* at 33. It is impossible to know what role, if any, the equity assurance program played in Oak Park's home price patterns, especially given that the equity assurance program was only one part of a multi-prong effort to preserve stability in Oak Park. McNamara, *supra* note 74, at 1481.

their investment is safe where it stands, cascades of fear-driven dislocations are precluded.<sup>76</sup> A number of other cities have adopted similar approaches.<sup>77</sup> In recent years, William Fischel has advocated home equity insurance to reduce provincial homeowner behavior, again focusing on the potential impacts of highly localized factors on home values.<sup>78</sup> Even more narrowly focused guarantees against home price declines have, on occasion, been offered by private industry to win support for sitings or expansions.<sup>79</sup>

Robert Shiller and others have sought to extend the home equity insurance concept to cover a much broader spectrum of risks, including housing market fluctuations.<sup>80</sup> A pilot program in Syracuse, New York has attempted to deliver such broad-spectrum protection to residents.<sup>81</sup> Robert Shiller and Karl Case have taken an important step toward making broader home equity insurance programs feasible by introducing local housing market indexes that could be used to settle insurance claims.<sup>82</sup> The Syracuse pilot program, for example, uses a ZIP code based housing price index to determine payouts.<sup>83</sup> These indexes respond to moral hazard concerns that arise from insuring home values—the worry that insured homeowners will

<sup>76</sup> See Marcus & Taussig, *supra* note 4, at 407 (“[T]he desired effect [of home equity insurance] is analogous to the success of FDIC in ending recurrent banking panics.”).

<sup>77</sup> See, e.g., Shiller & Weiss, *Home Equity Insurance*, *supra* note 5, at 32–33 (referencing a 1987 Chicago voter referendum that introduced a home equity assurance program that communities could opt into); Shiller, *supra* note 17, at 316 (noting that programs similar to the one established in Oak Park have been adopted in portions of Chicago and in the Chicago suburb of Aurora, Illinois, as well as in Patterson Park in Baltimore, Pittsburgh, and the cities of Ferguson and Florissant in Missouri); Home Equity Assurance Program, Florissant, Missouri, <http://www.florissantmo.com/CD/homeEquity.shtml> (last visited Feb. 18, 2008) (providing a summary of Florissant, Missouri’s program).

<sup>78</sup> See, e.g., Fischel, *supra* note 50, at 335–36. Fischel’s analysis proceeds from the observation that land use regulations such as zoning respond to a gap in the insurance market. See *id.* at 318 (citing Albert Breton, *Neighborhood Selection and Zoning*, in *ISSUES IN URBAN PUBLIC ECONOMICS* 241 (Harold Hochman ed., 1973)).

<sup>79</sup> See Tim Kane, *Cary Home-Value Guarantee on Table: Proposal a Carrot for Mine Expansion*, CHI. TRIB., Nov. 12, 2007, § 2, at C3 (reporting on a gravel-mining “company’s offer to guarantee nearby property values if it is allowed to expand a mining operation,” in Cary, Illinois—the third time gravel-mining companies have made such offers in Illinois); see also Fischel, *supra* note 50, at 336 (analyzing and critiquing the possibility of home equity insurance provided by developers).

<sup>80</sup> See *infra* Part I.C.4.

<sup>81</sup> For details on the program, see Home Value Protection, *supra* note 4. See also Andrew Caplin et al., *Home Equity Insurance: A Pilot Project* (Yale Int’l Ctr. for Fin., Working Paper No. 03-12, May 3, 2003), available at [http://ssrn.com/abstract\\_id=410141](http://ssrn.com/abstract_id=410141). Early reports indicated that the program had attracted few participants. Sarah Max, *Selling L.A., Buying Chicago*, CNNMONEY.COM, Aug. 9, 2004, [http://money.cnn.com/2004/08/06/real\\_estate/investment\\_prop/hedging/index.htm](http://money.cnn.com/2004/08/06/real_estate/investment_prop/hedging/index.htm) (“Since the [Syracuse] program was launched in August 2002, . . . only 76 homeowners have signed up, according to its director[,] Virginia Smith.”).

<sup>82</sup> See *infra* Part I.C.4.

<sup>83</sup> See Home Value Protection: Frequently Asked Questions, <http://www.syracusesni.org/equitysite/faqs/faqs.html> (last visited Feb. 18, 2008) (explaining how payments are tied to the ZIP code index and describing the incentive structure this provides).

be less concerned with taking care of their homes and less willing to expend effort to obtain a good resale price.<sup>84</sup>

2. *Collectivized Equity*.—Efforts to provide affordable homeownership have spawned a variety of arrangements known by names such as “limited equity co-ops” and “resale-restricted housing.”<sup>85</sup> Although the details of these arrangements vary, they all reconfigure the right to the home’s upside potential to achieve social objectives. The basic idea is to provide a low-income household with a home at a below-market price and then place limits on that household’s ability to “cash out” the home at its full market value through subsequent sales or leases.<sup>86</sup> The equity in the home does not fully belong to the household, at least at the outset, but rather is shared (in various ways) with some collective body, whether public or private.<sup>87</sup> When the home is sold, some part of the proceeds go to someone other than the household designated as its owner.

3. *Shared Appreciation and Shared Equity Models*.—Commercial lenders and investment companies have experimented with shared appreciation mortgages (SAMs) and shared equity mortgages (SEMs). Under these models, the lender compensates the homeowner for forgoing some of the equity in the home through a lower-priced mortgage or home equity loan. Notwithstanding some previous failed attempts with these products in the United States,<sup>88</sup> there has been a recent resurgence of interest in them. For example, the Bank of Scotland offered SAMs in the United Kingdom during the mid-1990s,<sup>89</sup> an Australian venture began offering “Equity Finance Mortgages” in 2007,<sup>90</sup> and an American company recently launched a simi-

---

<sup>84</sup> See, e.g., SHILLER, MACRO MARKETS, *supra* note 4, at 82; *infra* Part II.B (discussing indexes and other approaches to the problem of moral hazard).

<sup>85</sup> See, e.g., DAVIS, *supra* note 60, at 2–3; J. Peter Byrne & Michael Diamond, *Affordable Housing, Land Tenure, and Urban Policy: The Matrix Revealed*, 34 *FORDHAM URB. L.J.* 527, 541–51 (2007); Duncan Kennedy, *The Limited Equity Coop as a Vehicle for Affordable Housing in a Race and Class Divided Society*, 46 *HOW. L.J.* 85 (2002).

<sup>86</sup> See, e.g., Byrne & Diamond, *supra* note 85, at 545–48.

<sup>87</sup> See, e.g., DAVIS, *supra* note 60, at 3 (describing as a “distinguishing feature” of the shared equity programs under discussion “the emphasis they place on what is shared between individual homeowners and a larger community”); JACOBUS & LUBELL, *supra* note 4, at 5–6; Byrne & Diamond, *supra* note 85, at 546–47.

<sup>88</sup> See, e.g., Andrew Caplin et al., *Shared-Equity Mortgages, Housing Affordability, and Homeownership*, 18 *HOUSING POL’Y DEBATE* 209, 217–19 (2007).

<sup>89</sup> The product line has since been discontinued, apparently because it was not sufficiently attractive to investors. See Caplin et al., *supra* note 88, at 219 (discussing the Bank of Scotland mortgages and observing that “[t]he long and unpredictable nature of the payoff period appears to have been the chief reason that the Bank of Scotland withdrew its shared-equity mortgages from the market”). There have also been news reports of dissatisfaction among homeowners who used the product. See *infra* notes 191–92 and accompanying text.

<sup>90</sup> This mortgage product, which involves the sharing of both appreciation and downside risk, is offered by Rismark International and Adelaide Bank. See *Equity Finance Mortgage*, <http://www.efm.info/index.php?v=what> (last visited June 23, 2008).

lar program under the name of “REX Agreement.”<sup>91</sup> Although program details vary, the basic notion can be illustrated by the Bank of Scotland’s SAM, which provided households with interest-free home equity loans on which no payments were required until the home was sold or transferred at death. In exchange, the bank received a right to most of the home’s appreciation.<sup>92</sup>

Andrew Caplin and his coauthors urge adoption of a related model for sharing equity, known as “housing partnerships.”<sup>93</sup> This approach makes the homeowner a “managing partner” with full authority over the home, but grants certain rights to an “investing partner” who puts up half the cash for the property and receives half of the proceeds on resale.<sup>94</sup>

4. *Home Value Hedges.*—Although the preceding models contemplate rather specific changes in risk-bearing, new financial instruments tied to housing indexes<sup>95</sup> permit more open-ended trading in housing risk.<sup>96</sup> In spring 2006, the Chicago Mercantile Exchange (now CME Group) began offering S&P/Case-Shiller futures and options based on housing indexes.<sup>97</sup> CME Group currently offers index-based financial instruments for housing markets in ten major cities.<sup>98</sup> Because these futures and options offer a

---

<sup>91</sup> See James R. Hagerty, *Product Taps Home Equity Without Taking Out Loan*, WALL ST. J., May 8, 2007, at D3; see also REX & Co., *supra* note 4.

<sup>92</sup> See Shiller & Weiss, *supra* note 55, at 14–15 & fig.3 (describing and depicting the shared appreciation mortgage’s treatment of risk); Caplin et al., *supra* note 88, at 218–19 (describing this mortgage arrangement).

<sup>93</sup> CAPLIN ET AL., *supra* note 4.

<sup>94</sup> See generally *id.*

<sup>95</sup> See *supra* text accompanying notes 82–84.

<sup>96</sup> See, e.g., Noam Scheiber, *The Pork-Bellies Approach to Housing*, N.Y. TIMES MAG., Sept. 10, 2006, at 90, 92.

<sup>97</sup> See, e.g., CME GROUP, S&P/CASE-SHILLER HOME PRICE INDICES FUTURES AND OPTIONS: INTRODUCTORY GUIDE (2007), [http://www.cme.com/files/cmehousing\\_brochure.pdf](http://www.cme.com/files/cmehousing_brochure.pdf); Les Christie, *New Way to Bet on Real Estate*, CNNMONEY.COM, Mar. 22, 2006, [http://money.cnn.com/2006/03/22/real\\_estate/playing\\_the\\_home\\_price\\_market/index.htm](http://money.cnn.com/2006/03/22/real_estate/playing_the_home_price_market/index.htm); Chicago Mercantile Exchange, CME Housing Futures and Options: Frequently Asked Questions, [http://www.cme.com/files/housing\\_faq.pdf](http://www.cme.com/files/housing_faq.pdf) (last visited Feb. 18, 2008); Macro Markets, S&P/Case-Schiller Home Price Indices, [http://www.macromarkets.com/csi\\_housing/sp\\_caseshiller.asp](http://www.macromarkets.com/csi_housing/sp_caseshiller.asp) (last visited Feb. 18, 2008). Shiller and Weiss had previously designed and patented tradable instruments called “macro securities” to facilitate hedging. See SHILLER, NEW FINANCIAL ORDER, *supra* note 5, at 126–29. These securities, issued and redeemed in pairs consisting of an “up macro” and a “down macro,” represent offsetting bets on the movement of the index. *Id.* The up macro gains value (and the down macro loses value) as the index rises; the opposite occurs when the index falls. *Id.* at 127 (presenting an example using a GDP index); see also Michael Pereira, *Risk Management for the Age of Information*, 9 FORDHAM J. CORP. & FIN. L. 715, 729 (2004) (reviewing SHILLER, NEW FINANCIAL ORDER, *supra* note 5) (discussing this example).

<sup>98</sup> See CME GROUP, *supra* note 97, at 3. The cities are Boston, Chicago, Denver, Las Vegas, Los Angeles, Miami, New York, San Diego, San Francisco, and Washington, D.C. Futures and options settled to a “weighted composite index of U.S. real estate prices” are also available. *Id.*

flexible platform for buying and selling housing market risk, they open the door to gains from hedging.<sup>99</sup>

A simple example illustrates how hedging based on a housing index would work. Agatha, a homeowner who lives in the town of Doldrums, fears declining home values. Her house is currently appraised at \$200,000, and she would like to be able to sell it for that amount in five years, when she plans to move. An investor, Blake, sells Agatha a put option that gives her the right to receive, five years hence, a percentage of \$200,000 that is proportionate to any general decline in housing values within Doldrums (as reflected in the local housing index).<sup>100</sup> For example, if Doldrums has experienced a 10% decline in home values, the option that Agatha purchased from Blake is worth \$20,000 (10% × \$200,000). Agatha's home should sell for \$180,000, assuming its value tracks that of the local housing index.<sup>101</sup> The \$180,000 sales price added to the \$20,000 payout from Blake amounts to the \$200,000 Agatha originally paid for the house; she has been able to perfectly hedge the risk of a market decline.<sup>102</sup>

Agatha could also transact with respect to the local housing market's upside potential. For example, Agatha could sell Cody a call option that gives him the right to receive \$2,000 for each percentage point that the local housing market index rises by the end of the five-year period. If, at the end of five years, home prices in Doldrums have risen 10%, Agatha should receive \$220,000 when she sells her home, again assuming its value moves in concert with the Doldrums housing index. Agatha's gain of \$20,000 on the home sale will cover her required payout to Cody and leave her with her original investment of \$200,000. In the meantime, Agatha has been able to use the proceeds from the sale of the call option to pursue other investment opportunities or reduce her housing (or other) debt; she might even have used some of it to pay for the put option she purchased from Blake.<sup>103</sup>

---

<sup>99</sup> See Peter Englund et al., *Hedging Housing Risk*, 24 J. REAL ESTATE FIN. & ECON. 167 (2002) (estimating the potential gains from hedging, using data on housing prices from Stockholm).

<sup>100</sup> For discussion of the advantages of basing payouts on housing indexes rather than the appraisal value or sale price of each insured house, see, for example, SHILLER, *MACRO MARKETS*, *supra* note 4, at 82. I assume here that Agatha's actions cannot much affect the overall housing market in Doldrums. This simple example also assumes that Doldrums is a single housing market for indexing purposes, although indexing can instead break up a town into smaller units, such as ZIP codes.

<sup>101</sup> See *infra* Part II.B for a discussion of the risk that, for reasons out of a homeowner's control, the home's price will not track the local housing index.

<sup>102</sup> This simple example ignores the impact of inflation. For a discussion of the interaction between inflation and hedging, see, for example, SHILLER, *MACRO MARKETS*, *supra* note 4, at 96–98; Shiller & Weiss, *Home Equity Insurance*, *supra* note 5, at 31–32.

<sup>103</sup> Agatha might transact with the same investor (say, Blake) as to both the call and the put option. Such an arrangement would be identical to Blake buying futures in the local housing market from Agatha. See Shiller & Weiss, *Home Equity Insurance*, *supra* note 5 (discussing the use of puts to protect against downside risk and contrasting them with futures that would involve transacting as to both the upside and the downside). At the end of the five years, Blake receives (owes) the amount that the

Of course, most homeowners do not plan a move on a date certain in the future, but rather wish to be protected against price fluctuations over the entire (unknown) period that they will own the house, however long or short it turns out to be. Thus, short-term calls and puts must either be made available on a rolling basis or triggered by life events (such as the sale of a home) that are unpredictable in the individual case but predictable in the aggregate.<sup>104</sup> Creating workable financial instruments also requires attention to many other design elements, such as the appropriate construction, updating, and use of indexes;<sup>105</sup> the treatment of inflation;<sup>106</sup> the permissible timing for exercising an option;<sup>107</sup> and the timing and form of payments and payouts.<sup>108</sup> Although these issues are complex and difficult, past and ongoing work to address them suggests that they are not beyond the technical capacity of financial innovators.

A more formidable challenge is achieving widespread acceptance of these new hedges. Although it is possible that individual homeowners could trade in futures and options directly, most households' access to these housing risk markets would have to be mediated through a user-friendly interface provided by an insurer, lender, or other entity. For example, an insurance company could serve as a conduit in matching buyers and sellers of housing market risk, rather than having to price risk itself.<sup>109</sup> Alternatively, the offloading of risk might be built into the mortgage instrument.<sup>110</sup> Or, as

---

index indicates a \$200,000 home would have gained (lost) in value based on price movements within the local area.

<sup>104</sup> See *id.* at 39–44. Shiller and Weiss make detailed estimates of annual premiums for life-event triggered home equity insurance under a variety of assumptions, finding that in some cases a few hundred dollars annually would be sufficient to provide complete downside protection for a \$100,000 house (assuming no indexing for inflation). *Id.* at 43–44 & tbls.4–5. They also calculate the cost of fixed-term put options of one or two years, which are more costly. *Id.* at 36–37 & tbls.1–2. In all cases, the price would depend on the extent of protection and on the past behavior of the local housing market.

<sup>105</sup> See *infra* Part II.B.

<sup>106</sup> See sources cited *supra* note 102.

<sup>107</sup> These timing decisions would include the minimum holding period before a homeowner could cash in on changes in the home's value, the length of the option period, and whether the homeowner could exercise the option independent of specified events, such as moving out or selling the home.

<sup>108</sup> The investor's initial payment to the homeowner for the purchase of upside potential could be made in a lump sum, paid out over time, or could constitute savings built into the mortgage itself. See *infra* Part II.C.2. Likewise, payment for coverage against downside loss might be made either in a lump sum for the duration of the homeowners' time in the home, or in the form of annual premiums. Compare Shiller & Weiss, *Home Equity Insurance*, *supra* note 5, at 43–44 (calculating likely annual premiums to explore the potential for home equity insurance), with Caplin et al., *supra* note 81, at 21–23 (describing the use of a one-time payment for thirty years of coverage in the Syracuse pilot project). The one-time payment precludes strategic policy cancellation, a problem discussed in Shiller & Weiss, *Home Equity Insurance*, *supra* note 5, at 27–28. Caplin et al., *supra* note 81, at 21.

<sup>109</sup> Shiller & Weiss, *Home Equity Insurance*, *supra* note 5, at 33–34 (discussing “pass-through futures and options”).

<sup>110</sup> See Juerg Syz, Paolo Vanini & Marco Salvi, *Property Derivatives and Index-Linked Mortgages*, 36 J. REAL ESTATE FIN. & ECON. 23 (2008).

I suggest below, a separate entity could develop a user-friendly interface to seamlessly deliver home risk transactions to homebuyers.<sup>111</sup>

Shiller anticipated that the use of new risk management tools like housing futures and options would develop in two distinct stages—first adopted by sophisticated investors, and later adapted for use by ordinary consumers.<sup>112</sup> According to early reports, the trade volume for the new housing market securities has been relatively light.<sup>113</sup> It is possible that advances in the instruments themselves, such as a recent extension in the length of their terms, may help to make them more attractive to investors.<sup>114</sup> But it is also possible that assumptions about the order of progression need to be revised: To spur interest among investors, it may first be necessary to produce widespread demand among homeowners through the development of a comprehensible and user-friendly risk management interface.<sup>115</sup>

## II. INTRODUCING H2.0

As the survey above illustrates, efforts to decouple investment risk from housing consumption have taken diverse forms. Although these innovations all respond to the fact that the homeownership bundle encompasses investment components that may not well serve the needs of homeowners, these programs have been designed as adjuncts to traditional homeownership. None of the existing models returns to first principles to ask whether homeownership itself should be modified in a fundamental way. In developing H2.0, I hope to do just that.

I start by outlining the contents of the H2.0 bundle, which contains only part of the investment component presently packaged with homeownership. Next, I discuss a central design issue in producing (or approximating) that newly configured bundle—the disaggregation of onsite and offsite risks. Third, I examine the advantages for homebuyers of access to such a reduced-risk bundle. Finally, I discuss the advantages of making that new

---

<sup>111</sup> See *infra* text accompanying notes 163–64.

