

WHAT IS A PROTECTION GAP? HOMEOWNERS INSURANCE AS A CASE STUDY

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In the past few years, the insurance community has paid increasing attention to the “protection gap”—the extent to which significant losses are not covered by insurance. The Geneva Association, the insurers’ global think tank, has pioneered the concept, and it has become widely adopted.

Insurance always presents gaps in coverage; not all risks are insured or indeed insurable. The protection gap concept necessarily embodies a normative component—that insureds with limited coverage, potential insureds who lack insurance, and society as a whole suffer when certain gaps in insurance exists. It is this normative component of the protection gap concept that has not been fully developed and is the subject of this article.

Part I of the article explains the commonly used definitions of the protection gap. The most commonly used definition—the “risk protection gap”—is purely empirical, measuring the difference between total losses and insured losses. Analytically superior but harder to operationalize is the “insurance protection gap,” which is the difference between the amount of

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insurance that is economically beneficial and the amount of insurance in place. The insurance protection gap properly introduces a normative element to the concept, but it does not capture all of the considerations at stake. Part I offers a different definition: In a particular context, the protection gap is the difference between the amount of insurance that is in place and the amount of insurance that should be in place.

Part II of the article expands on the definition and discusses how much insurance “should be” in place. The method begins by defining a particular insurance context and then constructs policyholder expectations in that context. To define a baseline against which a protection gap should be measured, however, policyholder expectations must be reasonable. Therefore, the risks at issue must be insurable, the insurance must not be undermined by other effectiveness issues, and the social effects of coverage or its absence must be taken into account.

Part III illustrates how the article’s definition of the protection gap can be applied by analyzing several issues in homeowners insurance. A major problem, and a clear instance of the protection gap, is the extent to which homeowners frequently are underinsured for their losses. The most frequently discussed protection gap involves disaster losses, so this part applies the analysis to flood losses. The part concludes by considering whether several more mundane issues constitute protection gaps, damage caused by rain runoff, and matching of damaged and undamaged property.

I. DEFINITIONS OF THE PROTECTION GAP

The Geneva Association offers two definitions of a protection gap. Both are useful, but neither entirely captures the issues involved in thinking about protection gaps. Its definitions are:

- *The risk protection gap*—The difference between total losses and insured losses.
- *The insurance protection gap*—The difference between the amount of insurance that is economically beneficial and the amount of insurance actually purchased.¹

¹ The Geneva Association, *The Global Insurance Protection Gap: Assessment and Recommendations* 7 (2014), https://www.genevaassociation.org/sites/default/files/research-topics-document-type/pdf_public/ga2014-the_global_insurance_protection_gap_1.pdf.

The risk protection gap definition identifies the extent to which insurance is not providing protection for potentially insured losses. The definition's principal advantage is that it is relatively easy to calculate, at both the individual and the societal levels. After a natural disaster, for example, government and private entities can readily estimate the losses caused and the amount of insurance paid; the difference between the two is the risk protection gap.

The insurance protection gap definition introduces an important normative element, focusing attention on the kind of insurance that should be provided and not just the kind of insurance that is in place. Losses derive from risks, but insurance is only one way of addressing risk, and often not the only way or the best way. For some risks, control, mitigation, or retention may be superior to insurance.² For other risks, insurance may be unavailable at a price that potential insureds are willing or able to pay. The insurance protection gap definition forces attention to the process of evaluating particular types of insurance or insurance coverage decisions, because it takes account of the beneficial role of insurance in some circumstances and its limited role in other circumstances.

But the insurance protection gap definition is incomplete in two respects. First, the definition most often is used to assess the adequacy of amounts of insurance in place for a region after a natural disaster or otherwise for a class of actual or potential insureds. This macro level obviously is important, but the concept of a protection gap also can be used more narrowly, to determine whether a particular policyholder suffers from a protection gap or whether one insurance policy creates a greater protection gap relative to another policy of the same type.

Second, the insurance protection gap definition suggests that for a defined type of risk, there exists an optimal level of insurance that is "economically beneficial." That is not necessarily true, either for individual

On the protection gap in general, *see id.*; The Geneva Association, *Understanding and Addressing Global Insurance Protection Gaps* (2018), https://www.genevaassociation.org/sites/default/files/research-topics-document-type/pdf_public/understanding_and_addressing_global_insurance_protection_gaps.pdf; Bermuda:Re+ILS, *The Protection Gap* (2017), https://axaxl.com/-/media/axaxl/files/pdfs/fff/2017/xlcatlin_protection_gap_2017.pdf; Lloyd's, *A World at Risk: Closing the Insurance Gap* (2018). The concept of a protection gap is widely used, often in less precise ways. *See, e.g.*, ROB GALBRAITH, *THE END OF INSURANCE AS WE KNOW IT* 60–61 (2018).

² GEORGE E. REJDA, *PRINCIPLES OF RISK MANAGEMENT AND INSURANCE* 12–15 (11th ed. 2011).

policyholders or for society as a whole. The purchase of insurance is a response to risk aversion;³ a person or firm incurs a small, certain loss—the insurance premium—to protect against an uncertain but potentially larger loss. The insurance transaction is economically beneficial because the purchaser protects against a loss that it might otherwise be unable to bear at all, or only by using funds that would be more advantageously spent elsewhere. Individuals and entities have different levels of risk aversion and different underlying financial conditions, however, that enable, prevent, or dispose them in the decision of whether to purchase insurance and, if so, how much of what kind. Therefore, it is impossible to determine, in the abstract, what level of insurance is economically beneficial.

Moreover, insurance provides social benefits and costs that are not effectively captured in the assessment of how much insurance is socially beneficial. The social benefits of insurance include the aggregation of individual economic benefits, capital accumulation that becomes a source of investment funds, the production of knowledge about risks and the use of that knowledge to reduce losses, other loss reduction through the regulatory function of insurance, and forms of redistribution and social responsibility.⁴ Insurance also has social costs, notably the transaction costs of conducting the insurance enterprise and potential discriminatory effects of the availability and cost of insurance. Measuring and weighing the costs and benefits in order to determine the economically beneficial level of insurance is a Herculean task at best.

Even more important, focusing only on the economic benefits of insurance misses a large part of the nature of insurance, particularly when the focus shifts from the societal level to the situation of individual policyholders. The idea of insurance that is economically beneficial focuses on insurance as a financial transaction of risk transfer entered into by an economically rational policyholder. That does not fully capture the nature of insurance for many policyholders, as a socially constructed relationship of security, taking into account factors other than a stylized account of economic rationality. The relationship between insurer and policyholder is a relational contract, constituted in part by the written policy and in part by broader understandings and expectations created by insurance company advertising, consumer expectations, and social norms, and the relationship is situated in a system of relationships among insurers, policyholders, financial

³ TOM BAKER & KYLE D. LOGUE, *INSURANCE LAW AND POLICY* 3–4 (3rd ed. 2013).

⁴ *Id.* at 14–24.

institutions, tort victims, and society at large. For the individual policyholder, the relationship yields a sense of security that is not captured in the economic effects of the transfer of financial risk. Therefore, the insurance relationship has value and meaning beyond its portrayal as an economic transaction.⁵

A full definition of the protection gap accordingly needs to be context-sensitive and useful in assessing protection gaps at the macro and micro level, and it needs to take into account economic and noneconomic understandings of the insurance relationship:

In a particular context, the protection gap is the difference between the amount of insurance that is in place and the amount of insurance that should be in place.

The key term in this definition, to define the baseline of how much insurance “should be” in place, is of course vague in the extreme.⁶ By contrast, the easy step is to determine how much insurance is in place, either prospectively or relative to a loss that has occurred. Here are the steps to filling out the determination of how much insurance “should be” in place:

First, the insurance must relate to a defined class of potential insureds and the context in which they are situated.

Second, in a developed insurance market, the insurance should accord with policyholders’ reasonable expectations about the type of insurance at issue. Policyholders have general expectations, often indistinct, about the protection and security their insurance provides. Actual expectations are not the whole point; expectations must be reasonable as

⁵ REJDA, *supra* note 2, at 30–31; see Jay M. Feinman, *Contract and Claim in Insurance Law*, 25 CONN. INS. L.J. 153, 161–66 (2018); Jay M. Feinman, *The Insurance Relationship as Relational Contract and the “Fairly Debatable” Rule for First-Party Bad Faith*, 46 SAN DIEGO L. REV. 553, 556–59 (2009).

⁶ In a recent article in this journal, Kenneth Abraham rejects the concept of a protection gap. Kenneth S. Abraham, *“Incomplete” Insurance Coverage*, 26 CONN. INS. L.J. 116. “[T]he notions of a ‘gap’ in coverage and ‘incomplete’ coverage tend not to be helpful.” As to the definition of a protection gap, Abraham concludes:

Finally, a very different baseline for determining whether a policy contains a gap in coverage could be the optimal set of coverages that a policy of that type would contain. Unfortunately, however, although this baseline is superior in principle to the other possible baselines, it is impractical in the extreme, for a number of reasons.

Id. at 32.

well, which involves many of the other factors about what insurance should be provided.

Third, the risks must be insurable: calculable, non-correlated, and offered at a price that covers all costs and produces adequate demand.⁷

Fourth, the insurance must avoid problems that would undermine the viability of the insurance pool: moral hazard, adverse selection, improper risk segmentation, and high transaction costs.

Fifth, the insurance must provide positive social effects. In the case of a natural disaster, for example, whether homeowners in a community have adequate insurance to rebuild has important consequences for local businesses and the community as a whole. Similarly, whether their insurance has been priced to provide incentives for risk mitigation before the disaster occurs will influence the level of economic consequences for the community.

II. DEFINING THE BASELINE

The concept of a protection gap is complicated. There are easy examples. The paradigm case of a protection gap at the individual level arises when a typical potential insured does not have insurance that is readily available, reasonably priced, easily understood, economically rational given their level of risk preference, and socially beneficial; at the societal level, the paradigm cases involves many such potential insureds. Low take-up rates for federal flood insurance in high-risk areas and the purchase of inadequate policy limits under replacement cost homeowners insurance policies are common examples.⁸ But beyond those examples, the application of the definition to a particular issue can be contestable. Moreover, the definition of the baseline against which a protection gap is measured cannot easily be separated from the causes and consequences of protection gaps, and those causes and consequences need to be considered in describing instances of protection gaps and cures for them.⁹

⁷ The third and fourth elements, and to an extent the fifth element, are discussed in REJDA, *supra* note 2, at 22–24, 30–33; BAKER & LOGUE, *supra* note 3, at 4–13; Mark Geistfeld, *Interpreting the Rules of Insurance Contract Interpretation*, 68 RUTGERS U.L. REV. 371 (2015).

⁸ See *infra* text accompanying notes 54, 58.

⁹ The Geneva Ass'n, *Managing Physical Climate Risk: Leveraging Innovations in Catastrophe Risk Modelling* (2018), at 25–31; The Geneva Ass'n, *The Global Insurance Protection Gap: Assessment and Recommendations 7* (2014), at 33–38;

The first step in defining the baseline is to describe the particular insurance context in which the gap is to be measured, such as typical homeowners insurance, life insurance for middle-income wage earners, or general liability insurance for small- to medium-sized businesses. Within each context, policyholders have expectations of coverage, and those expectations are the starting point to determine how much insurance should be provided in the context. But policyholder expectations are only the beginning. Policyholders may expect maximal coverage, but their expectations may be unreasonable because of factors that limit the insurability of risks or that would undermine the operation of the insurance mechanism.¹⁰ Insurability issues are the extent to which the risks are calculable, noncorrelated, and capable of being priced at a level that policyholders will pay. Effectiveness issues are moral hazard, adverse selection, risk segmentation, and transaction costs. Finally, the social effects of the insurance, positive and negative need to be considered. The process involves balancing, of course.

A. THE TYPE AND CONTEXT OF INSURANCE

In the abstract, many potential insureds are subject to protection gaps because they lack insurance coverage for losses that occur. But the economics of risk spreading, the social construction of an insurable risk, and the path-dependence of types of insurance that ordinarily are available limit the potential contexts in which a protection gap usefully can be analyzed. A protection gap is always defined with reference to a particular context and a

Jay M. Feinman, *The Protection Gap in Homeowners Insurance: An Introduction* 8–9.

¹⁰ A dramatic recent example involves the disputes over business interruption insurance claims by businesses in the COVID-19 pandemic. Many business owners professed an expectation of coverage for lost business income when their businesses were forced to close. As expressed by President Trump, “You have people that have never asked for business-interruption insurance and they have been paying a lot of money for a lot of years for the privilege of having it and then when they finally need it, the insurance company says ‘We’re not going to give it,’” *Trump Tells Insurers to Pay Virus Claims If Pandemics Not Excluded*, INS. J. (Apr. 14, 2020), <https://www.insurancejournal.com/news/national/2020/04/14/564744.htm>.

Insurers, on the other hand, argued that the policyholders’ expectation of coverage was unreasonable for two reasons: as a matter of application of policy language, which sometimes contained a virus exclusion and generally required loss of or damage to property as a triggering event and, more generally, because losses in a pandemic were the most extreme example of an uninsurable risk.

particular type of insurance that now exists. The Geneva Association definitions, for example are pragmatic in measuring protection gaps against baselines of types of insurance that currently are widely available, such as different types of disaster insurance;¹¹ filling the gap would involve providing more insurance, not different insurance.¹²

The first step in considering context is to define the concept of an insurable loss. What constitutes an insurable loss is a constructed concept, of course. When a fire destroys a home, for example, the owner may incur a variety of losses, including:

1. the cost of rebuilding the dwelling,
2. the cost of replacing personal property such as clothes and furniture,
3. additional living expense while the home is being rebuilt,
4. time lost to work,
5. time lost to family, community, or social activities that now must be spent on the insurance claim and rebuilding process,
6. the loss of irreplaceable personal items such as family photographs, and emotional distress.
7. In addition, there are what might be thought of as secondary losses suffered by persons or groups other than the homeowner:
8. If the homeowner ordinarily would have a weekly house cleaner, the cleaner suffers a loss of income while the house is under repair.
9. If the homeowner usually coaches a Little League team but lacks the time to do so due to the demands of repair, the organization and its participants suffer a real if immeasurable loss.