<sup>112</sup> SHILLER, *MACRO MARKETS*, *supra* note 4, at 201.

<sup>113</sup> See Gail Liberman, *Hedging Real Estate: The Derivatives Are Here; Are They The Answer?*, FIN. ADVISOR MAG., Nov. 2006, available at [http://www.fa-mag.com/past\\_issues.php?id\\_content=3&idArticle=1365&idPastIssue=115](http://www.fa-mag.com/past_issues.php?id_content=3&idArticle=1365&idPastIssue=115) (discussing reasons for low trade volume during the first several months that housing derivatives were available).

<sup>114</sup> See *id.* (describing the view that the one-year term limit for hedges represented a significant drawback for investors); News Release, CME Group, CME Group Extends Offerings of S&P/Case-Shiller Housing Contracts (Aug. 7, 2007), <http://cmegroup.mediaroom.com/index.php?s=43&item=603> (reporting on the extension of housing future and option terms to periods up to five years).

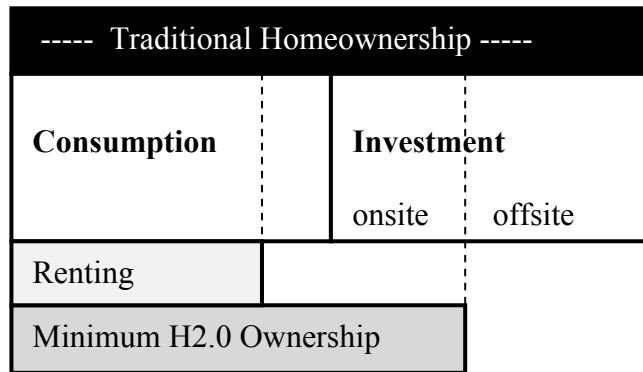
<sup>115</sup> Such a user-friendly interface could also help to create positive publicity for the development of the economic instruments, which might be viewed in isolation as speculative bets against local housing markets. See Pereira, *supra* note 97, at 732–33 (noting negative reactions to predictions markets introduced by the Pentagon’s Defense Advance Research Projects Agency in 2003 and observing that “public relations could be as important as economics in selling macro markets to the investing public”).

bundle seamlessly available to homebuyers as an off-the-rack tenure form with its own default settings.

A. *Configuring H2.0*

As the discussion in the previous Part suggests, there is a large gap between the constrained housing consumption opportunities available to renters and the full-blown package of investment and consumption that homeowners purchase as a matter of course. If we were to approach the problem of optimally designing homeownership for modern metropolitan conditions with fresh eyes, what would we include as standard elements in the bundle? Figure 1 sketches one answer to this question, drawing on a functional understanding of property as a container for an owner’s inputs and the resulting outcomes.

Figure 1: *Components of Homeownership*



As shown in Figure 1, traditional homeownership comprises both consumption and investment components.<sup>116</sup> Although I present these two categories as distinct, there is actually some overlap between them. Because the consumption stream extends over time, the as-yet-unused portion of that stream at any given point in time represents a form of savings.<sup>117</sup> The value of those savings—that is, the enjoyment that the household will realize through future consumption of housing—can fluctuate. In this sense, at least, even an intensely consumption-minded homeowner who plans to live in her home for the rest of her life is nevertheless an investor.<sup>118</sup>

<sup>116</sup> See *supra* note 19 and accompanying text.

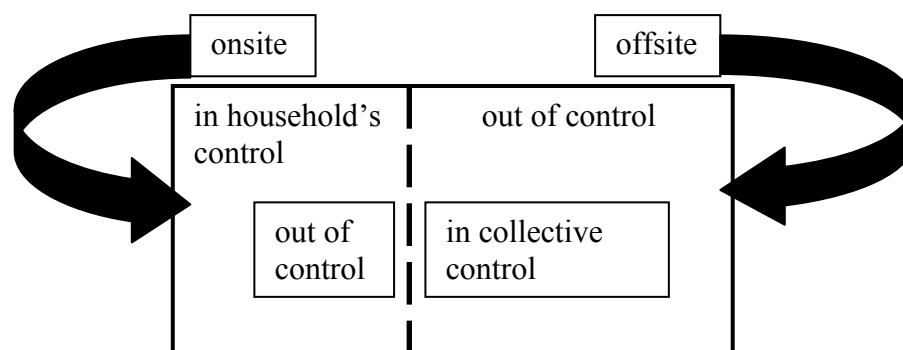
<sup>117</sup> Durable goods are commonly understood to contain such a savings component. See ALAN E.H. SPEIGHT, CONSUMPTION, RATIONAL EXPECTATIONS AND LIQUIDITY: THEORY AND EVIDENCE 10 (1989).

<sup>118</sup> The same might be said of a tenant during a given lease term, though the tenant may be able to appeal to the landlord for corrections to any downward trend in consumption value.

The dashed line cutting through the “consumption” box distinguishes between elements of consumption achievable through renting and those unique to homeownership.<sup>119</sup> If leaseholds were changed in certain ways, this dashed line (and the right edge of the “renting” bar) would move further to the right. The distinction would not disappear entirely, however, at least to the extent that “ownership” continues to carry some consumption cachet by conferring higher status and other benefits. As noted above, enjoyment of ownership-related consumption benefits may require a certain degree of investment.<sup>120</sup> In other words, there may be no conceptually coherent tenure form that would snap off cleanly at the right edge of the consumption box; to get all of those benefits, one must pick up more of the homeownership bundle.

The dashed line running through the “investment” box indicates that the investment portion of homeownership can be subdivided into volatility occasioned by onsite factors and that occasioned by offsite factors. As Figure 1 indicates, I propose that H2.0 ownership include, at a minimum, the investment component that corresponds to onsite factors. Defending this particular break point requires taking a closer look at the investment component, as shown in Figure 2.

Figure 2: Investment Factors



As the left-hand side of Figure 2 illustrates, most of the onsite factors lie within the individual household’s control. Some onsite risks lie outside the household’s control, however, such as fires not caused by negligent behavior on the part of the householders. Gains and losses associated with controllable factors are core elements in the homeowner’s residual claim.<sup>121</sup> Charging the impacts of these controllable factors to the homeowner is critical to attracting investment interest in other parts of the investment

<sup>119</sup> See *supra* Part I.A (discussing these differences).

<sup>120</sup> See *supra* Part I.B.

<sup>121</sup> See *supra* notes 56–62 and accompanying text.

package. The argument for including all onsite factors in the H2.0 bundle, including those that are not within the household's control, is that the individual household is in the best position to procure insurance against such eventualities. Because the risk will play out (or not) on the individual owner's parcel, a simple transaction between the homeowner and the insurer suffices.

As the right-hand side of Figure 2 indicates, offsite factors also exhibit some heterogeneity. Although offsite influences do not lie within the control of any individual household, homeowners as a group may have significant control over block-level, neighborhood, and local conditions through the use of norms, politics, exit options, and direct participation in the collective production of local public goods. Although attempts to exercise this control can be socially damaging,<sup>122</sup> some homeowner efforts build social capital and improve neighborhood and local conditions.<sup>123</sup> This raises the question whether allowing homeowners to avoid investment exposure to the subset of offsite factors that are amenable to collective control would make them less effective citizens and neighbors. My answer to this question is a qualified no, but the question is a difficult one that I take up in depth in Part IV.

To sum up, the standard H2.0 package would include the usual consumption incidents of homeownership, as well as the investment exposure relating to onsite factors. It would not include, as a default matter, the investment risk relating to offsite factors—although homebuyers would be free to add back in as much of that risk as they wished to assume.

### B. Disaggregating Onsite and Offsite Influences

The theoretically clear distinction between onsite and offsite influences on home values featured in my conceptual sketch of H2.0 cannot, of course, be drawn with such precision in practice. This concern has been discussed under the rubric of “moral hazard” in the literature—the possibility that a homeowner, after insuring against a loss or granting the proceeds of a future gain, will work less hard to avoid the loss or produce the gain.<sup>124</sup> Some of the responses to moral hazard produce hazards that run in the opposite di-

---

<sup>122</sup> For example, homeowners may work through the local political process to enact or sustain exclusionary zoning measures, which have been associated with a variety of societal harms. See, e.g., Lee Anne Fennell, *Homes Rule*, 112 YALE L.J. 617, 649–54 (2002) (book review of FISCHER, *supra* note 11) (discussing the harms of exclusionary zoning measures from the perspectives of both social justice and economic efficiency); Henry A. Span, *How Courts Should Fight Exclusionary Zoning*, 32 SETON HALL L. REV. 1, 15–22 (2001) (noting and evaluating several possible costs of exclusionary zoning measures).

<sup>123</sup> See *infra* Part IV.A (distinguishing between “value-enhancing collective control” and “value-reducing collective control”).

<sup>124</sup> See, e.g., Shiller & Weiss, *supra* note 55, at 6–11. An adverse selection problem may also be implicated if the payoff structure tends to attract those who are especially likely to experience subpar market outcomes. See, e.g., Shiller & Weiss, *Home Equity Insurance*, *supra* note 5, at 25–26 (referencing this “selection-bias problem”).

rection by effectively punishing a party for something that was not, in fact, under her control. Hence, the problem can be regarded more generically as one of disaggregation.

There are at least three distinct ways to go about disaggregating onsite and offsite influences on home values. These strategies can be combined to produce additional alternatives.

1. *Indexing.*—The advantages of housing market indexes for settling up home equity insurance claims and for facilitating trading in housing futures and options have already been noted. Put in terms of the present discussion, indexing has the potential to fairly neatly (though not perfectly) distinguish between the onsite influences for which we want to leave homeowners responsible and the offsite influences that might be more efficiently transferred to others. Although other disaggregation techniques exist, indexes win points for ease of administration. Although the index may be costly to construct, once in place it generates clear-cut answers about payoffs.

The construction of a workable local housing index implicates myriad technical factors that lie beyond the scope of this Article.<sup>125</sup> However, it is helpful to note one key tension: The thinner an index is sliced, the more capable it will be of drawing fine distinctions among homes, but the less well it will work as a basis for trading. The smaller the number of observations in a particular index and the fewer the market participants trading on that index, the less liquid and accurate it will be.<sup>126</sup>

The same design tension surfaces in efforts to disaggregate onsite and offsite influences on value. An index that perfectly tracked one particular home would of course reintroduce the full consideration of onsite factors. At the other extreme, a nationwide housing index that aggregated all owner-occupied housing would do a poor job of capturing regional and local offsite influences. In between these extremes, there are questions about whether any given housing index will pick up too much of what owners are doing on their own parcels (such as a home improvement trend within a particular neighborhood)<sup>127</sup> or too little of what is happening outside the parcel (such as highly localized undesirable land uses).<sup>128</sup>

---

<sup>125</sup> See, e.g., SHILLER, *MACRO MARKETS*, *supra* note 4, at 24–27 (discussing the potential for distortion of indexes through speculative trading). See generally *id.* at 116–200 (discussing a variety of issues relating to the construction, use, and updating of indexes).

<sup>126</sup> This issue affects the design of markets in many areas. See, e.g., Michael Abramowicz & M. Todd Henderson, *Prediction Markets for Corporate Governance*, 82 NOTRE DAME L. REV. 1343, 1352 (2007) (noting the concern that some prediction markets will have too few participants, “resulting in low liquidity and therefore lower reliability,” and discussing how to address that concern); James Salzman & J.B. Ruhl, *Currencies and the Commodification of Environmental Law*, 53 STAN. L. REV. 607, 645–48 (2000) (exploring the tradeoff between making tradable environmental currencies “fat and sloppy” and “thin and bland”).

<sup>127</sup> See SHILLER, *MACRO MARKETS*, *supra* note 4, at 166–68 (discussing the concern that home improvements could affect the housing index, but concluding that this factor would not be very significant).

These concerns illustrate “basis risk,” which Shiller and Weiss define “as the risk that fluctuations in the home price index will not match up well with fluctuations in the price of the home that are beyond the homeowners’ control.”<sup>129</sup> Basis risk is a real concern because it could keep risk management products from working as advertised. First, consider a household that purchases downside protection only. Assume the home’s value falls for reasons that have nothing to do with the household’s parcel-specific actions or omissions. Ideally, the index would fall by the same amount. But if it did not, and if payouts were made based on the index alone, the difference between the loss (if any) shown by the index and the actual loss the household experienced upon reselling their home would amount to a failure in the product’s protection.

Basis risk takes on an especially worrisome cast when the household sells upside potential, either on its own or in combination with the purchase of downside protection. Consider the following scenario: The index reflects a larger gain than is experienced by the homeowner, and the difference between the resale price as actually experienced and as predicted by the index is an artifact of imprecision in the index rather than the result of any acts or omissions by the household. If settlements were determined by the index alone, the homeowner would have to pay out the share of gains reflected in the index even though she did not realize those gains. An even more catastrophic manifestation of basis risk would occur if the index showed a gain while the home itself actually sold at a loss. Not only would an index-based payout system fail to protect against downside loss, but it would also add insult to injury by requiring someone in a loss position to make a payout for gains that were never experienced. These concerns make a purely index-based settlement system unattractive, especially where upside gains are alienated. However, indexes could be used in conjunction with mechanisms designed to correct for their shortcomings.<sup>130</sup>

2. *Accounting.*—Instead of relying on an index, disaggregation of onsite and offsite factors might be attempted on a property-specific basis. Before figuring the home’s gain or loss for purposes of settling up with investors, the home’s beginning value could be adjusted based on docu-

---

given the dollar value of home improvements relative to home values generally). It is possible, however, that the shift to H2.0 ownership might itself influence household investments in improvements.

<sup>128</sup> See Christian A.L. Hilber, *Neighborhood Externality Risk and the Homeownership Status of Properties*, 57 J. URB. ECON. 213, 238 (2005) (suggesting, given the role of neighborhood externality risk, that a real estate price index of the sort advocated by Shiller and Weiss “ought to be neighborhood specific if it is to be successful”).

<sup>129</sup> Shiller & Weiss, *supra* note 55, at 2. Basis risk might also work against the investor. A marked relaxation in maintenance norms in a given area, for example, might cause the index to drop, even though the individual households who lowered their maintenance standards would be responsible for the value change.

<sup>130</sup> See *infra* text accompanying notes 137–38.

mented acts or omissions of the homeowner.<sup>131</sup> For example, a kitchen renovation's impact on the home's value might be backed out of the resale price before calculating the home's appreciation, in order to give the owner credit for this onsite improvement. Similarly, an amount equal to the negative impact of dry rot might be added to the home's resale price before figuring the gain or loss attributable to offsite factors.

Whereas indexing attempts to separate onsite and offsite factors by pulling offsite factors out of the homeowner's payout, accounting works from the other side to pull onsite factors out of the investor's payout. This approach avoids basis risk, but it introduces costly measurement and verification problems that are likely to generate errors of their own. Indeed, it is the difficulty in measuring the impacts of onsite contributions to the home's value that arguably explains homeownership (the granting of the residual claim to the home's occupant) in the first place. As discussed below, an accounting approach could be combined with an index to pull additional offsite factors missed by the index out of the homeowner's payouts.<sup>132</sup> Measurement and verification problems would accompany this strategy as well, but these costs should be significantly lower than they would be with a pure accounting strategy. The index, if well constructed, will do most of the work most of the time, and accounting for those offsite impacts missed by the index is likely to be easier than tracing the impacts of every input made by owners on their properties.<sup>133</sup>

3. *Directing*.—Instead of disaggregating onsite and offsite impacts by counting up impacts or applying an index—strategies intended to leave the risk associated with onsite changes on the homeowner—it would also be possible for a program to direct onsite inputs.<sup>134</sup> A spectrum of approaches could be employed. At one extreme, an arrangement could give direct control over certain onsite matters to the investor (or agent thereof)—an approach that both erodes homeowner autonomy and requires costly interventions.

Instead of taking over onsite functions directly, a program might instead regulate inputs by requiring or prohibiting certain actions. This alter-

---

<sup>131</sup> This seems to be the approach taken by REX & Company in the REX Agreement. REX & Co., FAQs, [http://www.rexagreement.com/index.php/rex/who\\_we\\_serve\\_homeowners\\_faqs/](http://www.rexagreement.com/index.php/rex/who_we_serve_homeowners_faqs/) (last visited Feb. 18, 2008) (explaining that homeowners would be credited for improvements, based on an appraisal, before calculating the company's share).

<sup>132</sup> See *infra* text accompanying notes 137–38.

<sup>133</sup> There remains the possibility, noted above, that onsite inputs (e.g., a remodeling trend) will show up in the index itself. See *supra* note 127 and accompanying text. Increasing the area upon which the index is based could help to combat this concern, although at the cost of potentially making the index less sensitive to localized offsite factors. Nonetheless, it may be cheaper to identify and correct for omitted offsite impacts (which will involve factors in the community) than to learn about and account for factors like remodeling trends.

<sup>134</sup> Equity sharing arrangements designed to provide affordable housing seem to have made use of this approach. See DAVIS, *supra* note 60, at 96–99.

native requires monitoring and some sort of enforcement for violations. Such a directing approach might piggyback on an existing land use control regime enforced by a homeowners association or local zoning authority. If such an entity could be relied upon to enforce certain kinds of standards (through injunctive relief if necessary), this enforcement would guarantee a set of inputs without the need for any additional intervention or regulation. It must be borne in mind, of course, that these land use regimes can themselves cut deeply into homeowner autonomy and may have other negative societal effects as well.<sup>135</sup>

At the other end of the spectrum, a program might simply provide a schedule of commonly performed or recommended actions, with specific dollar values attached to each.<sup>136</sup> A household that engaged in listed actions in accordance with articulated standards would be credited in specified amounts, while a household that failed to undertake recommended maintenance efforts would be debited as specified. Pricing particular acts and omissions reserves to homeowners a larger degree of autonomy than would flat prohibitions. Moreover, if the schedule were accurately tied to impacts on resale values, it could be educational for less experienced homeowners or could help to counter the unrealistic predictions of overoptimistic would-be home improvers. Such an approach would be costly to administer, however. More interestingly, it would accomplish a significant shifting of risk relating to onsite factors from the homeowner to the investor. To the extent that luck or unobservable factors influence the relationship between inputs listed on the schedule and their market outcomes, actual results may not line up with the amount that the homeowner is credited or debited. Some homeowners might highly value the greater payoff certainty that such *ex ante* specification would provide, but it would also constrict the universe of factors that make up the homeowner's residual claim.

4. *Hybrid Approaches.*—There are many ways that the models above might be combined. One promising alternative would use local housing indexes to generate raw payoff figures that could then be adjusted as needed to address basis risk. An additional layer of insurance might be used to accomplish this, as Shiller and Weiss have suggested.<sup>137</sup> Payouts on the “basis” insurance could be based either on verification of differential local

---

<sup>135</sup> One concern is that prohibitions ostensibly directed at particular land uses might have the intention or effect of excluding categories of people. For discussion of the negative effects of exclusionary land use controls, see, for example, Fennell, *supra* note 122, at 649–54; Span, *supra* note 122, at 15–22. A separate concern is that land use restrictions will cut too deeply into a property owner's prerogatives, and may do so in ways that the owner might not fully appreciate when purchasing the property. See, e.g., Lee Anne Fennell, *Contracting Communities*, 2004 U. ILL. L. REV. 829, 876–82 (examining this point and citing literature elaborating on it).

<sup>136</sup> Larger or more unique proposed improvements might be handled through a preapproval process.

<sup>137</sup> Shiller & Weiss, *Home Equity Insurance*, *supra* note 5, at 26 (“[T]here could be complete insurance of the price change that is due to aggregate market conditions and coinsurance for the deviation of the home price from the price change inferred by the index.”).

conditions or on an investigation that rules out the possibility that negative onsite factors—such as neglect, destruction, an extraordinarily rapid sale, or a sale that was not conducted at arm’s length—were responsible for the outcome.

Some elements of the “directing” approach might also be incorporated into such a hybrid model. The insurer against basis risk could develop schedules of recommended maintenance and sales practices, which the homeowner might be required to follow (and document) in order to later make out a basis risk claim. As an alternative method for addressing moral hazard at the time of sale, recovery under the insurance policy could be made contingent on the homeowner extending to the insurer a right of first refusal—an option to acquire the home at a price slightly higher than the proposed sales price during a temporally constrained window.<sup>138</sup>

### C. Advantages for Homeowners

At this point, it is helpful to briefly summarize the benefits H2.0 could offer homeowners: reduced risk, affordability, and increased portfolio choice. These advantages have, of course, received attention in the literature surrounding the programs and policies surveyed in Part I.C. I reserve for Parts IV and V a discussion of larger societal impacts, both positive and negative, that might accompany the widespread adoption of the H2.0 form of homeownership.

1. *Reduced Risk.*—The advantage of protecting homeowners against the risk of downward housing market trends requires little elaboration.<sup>139</sup> Not only does risk buffering protect current homeowners against negative outcomes, it also can make potential homebuyers more willing to enter into homeownership in the first place.<sup>140</sup> But some caveats are in order. First, the extent of risk reduction possible through H2.0 depends on the household’s exposure to risk under traditional homeownership. Homeowners who can accurately predict that they will stay within a local housing market in which price movements are closely correlated will have little to fear from volatility; on the contrary, they may embrace an early home investment as a

---

<sup>138</sup> See CAPLIN ET AL., *supra* note 4, at 137 (incorporating a right of first refusal with a premium and a time limit into the housing partnership model). The reason for the premium and the short time window is to avoid discouraging buyers from writing a contract on an H2.0 home. *See id.* at 137–38.

<sup>139</sup> Two less obvious points relating to risk reduction grow out of the discussion. First, the fact that risk is reduced not only for the homeowner but also for the lender helps to increase the affordability of debt financing. *See infra* text accompanying notes 147–49. Second, to the extent that H2.0 leads to greater diversification of holdings, it can help to guard not only against the risk of loss but also against the risk of below market returns. *See infra* Part II.C.3.

<sup>140</sup> *See, e.g.,* Marcus & Taussig, *supra* note 4, at 405 (suggesting that protection against downward price movements “would increase the demand for, and hence broaden the ownership of, single-family, owner-occupied dwellings”); Ayres & Nalebuff, *supra* note 4, at 101 (explaining that when home prices are in decline, demand may fall rather than rise because would-be buyers “get worried that [they] might be about to catch a falling knife”).

hedge against future price increases.<sup>141</sup> Because such households are already able to control their home-investment risks, they would seem to have less to gain from H2.0's risk-reduction capacity.<sup>142</sup> Nonetheless, homeowners' efforts to accomplish risk buffering through the consumption of housing may alter the timing and magnitude of their home purchases, as well as their decisions whether to relocate to other housing markets.<sup>143</sup>

Second, the free trading of location-specific housing risk could enable households not only to offload unwanted risk but also to take on additional risk within a particular location. My analysis has implicitly assumed that the investors taking on location-specific risk from homeowners would hold it in relatively diversified portfolios, but in the absence of regulatory constraints, some households might use the instruments underlying H2.0 to become even more heavily invested in their neighborhoods than they are presently. Another possibility is that households who do reduce their exposure to offsite sources of home-value volatility will compensate for the enhanced safety in that domain with increased risk-taking in other domains.<sup>144</sup> For example, households that have purchased protection against the downside impacts of offsite factors might accept more risk in the stock market or job market than they otherwise would, or take greater risks with home improvements. Nonetheless, H2.0 would offer homeowners a tool for reducing risk that is not presently available, and we might expect at least some subset of these homeowners to benefit from the risk reduction.

2. *Affordability.*—A homebuyer who can sell off some of a home's potential gains will have a powerful new instrument for enhancing her purchasing power. In short, she can finance her home using equity as well as debt.<sup>145</sup> The ability to get more house for the same money also means greater access to premium public services, such as excellent public schools or beautiful neighborhood parks, that are effectively rationed through the housing stock. Greater affordability will translate into different results for different consumers. For some, it will make the purchase of a home (or a nicer home) possible; for others it will result in lower mortgage (or other)

---

<sup>141</sup> See *supra* note 21 and accompanying text.

<sup>142</sup> See Han, *supra* note 21, at 4–5.

<sup>143</sup> See Banks et al., *supra* note 21, at 9–11; *infra* notes 254–57 and accompanying text. Households' use of home purchases as risk hedges can be understood as a response to incomplete markets—with fully developed housing risk markets, the purchase of risk hedges and homes could be made independently. See Banks et al., *supra* note 21, at 10; Han, *supra* note 21, at 5.

<sup>144</sup> I thank Amitai Aviram for drawing my attention to this possibility. The potential for such compensatory risk-taking has been noted in other settings. See, e.g., JOHN ADAMS, RISK 59 (1995) (“Because people compensate for externally imposed safety measures, the risk regulators and safety engineers are chronically disappointed in the impact that they make on the accident toll.”). For example, drivers required to wear seatbelts may drive more aggressively than they would if unbelted. See *id.* at 113–28.

<sup>145</sup> See Caplin et al., *supra* note 88, at 217 (explaining that shared-equity mortgages would add equity financing alternatives to the “pure debt instruments” currently available to homeowners).

indebtedness; and for yet others, it will free up funds to be invested elsewhere.

Because downside protection requires a payment from the homebuyer to the investor, it is not generally viewed as enhancing affordability. Indeed, it would erase some of the affordability gains of the sale of upside potential.<sup>146</sup> But the added cost of protection against downward price movements may be partially offset by the impact of that protection on mortgage prices.<sup>147</sup> Mortgage lenders presently accept the risk that home prices will decline, a development that increases the probability of borrower default while simultaneously reducing the chance that the home's value will be sufficient to repay the loan.<sup>148</sup> Lenders bank against that exposure in part through underwriting requirements but also through higher loan charges that help to cover the nonperforming loans.

If the risk of market decline can be removed from the equation, lenders are helped in two ways. First, borrower defaults become less likely because borrowers can sell at a loss in a declining market and receive a payment that covers the proportion of the loss that is attributable to market decline. Second, if the borrower does default, the lender can collect that payment on the borrower's behalf, making default less costly for the lender.<sup>149</sup> These risk reductions would be expected to translate into lower-priced mortgages for homebuyers. This would have an additional, beneficial feedback effect: Other things equal, the less costly the mortgage, the less likely it is that the borrower will default.

Interestingly, the cost savings for the lender—and hence for the borrower—will be greatest for the highest risk borrowers.<sup>150</sup> These financially constrained borrowers are also more likely to elect to sell upside potential, which will generate additional cost savings and further reduce the chance of default. By increasing the availability of lower-cost loans to the riskiest classes of homebuyers, H2.0 offers at least a partial response to one of the largest fears associated with the prospect of increased regulation of subprime lending—that it will make mortgage loans to the most credit-

<sup>146</sup> If houses generally appreciate over time, however, the sale of the upside should exceed the premiums required to insure against the downside, producing net increases in affordability.

<sup>147</sup> See generally Syz, Vanini & Salvi, *supra* note 110.

<sup>148</sup> See, e.g., Karl E. Case & Robert J. Shiller, *Mortgage Default Risk and Real Estate Prices: The Use of Index-Based Futures and Options in Real Estate*, 7 J. HOUSING RES. 243, 245 (1996) (observing that the default probability and the cost of default to lenders both increase when home prices fall).

<sup>149</sup> See Syz, Vanini & Salvi, *supra* note 110, at 25 (observing that “the expected loss on the mortgage is reduced because of the housing hedge”). See generally Case & Shiller, *supra* note 148 (discussing potential for lenders themselves to purchase home equity insurance products).

<sup>150</sup> See Syz, Vanini & Salvi, *supra* note 110, at 33–34 (explaining, in the context of a proposal to link mortgages to housing price indexes, that the protection provided by such a plan would be more valuable for borrowers who have lower creditworthiness). Because the Syz, Vanini, and Salvi plan builds downside protection into the mortgage itself, this added value takes the form of a smaller price increase for less creditworthy borrowers. See *id.*

challenged homebuyers infeasible.<sup>151</sup> The extra security that H2.0 provides to lenders could help keep the loan supply to credit-challenged homebuyers from drying up even if constraints are placed on the pricing and structuring of loans.<sup>152</sup>

I do not mean to suggest that H2.0 will resolve all problems of subprime lending. On the contrary, new regulatory protections might be required to keep lenders from becoming too complacent about the possibility of borrower default in setting underwriting standards, given H2.0's capacity to lower their exposure in the event of market downturns. But because H2.0 leaves more money and less risk on the table, it has the potential to make homeowners better off.

3. *Increased Portfolio Choice.*—H2.0's ability to give homeowners greater portfolio choice interacts with both affordability and risk reduction. Money that would otherwise have to be invested in a home in order to enjoy a given housing consumption stream will not have to be so invested because it is provided by an outside investor who is purchasing some of the home's upside potential.<sup>153</sup> These savings can be invested elsewhere, perhaps in more diversified holdings. Alternatively, the saved funds can reduce mortgage indebtedness on the home—a move that does not increase diversification,<sup>154</sup> although it reduces the risk of default. A real concern, discussed at more length below, is that many homebuyers will get neither of these benefits because they will still choose to purchase the most expensive house for which they can qualify for financing. They will then enjoy heightened consumption benefits (because they can qualify for a more expensive home if they sell off the upside potential) but will receive no portfolio diversification and no diminution in debt load.

Given these possibilities, it cannot be confidently claimed, at least absent design features that would constrain homebuyer choice, that portfolios will necessarily become less house-heavy, more diversified, or more prudent as a result of H2.0. Some homeowners may even expand their holdings in the undiversified local housing market by taking on some of the risk

---

<sup>151</sup> See, e.g., Damian Paletta, *Regulators Tighten Subprime-Lending Rules*, WALL ST. J., June 30, 2007, at B1 (discussing tension between consumer protection and limiting of consumer choices); James Surowiecki, *Subprime Homesick Blues*, NEW YORKER, Apr. 9, 2007, at 27 (“We do need more regulatory vigilance, but banning subprime loans will protect the interests of some at the expense of limiting credit for subprime borrowers in general.”).

<sup>152</sup> I take no position here on the merits of increased regulation of subprime lending. In any case, steps in that direction are already underway. Stephen Labaton, *Lenders Fight Stricter Rules on Mortgages*, N.Y. TIMES, Apr. 28, 2008, at A1.

<sup>153</sup> See, e.g., CAPLIN ET AL., *supra* note 4, at 86–98 (describing these advantages in the context of the “housing partnerships” model).

<sup>154</sup> If a household with funds invested elsewhere uses some of those funds to pay down a mortgage, its holdings actually become less diversified. See Chatterjee, *supra* note 19, at 8–9. In the scenario in the text, the extra money put into the mortgage is not coming from otherwise invested funds but rather is raised by selling off some of the home's upside potential.

of their neighbors. It can only be said that consumers will have more *choice* in how they allocate dollars to different portions of their portfolios. At the same time, optimizing the portfolio arguably becomes less important if consumers avail themselves of the downside protection H2.0 will offer, which provides at least some of the risk buffering that portfolio diversification would be able to provide.

The temporal dimension of investment choices also requires discussion. Ideally, people would not only diversify across holdings but also “across time,” rather than waiting until late in life to make the bulk of their investments.<sup>155</sup> However, young people often have little money of their own available to invest. Because mortgages permit households to buy homes using a high proportion of borrowed dollars, they enable people to invest much larger sums in the early portions of the life cycle than would otherwise be possible.<sup>156</sup> In this sense, homeownership contributes to the temporal diversification of investments, even though the substance of the investment (the home) remains undiversified.<sup>157</sup>

From one perspective, this observation suggests that the home investment may be a better deal for homeowners than the discussion thus far has indicated. But another way of looking at the matter is to ask, as Ian Ayres and Barry Nalebuff recently have, why we do not expand opportunities for temporally diversified investments beyond the context of the home.<sup>158</sup> Not only is the home investment undiversified and hence risky, it is tied to consumption needs and thus may be larger or smaller than is optimal for the household’s investment needs. Although the idea cannot be worked out here, it should be possible to formulate a loan product capable of operating in conjunction with H2.0 to deliver significant degrees of leverage to homeowners without requiring that their investments be concentrated solely in the local housing market.

#### D. *Off the Rack or Build from Scratch?*

If shifting risk from homeowners to investors can produce important gains, the question remains how best to go about accomplishing those transfers. As discussed above, mechanisms for reallocating homeownership risk have long been under development, and although some important design issues remain, the technical problems do not seem insurmountable.<sup>159</sup> Thus,

<sup>155</sup> See Ian Ayres & Barry Nalebuff, *Mortgage Your Retirement*, FORBES, Nov. 14, 2005, at 150.

<sup>156</sup> Leverage ratios of 20-1 (or higher) are not uncommon for housing investments, while leverage in other investments is usually much more limited (typically 2-1 for stocks, for example). See *id.* For further discussion of the home investment from a life cycle perspective, see Marjorie Flavin & Takashi Yamashita, *Owner-Occupied Housing and the Composition of the Household Portfolio*, 92 AM. ECON. REV. 345 (2002).

<sup>157</sup> I thank Michael Abramowicz for this point.

<sup>158</sup> Ayres & Nalebuff, *supra* note 155, at 150.

<sup>159</sup> See *supra* notes 102–08 and accompanying text (referencing a variety of design details for housing futures and options); *supra* Part II.B (discussing disaggregation challenges).

with a few modifications, tools that already exist or are in the works could be used to reach the target that property theory suggests is the right one—a narrowing of mandatory homeowner investment risk to onsite factors, which are either under the homeowner’s control or efficient for the homeowner to insure against personally. What, then, would be the point of introducing a new tenure form like H2.0? If we already have (or will soon have) the technical capacity to reshape home investment risk in endlessly flexible ways, why not let the market supply an assortment of products for modifying traditional homeownership, and let consumers choose exactly which ones they wish to use? In theory, the raw materials of risk transfer could be used to build from scratch something that resembles my idea of H2.0 as well as any number of alternatives.

In the following Subsections, I discuss the advantages of adopting a new, off-the-rack version of homeownership, and discuss the extent to which such a new tenure form would require legal changes.<sup>160</sup>

*I. Advantages of the H2.0 Tenure Package.*—My case for the H2.0 package as a new starting point for homeownership is based on three considerations: its compatibility with property theory, its ability to serve as a focal point for the further development of law, and its cognitive role in facilitating widespread acceptance of new risk allocation arrangements.

First, introducing H2.0 as a new starting point is theoretically more coherent than altering, piecemeal, a homeownership form that no longer serves the needs of most households. To see this point, consider a fictitious municipality, Stockville, where land buyers are required to purchase one share of stock in the county’s largest enterprise (say, a sock factory) for each square foot of land they purchase. As long as the stock purchase adds little cost or risk to the real estate package, it might be tolerated. But if the company’s stock begins to skyrocket and fluctuate wildly, we would expect bright minds to quickly seize on the idea of separating the investment in socks from the investment in Stockville real estate.

In this case, it is easy to see that scaling back the Stockville real estate bundle so that it no longer includes a stock purchase requirement would be a more coherent approach than leaving the bundle unchanged and inventing elaborate devices to alter it after the fact. Of course, unbundling offsite

---

<sup>160</sup> Property forms, which are limited in number, are often described as being standardized or “off the rack.” See, e.g., Francesco Parisi, *Entropy in Property*, 50 AM. J. COMP. L. 595, 621–22 (2002); Carol M. Rose, *What Government Can Do for Property (and Vice Versa)*, in THE FUNDAMENTAL INTERRELATIONSHIPS BETWEEN GOVERNMENT AND PROPERTY 209, 213–14 (Nicholas Mercurio & Warren J. Samuels eds., 1999) (discussing “off-the-rack property packages” developed by courts and legislatures); *infra* notes 167–72 and accompanying text. However, arrangements capable of reducing information or transaction costs may also be created through standardized contract language or statutes. See, e.g., Frank Easterbrook & Daniel R. Fischel, *Voting in Corporate Law*, 26 J.L. & ECON. 395, 401 (1983) (describing corporate law’s “off-the-rack principles” as a kind of standard form contract). See generally Henry E. Smith, *Modularity in Contracts: Boilerplate and Information Flow*, 104 MICH. L. REV. 1175 (2006).

risks from homeownership is not as simple as suspending a senseless stock purchase requirement. But from a theoretical perspective, the goal should be the same—a sensibly configured bundle delivered seamlessly to the purchaser without extraneous risk attached. Risk transfer mechanisms should serve only as a means to accomplishing that end.

Here, we can see how H2.0 differs from the array of products that previously have been developed to subtract particular subsets of upside or downside risk from homeownership. The category of risks that are off-loaded by default through H2.0 are not limited to either downside or upside volatility, nor defined by reference to particular social ills, nor constrained based on the identities of the parties to the transaction. Instead, the central organizing principle behind H2.0 is a distinction between onsite and offsite factors affecting home value that is based on the owner's scope of effective control. Although homeowners may want to invest in offsite factors (just as residents of Stockville might wish to invest in their local sock factory), that investment should entail a separate, conscious transaction.

Second, a new tenure form solves a coordination problem by providing a focal point around which law and shared social and cultural understandings can evolve.<sup>161</sup> Most immediately, the existence of such a focal point would facilitate debate about the merits of changing the risk allocation that accompanies homeownership. To date, the numerous existing and proposed models that change how homeownership risk is allocated are difficult to even converse about in an efficient way because they all have different names and often different purposes as well.<sup>162</sup> A theoretically coherent bundle with well-known default settings can offer a more unified springboard for public discourse.

Moving forward, a single focal point would facilitate the orderly evolution of law. Just as ownership forms such as condominiums, cooperatives, and common interest communities have become comprehensible legal categories around which law has developed, so too could a new version of homeownership serve as a centerpoint around which new legal understandings could develop. In addition, providing a unified label for a new tenure regime will have significant advantages in terms of consumer comprehension. Consistent with the development of H2.0 as its own focal point, I would recommend not integrating it into the familiar vehicles of insurance

---

<sup>161</sup> I am grateful to Noah Zatz for discussions on this point. The idea that law itself can offer a focal point capable of solving private coordination problems has been explored in, for example, Richard H. McAdams, *A Focal Point Theory of Expressive Law*, 86 VA. L. REV. 1649 (2000). My concern here is with establishing a focal point for addressing the coordination games inherent in the development of the law and in the production of shared social understandings. *See id.* at 1658–72 (discussing and comparing focal points provided by third parties and by the law).

<sup>162</sup> *See supra* Part I.C (discussing a variety of models for altering homeownership risk arrangements).

policies or mortgages, at least initially.<sup>163</sup> Instead, a separate entity would market this tenure form to consumers and take care of preparing the necessary option agreements to transfer upside and downside equity seamlessly (from the consumer's perspective).<sup>164</sup>

Third, and most important, without a new paradigm for homeownership, the widespread adoption of mechanisms designed to alter home value risk seems unlikely. Having a comprehensive new mental template as a starting point will be crucial to effecting such a paradigm shift. As discussed in Part III, cognitive features relating to the processing of risks, gains, and losses pose significant obstacles to incremental do-it-yourself changes in risk-bearing. Creating a new default package with pricing that already reflects the shedding of investment risk is likely to be essential in making an alternative to traditional homeownership cognitively viable.