Items 1–4 are measurable economic losses, but items 5–9 are also real losses. Item 8 conceivably could be covered by contingent business interruption insurance but in the overwhelming majority of cases it will not

¹¹ The Geneva Ass'n, *Managing Physical Climate Risk: Leveraging Innovations in Catastrophe Risk Modelling* (2018), at 5, 14–15.

¹² The Geneva Ass'n, *The Global Insurance Protection Gap: Assessment and Recommendations 7* (2014) at 7, 13.

be. But only 1, 2, and 3 are generally regarded as insurable losses that would figure into most definitions of a protection gap. This is for practical reasons; in measuring the protection gap, the baseline is limited to losses that could be covered by the kind of insurance that is readily available or, by modest extension of existing types of coverage, could be available.¹³ The kind of insurance that is or could be available is partly a product of history and partly a product of the nature of insurable risks.¹⁴ Many risks covered by the modern homeowners policy result from a process of accretion, as more and more perils were added to policies that originally covered only losses by fire.¹⁵ The reasons that some type of losses are not covered by homeowners insurance—time lost to community activities or emotional distress, for example—rest in the limits of insurance discussed in later sections, such as not being readily calculable.

To begin to define the baseline, we could think of the homeowner as an instance of the class of homeowners facing property losses and their cleaning person as a potential insured under a contingent business interruption policy. However, there is no available insurance for the Little League that loses the time of a coach, so that is not relevant to the definition of a protection gap.

Depending on the level at which the analysis is aimed and the purpose for which the definition is employed, the context may need to be more narrowly defined. “Homeowner” and “business potentially subject to loss of income” are categories that are sufficient for some purposes but not others. For example, if the goal is to determine the extent to which homeowners are protected against disaster or businesses against shutdowns due to a pandemic, the broad contexts may be useful. In other situations, these contexts need to be narrowed. The means of narrowing the category are related to the concept of the policyholder’s reasonable expectations discussed in the next section, but as a start, consider the ways in which a group of insureds or potential insureds seems to cohere and to be distinguished from other groups. Thus, middle-class homeowners insured under typical replacement cost policies belong to a different group than owners of luxury vacation homes insured under specially procured policies

¹³ This is measuring from the top down—insurance that could be but is not provided—rather than from the bottom up—losses that could be insured. Thanks to Steve Figlin for the insight.

¹⁴ Abraham, *supra* note 6, at 118.

¹⁵ Harold Weston, *À la Carte Coverage: Unbundling Causes of Losses and Coverage Grants to Allow Consumer-Insured Selection*, 11 RUTGERS J. L. & PUB. POL’Y 38, 42–51 (2013).

with numerous endorsements, or homeowners with more limited dwelling fire policies ordinarily used to insure rental houses. An individual house cleaner who may be entirely uninsured is different than a franchised housecleaning service that might have business interruption insurance. The protection gap concept applies to any context once it is defined; the examples in this article are drawn from the typical homeowners policy context.

B. POLICYHOLDERS' REASONABLE EXPECTATIONS

In insurance law, the reasonable expectations doctrine arises most often in disputes about the meaning and operation of policy language.¹⁶ A claim potentially covered by the policy arises; the insurer asserts that the language of the policy denies coverage, while the policyholder asserts that the language should be understood, supplemented, or even overcome by the policyholder's own reasonable understanding of the language. Once regarded as a potential challenger to traditional interpretation rules, reasonable expectations as a doctrine today is not regarded as particularly robust.

The importance of reasonable expectations in defining protection gaps is different. The issue is not interpreting the language of an insurance policy but determining reasonable expectations as a basis for a normative consideration in finding the level of insurance that should be in force.¹⁷ In that sense, reasonable expectations may be regarded not as a doctrine but as a principle that animates rules of insurance law and of contract law more generally. According to Corbin's magisterial contracts treatise, the "main purpose of contract law [is] the protection of reasonable expectations."¹⁸ In insurance law, this is further development of an idea first suggested by Kenneth Abraham, building on work by Robert Keeton, twenty years ago:

¹⁶ ROBERT H. JERRY & DOUGLAS R. RICHMOND, UNDERSTANDING INSURANCE LAW 142–51 (5th ed. 2012).

¹⁷ Abraham, *supra* note 6, at 139 (rejecting the concept of reasonable expectations in contexts because "the scope of coverage that is optimal for one policyholder is not necessarily optimal for others.").

¹⁸ ARTHUR LINTON CORBIN, CORBIN ON CONTRACTS § 1, at 2 (one vol. ed. 1952). For Corbin the principle was "the realization of reasonable expectations that have been *induced by the making of a promise*" *Id.* (emphasis added). The latter phrase does not capture all of my analysis. See Jay M. Feinman, *Good Faith and Reasonable Expectations*, 67 ARK. L. REV. 525 (2014).

As a regulative ideal, the expectations principle reflects an elegantly simple notion, which is why the principle serves so powerful an ideal. This is the notion that people should be able to buy the insurance that they reasonably want. Accompanying this notion is a corollary: people should not be led to believe that they have the insurance they reasonably want, when in fact they do not have that insurance. Since both the principle and the corollary refer to *reasonable* expectations of coverage, these are for the most part statements about the expectations of the vast majority of policyholders, not of isolated individuals. An expectation of coverage is most likely to be reasonable, after all, if a large number of people hold it in common. Indeed, most expectations of coverage held by the vast majority of policyholders are reasonable, and most expectations that are not held by the vast majority of policyholders are not reasonable.

Thus, taken together, the expectations principle and its corollary constitute a normative statement about the proper relation between the supply side of the insurance market and the demand side of the market.¹⁹

In the context used as an example in this article, the reasonable expectations principle reflects a particular conception of the insurance relationship appropriate to the context of the homeowners insurance. For the prototypical member of the class of policyholders under a replacement cost homeowners insurance policy, the relationship between the insurer and its policyholder is not fully described by the terms of the policy. The insurance policy involves minimal planning and choice by the policyholder, typically focusing on price, policy limits, deductible, a vague sense of the insurer's reputation, convenience, and perhaps a few items of coverage. The policyholder, rather than agreeing to the detailed terms, invests in a relationship of security, a relationship that is formally created by the policy but that is socially constructed and promoted by insurers as a group.²⁰ For the policyholder the insurance policy has value prior to loss because it

¹⁹ Kenneth S. Abraham, *The Expectations Principle as a Regulative Ideal*, 5 CONN. INS. L.J. 60, 63–64 (1998). Abraham built on Robert Keeton's earlier identification of reasonable expectations as a doctrine and principle. *Id.* at 65.