2. *Legal Implications of a New Tenure Form.*—I have used the phrase “new tenure form” thus far without specifying exactly what that would mean in legal terms. One possibility would be the insertion of a new possessory estate into the existing ranks of freehold property forms. Indeed, this might seem to be an almost inevitable implication of the arguments I have made. But, on closer examination, creating a new possessory estate is wholly unnecessary and would only serve to introduce new costs and complexities.

To see this, suppose that the H2.0 estate were created by legislative or judicial fiat tomorrow. A current owner of a fee simple, Owen, would now have the legal capacity to convey an H2.0 estate to a homebuyer, Henrietta, while separately conveying the offsite investment component to an investor, Ivor. So far so good. But notice what happens when Henrietta wants to sell her home to a new buyer, Blanche. If Blanche wants to purchase a fee simple estate (as many homebuyers presumably will continue to do, even after H2.0 becomes available), she must transact with both Henrietta and Ivor in order to regain the divided pieces of that estate. The need to transact with multiple parties is likely to raise transaction costs considerably.

It is no easier for Blanche to purchase the H2.0 estate in isolation. Assuming Blanche's willingness to pay for the home is based in part on offsite factors, the gain or loss that the sale generates for Henrietta directly implicates Ivor's interest in the property. Typically, each sale would be a trigger for an H2.0 investor's payoff for precisely this reason.<sup>165</sup> As a practical

---

<sup>163</sup> It is also relevant that mortgage and insurance products are subject to complex regulatory regimes that have not been designed with the goals of this sort of risk-offloading in mind. See Caplin et al., *supra* note 81, at 24–28. Regulators could address a stand-alone product on its own terms rather than through regulations that were designed for dissimilar products.

<sup>164</sup> Because H2.0 can reduce mortgage costs, the entity might also play a coordinating role in connecting consumers to lenders and negotiating discount packages.

<sup>165</sup> Blanche could, in theory, buy an H2.0 estate subject to Ivor's claims against Henrietta (or Henrietta's claims against Ivor). But if the interests could remain splintered as resales proceed, it is not clear

matter, then, it would be necessary to reunite the property into a fee simple at each sales point, so that it could either be transferred in its entirety to a traditional homebuyer, or in its constituent parts to an H2.0 buyer and investor. But if the H2.0 estate cannot survive resale, there is no reason to formulate it as a special possessory estate, rather than as a standardized set of contractual arrangements between the owner of a fee simple and an investor.<sup>166</sup> Moreover, the literature on the *numerus clausus*<sup>167</sup> offers some possible reasons to resist adding another option to the limited slate of property forms. For example, the fact that property rights bind those who are not parties to an agreement might argue for standardization.<sup>168</sup> Although I do not take a position here on the arguments surrounding the *numerus clausus*, nothing in the H2.0 formulation dictates a departure from existing property templates.

Instead, H2.0 would retain the fee simple estate as the basic unit of analysis and would accomplish the transfer of risk contractually within that structure. Although it is a question of terminology whether this route really

---

when accounts would ever be settled. If numerous resales were to occur between settlement points between investors and H2.0 owners, the difficulties of disaggregating onsite and offsite impacts and determining who is to be paid what amount presumably would become increasingly intractable.

<sup>166</sup> Many additional questions remain, including whether the arrangement would grant the investor who is entitled to upside appreciation an interest secured by the home itself (that is, a property interest that would be good against successors) or whether instead the investor's claim would be purely contractual in nature. See, e.g., Bernard Rudden, *Economic Theory v. Property Law: The Numerus Clausus Problem*, in OXFORD ESSAYS IN JURISPRUDENCE, 3D SERIES 237, 240–41 (John Eekelaar & John Bell eds., 1987) (distinguishing “a pure contract debt” from a “security” such as a mortgage). One possibility, which I take no position on here, would be an analogue to the “anti-lien”—a negative covenant that would prohibit the homeowner from alienating the property or granting additional security interests in it without first fulfilling the obligations due the investor. See Uriel Reichman, *The Anti-Lien, Another Security Interest in Land*, 41 U. CHI. L. REV. 685, 701–07 (1974) (discussing the ways in which an anti-lien resembles and differs from a traditional security interest); see also Lynn M. LoPucki, *The Unsecured Creditor's Bargain*, 80 VA. L. REV. 1887, 1924–31 (1994) (discussing “asset-based unsecured lending” that relies on negative covenants).

<sup>167</sup> See, e.g., Henry Hansmann & Reinier Kraakman, *Property, Contract, and Verification: The Numerus Clausus Problem and the Divisibility of Rights*, 31 J. LEGAL STUD. 373 (2002); Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*, 110 YALE L.J. 1 (2000); see also Rudden, *supra* note 166, at 245–63 (considering a number of rationales for the *numerus clausus* principle, but finding them less than fully convincing); Nestor Davidson, *Standardization and Pluralism in Property Law*, 61 VAND. L. REV. (forthcoming 2008) (May 2008 draft on file with author) (reviewing scholarly accounts of the *numerus clausus* and offering a different take on the purposes of standardization).

<sup>168</sup> See, e.g., Hansmann & Kraakman, *supra* note 167, at 383–84 (arguing that the limited number of forms helps to provide adequate notice when property rights are divided); Merrill & Smith, *supra* note 167, at 26–34 (discussing how standardization of in rem rights reduces externalities from measurement costs). But see, e.g., Glen O. Robinson, *Personal Property Servitudes*, 71 U. CHI. L. REV. 1449, 1482–88 (2004) (challenging Merrill and Smith's account based on the capacity of notice to overcome the lack of standardization, and noting analogous problems, such as unobservable measures of quality, that are not resolved through property form standardization); Rudden, *supra* note 166, at 253–54 (questioning whether the advantages of standardization will be realized given the ability of parties to contractually modify property arrangements).

produces a new tenure form, it can easily produce the functional equivalent of one by establishing a standardized contractual interface that accomplishes the basic move from traditional homeownership to the default H2.0 package. Common interest communities provide a useful analogy. Members of these communities typically hold their individual parcels in fee simple, but a set of covenants, conditions, and restrictions agreed to upon purchase modifies, often dramatically, the homeowner's standard package of property rights and the nature of her relationship with her neighbors.<sup>169</sup> The resulting arrangement, which can be customized in innumerable ways, simply combines two standard elements from the existing property menu—the fee simple estate and the servitude.<sup>170</sup> Thus, it is not necessary to stray from the standardized property menu to transform the content and meaning of property ownership.<sup>171</sup>

What I have in mind, then, in casting H2.0 as a new tenure form is not a new possessory estate, but rather a set of off-the-rack contractual arrangements that will quickly become familiar to homebuyers as a conceptually coherent alternative to traditional homeownership. Legislation defining this alternative would facilitate both its adoption by institutional players and consumers, and its regulation by governmental actors.<sup>172</sup> As I indicated at

---

<sup>169</sup> See, e.g., Fennell, *supra* note 135, at 830–31, 838; Uriel Reichman, *Residential Private Governments: An Introductory Survey*, 43 U. CHI. L. REV. 253, 268–75 (1976).

<sup>170</sup> See, e.g., Merrill & Smith, *supra* note 167, at 12–17, 35–38 (detailing the standard real property menu, which includes, among other things, possessory estates and servitudes, and noting the many ways in which these elements can be combined); Davidson, *supra* note 167 (manuscript at 6–10) (listing standard property forms, which include possessory estates, security interests, and servitudes). To be sure, Merrill and Smith characterize equitable servitudes, first endorsed in *Tulk v. Moxhay*, 41 Eng. Rep. 1143 (Ch. 1848), as a “significant breach of the *numerus clausus*,” albeit one that was rapidly cabined by subsequent judicial opinions. Merrill & Smith, *supra* note 167, at 17. Nonetheless, this property form was well entrenched by the time that modern common interest communities began to proliferate. See, e.g., ROBERT H. NELSON, *PRIVATE NEIGHBORHOODS AND THE TRANSFORMATION OF LOCAL GOVERNMENT* xiii–xiv (2005) (discussing the dramatic increase in private community associations over the last forty years); Fennell, *supra* note 135, at 834–35 (summarizing the history of common interest communities).

<sup>171</sup> See, e.g., NELSON, *supra* note 170, at xiii (observing that the growing prevalence of private communities “represents a radical new development in the history of American local government” and one that is “significantly altering the way tens of millions of Americans obtain housing”). Covenants in common interest communities run with the land; hence, they are not merely contractual in nature, but are instead classed as servitudes—property interests good against third parties. See, e.g., Reichman, *supra* note 169, at 279–80. Because H2.0 investments would settle up at each sales point, contractual instruments would appear sufficient to modify the fee simple estate. It is possible, however, that these contracts would need to be buttressed with some form of security instrument that would either restrict the property's alienation until accounts were settled or that would give investors a claim against successors. See *supra* note 166. Regardless, it is clear that changes in property holdings can be attained by combining the existing fee simple estate with other legal instruments; it is not necessary to invent a new possessory estate.

<sup>172</sup> See Rose, *supra* note 160, at 213 (suggesting that one of the roles that government performs with respect to property involves “defining off-the-rack versions of entitlements that individuals (or at least their lawyers) can understand”); Davidson, *supra* note 167 (manuscript at 38–42) (explaining that limited, standardized property forms can serve as “regulatory platforms”).

the outset, however, H2.0 will not lock homebuyers into any particular risk configuration. The tenure form will come not only with default settings, but also with dials for adjusting away from those initial settings. Although the difference between this approach and simply supplying homeowners with a set of tools with which they can alter their traditional homeownership bundle may seem subtle, it is likely to be cognitively crucial. Having a familiar and standardized set of arrangements for reallocating homeownership risk is also likely to be important to policymakers in evaluating and responding to the societal effects of changes in risk-bearing among homeowners.

### III. COGNITIVE IMPLICATIONS

One aspect of human psychology, loss aversion, suggests that H2.0's replacement of risky prospects with surer ones would be attractive.<sup>173</sup> But other cognitive features present obstacles to H2.0's adoption.<sup>174</sup> Cognitive biases also might lead people to misuse a new tenure form like H2.0. Thus, we might worry both that people would not use H2.0 when it would benefit them, and that they would make use of H2.0 in ways that would harm them.<sup>175</sup> I address these concerns in turn.

#### A. Barriers to Acceptance

Two features of human cognition, overoptimism and regret avoidance, might keep homeowners from using H2.0 when it would be in their best interests to do so. Because framing is central to how the payoffs are viewed, the introduction of a new default point could help to address these concerns.

---

<sup>173</sup> People dislike experiencing a loss much more than a failure to achieve an equivalent gain. See, e.g., Daniel Kahneman et al., *Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias*, 5 J. ECON. PERSP. 193, 199–203 (1991). Of course, what constitutes a loss and a gain depends on the implicit baseline in use, which is a function of how the problem is framed. See, e.g., Amos Tversky & Daniel Kahneman, *The Framing of Decisions and the Psychology of Choice*, 211 SCIENCE 453, 453 (1981); see also SHILLER, NEW FINANCIAL ORDER, *supra* note 5, at 86–87 (noting the relevance of the framing literature to the design of mechanisms for managing risk); Patricia A. McCoy, *A Behavioral Analysis of Predatory Lending*, 38 AKRON L. REV. 725, 727–32 (2005) (discussing the interaction of loss aversion and lending practices in the homeownership setting).

<sup>174</sup> See, e.g., SHILLER, MACRO MARKETS, *supra* note 4, at 17–30 (discussing psychological barriers to the acceptance of new risk management tools); SHILLER, NEW FINANCIAL ORDER, *supra* note 5, at 82–98 (discussing how psychological insights apply to risk management).

<sup>175</sup> I focus here only on the decisions of homeowners, not the choices of the investors who would be necessary to the successful operation of a program for reassigning homeownership risk. Although investors as a group may have more sophisticated views of money and risk and may be relatively less burdened by cognitive biases, it is possible that resistance to novel financial arrangements would not come exclusively from the consumer side.

1. *Overoptimism.*—People tend to be more optimistic about many aspects of their lives and finances than is objectively justified.<sup>176</sup> This overoptimism extends to investments generally and to home values specifically.<sup>177</sup> If people believe their homes will not lose value, then purchasing downside risk protection will seem unnecessary. Likewise, if people hold unrealistic beliefs about their home’s upward value trajectory, then the price at which an investor would be willing to buy the upside potential will seem too low. Thus, a valid initial question is whether overoptimism would make H2.0 a nonstarter.

There are a few reasons why this might not be the case. Significantly, H2.0’s target audience includes not only current homeowners but also those who are not yet homeowners. Optimism and confidence among current homeowners as to the predicted future value of their homes thus does not capture the mental states of all those who might employ H2.0. Because homeowners are a self-selected group who chose to buy notwithstanding the cost and risk involved in existing institutional arrangements, we would expect their ranks to contain disproportionate numbers of people who are optimistic about home values. Tenant households may include more of those who are less optimistic about home price movements, and who would therefore find value in H2.0’s risk buffering.

In addition, some homeowners may espouse optimism and confidence as a defense against cognitive dissonance and buyer’s remorse. Having made the purchase, it may be functional to assume that one has not made a horrible mistake. This does not necessarily mean that one would not have chosen differently at the time of purchase if a lower-risk alternative had been available. Some support for this thesis is found in the anecdotal evidence that homeowners tend to be fretful participants in local govern-

---

<sup>176</sup> See, e.g., SHELLY E. TAYLOR, *POSITIVE ILLUSIONS: CREATIVE SELF-DECEPTION AND THE HEALTHY MIND* 32–34 (1989); Christine Jolls, *Behavioral Economic Analysis of Redistributive Legal Rules*, 51 *VAND. L. REV.* 1653, 1659–62 (1998); Neil D. Weinstein, *Unrealistic Optimism About Future Life Events*, 39 *J. PERSONALITY & SOC. PSYCHOL.* 806, 810 tbl.1 (1980).

<sup>177</sup> A recent poll that reflected “widespread unease about the U.S. economy” nonetheless found that only sixteen percent of respondents predicted a decline in the value of the household’s home during the next six months, notwithstanding significant slowdowns in sales and mounting inventories. David Streitfeld, *Economic Fears Exclude Home Values*, *CHI. TRIB.*, Apr. 12, 2007, § 3, at 1 (reporting on the results of a Los Angeles Times/Bloomberg poll). In addition to optimistic projections about future price movements, homeowners may hold inaccurate perceptions of the home’s current value. See Sumit Agarwal, *The Impact of Homeowners’ Housing Wealth Misestimation on Consumption and Saving Decisions*, 35 *REAL ESTATE ECON.* 135, 141 tbl.2 (2007) (finding, in an empirical analysis of 81,943 home value estimates by homeowners and their financial institutions, that homeowners overestimate the home’s value by 3.1% on average). Homeowners may also experience “overconfidence”—a distinct but related bias that involves an underestimation of the likelihood of error in one’s assessment. See, e.g., David Dunning et al., *The Overconfidence Effect in Social Prediction*, 58 *J. PERSONALITY & SOC. PSYCHOL.* 568, 569 (1990) (reviewing literature on “miscalibrated judgmental confidence”); Daniel Kahneman & Dan Lovallo, *Timid Choices and Bold Forecasts: A Cognitive Perspective on Risk Taking*, 39 *MGMT. SCI.* 17, 26 (1993) (“There is massive evidence for the conclusion that people are generally overconfident in their assignments of probability to their beliefs.”).

ment.<sup>178</sup> If they truly believed that they had no chance of suffering a decline in home values and that fabulous returns awaited them on resale, then this fear-driven behavior would be difficult to explain.

To look at the question from a slightly different angle, the fact that people tend to be optimistic about their own investment choices does not mean that optimism dictates making any particular set of investment choices. H2.0 would facilitate investing less in local housing markets and more in other enterprises about which homeowners might be equally or more optimistic. In addition, H2.0 leaves the homeowner exposed to that subset of gains and losses that are squarely under her control—that is, precisely where homeowners are most inclined to be optimistic.<sup>179</sup> To the extent that indexes are used to determine payouts, for example, homeowners can channel their optimism into their own home's outperformance of the index. Although there might be some concerns about disappointment on this front (not every home can outperform the index, just as not everyone can be above average), the optimism is likely to produce socially valuable behaviors.

Finally, it is important to keep in mind that H2.0 is not only a tool for overcoming risk, but also an affordability tool. For this reason, H2.0 might be attractive even to those who are quite sanguine about home prices. Optimism alone cannot turn those with too few resources into homebuyers.

2. *Regret Avoidance.*—Another reason that consumers might steer clear of H2.0 is regret avoidance.<sup>180</sup> Attempts to avoid future regret, coupled with a cognitive apparatus that causes actions to be regretted more than omissions,<sup>181</sup> can lead people to favor the status quo.<sup>182</sup>

---

<sup>178</sup> See, e.g., Fischel, *supra* note 2, at 144–45 (relating an incident at a zoning board meeting in which homeowner opposition to a development plan was apparently based on risk aversion, rather than negative expected value).

<sup>179</sup> This optimism translates into a greater willingness to take gambles that are viewed as under one's control. See SHILLER, *MACRO MARKETS*, *supra* note 4, at 24 (“Research on gambling behavior has stressed that most gamblers have preferences for activities that offer them some sense of control and mastery . . .”). However, there is often an “illusion of control” over events that actually contain a large luck component. See, e.g., Kahneman & Lovallo, *supra* note 177, at 27–29; Ellen J. Langer, *The Illusion of Control*, 32 *J. PERSONALITY & SOC. PSYCHOL.* 311 (1975).

<sup>180</sup> See, e.g., Graham Loomes & Robert Sugden, *Regret Theory: An Alternative Theory of Rational Choice Under Uncertainty*, 92 *ECON. J.* 805, 820 (1982) (“Regret theory rests on two fundamental assumptions: first, that many people experience the sensations we call regret and rejoicing; and second, that in making decisions under uncertainty, they try to anticipate and take account of those sensations.”). See generally David E. Bell, *Regret in Decision Making Under Uncertainty*, 30 *OPERATIONS RES.* 961 (1982). For a discussion of the role of regret in impeding housing derivatives markets, see Shiller, *Derivatives Markets*, *supra* note 5, at 17–20 (focusing on the regret that a homeowner might experience if she spent money to hedge her home and it failed to lose value).

<sup>181</sup> See Daniel Kahneman & Amos Tversky, *The Psychology of Preferences*, 246 *SCI. AM.* 160, 173 (1982) (presenting an example comparing the regret attributed to an actor (George), who sells stock in one company to purchase stock in another company and is worse off as a result, to that attributed to another actor (Paul), who is worse off by the same dollar amount because he stuck with the stock he owned).

People are more likely to anticipate regret when they know that, after making their choice, they will obtain full knowledge not only about the outcome chosen, but also about the outcome that was not chosen.<sup>183</sup> Because many “paths not taken” involve significant uncertainty, people are often protected from regret (and hence from its anticipation) by an inability to fully assess what would have happened in the counterfactual state.<sup>184</sup> In contrast, if one elects H2.0 over traditional homeownership when purchasing a particular home, the counterfactual alternative (owning the home’s full upside and downside) remains continually in view as the homeowner follows housing trends in her neighborhood; it stands starkly at the center of her attention when the home is eventually sold. On average, houses will appreciate over time. Hence, it might seem that regret would not be a rare occurrence for H2.0 owners, but rather the typical state of affairs.