²⁰ Feinman, *Contract and Claim in Insurance Law*, 25 CONN. INS. L.J. 153, 162–66 (2018)

provides this expectation of security. The reasonable policyholder understands that relationship does not guarantee coverage for every conceivable loss, but the policyholder has a legitimate expectation of broad coverage.²¹

Reasonable expectations begin with actual expectations, which Abraham defines as the “expectations of the vast majority of policyholders.”²² Individual policyholders also may have unique expectations about coverage, but reasonable expectations focus on the general expectations of the class, not those unique expectations.²³

Surprisingly little research exists on policyholders’ actual expectations about coverage. The studies that do exist show that homeowners understand some of the basics of homeowners insurance coverage, but they have significant gaps in knowledge, and they often believe they have more coverage than policies actually provide. For example, an Insurance Information Institute survey found that ninety-one percent of homeowners knew they were protected for fire damage and seventy-nine percent for theft from the house.²⁴ But homeowners often believe that homeowners insurance covers catastrophic losses that in fact are uniformly excluded. A survey by Allstate concluded that sixty-one percent of homeowners believed that flood damage was covered,²⁵ as did fifty-six percent of respondents in a survey for insuranceQuotes.com,²⁶ an NAIC survey found that fifty-one percent either believed that flood damage was covered or were not sure, and a survey by Zogby International concluded

²¹ Cf. Abraham, *supra* note 6, at 120 (“[S]ome omissions from coverage under certain kinds of policies would be surprising, based on the kind of policy involved.”).

²² Abraham, *supra* note 19, at 63.

²³ Millar v. State Farm Fire & Cas. Co., 804 P.2d 822, 826 (Ariz. Ct. App. 1990) (“[T]he reasonable expectation concept must be limited by something more than the fervent hope usually engendered by loss. (citation omitted) Thus, a plaintiff’s expectation of coverage must be objectively reasonable.”).

²⁴ Ins. Info. Inst., *2016 Consumer Insurance Survey Homeowners Insurance: Understanding, Attitudes and Shopping Practices* (Feb. 2017), <https://www.iii.org/sites/default/files/docs/pdf/pulse-wp-020217-final.pdf>.

²⁵ *Do You Know What Your Insurance Covers?*, Allstate (Nov. 2015), <https://www.allstate.com/tr/insurance-basics/what-insurance-covers-infographic.aspx>.

²⁶ *Survey: Majority of Americans Mistakenly Believe That a Standard Home Insurance Policy Covers Flood Damage*, Ins. Quotes (Apr. 6, 2017), <https://www.insurancequotes.com/press-room/home-renters-insurance-misconceptions>.

that twenty-eight percent incorrectly believed they were covered for earthquake damage and an equal amount weren't sure.²⁷

Therefore, in the absence of more reliable data, policyholders' expectations about coverage can first be described as a diffuse expectation of broad coverage. That expectation reflects the social understanding of the role of insurance as protector of financial security and is powerfully shaped by insurance company advertising. The iconic slogans of insurance company advertising have expressed that understanding, and they continue to do so: "Like a good neighbor, State Farm is there" and, more recently, "Here to make life go right." "You're in good hands with Allstate" and now, "Better protected from mayhem."

More specifically, here are a set of propositions about policyholders' expectations of homeowners insurance coverage. More research would be needed to validate the propositions empirically, and they may be subject to qualification, but they are at base inarguable.

- Coverage is provided for common causes of significant accidental loss.
- Coverage is particularly important to protect against large financial losses (the large-loss principle).
- Broad coverage is provided for covered losses, subject to the stated general deductible, without obscure limitations or exclusions.
- In interpreting terms of coverage and resolving claims, insurers will act consistently with the relation of security and in the insureds' interests, as long as it is reasonable to do so consistent with insurers' obligation to the pool of insureds.

Further, because of the prevalence of mortgage lender requirements and the limitation of the class to replacement cost policies in the homeowners insurance marketplace, there are additional features:

- Insurance that is required by lenders or mortgage guarantors is adequate to meet those parties' requirements.

²⁷ *Homeowners Coverage Knowledge Gap Wide Among Consumers, INS. J. (Aug. 24, 2010),* <https://www.insurancejournal.com/news/national/2010/08/24/112704.htm>.

- In a replacement cost policy, coverage is provided for complete repair of damage or restoration of property, subject to the general deductible.

Finally, because of the ways policies are advertised and represented in the insurance marketplace:

- Coverage is related to price and description of policies. In comparing policies, higher-priced policies and policies with names such as “Gold Star Special Deluxe Form” provide much better coverage than cheaper or “Special” policies.²⁸

Policyholder expectations of coverage are the starting point to determine how much insurance should be provided in the context. But as noted, actual expectations are only the beginning. Only reasonable expectations are relevant, constructed as what insurance the reasonable policyholder would purchase, or, put another way, what the reasonable policyholder in the relevant class believes they have purchased. Factors that limit the insurability of risks or that otherwise affect the operation of the insurance mechanism need to be considered as well.

C. INSURABLE RISKS

Some risks or losses are less insurable on economic terms than others, and some may even be uninsurable. At its best, insurance embodies an economic logic based on the law of large numbers that permits the transfer and pooling of risk and therefore the potential for coverage.²⁹ In defining the

²⁸ See *Homeowners Policies*, MO. DEPT. OF INSURANCE, https://insurance.mo.gov/consumers/home/homeowners_policies.php (last visited Feb. 23, 2021).

²⁹ The insurance and society literature demonstrates that insurance often does not operate in this way, so that insurers’ decisions sometimes move, “beyond the domain of risk (where uncertain individual losses become predictable in the aggregate) into the domain of uncertainty (where losses are not predictable even in the aggregate).” Tom Baker, *Uncertainty > Risk: Lessons for Legal Thought from the Insurance Runoff Market* (Sept. 20, 2020), <https://ssrn.com/abstract=3532449>. See also Sean M. Fitzpatrick, *Fear is the Key: A Behavioral Guide to Underwriting Cycles*, 10 CONN. INS. L.J. 255, at n.29 (2004). For present purposes, the ideal type

amount of insurance that should be in force as a baseline for measuring the protection gap, the extent to which a risk is insurable needs to be evaluated. Three factors are relevant: The risk should be calculable and non-correlated, and it should link cost, price, and demand.³⁰ Typically the question is not whether a risk is insurable or uninsurable, but the extent to which these factors need to be balanced against other considerations in defining the baseline against which the protection gap is measured.

First, the probability and magnitude of loss must be calculable. For an insurer to calculate the cost of coverage, it must be able to predict with reasonable accuracy how likely it is that a risk will cause a loss and how large that loss is likely to be.³¹ Most of the risks addressed by a typical homeowners policy are calculable, whether they are covered or excluded.³² There are a large number of similar exposures (single-family dwellings), losses are determinable and measurable (the cost to repair), and the chance of loss is predictable (the proportion of dwellings likely to suffer losses of specified kinds within a year).

Second, the risk of loss for each policyholder must be substantially independent of the risk for other policyholders.³³ The law of large numbers works only when relatively few policyholders in a large pool suffer similar losses in given period. If instead many policyholders are likely to suffer similar losses at the same time, then the pool and the insurer can less effectively distribute the risk. The risk that a home will be destroyed by an accidental electrical fire is independent of the risk of similar losses to other homes, and so is readily insurable. Destruction by wildfire in risk-prone areas of California presents a much greater correlated risk, which is why some insurers have ceased offering such coverage.

Third, and often related, premiums must be economically feasible.³⁴ Insurers need to price their products at a level that will produce premiums sufficient to pay for the losses and for the other expenses of operating the

of insurance is sufficient, in that it is harder to argue the existence of a protection gap in the absence of a relatively determinate risk calculation.