In assessing the significance of regret avoidance for the viability of H2.0, it is helpful to separate downside protection from the transfer of upside potential. People frequently buy insurance without anticipating or experiencing any regret if no covered event occurs; on the contrary, insurance may be purchased precisely to avoid the regret that would result from a

---

and did not switch to a different company’s stock). Kahneman and Tversky suggest that the action (switching stocks) is easier to imagine having been otherwise: “Apparently it is easier for George to imagine not taking an action (and therefore retaining the more advantageous stock) than it would be for Paul to imagine taking the action.” *Id.*; see also RICHARD H. THALER, *THE WINNER’S CURSE: PARADOXES AND ANOMALIES OF ECONOMIC LIFE* 73 (1992) (noting an “asymmetry between omission and commission” in experiencing and anticipating regret over an unfavorable outcome); Daniel Kahneman, *Varieties of Counterfactual Thinking*, in *WHAT MIGHT HAVE BEEN: THE SOCIAL PSYCHOLOGY OF COUNTERFACTUAL THINKING* 375, 388–92 (Neal J. Roese & James M. Olson eds., 1995) (examining the amount of regret associated with omission and commission, respectively).

<sup>182</sup> See, e.g., Robert E. Scott, *Error and Rationality in Individual Decisionmaking: An Essay on the Relationship Between Cognitive Illusions and the Management of Choices*, 59 S. CAL. L. REV. 329, 340 (1986) (suggesting that because “individuals weight the anticipated cost of regret more heavily than the corresponding benefit of pride,” they may be inclined not to make a given choice if they are otherwise in equipoise about it).

<sup>183</sup> For studies demonstrating this result, see, for example, Ilana Ritov, *Probability of Regret: Anticipation of Uncertainty Resolution in Choice*, 66 *ORG. BEHAV. & HUM. DECISION PROCESSES* 228 (1996); Ilana Ritov & Jonathan Baron, *Outcome Knowledge, Regret, and Omission Bias*, 64 *ORG. BEHAV. & HUM. DECISION PROCESSES* 119 (1995); Eric van Dijk & Marcel Zeelenberg, *On the Psychology of ‘If Only’: Regret and the Comparison Between Factual and Counterfactual Outcomes*, 97 *ORG. BEHAV. & HUM. DECISION PROCESSES* 152 (2005).

<sup>184</sup> See, e.g., van Dijk & Zeelenberg, *supra* note 183, at 156 (“[V]ulnerability to regret is moderated by the uncertainty people may experience regarding counterfactual outcomes, and the comparability of counterfactual outcomes with factual outcomes.”). Even when it is possible to determine the value of an unchosen alternative, such as a stock that one did not buy, people have limited attention to devote to tracking the progress of every alternative that was not selected over an extended period of time. This observation is consistent with findings that unfavorable results from acts of commission tend to be “more available in memory,” and hence their frequency may be overestimated. See Dale T. Miller & Brian R. Taylor, *Counterfactual Thought, Regret, and Superstition: How to Avoid Kicking Yourself*, in *WHAT MIGHT HAVE BEEN: THE SOCIAL PSYCHOLOGY OF COUNTERFACTUAL THINKING*, *supra* note 181, at 305, 307–14.

failure to insure against a low-probability but severe event.<sup>185</sup> Regret avoidance seems more clearly implicated when people contemplate alienating the home's upside potential. Self-serving attribution bias might be expected to amplify this effect.<sup>186</sup> People tend to attribute good outcomes that they experience to skill and bad outcomes that they experience to bad luck.<sup>187</sup> Homeowners are thus likely to attribute any gains that are realized on a home to their own personal ability and savvy. If the early adopters of an H2.0 program felt cheated whenever they had to give up money they viewed themselves as having earned—or if potential adopters could foresee their own negative reactions on this score—the program might not get off the ground, or might not stay off the ground for long.

There are some additional factors that might attenuate anticipated regret, however, at least for some homeowners. How the homeowner uses the benefits that she receives in exchange for the upside potential, as well as the other ways (if any) that the homeowner could obtain those same benefits, will be important. First, consider a homeowner who uses H2.0 to get into a more expensive home than she could otherwise qualify to finance. The appropriate point of comparison on resale is not what the homeowner's house would have netted her had she not alienated equity rights because that particular house would have been out of reach for the homeowner. Rather, the appropriate comparison would be the gains on resale from the less expensive house that she could have afforded without altering equity arrangements, less the disutility from having to live in that house rather than in the one she actually occupied. Typically, there will be a much greater degree of uncertainty about the returns that the homeowner would have received had she opted for a house in a different price range than there will be about the returns on the house that she actually purchased. Where an actor does not expect to have good information about the counterfactual outcome, anticipated regret is reduced.<sup>188</sup>

Even if the returns on the cheaper alternative could be known with certainty (suppose the homeowner had previously identified a specific house in that less expensive price range, knew exactly the price at which she could

---

<sup>185</sup> As Shiller has discussed, the name “insurance” itself may carry positive connotations that produce a particular framing effect. See SHILLER, *NEW FINANCIAL ORDER*, *supra* note 5, at 83–84.

<sup>186</sup> See, e.g., Amy H. Mezulis et al., *Is There a Universal Positivity Bias in Attributions? A Meta-Analytic Review of Individual, Developmental, and Cultural Differences in the Self-Serving Attributional Bias*, 130 *PSYCHOL. BULL.* 711, 712 (2004) (“The self-serving attributional bias is defined as the tendency of individuals to make attributions for positive events that are more internal, stable, and global than their attributions for negative events.”).

<sup>187</sup> Eric Van den Steen, *Skill or Luck? Biases of Rational Agents* 1–2 (MIT Sloan Sch. of Mgmt., Working Paper No. 4255-02, 2002), available at [http://www.ssrn.com/abstract\\_id=319972](http://www.ssrn.com/abstract_id=319972) (“People tend to attribute success to their own skills and failures to bad luck.” (citation omitted)). See generally NASSIM NICHOLAS TALEB, *FOOLED BY RANDOMNESS: THE HIDDEN ROLE OF CHANCE IN LIFE AND IN THE MARKETS* (2d ed. 2004) (contending that luck is often mistaken for skill).

<sup>188</sup> See *supra* note 183 and accompanying text.

have purchased it, and observed it being resold at precisely the same time as the house that she ended up buying), the counterfactual state of the world in which the owner bought the cheaper house is not directly comparable with the owner's actual outcome. The consumption streams from the two homes involve experiential elements that cannot be easily reduced to a common metric like money. Studies have shown that when the counterfactual and actual outcomes are not directly comparable, regret (and the anticipation of regret) is diminished.<sup>189</sup> Moreover, the consequences of the counterfactual state of living in a different house will often be both uncertain and difficult to compare. It is hard to know, for example, whether one's child would have done as well in a different school, or whether one would have felt as safe in a different neighborhood. Thus, regret avoidance may be muted or absent for people who anticipate using H2.0 to access better housing stock than they could otherwise afford.

Not everyone will want to use H2.0 in this way. People may use the benefits provided by H2.0 to pay down or avoid debt, or to make other investments. Assuming this category of buyers occupies the same homes that they would have occupied under traditional homeownership, the relevant comparison is the H2.0 payoff plus or minus the gains or losses on the other investments (or debt reduction). Because these elements can be reduced to dollars, there is no lack of comparability. When viewed *ex ante*, however, the house might be either a better or worse investment than the alternatives, making regret imaginable either way. What may be most important, then, is which choice is viewed as the status quo arrangement and which is viewed as an active investment decision.

A particular danger of actual and anticipated regret may exist when H2.0 is used as an alternative mechanism for raising funds that could instead be borrowed through a conventional loan. The Bank of Scotland's experience with SAMs in the mid- to late-1990s is instructive on this score. In exchange for giving up a hefty share of their home's appreciation, customers were given interest-free loans that did not have to be repaid until the home was sold.<sup>190</sup> Some customers became outraged when the amount that they owed to the bank grew as home prices experienced rapid apprecia-

---

<sup>189</sup> See van Dijk & Zeelenberg, *supra* note 183, at 154 ("If comparability lies at the heart of regret, the (in)comparability of factual and counterfactual outcomes may be another feature explaining why we do not constantly go about kicking ourselves over forgone outcomes."). Van Dijk and Zeelenberg studied this effect by asking subjects to imagine choosing between two "scratch cards" and finding, on the one they selected, either a €15 coupon for liquor or (in a different condition) a €15 coupon for books. *Id.* at 155. They were then told that the unchosen scratch card would have yielded a €50 prize—in different conditions, either a €50 book coupon or a €50 liquor coupon. When the forgone €50 card was for a different product category than the €15 prize given to the subject (e.g., where the subject received a €15 book certificate and the forgone prize was a €50 liquor certificate), reported regret was lower than when the actual prize and the forgone prize were from the same product category. *See id.* & tbl.2.

<sup>190</sup> See Caplin et al., *supra* note 88, at 218.

tion.<sup>191</sup> Rather than frame the transaction as one in which the right to some of the gains on resale was alienated in exchange for valuable benefits (interest-free access to money for as long as the homeowner wished to own the home), homeowners viewed the appreciation that had to be credited to the bank upon sale of the home as representing unconscionably high interest charges on the initial loan.<sup>192</sup> As this example illustrates, the way in which consumers frame transactions is important.

3. *Framing and Defaults.*—Because people dislike losses much more than failures to achieve gains, the implicit baseline from which changes are measured matters a great deal.<sup>193</sup> The baseline is also important to regret avoidance because it determines which choices will be coded as commissions and thus will be especially likely to trigger regret. Because traditional homeownership has long been the dominant model in the United States, it is inevitable that consumers will measure payoffs against that baseline, at least in part, for the foreseeable future. However, H2.0's new default package could eventually represent a new baseline against which action or inaction could be assessed.

Behavioral research shows that defaults can have a powerful influence on choices, drawing as they do on inertia, and perhaps also on the consumer's faith in those who have designed the institutional interface.<sup>194</sup> Because action would be required to move away from H2.0's defaults, the decision to take on offsite risk would be framed as a positive act. In other words, the homebuyer must consciously choose to add in risk factors lying outside of her parcel and over which she has no direct control. If she adds in only the downside risk, she will save some money, but loss aversion is likely to steer her away from this move. If she adds in the right to upside potential, her net outlay for the home increases. She must ask herself

---

<sup>191</sup> See, e.g., Jeff Prestidge, *Trapped by 367% Interest Loan*, THISISMONEY.CO.UK, Jan. 8, 2006, [http://www.thisismoney.co.uk/mortgages/mortgages/article.html?in\\_article\\_id=406104&in\\_page\\_id=58](http://www.thisismoney.co.uk/mortgages/mortgages/article.html?in_article_id=406104&in_page_id=58) (reporting that due to “[r]ampant house price inflation,” an elderly couple with a SAM found that “the amount now due to the bank has swollen grotesquely”).

<sup>192</sup> See *id.*

<sup>193</sup> See, e.g., Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 *ECONOMETRICA* 263, 274, 286–88 (1979) (noting the significance and potential movement of the “reference point” from which gains and losses are measured).

<sup>194</sup> See, e.g., James J. Choi et al., *Passive Decisions and Potent Defaults* (Nat'l Bureau Econ. Res., Working Paper No. 9917, 2003), available at <http://www.nber.org/papers/w9917>. Some of the reasons that defaults make a difference in the context Choi et al. studied—401(k) plan choices—would not be applicable to the present discussion. For example, when given an open-ended time window in which to move away from a default, people may procrastinate on making an intended change. *Id.* at 3. Because the H2.0 interface would require making a decision of some kind at the time of home purchase, the alternative of procrastination would not be available. Nonetheless, the idea that movement away from a default requires action could be significant here, as could the consumer's view of the default as providing “implicit advice.” See *id.* at 3, 18–19. However, Choi et al.'s suggestion that “[e]mployees may treat a zero default as weaker implicit advice than a non-zero default” might also translate over to H2.0, if zero defaults were put in place for offsite factors. See *id.* at 19 n.9.

whether she wants to invest in her local neighborhood housing market with that extra outlay, or whether she would rather invest in something else, like a stock index fund, or a larger home, or reduced credit card debt.

Framed in this manner, the choice to stick with the default arrangement may seem unexceptional. Because choosing the default requires no action, it is also less likely to induce regret. Of course, H2.0 will not be the only game in town; rather, it will be the new kid on the block. Thus, it will not represent “the” default arrangement for homeownership, but rather only a competing paradigm for homeownership. The question is whether the new paradigm can be made attractive and familiar enough to gain the attention of consumers.

Home sellers and real estate agents, who have an intense interest in moving homes into the hands of buyers, might be the natural parties to launch such a publicity campaign.<sup>195</sup> H2.0’s use of a single default setting would facilitate the easy communication of an “H2.0 price” along with the regular price. Multi-list software could be upgraded to permit home hunters to search within regular or H2.0 price ranges. If homes that previously seemed out of reach begin to show up on home seekers’ radar screens, we might expect significant consumer interest in this approach.

### B. Potential for Misuse

The discussion above examined biases that might keep those who could benefit from H2.0 from choosing it, as well as some strategies for counteracting those biases. But at least as worrisome is the possibility that cognitive biases might cause people to use H2.0 in ways that are ultimately self-defeating. The largest concern in this regard relates to time-inconsistent preferences. Many people behave myopically at times, heavily discounting the future.<sup>196</sup> Because the sale of upside potential under H2.0 would provide immediate consumption opportunities funded by a delayed payment (in the form of foregone appreciation on resale), it might seem poised to exploit myopic individuals. Currently, people aware of their own self-control problems may use their mortgage payments as a form of forced savings.<sup>197</sup> If these payments are smaller under H2.0 and the wealth-

---

<sup>195</sup> See REX & Co., Why REX & Co., [http://www.rexagreement.com/index.php/rex/who\\_we\\_serve\\_realtors\\_why\\_rex/](http://www.rexagreement.com/index.php/rex/who_we_serve_realtors_why_rex/) (last visited Feb. 18, 2008) (suggesting that realtors view the equity agreement as their “secret weapon to sell more homes, more quickly”).

<sup>196</sup> See, e.g., JONATHAN BARON, THINKING AND DECIDING 474–75, 479 (3d ed. 2000).

<sup>197</sup> See David Laibson, *Golden Eggs and Hyperbolic Discounting*, 112 Q.J. ECON. 443, 444–45 (1997) (discussing purchases of illiquid assets, such as homes, as precommitment strategies). Laibson notes, however, that the ability to easily and quickly borrow against such assets undermines their capacity to serve as precommitment devices. See *id.* at 465–66. Older people may use the home as a form of self-insurance against long-term care needs. See Thomas Davidoff, *Illiquid Housing as Self-Insurance: The Case of Long Term Care* (Aug. 24, 2007) (unpublished manuscript), available at <http://ssrn.com/abstract=1009738>. But a volatile asset is less than ideal for these purposes. See James Banks et al., *Housing Price Volatility and Downsizing in Later Life* 11 (Nat’l Bureau Econ. Res., Working Paper No.

building potential they represent is reduced, then people might end up saving even less than they do now.

There are several responses. First, not all decisions to consume now and pay later are irrational. The typical breadwinner's earning profile takes an inverted-U shape over the life cycle, rising with age and then falling in retirement. Under the permanent income hypothesis and the related life-cycle hypothesis, people would be expected to consume in each period based on lifetime income, rather than on income received during that period alone.<sup>198</sup> That is, they would be expected to spread their lifetime earnings optimally across the life cycle. Research suggests that people do not, in fact, accomplish this idealized degree of consumption smoothing.<sup>199</sup> Part of the problem relates to capital market imperfections, which make it difficult to tap future wage earnings. Making it possible to access future appreciation from an asset—the home—would be a more feasible way of introducing liquidity into the early part of the life cycle.<sup>200</sup>

Even apart from these liquidity issues, it is difficult to establish that any particular tradeoff between current and future consumption should be objectively regarded as a mistake.<sup>201</sup> What are easier to identify as mistakes are *inconsistent* time preferences.<sup>202</sup> Where an individual's long-run plans are vulnerable to short-run impulsiveness, it is useful to have mechanisms in place that allow the earlier self to precommit to a more patient choice.<sup>203</sup> Having H2.0 available only at the time of purchasing a home, with adequate periods for advice and reflection before choosing to enter into the agreement, should be helpful in this regard.<sup>204</sup>

Perhaps most important to keep in mind, however, is the fact that innumerable opportunities already exist for myopic individuals to act in a

---

13,496, 2007), available at <http://www.nber.org/papers/w13496> (“Holding a risky asset such as housing when prices are highly volatile may be a dubious strategy when one faces additional health risk.”).

<sup>198</sup> See MILTON FRIEDMAN, A THEORY OF THE CONSUMPTION FUNCTION 25–31 (1957) (presenting the permanent income hypothesis); Franco Modigliani & Richard Brumberg, *Utility Analysis and the Consumption Function: An Interpretation of Cross-Section Data*, in POST-KEYNESIAN ECONOMICS 388 (Kenneth K. Kurihara ed., 1954) (presenting the life-cycle hypothesis).

<sup>199</sup> See, e.g., Lee Anne Fennell & Kirk J. Stark, *Taxation over Time*, 59 TAX L. REV. 1, 16–21 (2005), and sources cited therein.

<sup>200</sup> See FRIEDMAN, *supra* note 198, at 16 (“It is in general far easier to borrow on the basis of a tangible physical asset, or a claim to one, than on the basis of future earning power.”).

<sup>201</sup> The marginal utility of consumption might vary over time. In addition, considerations like the interest rate, uncertainty about future events, and differing degrees of connectedness to other selves might rationally influence one's temporal preferences. See, e.g., BARON, *supra* note 196, at 479–80 (noting these considerations and discussing Derek Parfit's work).

<sup>202</sup> See, e.g., *id.* at 475–78 (discussing dynamic inconsistency).

<sup>203</sup> See, e.g., JON ELSTER, ULYSSES UNBOUND 29–34 (2000) (explaining how precommitment responds to inconsistent time preferences).

<sup>204</sup> See Shiller & Weiss, *Home Equity Insurance*, *supra* note 5, at 29 (suggesting limiting the purchase of hedging instruments to the time of home purchase, sale, or refinancing, noting that “[a]t these times, the homeowner has legal counsel and advice of others that would naturally be used to help make an informed decision about risk-management contracts as well”).

manner that is counter to their own long-run interests. Adjustable rate mortgages that can escalate out of the borrower's affordability window represent just one example. Similarly, home equity loans that allow the extraction of most of the value from homes during market peaks can set the stage for financial disaster if prices fall at a later time.<sup>205</sup> It would be inaccurate to predict that a program like H2.0 would never get in the way of wealth-building or cause any households to make choices that they will later view as ill-advised. But given the many ways in which people can already thwart their own long-run interests, H2.0 seems like a relatively innocuous instrument. Indeed, mild forms of myopia might actually act to counterbalance other cognitive biases that would cause people to forgo the benefits of H2.0 (although it would be mere happenstance if they did so perfectly).

We might also worry that a new form of homeownership would confuse consumers and make them more vulnerable to fraud and sharp practices. As many homeowners have fallen on hard times, "equity stripping" schemes in which the owner signs over the house deed in exchange for promises of freedom from mortgage payments have become increasingly prevalent.<sup>206</sup> Many homeowners have also accepted mortgages without understanding their most basic terms, such as the potential for mortgage payments to increase. Whether these misunderstandings were due to misrepresentation or consumer inattention, they have placed a significant number of households in financial peril. Would H2.0 make matters worse by introducing more complexity into the homebuyer's choice set?

Some precautions would be necessary. Perhaps most important is the characterization of H2.0 as a new tenure form, flagging that it is not just another product, but rather a different way of holding property. Required disclosures (including simulations showing various future states of the world), and standardized formats for key financial terms would assist both in consumer understanding and in comparison shopping.<sup>207</sup> Finally, the

---

<sup>205</sup> See, e.g., Louis Uchitelle, *A False Sense of Security? You Must Own a Home*, N.Y. TIMES, July 1, 2007, at BU4 (reporting the increasing prevalence of homeowners removing equity from their homes via home equity loans).