³⁰ The discussion focuses on the economics of insurance in general. In particular cases, business or regulatory considerations also may render a risk uninsurable. See GALBRAITH, *supra* note 1, at 127.

³¹ REJDA, *supra* note 2 at 22–25.

³² Only some of the exclusions suggest less calculable risks, such as loss caused by “[s]moke from agricultural smudging or industrial operations.” ISO, HOMEOWNERS 3 – SPECIAL FORM, HO 00 03 10 00 (1999) —Perils Insured Against, A.2.c.(6)(d).

³³ REJDA, *supra* note 2, at 23–24.

³⁴ REJDA, *supra* note 2, at 24.

enterprise and to produce a profit, but the premiums also must be low enough so that many potential policyholders are able and willing to pay them.³⁵

D. OTHER EFFECTIVENESS ISSUES

Even risks that are economically insurable cannot always be effectively insured. Four other factors should be considered in determining the effective provision of coverage: moral hazard, adverse selection, risk segmentation, and transaction costs. In particular contexts, the application of the factors might suggest that the baseline against which the protection gap is measured should not include some elements of insurance.

Moral hazard arises when the presence of insurance decreases an insured's incentive to protect against a loss or to reduce the cost of a loss.³⁶ The failure of an insured to make a cost-effective expenditure to avoid or reduce the cost of a risk imposes higher costs on the pool of insureds. Insurance is less effective when it creates a significant moral hazard.

In many instances in homeowners insurance, the insured's tendency toward moral hazard *ex ante* is mitigated by the consequences of loss despite the presence of insurance; a homeowner who is fully insured against loss still is not likely to be indifferent to the possibility of fire and so less inclined to take precautions. Insurers employ a number of measures to control moral hazard; in terms of coverage, these efforts may include deductibles, coinsurance terms, policy limits, and specific limitations and exclusions. The specific limitations and exclusions require distinct justification. For example, the common exclusion for wear and tear aims to prevent the moral hazard of failing to protect against a loss caused by ordinary deterioration. The post-loss requirement that an insured act reasonably to prevent further damage is justified as an attempt to prevent the moral hazard of failing to reduce the cost of a loss *ex post*.

Adverse selection refers to the potential for higher-risk policyholders to seek more coverage than lower-risk policyholders.³⁷ Because premiums are not finely tuned to the risk profile of each policyholder, lower-risk

³⁵ *Id.*

³⁶ BAKER & LOGUE, *supra* note 3, at 6. Sometimes "moral hazard" is distinguished from "morale hazard," with the former referring to dishonesty and the latter carelessness that each can increase the frequency or severity of a loss, but there is little meaningful difference in effect in most contexts. *See also* REJDA, *supra* note 2, at 5–6.

³⁷ BAKER & LOGUE, *supra* note 3, at 12; REJDA, *supra* note 2, at 26, 111.

policyholders subsidize the losses of higher-risk policyholders and, in extreme cases, the increase in premiums may even cause the lower-risk policyholders to drop out of the insurance pool.

At least in the homeowners insurance context, adverse selection as a general problem may be more theoretical than real; practically all homeowners are required to purchase insurance, and the more common phenomenon may be propitious selection—better risks are likely to purchase more and better insurance.³⁸ But at the extreme and with respect to certain coverage provisions, adverse selection can be a problem. Flood insurance presents the problem of large, correlated losses, but also adverse selection; property owners at higher flood risk are more likely to insure than those at lower risk. How large a problem adverse selection is depends on insurers' ability to engage in accurate underwriting and pricing of policies; risk classification and pricing are justified in part by the desire to charge prices that limit adverse selection.

Risk segmentation is the process of assigning different risks to different forms of insurance.³⁹ Risk segmentation sometimes simply reflects the history of the way that policies have been constructed and reconstructed over time.⁴⁰ In other circumstances it may reflect an attempt to address adverse selection; segmenting risks avoids the need and expense of engaging in more extensive underwriting with respect to a risk carved out of one policy and covered in another, such as the exclusion of earthquake coverage in the basic homeowners policy.⁴¹ Or it may make the provision of a general type of insurance more economically feasible by excluding coverage not needed by a typical insured.⁴²

In the realm of homeowners insurance, risks are segmented by the type of property insured (e.g., car vs. home, property used for business vs. domestic property) and the type of risk (e.g., fire vs. flood). Where coverage commonly is available and purchased under other policies, there is less need to include the risk under a homeowners policy. Where coverage is otherwise unavailable or hard to procure and the risk is substantial and should be covered, there is more reason to include coverage under the homeowners

³⁸ BAKER & LOGUE, *supra* note 3, at 13.

³⁹ BAKER & LOGUE, *supra* note 3, at 440 (“market segmentation”); Adam F. Scales, *A Nation of Policyholders: Governmental and Market Failure in Flood Insurance*, 26 MISS. COLL. L. REV. 3, 22 (2006).

⁴⁰ Abraham, *supra* note 6, at 118–121 (discussing bundling and fragmenting coverage).

⁴¹ Abraham, *supra* note 6, at 122, 123 nn. 20–21.

⁴² REJDA, *supra* note 2, at 196.

policy. Similarly, segmentation also can occur through the offer of endorsements to a standard policy, such as endorsements that provide coverage for property loss or liability arising out of substantial business use of the premises. Endorsements should not be a substitute for basic elements of coverage under a standard policy, but where an endorsement is broadly available, reasonably priced, commonly offered, and well understood, it can reduce the need for coverage under the basic policy.

Transaction costs arise in the underwriting process or in the process of determining whether a loss is covered—investigating the underlying facts and applying the policy language to the facts. Ordinarily the scale of the transaction costs relative to the amount of loss is acceptable even if not minimal. However, there may be some cases in which a particular coverage term generates such high transaction costs in a large number of cases that render the term so expensive as to be unworkable.

E. SOCIAL EFFECTS

Homeowners insurance is a private market transaction, but one that is constituted and regulated by public authority and endowed with a significant public interest. Therefore, social effects merit consideration in the determination of how much insurance should be provided.

Insurance as an institution has broad social effects, from the generation of knowledge about risk and means of reducing it to capital accumulation, but the inquiry here is narrower. Many of the desirable social effects of coverage terms are built into the earlier elements of the analysis. Policy terms that reduce moral hazard, for example, can lead to socially efficient risk reduction as homeowners invest in risk prevention measures. But there are at least three related social impacts of insurance that are particularly important in determining a baseline for the protection gap.

First, homeowners insurance provides security to the policyholder against significant losses, and it also provides a safety net for communities against the economic and social dislocation that follows from property losses. This is most apparent in large-scale disasters, when insurance provides funds for rebuilding areas that otherwise would be devastated economically and socially. But even when a single homeowner suffers a major property loss, the effects can ripple throughout a community.

Second, fostering homeownership is a public policy goal in the United States,⁴³ and insurance supports that goal. Loan guarantee programs, tax incentives, and other government measures support the goal of homeownership, and insurance protects the private and public investment in a home.

Third, insurance potentially is an expression of community and solidarity as well as an economic form of risk transfer. To the extent that premiums are not individualized, insurance embodies a sense of collective responsibility for the losses of all members of an insurance pool. Beyond the economics of the transaction, homeowners insurance can be understood as a coming-together of members of a community to pool their resources for the protection of all.