<sup>206</sup> Gretchen Morgenson & Vikas Bajaj, *New Scheme Preys on Desperate Homeowners*, N.Y. TIMES, July 3, 2007, at A1.

<sup>207</sup> Requiring disclosures as part of the home purchase transaction is nothing new. A variety of disclosures are required for a mortgage transaction, including those mandated by the Truth-in-Lending Act (TILA), 15 U.S.C. §§ 1601–1667f (2000), and the Real Estate Settlement Procedures Act (RESPA), 12 U.S.C. §§ 2601–2617 (2000). New mortgage disclosures may soon be in the offing, as part of the response to the subprime lending crisis. See, e.g., Labaton, *supra* note 152.

Significant questions have been raised about the content, timing, and cognitive processing of mortgage disclosures, and these considerations would be important in developing disclosure requirements for H2.0. See generally Matthew A. Edwards, *Empirical and Behavioral Critiques of Mandatory Disclosure: Socio-Economics and the Quest for Truth in Lending*, 14 CORNELL J.L. & PUB. POL'Y 199 (2005); William N. Eskridge, Jr., *One Hundred Years of Ineptitude: The Need for Mortgage Rules Consonant with the Economic and Psychological Dynamics of the Home Sale and Loan Transaction*, 70 VA. L. REV. 1083 (1984).

name H2.0 should denote only those arrangements that comply with these required disclosures and standards so that consumers encounter a recognizable, standardized product.<sup>208</sup> With these precautions in place, H2.0 could actually reduce consumer vulnerability to sharp practices. To the extent that homeowners' current susceptibility is driven by desperation and the lack of viable alternatives, adding a legitimate alternative for increasing affordability would be expected to improve matters.

#### IV. LOCAL PARTICIPATION AND POLITICS

H2.0—if implemented in a way that fully screens out the effects of off-site factors on the investment payoffs of homeownership—could dampen the incentives that presently drive homeowners' participation in collective control efforts at the local and sublocal levels.<sup>209</sup> One rationale for withdrawing offsite investment risk factors from the homeowner's bundle is that these factors lie outside of the household's individual control. But, as Figure 2 emphasizes, some factors that lie outside of individual control are nonetheless amenable to the control of homeowners acting collectively. An important question, then, is whether removing part of the homeowner's stake in collective control—and transferring that stake to investors—is socially valuable or socially costly on balance. The question is a complex one that goes to the heart of local governance.

##### *A. Homeowner Collective Control*

Homeowners presently use collective control both for good (resolving local collective action problems or building bonds among neighbors in ways that are socially valuable on net) and for ill (excluding outsiders or offloading externalities onto them in ways that are socially costly on net). Based on the net impacts, we can refer to these two categories of collective control as “value enhancing” and “value reducing,” respectively. In the Subsections below, I consider what H2.0's transfer of investment risk would do to each of these categories of conduct before turning more broadly in Section B to the connections between local governance, investor stakeholding, and the H2.0 form of ownership.

---

<sup>208</sup> In the mortgage context, standardization of alternatives has been proposed as a means of countering “information overload” and reducing consumer confusion. See Eskridge, *supra* note 207, at 1178–86.

<sup>209</sup> There is strong theoretical and anecdotal support for homeowners' large role in local governance, but questions remain about the strength of the empirical connection between homeownership and specific social and political behaviors. A recent view of the empirical literature concluded that “[a]s a whole, the existing literature suggests that homeownership has a modest impact on social and political behavior.” Dietz & Haurin, *supra* note 40, at 430. Apart from higher voting rates for homeowners, which have been consistently established, empirical results are sufficiently mixed that “no strong conclusions can be drawn at this time.” *Id.* The discussion in this Part assumes a significant level of homeowner influence arising from the fact of homeownership; the weaker the connection between tenure form and political and social behaviors, the less a shift to H2.0 ownership would change matters.

1. *Value-Enhancing Collective Control.*—In *The Homevoter Hypothesis*, William Fischel observes that a desire to maximize home values underlies local political behavior, and suggests that homeowners' politics generally tend to inure to the benefit of the community, and to society at large.<sup>210</sup> For example, Fischel observes that a homeowner without children (or any prospect of children) will nonetheless be concerned about the quality of the local public schools given the expected impact of school quality on her home's resale value.<sup>211</sup> More generally, we would expect homeowners with a financial stake in a given community to do more to advance the fortunes of that community—perhaps by participating in neighborhood watches, or otherwise helping to police and enforce behavioral and aesthetic norms.

Although these considerations are important ones, they do not support forcing homeowners to accept *investment* risks associated with local conditions. Significantly, H2.0 would leave the homeowner exposed to risks associated with the quality of the consumption stream itself, whether emanating from onsite or offsite factors. Safe, well-kept streets and fine amenities are more than good investments; they are desirable consumption ends in themselves. Thus, we would expect H2.0 homeowners to continue to make localized investments in the community that will pay dividends in kind through the flow of housing services they consume. It is true that the exit option becomes less costly to the homeowner who becomes dissatisfied with her neighborhood, because she will not bear the full loss associated with a downward trend in prices. But the protection against downside loss on resale also makes staying less risky, and hence less costly.<sup>212</sup>

It is also important to note that H2.0 would be expected to attract some households that would otherwise choose to rent, as well as some households that would otherwise opt for traditional homeownership. If tenants are deemed to be less engaged neighbors and community members than are owners (on average),<sup>213</sup> moves from tenancy to H2.0 would generate im-

---

<sup>210</sup> See generally FISCHEL, *supra* note 11. However, Fischel has also argued that homeowners can be overzealous in defending their property values, and has suggested a form of home equity insurance as a countermeasure. See, e.g., *id.* at 268–70; Fischel, *supra* note 50, at 335–36.

<sup>211</sup> FISCHEL, *supra* note 11, at 5, 149–52.

<sup>212</sup> See *infra* note 262 and accompanying text.

<sup>213</sup> A variety of positive social effects have been associated with homeownership in the theoretical and empirical literature. See, e.g., Denise DiPasquale & Edward L. Glaeser, *Incentives and Social Capital: Are Homeowners Better Citizens?*, 45 J. URB. ECON. 354 (1999); Donald R. Haurin et al., *The Impact of Neighborhood Homeownership Rates: A Review of the Theoretical and Empirical Literature*, 13 J. HOUSING RES. 119 (2003). Selection bias presents a difficulty in interpreting empirical results, however—do people with good-neighbor characteristics just happen to become homeowners, or is there something about homeownership that improves their neighborliness? See, e.g., Gale et al., *supra* note 42, at 1177; Haurin et al., *supra*, at 132–33. Studies examining the effects of homeownership control for observable characteristics like age, marital status, and income, but it is still possible that unobservable characteristics influence both the tenure choice and the neighborly behavior. See Gale et al., *supra* note 42, at 1177. Similar econometric challenges are implicated in attempts to determine the impacts of

provements along these dimensions. Even though H2.0 owners will not own all of the risk associated with their investment, they will hold an option to stay in the community as long as they wish, and would therefore not be discouraged (as tenants presumably are) from making site-specific investments in the community.<sup>214</sup>

Finally, granting households the capacity to transfer unwanted investment risk elsewhere does not eliminate all stakeholding in communities; rather, it may produce a more effective class of stakeholders.<sup>215</sup> In addition to those homeowners who continue to opt for the traditional model of ownership (with all upside and downside risk intact), outside investors would have an interest in ensuring that homes appreciate over time. This combination of local stakeholding and investor monitoring could generate more balanced and rational local political inputs than those produced by individuals who are forced to bear unwanted, undiversified risks.<sup>216</sup> Put another way, the losses to socially valuable local participation associated with diminished investment stakes in local conditions may be outweighed by the gains from reducing the political inputs of those homeowners who, as a result of fear, might be especially likely to push for value-reducing moves.

2. *Value-Reducing Collective Control.*—Reducing home investment risk not only directly benefits the risk-averse consumer, but also protects society from the socially damaging actions that homeowners driven by unchosen risk might undertake.<sup>217</sup> This was the impetus behind the early versions of home equity insurance,<sup>218</sup> and it explains recent efforts to use

---

homeownership on a raft of other variables, including wealth, health, child outcomes, self-esteem, mobility, employment, and family composition. *See generally* Dietz & Haurin, *supra* note 40 (reviewing literature addressing these impacts and discussing associated methodological issues).

<sup>214</sup> *See* Mark Dynarski, *Residential Attachment and Housing Demand*, 23 URB. STUD. 11, 19 (1986) (“A renter household might not form many social attachments or have children partly to avoid future adjustment costs if it plans on eventually becoming an owner-occupant.”).

<sup>215</sup> For example, Michael Pereira has argued that a company insuring all of a community’s residences against home equity declines would be able to overcome collective action problems that the residents themselves might face. Pereira, *supra* note 97, at 752–53 (giving an example in which the insurer could more effectively sue or bargain with a neighboring factory that was generating a nuisance). Depending on the structure of markets for home equity investments, a single entity might not have such a large stake in a single community. Nonetheless, the possibility that some actors might be better positioned than others to vindicate homeowners’ interests is worth noting.

<sup>216</sup> We might generally imagine that investors select investments based on their risk tolerance—the faint-hearted choose T-notes, while the daredevils choose junk bonds. If such sorting were perfect, investors would not typically suffer bouts of white-knuckled terror over normal market movements; their investments would be suited to their comfort level. However, because homeowners sort into homeownership for many reasons other than risk tolerance, we might expect many of them to be out of their comfort zone with regard to the home’s investment risk.

<sup>217</sup> *See, e.g.*, Marcus & Taussig, *supra* note 4, at 406 (explaining that “avoidance of locational risks to home values encourages the well-documented attempts by relatively affluent communities in this country to export (or refuse to import) social problems to (from) older, poorer urban communities” and suggesting that removal of downside risk to home values would ameliorate this problem).

<sup>218</sup> *See supra* notes 74–75 and accompanying text (discussing Oak Park’s program).

such insurance to stem NIMBYism.<sup>219</sup> Free of the fear accompanying undiversified home value risk, the argument runs, homeowners will no longer pursue socially costly local collective actions.<sup>220</sup> Although this is an extraordinarily important potential benefit, the claim must be qualified in two ways.

First, the consumption interest that H2.0 homeowners would continue to have in their homes might still cause them to undertake socially costly collective actions. However, that consumption interest comes with an important built-in check—that objections to particular changes must be couched in terms of the homeowner’s own preferences and beliefs. Currently, homeowners can justify positions on local issues that would otherwise appear indefensible on the grounds of “preserving property values.” For example, a homeowner who maintains that she does not personally mind having a homeless shelter or low-income housing project in her neighborhood may nonetheless oppose the shelter or project on the grounds that those to whom she will need to resell her home several years hence will be less enlightened.<sup>221</sup> A homeowner who is exposed only to consumption stream effects from such developments, and not to the chance of resale value diminution, would have to confront forthrightly how much a given factor matters to her, rather than blame her actions on the supposed prejudices of others.

Second, H2.0 lets homeowners shift risk onto investors who are in a position to diversify that risk away, but it does not eliminate the investors’ incentives to avoid taking losses on the investment. Although diversification works well to even out the effects of risk (variance), it cannot transform a low expected value event into a high expected value event. If a given change in a local area would unambiguously reduce property values, an investor presumably would be no happier with the prospect of that change than would a homeowner. Thus, we might expect investors to demand some of the same sorts of covenants and zoning regulations that homeowners have long employed to guard against negative impacts on home values. Investors may not be able to vote locally, but they can express their demands through price signals to homeowners who wish to purchase protection against downside risk or sell upside potential.<sup>222</sup> Alternatively, as

---

<sup>219</sup> Fischel, *supra* note 2, at 148–50. NIMBY is an acronym for “not in my back yard.” *Id.* at 144.

<sup>220</sup> *See, e.g.*, Fischel, *supra* note 50. These costly actions might include opposing development that is expected to generate benefits for the jurisdiction (although with some risk attached), as well as actions to offload costs onto other jurisdictions by excluding people or land uses.

<sup>221</sup> *See, e.g.*, Fennell, *supra* note 122, at 645–49.

<sup>222</sup> These price signals could reintroduce the phenomenon of homeowners distancing themselves rhetorically from the positions that they take on local matters. Instead of referring to a risk to property values, H2.0 homeowners might refer to pricing risks in their dealings with investors. If, however, payment obligations are fixed at the time the home is purchased (or even handled in lump sums at that time, as in the Syracuse pilot project, *see supra* note 108), current H2.0 homeowners would not be exposed to such pricing risks. I thank Eduardo Peñalver for discussions on this point.

special interests with a high stake in the community's future, investor groups may be able to wield political power to obtain these results directly, notwithstanding their inability to vote locally.<sup>223</sup>

Nonetheless, there are at least three ways that having investors hold risk rather than homeowners could curtail value-reducing behavior. First, as Fischel has suggested, homeowners may oppose projects because of the high variance in outcomes, not because of low expected value.<sup>224</sup> Shifting risk to diversified investors works well when the real problem is risk aversion (rather than a desire to avoid an outcome that represents a loss in expected value terms). Second, investors are at a physical and emotional remove from the local neighborhood and have consciously chosen to take on a certain level of risk. Hence, they should be less vulnerable to overblown fears or group hysteria about changes that are objectively unlikely to produce negative results. Third, and perhaps most importantly, investors are more likely than individual homeowners to hold offsetting interests in other properties or entities. If the mark of NIMBYism is narrow self-interest that pushes costs onto other entities, investors who hold positions in some of these other entities (other neighborhoods, localities, or business interests) would be less inclined toward such behaviors.

The resulting potential for positive effects on society can perhaps best be understood through the lens of the semicommons. As Henry Smith has explained, medieval grazing and farming arrangements comprised a semicommons; the land was shared in common for purposes of grazing, but farming strips were individually owned.<sup>225</sup> The farming strips held by a given owner were scattered throughout the grazing field.<sup>226</sup> The scattered arrangement has been attributed to various purposes, such as diversification of risk, but Smith emphasizes its role in controlling strategic behavior.<sup>227</sup> Spatially interspersing the holdings of many different owners neutralizes each owner's temptation to use the commons in a way that would selectively offload costs onto the farmland of others or selectively direct benefits to his own land.<sup>228</sup>

Neighborhoods, localities, and metropolitan areas can similarly be viewed as semicommons regimes. Individual households own parcels of land, but many elements of value are held in common by a larger group. But these semicommons regimes largely lack the protection against strategic behavior that marked medieval grazing and farming arrangements. The

---

<sup>223</sup> See *infra* notes 238–41 and accompanying text.

<sup>224</sup> See FISCHEL, *supra* note 11, at 9–11.

<sup>225</sup> See Henry E. Smith, *Semicommon Property Rights and Scattering in the Open Fields*, 29 J. LEGAL STUD. 131, 132 (2000).

<sup>226</sup> See Robert C. Ellickson, *Property in Land*, 102 YALE L.J. 1315, 1389 (1993) (providing an illustration of an open field village, adapted from maps dated 1719 appearing in GEORGE C. HOMANS, *ENGLISH VILLAGERS OF THE THIRTEENTH CENTURY* 88–89 (1941)).

<sup>227</sup> Smith, *supra* note 225, at 146–54.

<sup>228</sup> See *id.*

politically powerless and impoverished are likely to be spatially concentrated, enabling wealthier and more powerful citizens to selectively burden (or fail to benefit) those areas. Although subject to debate, concerns about geographic targeting have arisen in contexts involving the siting of locally undesirable land uses,<sup>229</sup> the provision of public goods and services,<sup>230</sup> and, of course, the exercise of eminent domain.<sup>231</sup>

Slicing up interests in owner-occupied property and dispersing the slices among investors helps to sever the link between self-interest and geography. It is at least possible that the result will be a better-functioning political process in which a larger percentage of the population holds interdependent interests. I do not want to overstate this point. The interests of investors may diverge from those of homeowners in many ways. More generally, making interests more diffuse may dilute investors' incentives to become involved in any particular dispute. Yet intertwining interests seem likely to ease the isolation and powerlessness of the most vulnerable communities.

An important empirical question is whether investments would actually tend to take this scattered form, or whether instead investors would attempt to acquire heavily concentrated interests in particular communities so as to wield more power in the local political process. This question is best taken up in a broader discussion of what investor stakeholding might mean for local governance.

### B. Investors and Local Governance

Shifting financial stakes in a municipality from homeowners to outside investors might seem worrisome for local governance given that homeown-

---

<sup>229</sup> See, e.g., Vicki Been, *What's Fairness Got to Do With It? Environmental Justice and the Siting of Locally Undesirable Land Uses*, 78 CORNELL L. REV. 1001 (1993) (discussing and critiquing literature on disparities in the siting of locally undesirable land uses, and evaluating fairness considerations).

<sup>230</sup> See, e.g., CHARLES H. HAAR & DANIEL WM. FESSLER, *THE WRONG SIDE OF THE TRACKS: A REVOLUTIONARY REDISCOVERY OF THE COMMON LAW TRADITION OF FAIRNESS IN THE STRUGGLE AGAINST INEQUALITY* (1986) (analyzing legal responses to geographic disparities in the provision of public services); Clayton P. Gillette, *Equality and Variety in the Delivery of Municipal Services*, 100 HARV. L. REV. 946 (1987) (reviewing HAAR & FESSLER, *supra*). Although the issues surrounding the provision and financing of public education are too complex and contested to delve into here, the continued existence of striking disparities among school districts bears separate mention. See, e.g., James E. Ryan & Thomas Saunders, *Foreword to Symposium on School Finance Litigation: Emerging Trends or New Dead Ends?*, 22 YALE L. & POL'Y REV. 463, 463–64 (2004).

<sup>231</sup> See, e.g., *Kelo v. City of New London*, 545 U.S. 469, 521–22 (Thomas, J., dissenting) (contending that exercises of eminent domain for economic development purposes will disproportionately burden poor communities); Wendell E. Pritchett, *The "Public Menace" of Blight: Urban Renewal and the Private Uses of Eminent Domain*, 21 YALE L. & POL'Y REV. 1 (2003) (examining the use of "blight" rhetoric to justify urban renewal efforts targeting low-income minority neighborhoods).

ers are voters and residents, while H2.0 investors (probably) are not.<sup>232</sup> There is a tidy congruence when the same set of people votes for local policies, pays for local policies, lives under local policies, and suffers gains or losses from local policies. Of course, even in the absence of H2.0, perfect congruence of interests does not exist. Many parties other than local voters have direct financial stakes in local jurisdictions—landlords, owners of commercial and industrial properties, developers, and mortgage lenders, to name a few. Moreover, homeowners' votes are not scaled to the size of their equity stakes, and tenants can vote without owning any equity stake at all.<sup>233</sup> Nonetheless, when households that would otherwise choose traditional homeownership opt for H2.0, the divergence between financial interests, votes, and residency will grow.

This divergence might be deemed problematic either because investors would have too much power over local matters, or because they would have too little. These possibilities track the twin fears Neil Komesar explores in his “two-force model of politics”—“the fear of the few” associated with the political dominance of concentrated special interests, and “the fear of the many” associated with unchecked majoritarianism.<sup>234</sup> Both sources of “political malfunction” have long been of concern to students of local governance; neither is unique to H2.0.<sup>235</sup> Indeed, as the discussion in the previous Section suggests, H2.0 could counter existing political defects associated with homeowner domination.<sup>236</sup> Nonetheless, we must consider how off-loading risk to investors might alter the political picture.

1. *Special Interests in Local Politics.*—The possibility that investors would dominate the local political process, despite their inability to vote in local elections, grows out of an interest-group account of politics. Those with sufficiently large, concentrated interests will find it worth their while to place pressure on local officials and institutions to get their policies enacted; meanwhile, larger numbers of people with more diffuse stakes in the policy outcome will fail to vindicate their interests. The interest group model has typically fit less well with suburban governance than does a “median voter” model in which majoritarian homeowner interests hold sway.<sup>237</sup> This is not due to a lack of special interests—developers have

---

<sup>232</sup> Investors could be residents of the community who choose to take on the risk of their neighbors, but it is likely that most investors in the H2.0 regime would live and vote outside of the jurisdiction in which the property is located.

<sup>233</sup> For an analysis of the implications of the one-person-one-vote rule as well as discussion of alternatives that have been employed in private common interest communities, see Robert C. Ellickson, *Cities and Homeowners Associations*, 130 U. PA. L. REV. 1519, 1539–63 (1982).

<sup>234</sup> NEIL K. KOMESAR, *LAW'S LIMITS: THE RULE OF LAW AND THE SUPPLY AND DEMAND OF RIGHTS* 60–70 (2001).

<sup>235</sup> See, e.g., *id.* at 56–60 (discussing these concerns in the land use arena).

<sup>236</sup> See *supra* Part IV.A.2.

<sup>237</sup> See, e.g., FISCHER, *supra* note 11, at 87–97; KOMESAR, *supra* note 234, at 68. Heterogeneity among local governments makes generalizations impossible, however, and the political balance may

large stakes in local land use decisions—but rather stems from the acute interest that homeowners presently take in local matters. Homeowners who are less concerned about property values might, therefore, cede some political ground to special interests.

It is far from clear, however, that investors would end up running the show. Developers as well as investors stand to gain if the political grip of homeowners loosens, bringing potentially conflicting perspectives on local matters into the local political arena. The resulting realignment of power could even amplify the voices of tenant groups, business owners, and other non-homeowners with interests in the fate of the community. It is also unclear whether investors would be motivated to take a leading role in the local political process. If investors held scattered shares in many local housing markets as part of large, diversified portfolios, the fraction of wealth to be gained as a result of manipulating any particular jurisdiction's local decisions would be small relative to the costs of such efforts. Moreover, investors who hold interests in many different communities would be less interested in actions that enrich one community at the expense of others.

Unless some restrictions were placed on an investor's ability to hold geographically concentrated interests, however, it is possible that a large investor might try to "capture" a particular municipality by buying stakes in as much of its housing stock as possible and manipulating local politics to serve the investor's own (highly localized) interests.<sup>238</sup> The returns from this kind of capture behavior might eclipse the disadvantages to the investor of taking on such an undiversified investment package. Three sources of such returns deserve attention. First, perhaps the investor has innovative ideas, access to capital, or other advantages that enable her to achieve large housing market gains without harming residents or outsiders. This brand of investor involvement seems benign or even attractive, although process-based objections to the shift of political power to an outside interest would remain.<sup>239</sup>

Second, an investor might pursue policies that increase local housing prices by offloading costs on surrounding communities. But homeowners can already act collectively in these self-serving ways,<sup>240</sup> and it is questionable whether investors would be able to advance such an agenda more pow-

---

vary among jurisdictions. *See, e.g.*, FISCHER, *supra* note 11, at 90–93; KOMESAR, *supra* note 234, at 70; William A. Fischel, *Political Structure and Exclusionary Zoning: Are Small Suburbs the Big Problem?*, in *FISCAL DECENTRALIZATION AND LAND POLICIES* 111 (Gregory K. Ingram & Yu-Hung Hong eds., 2008) (examining how differences in jurisdiction size and metropolitan structure relate to local restrictions on housing development).

<sup>238</sup> I am indebted to Lior Strahilevitz for raising this point and for very helpful discussions about it.

<sup>239</sup> *Cf.* Richard M. Brunell, *The Social Costs of Mergers: Restoring "Local Control" as a Factor in Merger Policy*, 85 N.C. L. REV. 149 (2006) (raising analogous concerns about outside control of private businesses).

<sup>240</sup> *See supra* Part IV.A.2.

erfully and successfully than homeowners already do.<sup>241</sup> Of course, it might seem worse for these policies to emerge from investor pressure than from homeowner collective action, given that the latter represents democratic action within the community and may contribute to patterns of behavior that will be value-enhancing in other contexts.<sup>242</sup>

A third possibility is that investors would find ways to drive up home prices at the expense of some or all local residents. For example, assuming property tax changes are capitalized into home prices, investors might attempt to drive down taxes (and drive up prices) by stinting on local goods and services that homebuyers tend not to factor into their purchase decisions.<sup>243</sup> An investor would use this tactic at her peril, however—a home seller who no longer fears investment losses associated with community conditions might speak more freely to prospective buyers about shortcomings in the local arena, allowing more information to feed into the home price calculation. To be sure, this freer flow of information might not deter investors from looking for ways to selectively disadvantage subsets of residents in the community, such as tenants or homeowners in a separately indexed portion of the community.<sup>244</sup> But actions of that nature are already a concern under a regime of homeowner control, and they are subject to at least some legal checks.<sup>245</sup>

If investor capture were viewed as a sufficient threat to local governance, it could be countered through regulatory policy. For example, limits might be placed on the fraction of holdings within a given jurisdiction that could be held by a single investor, or H2.0 investments above a given dollar

---

<sup>241</sup> One might think that investors holding concentrated interests in a particular locality would be better able to orchestrate a political response than could a large group of homeowners holding more diffuse interests. However, even investors who have significant holdings in a particular area will not likely have as much of their net worth at stake in that area as does the typical homeowner today, for whom the home is the single largest entry in her portfolio. Another factor that assists homeowners in organizing politically inheres in their geographic and social proximity to each other—they live near each other, may have children in school together, and are likely to encounter each other in a variety of local contexts. Fischel has noted these features conducive to homeowners' political efficacy in explaining why developers do not wield greater political clout in local land use decisions. *See* Fischel, *supra* note 237, at 118.

<sup>242</sup> *See supra* Part IV.A.1 (discussing value-enhancing collective control).

<sup>243</sup> Factors that affect quality of life in observable and salient ways will presumably feed directly back into housing prices, at least roughly aligning the interests of investors with residents. But some features of community life that local residents in fact care about—such as the hours of the local public library or the speed with which snow is plowed from side streets—might remain too obscure to homebuyers to factor into purchase prices.

<sup>244</sup> As discussed above, housing market indexes used to disaggregate onsite and offsite influences might be constructed at a relatively small scale so that a given municipality could contain several separately defined local housing markets. An investor might concentrate her investments in one or a few of these and then attempt to enact policies that disadvantage the others.

<sup>245</sup> *See generally* HAAR & FESSLER, *supra* note 230 (discussing the unequal provision of municipal services).

amount might automatically bundle together geographically disparate holdings that represent substantively similar types and levels of housing risk.<sup>246</sup>

2. *Neglect of Investor Interests in Local Politics.*—The opposite concern is that investors, who cannot vote locally, will be short-changed in the political process. This is less a matter of politics or justice (investors are sophisticated actors with many outside options)<sup>247</sup> than an issue that goes to the economic viability of the H2.0 model within a local political framework. If investors are unable to price political uncertainty into the deals that they make with H2.0 homeowners or to find other ways to keep that uncertainty within acceptable bounds, they will exit the market.

If we assume a context in which investors cannot cost-effectively influence the political process directly,<sup>248</sup> they must rely on homeowners to act as agents for their interests in political decisions at the local level. Some of the ways that principals typically control agents—directing specific actions and monitoring to make sure the agent complies—are simply unavailable. Investors cannot require that H2.0 homeowners vote a particular way or punish them for failing to do so. Past voting behavior might offer clues to future voting patterns, but it could be an unreliable guide if large numbers of voters are expected to switch from traditional homeownership to H2.0 homeownership and thereby shed incentives to participate in the political process in the old, familiar ways. The stakes associated with political uncertainty might be reduced by requiring H2.0 homeowners to make binding commitments through private land use controls that cannot be politically undone—a tack that could raise concerns of its own.<sup>249</sup>

Political uncertainty will be less problematic for investors if H2.0 homeowners' interests align closely with those of the investors themselves. There are good reasons to expect such correspondence if the things that homeowners value about their communities are the same things that incoming homebuyers will value (and hence be willing to pay money to obtain). The property tax introduces some wrinkles, however, as the next Subsection explains.

3. *The Property Tax.*—Property taxes, levied based on property values, are a key source of revenue for local governments.<sup>250</sup> This system of

---

<sup>246</sup> Placing restrictions on the concentration of ownership stakes in a particular locality is one of many possible ways that government might be involved in refining the H2.0 property form. *See infra* Part VI.B.

<sup>247</sup> In this respect, the risks are very different than those involving majoritarian control that neglects the interests of a minority within the jurisdiction, or the interests of a group that wishes to enter the jurisdiction.

<sup>248</sup> The contrary possibility is discussed in *supra* Part IV.B.1.

<sup>249</sup> *See infra* Part V.C.

<sup>250</sup> *See, e.g.,* RICHARD BRIFFAULT & LAURIE REYNOLDS, CASES AND MATERIALS ON STATE AND LOCAL GOVERNMENT LAW 548–49 (6th ed. 2004) (noting that the property tax “provides about 30% of all local revenues, and nearly half of all locally provided—or ‘own-source’—local revenues,” making it

funding can be most easily squared with a world in which homeowners control taxing and spending decisions through their political activities and suffer from or enjoy the net results of changes in local amenities, home values, and taxes. H2.0 presents challenges to this model in terms of both liquidity and politics. If property values are increasing, but an H2.0 homeowner has alienated the right to some or all of those gains, what property tax treatment is appropriate?<sup>251</sup>

Simply leaving the full property tax burden on the H2.0 homeowner is problematic. Rapid property tax increases can create severe liquidity problems, even apart from H2.0.<sup>252</sup> But under traditional homeownership, rising property values create a pool of equity in the home that, at least in theory, can be tapped to pay the higher taxes. Under H2.0, rights to those gains would already have been sold, making tapping into them impossible. There is also a potential political difficulty. The voting patterns of H2.0 homeowners might be insufficiently protective of long-run property values given that these homeowners will not bear the investment impacts.

One approach that has been advocated in the context of limited equity programs for low-income people is simply to adjust the tax assessment downward to account for the owner's limited interest in the home.<sup>253</sup> But this approach, which implicitly places higher tax burdens on the rest of the property owners in the community, would quickly become unworkable as we move from a limited program available to a tiny percentage of the population to a broad-based program that is available to everyone. With the tax base deeply eroded by these adjustments, the hefty rate increases required to meet budgetary demands would fall heavily on traditional homeowners (whose assessments would not have been adjusted). Not only would this result be unfair, it would also distort the choice between traditional homeownership and H2.0.

Another possibility would be for the property tax to follow the equity interest so that investors would be responsible for the percentage of the increase in property taxes that corresponds to their share of the appreciation potential. This solves the liquidity problem but introduces another political difficulty—the investors cannot vote in the local elections and therefore

---

“the key local government revenue source that is under local government control”); *id.* at 549 (“The property tax obligation of a particular taxpayer is measured by the value of the property subject to tax.”).

<sup>251</sup> See DAVIS, *supra* note 60, at 85–87 (discussing this issue).

<sup>252</sup> Homestead exemptions and various forms of “circuit-breakers” offered by local governments can help to address the liquidity problem. See, e.g., LYNN A. BAKER & CLAYTON P. GILLETTE, LOCAL GOVERNMENT LAW CASES AND MATERIALS 470–71 (3d ed. 2004) (discussing homestead exemptions as well as “refunds, tax credits, or exemptions to low-income, disabled, or elderly individuals, or to other groups of special need or desert”).

<sup>253</sup> See *Prowitz v. Ridgefield Park Vill.*, 568 A.2d 114, 118–19 (N.J. Super. Ct. App. Div. 1989) (upholding a reduced tax assessment for a home that was subject to a resale cap as part of an affordable housing program, finding the resale restriction “analogous to value-depreciating government regulation”); DAVIS, *supra* note 60, at 86–87 (citing and discussing *Prowitz*).

would be liable for tax burdens that they had no hand in creating. H2.0 homeowners might then vote for tax increases to fund amenities that they wish to consume, knowing that the bill for these increases would fall on others.

Yet another alternative would be for the investor to front the money to pay for all property tax increases attributable to increased assessments, thus solving the liquidity problem. These advances could be treated as loans to be forgiven in whole or in part based on the ratio between the tax increases and the gains that the investor ultimately realizes on the property. Although this solution is not perfect and would require considerable fine-tuning, it would aim at the right target—creating an incentive for the homeowner to act in the investor’s long-run interests, while making the investor bear the costs associated with achieving those interests. In the longer run, if H2.0 became the dominant form of homeownership, the method of financing might be altered to better align with it.

## V. OTHER SOCIETAL IMPACTS

Because nothing like H2.0 has ever been implemented on a broad scale, the societal effects of such a widespread change in the meaning of homeownership cannot be fully predicted. In this Part, I trace some additional benefits and concerns that might accompany such a change.

### A. Stability and Stickiness in Housing Markets

H2.0 would have important effects on incentives to buy and sell in changing markets. Under traditional homeownership, downward-trending housing markets can suffer from inertia: Current owners refuse to accept prices that are any lower than the property could command at its most recent peak, while would-be buyers refuse to pay anywhere near that amount.<sup>254</sup> Sales volume plummets and inventory piles up, but prices do not drop accordingly, at least in the short run.<sup>255</sup> The result is diminished mobility among homeowners.<sup>256</sup> This stickiness may be driven in part by liquidity constraints (the need to pay off an existing mortgage or the desire to

---

<sup>254</sup> See, e.g., SHILLER, *MACRO MARKETS*, *supra* note 4, at 171.

<sup>255</sup> Recent experience attests to this effect. See, e.g., Sudeep Reddy & Michael Corkery, *Housing Chill Grows Worse, Bites Consumers*, WALL ST. J., Sept. 26, 2007, at A1 (reporting based on newly released data that “home inventories by one measure soared to an 18-year high”).

<sup>256</sup> Tammy Joyner, *Relocation Reluctance Hitting Job Market*, CHI. TRIB., July 1, 2007, § 14, at 41. Some research has even explored a possible link between homeownership rates and longer bouts of unemployment, perhaps stemming from homeowners’ limited mobility. See Steven E. Landsburg, *Everyday Economics: Buy a House, Lose Your Job?*, SLATE, Nov. 7, 1997, <http://www.slate.com/id/2044/> (discussing data indicating a correlation between homeownership rates and unemployment rates and the hypothesis for that relationship put forward by Andrew Oswald, as well as some alternative explanations for the data); Dietz & Haurin, *supra* note 40, at 419–21 (reviewing literature on this point).

walk away with sufficient equity to make a down payment on a new home), but loss aversion seems strongly implicated as well.<sup>257</sup>

H2.0 might be expected to help in three ways. First, sellers who are protected against downward price trends might be less reluctant to sell.<sup>258</sup> Second, buyers who can purchase protection against future price drops might be less reluctant to buy. Third, to the extent that equity financing (selling off upside potential) begins to take the place of debt financing, the liquidity problems that produce lock-in effects may become less common. In combination, these three advantages would be expected to dampen the feedback effects of declining market conditions on mobility choices. Widespread risk buffering through H2.0 therefore benefits housing consumers in general, not just those who have opted for H2.0.<sup>259</sup> Because of its potentially favorable societal and macroeconomic effects, the risk buffering aspects of H2.0 have some of the characteristics of a public good.<sup>260</sup>

A concern might arise if we thought that such a program would increase mobility overall and thereby produce neighborhood instability. Indeed, it is sometimes suggested that homeowners' reluctance to take losses on their homes serves a useful function by reducing resort to "exit" and encouraging the exercise of political "voice."<sup>261</sup> But downward price protection could also give homeowners newfound confidence to stay in their neighborhoods when price downturns threaten.<sup>262</sup> Another way that H2.0

<sup>257</sup> For example, an empirical study of condominium sales in Boston between 1990 and 1997 showed that sellers facing a loss from the benchmark of the nominal price paid for the home chose higher asking prices and took longer to sell their homes than other sellers—a result consistent with loss aversion. See David Genesove & Christopher Mayer, *Loss Aversion and Seller Behavior: Evidence from the Housing Market*, 116 Q.J. ECON. 1233 (2001). Turning down offers below the purchase-price benchmark may be understood as risk-seeking behavior consistent with the "trying to break even" phenomenon. See Richard H. Thaler & Eric J. Johnson, *Gambling with the House Money and Trying to Break Even: The Effects of Prior Outcomes on Risky Choice*, 36 MGMT. SCI. 643, 657–58 (1990). It is not clear, however, that holding out for a better price is always irrational. See Stephen Day Cauley & Andrey D. Pavlov, *Rational Delays: The Case of Real Estate*, 24 J. REAL ESTATE FIN. & ECON. 143 (2002) (suggesting that holding out during down markets can be rational, if the option value of doing so exceeds the carrying costs of the home).

<sup>258</sup> Indeed, there is the opposite concern that sellers will care too little about the sales price if they will not bear the loss. See, e.g., SHILLER, *MACRO MARKETS*, *supra* note 4, at 82. The disaggregation approaches discussed above would attempt to control for this risk. See *supra* Part II.B. One specific safeguard would be a right of first refusal granted to the investor. See *supra* note 138 and accompanying text.

<sup>259</sup> Cf. Caplin et al., *supra* note 81, at 28–29 (discussing the potential social benefits of Syracuse's home equity insurance pilot program for those not enrolled in it).

<sup>260</sup> See SHILLER, *MACRO MARKETS*, *supra* note 4, at 207–08 (discussing financial innovations as public goods); Caplin et al., *supra* note 81, at 28–29.

<sup>261</sup> See, e.g., FISCHER, *supra* note 11, at 74–75 (noting the pain that homeowners would experience in selling at a loss, and suggesting that this constraint on "exit" functions to encourage "voice" in the local political process).

<sup>262</sup> See, e.g., Thomas C. Schelling, *A Process of Residential Segregation: Neighborhood Tipping*, in *RACIAL DISCRIMINATION IN ECONOMIC LIFE* 157, 174 (Anthony H. Pascal ed., 1972) (exploring how speculation about future neighborhood changes might affect a homeowner's decision whether to stay or

might deliver greater stability is simply by encouraging more homeownership.<sup>263</sup> Census data show that homeowners move much less frequently than renters.<sup>264</sup> These data may be picking up on some of the stickiness that H2.0 would alleviate, but it is likely that much of the effect is attributable to transaction costs associated with buying and selling a home.<sup>265</sup> Although it cannot be said with certainty which of several mobility-related effects would dominate, there is at least the potential for less stickiness in housing markets without any loss in stability.

### B. Competitive Consumption

Another concern with widespread implementation of H2.0 is that it will alter the very housing markets that it was designed to assist consumers in navigating. H2.0 would have the immediate effect of enhancing the average homeowner's purchasing power. If too many dollars were chasing the same houses, there would be housing price increases, at least in the short run.<sup>266</sup> Over time, however, we would expect housing supply to expand in response to these changes.<sup>267</sup> Following these adjustments, would we expect to see consumers allocating a smaller share of their income and wealth to housing and diverting their extra purchasing power to other, more diversified uses, or would we instead see an increase in the total amount of housing consumed?

Robert Frank has suggested that people engage in competitive consumption in their efforts to attain relative standing, and homes are one of the primary vehicles through which such competition is carried out.<sup>268</sup> It is

---

leave, and observing that “[i]f capital losses are involved, the whole process can be aggravated by the attempt to get rid of one’s house a little sooner than everyone else”); Caplin et al., *supra* note 81, at 28 (suggesting that home equity protection programs might have “confidence-building effects,” even if not many households purchase the protection).

<sup>263</sup> See Caplin et al., *supra* note 88, at 237–38 (presenting rough calculations that suggest shared equity mortgages could increase homeownership by more than one percent).