These social effects do not suggest that maximal coverage always is desirable. In assessing the desirability of terms of coverage, however, social effects do factor into the construction of terms that cover large losses which otherwise could have broad social impacts and could undermine the goals of homeownership and solidarity.

III. EXAMPLES OF PROTECTION GAPS

The definition of a protection gap developed here addresses the difference between the amount of insurance that is in place and the amount of insurance that should be in place, in individual cases or in a group, relating to a defined insurance context. The amount of insurance that “should” be in place accords with policyholders’ reasonable expectations. The reasonableness of those expectations requires that the risks covered must be insurable and the coverage must be economically feasible, that problems that would undermine the viability of the insurance be controlled, and that the social effects of the insurance be taken into account.

Once the baseline in a particular context is established against which a protection gap can be measured, it becomes possible to identify significant protection gaps, in individual cases and as a class. Protection gaps take several forms:

- Entirely uninsured. A property owner lacks insurance for all risks, or all property owners are uninsured with respect to a risk.

⁴³ See, e.g., U.S. DEP’T OF HOUS. & URBAN DEV., HOMEOWNERSHIP: PROGRESS AND WORK REMAINING 1 (2000) (“Making homeownership more attainable has always been a goal . . .”).

- Underinsured. A policyholder has coverage against relevant risks, or the class of policyholders generally have coverage, but in an amount that is less than the extent of actual or potential losses (the underinsurance gap).
- A policyholder is insured for some risks, or the class of policyholders generally have coverage, but certain other significant risks are not covered (the risk protection gap).
- A policyholder is insured for some risks, or the class of policyholders generally is insured, and the risk resulting in loss generally is covered, but coverage is subject to other limitations. That is, limitations or restrictions in the insurance policy other than the exclusion of property or risks prevent full coverage for actual or potential losses (the coverage gap).
- The insurance in place potentially covers risks and losses, but factors in the claim process result in a failure to pay fully for an individual policyholder or for the class of policyholders (the claiming gap).

To illustrate the application of the baseline, this section briefly discusses examples of the underinsurance gap, the risk protection gap, and the coverage gap in the context of the prototypical residential homeowner. The protection gap created where policyholders are entirely uninsured or by the claiming gap needs only brief mention.

Much of the protection gap literature addresses the problem in developing economies, where a large portion of the gap may arise because of the unavailability of insurance.⁴⁴ The situation in developed economies with mature insurance markets is different, so only about five percent of U.S. homes are entirely uninsured.⁴⁵ In part this is driven by the requirements of mortgage lenders and the federal mortgage programs, which require

⁴⁴ See, e.g., THE GENEVA ASS'N, *Managing Physical Climate Risk: Leveraging Innovations in Catastrophe Risk Modelling*, at 6, 10 (2018).

⁴⁵ Ins. Info. Inst., *How Many Homes are Insured? How Many are Uninsured?*, THE TRIPLE-I BLOG (Jan. 29, 2016), <https://www.iii.org/insuranceindustryblog/how-many-homes-are-insured-how-many-are-uninsured/>.

insurance.⁴⁶ In some cases, however, insurance may be unavailable for some property owners. Risk factors such as a history of recurring high-value claims or unusual hazards, for example, may make an individual home uninsurable.⁴⁷ More commonly, when special factors make insurance generally unavailable in an area, regulatory or legislative action typically follows. In many cases, a property that is uninsurable in the ordinary private market may be eligible for insurance under a state's residual market mechanism, such as a FAIR plan, or in the surplus lines market. After the California wildfires of 2015–2017, insurers have been less willing to write new policies or offer renewals in areas prone to wildfire,⁴⁸ but proposals to expand the market soon followed.⁴⁹

Under any of the definitions of the protection gap, the assumption is that the amount of insured losses is relatively fixed, and that coverage under a policy equates to payment if there is a loss. But even where coverage is in place, there are factors in the claim process that can result in the failure to pay and therefore in a claiming gap type of protection gap.

On the policyholder side, the factors are captured in the well-known concept of the dispute pyramid.⁵⁰ Of all covered losses (the base of the pyramid), only some are actually paid, due to filters that cause the pyramid to narrow as losses proceed through the process to eventual payment of a smaller number of claims at the top of the pyramid. Policyholders first must recognize they have a covered claim. If they contact their insurer and the insurer incorrectly responds that the claim is not covered, or if the insurer offers an amount in settlement lower than the amount to which the

⁴⁶ Fannie Mae, *Selling Guide*, at B7-3-02 (Sept. 2, 2020), <https://selling-guide.fanniemae.com/Selling-Guide/Origination-thru-Closing/#Coverage.20Requirements>.

⁴⁷ *What if I Can't Get Coverage?*, INSURANCE INFORMATION INSTITUTE, <https://www.iii.org/article/what-if-i-cant-get-coverage> (last visited Sept. 11, 2020); *What to Do if You Get Turned Down for Homeowner Insurance*, ALLSTATE (June 2020), <https://www.allstate.com/tr/home-insurance/high-risk-homeowners-insurance.aspx>.

⁴⁸ CAL. DEP'T OF INS., *THE AVAILABILITY AND AFFORDABILITY OF COVERAGE FOR WILDFIRE LOSS IN RESIDENTIAL PROPERTY INSURANCE IN THE WILDLAND-URBAN INTERFACE AND OTHER HIGH-RISK AREAS OF CALIFORNIA 1* (2018).

⁴⁹ Don Jergler, *Backers of Controversial California Homeowners Insurance Bill Like Its Momentum, Timing*, INS. J. (June 17, 2020), <https://www.insurancejournal.com/news/west/2020/06/17/572626.htm>.

⁵⁰ William L.F. Felstiner, Richard L. Abel & Austin Sarat, *The Emergence and Transformation of Disputes: Naming, Blaming, Claiming . . .*, 15 L. & SOC'Y REV. 631, 631 (1980).

policyholder is entitled, they may defer to the insurer's expertise. If they are dissatisfied with the insurer's action, policyholders may not seek professional help. They may find the transaction costs of doing so are unjustified in small claims, or they may be willing to resolve claims for less than full value because of the financial and emotional toll of delay.

On the company side, failure to pay claims at less than full value may be due to bureaucracy, claims personnel's lack of knowledge of the terms of policies, or worse. The "worse" is the potential mismatch of incentives in an organization; customer service that aids reputation and retention are important, but so is the need to limit claim costs. If the claim process is perceived as a profit center, claims can be underpaid in ways large and small, incidental and institutional.⁵¹

A. THE UNDERINSURANCE GAP

Often policyholders have coverage but in dollar amounts that are less than the extent of actual or potential losses. Until the 1990s, guaranteed replacement cost coverage was the norm, ensuring that coverage would be available for the entire cost of rebuilding even in the case of a total loss.⁵² Now it is the exception. As a result, most homes are insured for less than the cost to rebuild in the event of a total loss, because even replacement cost coverage is subject to policy limits that are likely to be too low. Three of every five homes in America are underinsured by an average of twenty percent less than full value, according to analytics firm CoreLogic, whose software is a widely used tool for estimating replacement cost.⁵³ Following the 2007 wildfires, the California Department of Insurance found that even though many homeowners bought coverage higher than the policy limit recommended by their insurer, more than half still were underinsured.⁵⁴ A

⁵¹ See generally JAY M. FEINMAN, DELAY, DENY, DEFEND: WHY INSURANCE COMPANIES DON'T PAY CLAIMS AND WHAT YOU CAN DO ABOUT IT 56–120 (2010).