<sup>264</sup> Census data show that one-third of renter households changed residences between 2002 and 2003, compared with one in fourteen households living in owner-occupied housing at the time of the survey. JASON P. SCHACHTER, U.S. CENSUS BUREAU, GEOGRAPHIC MOBILITY: 2002 TO 2003, CURRENT POPULATION REPORTS 5 (2004), available at <http://www.census.gov/prod/2004pubs/p20-549.pdf>. Data for 2004 to 2005 reflect moves by 29% of renter households and 6.34% of owner-occupant households. See U.S. CENSUS BUREAU, GEOGRAPHIC MOBILITY: 2004 TO 2005, tbl.17-2, available at <http://www.census.gov/population/socdemo/migration/cps2005/tab17-2.xls> (providing data on householders in owner-occupied units); *id.* at tbl.17-3, available at <http://www.census.gov/population/socdemo/migration/cps2005/tab17-3.xls> (providing data on householders in renter-occupied units); see also Dietz & Haurin, *supra* note 40, at 416–18.

<sup>265</sup> See Dietz & Haurin, *supra* note 40, at 416–18.

<sup>266</sup> See CAPLIN ET AL., *supra* note 4, at 219–20 (predicting that housing partnerships would create short-run price increases, which could be “quite significant”).

<sup>267</sup> See *id.* at 219. Land use policies restricting development could dampen this response, although the policies themselves might undergo change as a result of the shift in interests brought about by H2.0. I thank Ezra Rosser for raising this issue.

<sup>268</sup> See, e.g., ROBERT FRANK, LUXURY FEVER 159–60 (1999).

not just a matter of outdoing the Joneses with respect to square footage or fancy trim. Rather, people bid against each other for homes in particular neighborhoods and school districts because those neighborhoods and school districts are better, in relative terms, than other neighborhoods and school districts.<sup>269</sup> With so much riding on the choice of a home, people often stretch themselves quite thin to get a foothold in a premier neighborhood, even when it means placing themselves at risk of foreclosure and bankruptcy. It is worth thinking about how H2.0 might affect incentives in this regard.

By using H2.0, many people could get into more expensive homes than they could otherwise afford.<sup>270</sup> The initial effect would be to allow more people of modest means into neighborhoods that are a rung or two higher on the ladder than the neighborhoods they would have been able to occupy previously. But if everyone responded by employing H2.0 to purchase a bigger and better house, the existing pattern of relative housing quality would shift upward, with everyone living in more expensive homes than before.<sup>271</sup> In other words, if people follow the heuristic of buying as much house as they can afford, a mechanism that moves the affordability benchmark upward would merely increase the consumption of housing. Even if people buy objectively larger or nicer houses under H2.0, adaptation effects and a focus on relative standing might leave people no happier<sup>272</sup>—and no more diversified<sup>273</sup>—than before.

One factor that could prove helpful in addressing this dynamic is inertia. If most people continue to live in their current homes, at least in the short run, any upward shift in housing consumption would be gradual and perhaps concentrated toward the lower end of the housing stock continuum. Socioeconomic mixing that occurred during the early (inertial) stage of H2.0 could perform an educative function, reducing the perceived need to get into a more exclusive setting. If diminished concerns about resale values softened the exclusionary policies of local governments, this could help

---

<sup>269</sup> *See id.* at 159.

<sup>270</sup> Andrew Caplin and his coauthors suggest that the increased affordability associated with equity financing would not have uniform effects throughout the income distribution because “at some point, borrowers achieve an income level that makes it possible to pay regular mortgage interest on the most valuable house that their assets will permit them to purchase.” Caplin et al., *supra* note 88, at 226–27 & tbl.6.

<sup>271</sup> A legislative backlash against larger homes seems to be brewing, however, perhaps reflecting shifting norms about housing consumption. *See, e.g.*, Nicholas Riccardi, *Leveling Restrictions on Houses’ Big Growth*, L.A. TIMES, July 23, 2007, at A12 (discussing proposed or implemented restrictions on oversized homes in several metropolitan areas).

<sup>272</sup> *See, e.g.*, FRANK, *supra* note 268, at 79–81 (discussing adaptation effects in the context of housing); Daniel Kahneman & Carol Varey, *Notes on the Psychology of Utility*, in INTERPERSONAL COMPARISONS OF WELL-BEING 127, 136–47 (Jon Elster & John E. Roemer eds., 1991) (analyzing the impact of adaptation and comparison on subjective well-being).

<sup>273</sup> H2.0’s downside protection would reduce the risk associated with a lack of diversification, however. *See supra* Part II.C.

reduce stratification and lower the pressure to get into a particular neighborhood or school district. Ultimately, however, larger reforms aimed at altering the incentive structures that produce socioeconomic segregation might be necessary to prevent competitive housing consumption from eroding the advantages of H2.0.

### C. *Autonomy and Conformity*

Another concern is that investor pricing practices could interact with a competitive consumption dynamic to pressure H2.0 households to relinquish many of the prerogatives that have traditionally accompanied homeownership. I have observed already that notwithstanding their risk tolerance, investors want to avoid losses. They may therefore send price signals to homeowners about the kinds of land use restrictions that must be in place in order to receive top dollar for upside potential or the best deal on downside protection. In concept, this is no different than an insurer offering a discount for features like fire extinguishers and deadbolts, but the restrictions that would maximize investment returns might not always optimize the homeowner's consumption experience.<sup>274</sup> If getting one's child into the best school means buying in the most exclusive neighborhood, and if buying in the most exclusive neighborhood requires surrendering nearly all of one's discretion with respect to the use of the home, then we might begin to see an overall reduction in the autonomy that homeowners enjoy.

The fact that any such effect would stem from individual households choosing to make bargains does not provide a full answer. If ceding autonomy represents a competitive strategy that everyone feels compelled to undertake, then everyone loses autonomy and gains nothing in relative position; each household merely maintains its previous place in the neighborhood (and public school) hierarchy. Moreover, there may be society-wide externalities associated with many or most households giving up control over their homeownership experiences.<sup>275</sup> Not only might society as a whole become more conformist than anyone would prefer, but homeowners could also lose the sense of individual responsibility to their households and communities that comes with having some capacity to choose their own actions with respect to their homes.

---

<sup>274</sup> Of course, we would expect the two to be closely related. The resale price should reflect what homeowners find valuable about the home, and if restrictions on autonomy are aversive, then the price homeowners are willing to pay should drop accordingly. This might not happen, however, if homeowners misgauge how much the lost autonomy would mean to them or if competitive pressures to attain the highest possible relative standing in the housing market overwhelm considerations relating to the day-to-day consumption experience.

<sup>275</sup> Cf. Thomas W. Merrill, *Dolan v. City of Tigard: Constitutional Rights as Public Goods*, 72 DENV. U. L. REV. 859, 870–72 (1995) (observing that where constitutional rights produce positive externalities, the interests of more than just the rights-holder are implicated in bargains to cede them).

One response to these worries, albeit not an entirely satisfying one, is that these concerns are already implicated by the widespread use of restrictive covenants in common interest communities.<sup>276</sup> What may be needed, then, is not a ban on innovation in homeownership, but pushback against undue intrusions on personal liberty in housing. Nonetheless, the possibility that H2.0 could intensify what many already see as a troubling trend toward reduced residential autonomy must be taken seriously.

## VI. AVENUES FOR FURTHER RESEARCH

This Article's introduction of H2.0 only scratches the surface in exploring the potential for, and implications of, a widespread shift in the meaning of homeownership. This Part briefly identifies some additional areas of research that might prove instrumental in designing and implementing a new paradigm for owner-occupied housing.

### A. *Tailored Risk-Bearing: H3.0 and Beyond*

In this Article, I have conceptualized H2.0 as a new package that would shift the default arrangement from one in which offsite risk is automatically bundled with homeownership to one in which it is not. Homebuyers would then be free to dial back to their desired level of investment in offsite factors. My brief discussion of this interface has suggested that the dials would be purely quantitative in nature, allowing a homebuyer to take on, say, ten percent of offsite risk. But it would also be possible to construct dials or levers organized along qualitative lines, or keyed to other economic indicators. Two examples help to illustrate how future versions of homeownership might evolve beyond H2.0's simple notion of adding risk back into the bundle.

Many homebuyers correctly anticipate that the sale of their current home will be followed by the purchase of another home. Accordingly, they will not fear home value shifts that would affect the prices of their current and future homes in equal measure: their purchasing power will not be eroded by a drop in their current home's price that is matched by a drop in prices in their new market, and price increases in the new market will be less problematic if their current home appreciates at the same rate.<sup>277</sup> Instead, they fear shifts in their current housing market that are uncorrelated with changes in other housing markets in which they expect to buy. Thus, we could imagine variations on the H2.0 concept that would provide homebuyers with protection against the special risks that come from transitioning from one housing market to another—that one's local housing market will suffer declines that are uncorrelated with declines in other areas, or that the

---

<sup>276</sup> See, e.g., Fennell, *supra* note 135, at 849–90 (discussing a variety of reasons that the restrictions in private communities may not well serve the interests of the residents of those communities).

<sup>277</sup> See text accompanying notes 141–43.

gains in one's local housing market will fail to keep pace with those in other areas.

Specialized products might be developed that key payoffs not merely to changes in the homeowner's local housing market, but to relationships between those changes and changes occurring in other local housing markets. If we think that homebuyers can do a good job of predicting the markets in which they plan to buy and the time at which they hope to buy, they could, in theory, make the appropriate investments on their own. But a more viable product for widespread adoption would take into account shortfalls in predictions. Such a product might, for example, offer a homebuyer a payoff that would effectively stabilize the inflation-adjusted purchasing power represented by her current home, no matter which housing market within the country she later moved to, and even if she ended up choosing not to purchase another home at all.<sup>278</sup>

A second example of tailored risk-bearing would involve drawing qualitative distinctions between different sources of housing market risks. Recall, for example, Figure 2's distinction between offsite risks that are completely out of homeowner control and those that are within the control of homeowners acting collectively. I have suggested some reasons that the offsite risk factors amenable to collective control need not be a mandatory component of homeownership.<sup>279</sup> However, some homeowners might wish to bear risks associated with these highly localized changes occurring at the local or neighborhood level without taking on regional or national housing market risks—or vice versa. Likewise, investors might wish to slice up the risks of home value changes along qualitative lines for resale in secondary risk markets. Even finer distinctions between sources of home value risk might be developed, and traded independently of each other.

### B. Government's Role

Throughout the Article, I have assumed that H2.0 would be the product of private actors working through markets. But it would also be possible for a governmental agency to be directly involved in launching and fostering H2.0. Indeed, early discussions of home equity insurance posited a central role for a governmental agency.<sup>280</sup> Governmental involvement might be used to overcome inertia, resolve collective action problems, ensure that

---

<sup>278</sup> To be clear, such a product would not enable our protagonist living in Doldrums to purchase a *comparable* home in Bright Lights, where homes cost several times as much. Rather, if Agatha originally bought her home in Doldrums for \$200,000, she would receive enough money to purchase the sort of home in Bright Lights that she could have purchased for \$200,000 at the time of her initial home investment in Doldrums.

<sup>279</sup> See *supra* Part I.B.

<sup>280</sup> See Marcus & Taussig, *supra* note 4 (proposing the establishment of a governmental program, the Home Owners' Insurance Corporation, to insure single-family, owner-occupied homes under a particular value against equity loss due to locational factors).

H2.0 develops along particular lines, or blend redistributive policies with the risk transfers undertaken under H2.0. On the last point, it is notable that upside and downside risks will vary across the country, and if actuarially priced, could yield significant differences in the cost of downside protection or the amount of equity financing available to purchase a home. A governmental agency could build in a subsidization program that would help to even out these differences.

Even if no governmental agency is directly involved in developing and implementing H2.0, some form of regulatory action undoubtedly would be required, given that H2.0 would be a novel and complex financial product marketed to the general public. We would expect a body of law to develop around this new tenure form to regulate the way in which it is offered to consumers and investors. I have already noted some concerns that such regulation might address, including the concentration of investment stakes within particular communities, as well as concerns about making H2.0's implications comprehensible to homebuyers. Certain kinds of pernicious investor activities, such as "redlining" particular neighborhoods, might be reached either through existing antidiscrimination laws or through new legislation tailored for H2.0.<sup>281</sup> Regulation might also be used to narrow choice sets to prevent homebuyers from making certain kinds of predictable and costly mistakes, or to address some of the collateral concerns about competitive consumption that might be sharpened if H2.0 were to become widespread.

Tax policy decisions would also be necessary. The federal tax code incorporates a heavy subsidy for traditional homeownership.<sup>282</sup> Whether the subsidies granted to H2.0 homeowners should be equally heavy depends on the extent to which H2.0 ownership serves the social purposes that underlie the current tax expenditures. H2.0 delivers the secure option to stay put that is arguably the most important feature of homeownership. Although the lack of an investment stake in the fortunes of the neighborhood might seem to cut against extending full tax benefits to the H2.0 homeowner, H2.0

---

<sup>281</sup> See, e.g., Amy E. Hillier, *Redlining and the Home Owners' Loan Corporation*, 29 J. URB. HIST. 394, 395 (2003) ("Redlining refers to lending (or insurance) discrimination that bases credit decisions on the location of a property to the exclusion of characteristics of the borrower or property."). Redlining has historically been used to deny credit or other services, or to make these services available on less favorable terms, in neighborhoods that are racially mixed or that are identified as minority neighborhoods. A number of federal statutes, including the Fair Housing Act, 42 U.S.C. §§ 3601–3631 (2000), the Equal Credit Opportunity Act, 15 U.S.C. §§ 1691–1691f (2000), the Home Mortgage Disclosure Act 12 U.S.C. § 2801–2810 (2000), and the Community Reinvestment Act, *id.* §§ 2901–2908 bear on redlining practices. See, e.g., Stephen M. Dane, *Eliminating the Labyrinth: A Proposal to Simplify Federal Mortgage Lending Discrimination Laws*, 26 U. MICH. J.L. REFORM 527, 540–57 (1993) (reviewing and critiquing legislation addressing mortgage discrimination, including redlining). I do not mean to suggest that avoiding discrimination in the H2.0 context would be a simple matter. Legislative protections tailored for the mortgage lending context would have to be adapted and extended to the H2.0 investment context, and to the extent existing protections are ineffective, broader reforms would be necessary.

<sup>282</sup> See *supra* notes 42–46 and accompanying text.

homeowners are exposed to the consumption risks that attend neighborhood changes. Because they will not be involuntarily forced out of the neighborhood, they are free to make the kinds of site-specific investments in the community that help to generate social capital and other positive externalities associated with homeownership.

If we assume for the sake of argument that H2.0 ownership is as worthy of subsidization as is traditional homeownership, then the tax code should treat these two kinds of ownership equally. This may be easier said than done, however. If H2.0 substitutes in part for mortgage financing and alters the amount of property taxes paid, H2.0 homeowners would receive less advantage from the tax code's mortgage interest and property tax deductions than their traditional homeowner counterparts would. Equalizing the treatment of capital gains would be even more challenging because H2.0 would assign some or all of those gains to investors, who would not currently qualify for the tax code's capital gains exemption for owner-occupied housing.<sup>283</sup> More comprehensive reforms to the tax treatment of homeownership might be preferable, of course, and the introduction of H2.0 could offer a propitious moment to undertake them.

### C. Beyond Housing

H2.0 would form only one part of a growing trend toward increasingly sophisticated risk management. Although this Article focuses exclusively on homeownership, an area of undiversified risk that seems especially amenable to improvements through the appropriate use of financial instruments, the idea of reconfiguring risk has been extended to other areas. For example, Robert Shiller's work has addressed the possibility of insurance markets for occupational specialties based on an indexing system similar to that used to measure changes in housing markets.<sup>284</sup> Predictions markets occupy a closely related field of research, in which trading on uncertain events generates information about those events that can yield more accurate pricing of risks.<sup>285</sup> For example, weather derivatives—such as those that pay off

---

<sup>283</sup> It is perhaps significant that the tax code offers the same capital gains advantages granted to homeowners to "tenant-stockholders" living in housing cooperatives. See 26 U.S.C. § 121(d)(4) (2000). Although the situation of these tenant-stockholders is not analogous to that of outside investors (they live in the home and hold shares in the cooperative corresponding to the value of their residence), the inclusion of this provision shows a willingness to look beyond the formal correspondence of ownership and occupancy in granting tax advantages.

<sup>284</sup> See SHILLER, NEW FINANCIAL ORDER, *supra* note 5, at 107–18 (explaining how "livelihood insurance" might work). Shiller offers the example of a young person who wants to specialize in "recombinant DNA technology," but fears a downturn in the returns to that field over time. *Id.* at 107–10. "Livelihood insurance" would protect the young biochemist against the possibility of such a decline through payoffs keyed, in part, to incomes within that area of specialization. *Id.* at 109–10, 113.

<sup>285</sup> For a recent overview of predictions markets, see Abramowicz & Henderson, *supra* note 126, at 1349–60. Twenty-five scholars recently drafted a statement urging that regulatory barriers to the development of such predictions markets be lowered. See Kenneth J. Arrow et al., *Statement on Prediction*

based on rainfall—can help to manage the risks of those engaged in weather-sensitive enterprises.<sup>286</sup>

H2.0 therefore offers not only a model for how homeownership might be reconceived, but also a paradigm case for thinking carefully about the gains that might be achieved through the buying and selling of all manner of routine risks. Derivatives have gained tremendous ground over the last few decades, and currently occupy a role in the economy that would have been unimaginable half a century ago.<sup>287</sup> We may well be standing on the verge of even more momentous changes that will bring the financial tools of risk management to ordinary people in transformative ways. Such changes are not without costs and downsides, however. This Article attempts to temper its enthusiasm for the potential of new forms of risk management with an exploration of some of the concerns that must be addressed if such innovations are to produce the hoped-for social gains.

#### CONCLUSION

Homeownership has moved out of alignment with economic and social reality. A new version of homeownership designed to bring the household's exposure into line with its effective scope of control offers tremendous potential. By allowing owners to alienate both upside and downside home equity risk, homeownership can be made more stable and less expensive, homeowners more secure and less fearful, and local governmental decisions less narrow and less exclusive. Of course, H2.0 is no magic bullet; it cannot solve underlying problems of economic inequality and socioeconomic stratification.<sup>288</sup> In addition, the cognitive and societal implications of changing the investment structure of homeownership require careful consideration. But homeownership, as presently configured, falls far short of its promise for many households. By thinking creatively about what is and is not essential to the institution, it becomes possible to identify a gap in the tenure menu and to devise an alternative version of homeownership capable of filling it. My treatment here has been far from comprehensive, but I hope that it will spur further conversation and debate on this topic.

---

*Markets* (AEI-Brookings Joint Ctr. for Reg. Stud., Related Publication 07-11, May 2007), available at <http://ssrn.com/abstract=984584>.

<sup>286</sup> See, e.g., *Come Rain or Come Shine*, *ECONOMIST*, Feb. 10, 2007, at 78, 78–79; CME Weather Products, <http://www.cme.com/trading/prd/weather/> (last visited Feb. 18, 2008); see also Michael Lewis, *In Nature's Casino*, *N.Y. TIMES MAG.*, Aug. 26, 2007, at 26 (discussing “catastrophe bonds” used to hedge against natural disasters).

<sup>287</sup> For background on the history and regulation of derivatives, see, for example, Roberta Romano, *A Thumbnail Sketch of Derivative Securities and Their Regulation*, 55 *MD. L. REV.* 1 (1996).

<sup>288</sup> See Caplin et al., *supra* note 88, at 211 (observing that shared equity mortgages “are not a panacea for housing affordability problems and the associated constraints on building wealth”).