⁵² Kenneth S. Klein, *When Enough Is Not Enough: Correcting Market Inefficiencies in the Purchase and Sale of Residential Property Insurance*, 18 VA. J. SOC. POL'Y & L. 345, 363 (2011).

⁵³ Ron Hurtibise, *Do you have enough homeowner insurance? Here's how to find out*, S. FLA. SUN SENTINEL (July 13, 2018), <https://www.sun-sentinel.com/business/fl-bz-do-you-have-enough-property-insurance-20180711-story.html>; Kenneth S. Klein, *Minding the Protection Gap: Resolving Unintended, Pervasive, Profound Homeowner Underinsurance*, 25 CONN. INS. L.J. 35, 42–43 (2018).

⁵⁴ Klein, *supra* note 53, at 40–41.

decade later the underinsurance gap was still substantial; a year after the North Bay wildfires in California, “66% of survey respondents . . . [knew] if they had enough insurance to cover the cost of repairing, replacing or rebuilding their home, reported being underinsured,” according to a United Policyholders survey.⁵⁵

The underinsurance gap arises from a mix of information problems, underwriting issues, and mixed incentives. Although the homeowner nominally is responsible for arriving at a proper estimate of replacement cost and choosing appropriate policy limits, homeowners almost always rely on insurers’ own estimates.⁵⁶ Because of inadequacies in the software used to estimate costs, underinsurance often occurs.⁵⁷ The problem is complicated because homeowners, insurers, and insurance agents have one incentive to arrive at a proper estimate of value, so that there are sufficient funds to rebuild in case of loss. But they also have a contrary incentive to keep the premium low by undervaluing the property. In the price-dominated market for homeowners insurance, insurers and insurance producers have an incentive to understate the replacement cost and so offer a less expensive product, particularly because the error will never be revealed, as few policyholders ever suffer a total loss where the estimate is relevant.⁵⁸ Properties are even more likely to be undervalued if the loss occurs in a widespread disaster such as a wildfire, when the cost of repair or rebuilding usually rises dramatically because of demand surge—increased demand for a limited supply of labor and materials.

With respect to an individual homeowner and the class of homeowners, the failure to insure for full replacement cost almost always constitutes a true protection gap. First, a homeowner who purchases a policy that is described as “replacement cost” likely and reasonably expects that the insurance for a covered loss will be adequate to provide for complete repair of damage or restoration of property, subject only to the general deductible. Under the large-loss principle, coverage is particularly important to protect against large losses, and the shortfall from underinsurance is likely to be substantial, as the CoreLogic study found.⁵⁹

⁵⁵ *North Bay Fires – 12 Month Survey Results*, UNITED POLICYHOLDERS, https://www.uphelp.org/sites/default/files/attachments/north_bay_fires_12_month_survey_report_v1.pdf (last visited Sept. 5, 2020); Klein, *supra* note 53, at 48.

⁵⁶ Klein, *supra* note 53, at 56.

⁵⁷ See Klein, *supra* note 53, at 60–80.

⁵⁸ Klein, *supra* note 53, at 100.

⁵⁹ Sources cited at note 51.

Second, replacement cost is an insurable risk. The replacement cost is calculable. With basic information provided by the homeowner in the application process, the insurer can draw on a variety of sources of information to arrive at an accurate estimate of rebuilding.⁶⁰ The estimate may be marginally inaccurate in individual cases, but in insuring a large number of homes the insurer has the benefit of the law of large numbers tending toward accuracy over the entire run of losses. Even demand surge after a disaster can largely be accounted for, based on past experience, so correlated risk is not a problem. To the extent that the difference between an accurate estimate and a lower, inaccurate estimate, has an effect on the premium, the insurance is still economically feasible since a policyholder informed about the consequences of under-insurance is likely to accept a modest additional premium in exchange for the risk of being substantially underinsured.

Third, there are no effectiveness issues—policyholder-side moral hazard, adverse selection, or risk segmentation. Transaction costs in arriving at an accurate estimate may be modestly higher, but not significantly so.

Finally, there is a significant social effect in providing true replacement cost. Full replacement cost promotes prompt recovery for an individual homeowner, and in large-scale disasters, for communities, against the economic and social dislocation that otherwise might result. The failure to provide full replacement cost delays rebuilding and prevents full economic recovery.

Therefore, the underinsurance gap in homeowners insurance is an excellent example of a true protection gap. Replacement cost coverage should be provided in an amount that accurately reflects the cost of rebuilding, and the failure to do so constitutes a protection gap.

B. THE RISK PROTECTION GAP: WATER DAMAGE

A risk protection gap arises when a policyholder is insured for some risks, or the class of policyholders generally have coverage for relevant risks, but certain other significant risks are not covered. An example is the exclusion from homeowners insurance of coverage for many types of water damage. Under the standard ISO HO-3 insurance policy, Section I—Exclusions, the exclusion is as follows:

⁶⁰ Klein, *supra* note 53, at 58–64.

We do not insure for loss caused directly or indirectly by...

3. Water Damage

Water Damage means:

a. Flood, surface water, waves, [including tidal wave and tsunami, tides,] tidal water, overflow of any body of water, or spray from any of these, whether or not driven by wind, [including storm surge];

b. Water ... which[:]

[(1) B]acks up through sewers or drains[:]

or

[(2) O]verflows or is discharged from a sump, sump pump or related equipment; or

c. Water ... below the surface of the ground, including water which exerts pressure on or seeps[,] leaks [or flows] through a building, sidewalk, driveway, [patio,] foundation, swimming pool or other structure; [or

d. Waterborne material carried or otherwise moved by any of the water referred to in A.3.a. through A.3.c. of this exclusion.

...

This Exclusion A.3. applies regardless of whether any of the above, in A.3.a. through A.3.d., is caused by an act of nature or is otherwise caused.

This Exclusion A.3. applies to, but is not limited to, escape, overflow or discharge, for any reason, of water or waterborne material from a dam, levee, seawall or any other boundary or containment system.]

Provisions such as these exclude many types of damage caused by water from coverage—flooding caused by a hurricane, rain-gorged streams, sewer backup off premises, sump pump failure on premises, and more. Other terms of the policy may provide coverage for some water damage, such as accidental discharge of water from a plumbing system.⁶¹ Each type of loss excluded from coverage requires separate analysis as a potential protection gap. To illustrate how the analysis applies, contrast two situations: flooding caused by a hurricane and water that flows into a basement as heavy rain accumulates in the street.

⁶¹ ISO, HOMEOWNERS 3 – SPECIAL FORM, Section I – Perils Insured Against, A., Exception to.c.6 (HO 00 03 10 00), at 12 (1999).

Flood coverage, or the lack thereof, often is used as an example of a protection gap. As the ISO form illustrates, homeowners insurance policies exclude flood damage from coverage. Coverage is available through the National Flood Insurance Program (NFIP), but many homeowners fail to purchase flood insurance. In hurricane-prone south Florida, for example, penetration of NFIP flood insurance is only thirty-four percent in Miami-Dade County, twenty-six percent in Broward County, and twenty-two percent in Palm Beach County.⁶² In areas most affected by recent Category 4 hurricanes Harvey, Irma and Maria, as many as eighty percent of homeowners in Texas, sixty percent in Florida, and ninety-nine percent in Puerto Rico lacked flood insurance.⁶³

As noted earlier, policyholder expectations about flood coverage under homeowners insurance are mixed and often mistaken.⁶⁴ Despite substantial advertising campaigns by the federal government, state regulators, and insurance companies, many homeowners hold the mistaken belief that homeowners insurance includes flood coverage.⁶⁵ The confusion is not surprising. Two of the basic elements of policyholders expectations are that coverage is provided for common causes of significant accidental loss, and coverage is particularly important for risks that result in large financial losses. But the studies tend to be general. It is likely that policyholders in flood-prone areas are more knowledgeable about the absence of flood insurance from homeowners policies. The increase in the rate of purchase of federal flood insurance in an area after it has suffered catastrophic flooding, for example, suggests a higher level of awareness.

Despite potential policyholder expectations of coverage, the exclusion of flooding from homeowners insurance has been justified because of several related reasons. Flood damage may be hard to calculate,⁶⁶ or at

⁶² *Facts + Statistics: Flood Insurance*, INS. INFO. INST., <https://www.iii.org/fact-statistic/facts-statistics-flood-insurance>; see generally Michael K. McShane & Juita-Elena (Wie) Yusuf, *Toward Better Management of Flood Losses: Flood Insurance in a Wetter World*, 24 PUB. WORKS MGT. & POL'Y 88, 93 (2019).

⁶³ Erwann Michel-Kerjan & Giambattista Taglioni, *Insuring Hurricanes: Perspectives, Gaps, and Opportunities After 2017*, MCKINSEY & CO. (Dec. 20, 2017), <https://www.mckinsey.com/industries/financial-services/our-insights/insuring-hurricanes-perspectives-gaps-and-opportunities-after-2017>.

⁶⁴ *Id.* at 11.

⁶⁵ *Id.* (“Research shows that many people underestimate the risk and think accidents will not happen to them, or they believe their homeowners insurance covers all hazards.”).

⁶⁶ Scales, *supra* note 39, at 8, 15, 46.

least it was hard to calculate at the time it was generally excluded from homeowners policies (although that may not be the case any longer⁶⁷). Floods damage large numbers of properties all at once, so there is a substantial problem of correlated risk. Correlated risk in itself may render a risk uninsurable, or it may raise the price at which insurance can be sold to high and therefore unsaleable levels. It requires a higher premium because of the higher expected loss rate and, due to capital requirements, insurers often need to charge a premium that actually is higher than the expected loss.⁶⁸ The cost problem also can be exacerbated by adverse selection; property owners more at risk are more likely to buy insurance, including even those who have suffered repeated losses, which can drive prices higher. These factors caused private insurers to stop selling flood insurance and arguably still justify the general exclusion of flood from homeowners policies. Recently private insurers have reentered the market in a more substantial way, although by selling stand-alone products rather than removing the flood exclusion.⁶⁹

In response, of course, the federal government stepped in and created the National Flood Insurance Program (NFIP). The NFIP has its own problems; as relevant to the protection gap, a key issue is that prices are not actuarially sound. A study of NFIP pricing in Texas, for example, found that in some areas, the NFIP charges prices that are more than fifteen times the pure premium, while other areas are charged up to three times less than the pure premium.⁷⁰ The subsidies in general and especially the egregious example of repetitive loss properties, where recurring losses and constant risk should prevent an economically rational homeowner from purchasing insurance and, as a consequence, building or rebuilding in a high-risk area,

⁶⁷ Erwann Michel-Kerjan, Jeffrey Czajkowski & Howard Kunreuther, *Could Flood Insurance be Privatized in the United States? A Primer*, 40 THE GENEVA PAPERS ON RISK AND INS. - ISSUES AND PRAC. 2 (2015).

⁶⁸ Carolyn Kousky & Roger Cooke, *Explaining the Failure to Insure Catastrophic Risks*, 37 THE GENEVA PAPERS ON RISK AND INS. - ISSUES AND PRAC. 2, 207 (2012).

⁶⁹ See e.g., Nancy Watkins & David D. Evans, *U.S. Private Flood Insurance: The Journey to Build a New Market*, INS. J. (Sept. 27, 2019), <https://www.insurancejournal.com/news/national/2019/09/27/541314.htm>; see also, *Spotlight on: Flood Insurance*, INS. INFO. INST. (Aug. 11, 2020), <https://www.iii.org/article/spotlight-on-floodinsurance#Private%20Flood%20Insurance> (according to the National Association of Insurance Commissioners, there were 116 private companies writing flood insurance in 2018).

⁷⁰ Michel-Kerjan et al., *supra* note 67, at 1.

encourage moral hazard and provide an unjustified public subsidy of private homeownership.

All of these issues coalesce around price. For many homeowners, insurance against flood damage will be an expensive product. Many will fail to purchase it even if it is economically rational to do so; cognitive biases often lead homeowners to fail to protect against low-probability, high-consequence losses.⁷¹ And for some homeowners, the combination of high premiums and their limited financial resources lead to the failure to purchase flood insurance.⁷² The result is a significant protection gap, made more significant because of the social effect of the failure of insurance to be available or to be purchased when it is available. For individuals and communities, the effect of substantial flood losses can be catastrophic. For the individual and the community, therefore, the true protection gaps are exacerbated in the situations in which insurance is or should be available. Insurance against flood loss in those settings not only is calculable and effective, but its absence presents a real and significant social loss. Much of the protection gap literature appropriately uses the lack of insurance against disasters such as flooding as the paradigmatic example of a protection gap.

The difficulty, of course, is defining a vehicle that will effectively fill the protection gap. The gap arises not because flood damage is excluded from the basic homeowners policy but because flood damage is not covered at all in many cases. Widespread dissatisfaction with the usual absence of coverage through homeowners insurance policies and the ineffectiveness of the NFIP have produced a variety of suggestions. Reform of the NFIP to remove some of the problems was attempted in the Biggert-Waters Flood Insurance Reform Act of 2012, but was thwarted by the Homeowner Flood Insurance Affordability Act of 2014, and has since been stalled in Congress as the program repeatedly has been reauthorized without change.⁷³ In some areas, private insurers are entering the market, although their participation has yet to reach the critical mass needed to fill the protection gap. And

⁷¹ Howard Kunreuther, *Improving the National Flood Insurance Program*, BEHAVIOURAL PUB. POL'Y, Apr. 2018, at 1, https://marketing.wharton.upenn.edu/wp-content/uploads/2018/08/improving_the_national_flood_insurance_program.-Behavioral-Public-Policy-2018.pdf.

⁷² Kousky & Cooke, *supra* note 68, at 206.

⁷³ James Jarvis, *Congress Extends Flood Insurance Program for 14th Time Since 2017*, THE HILL: BLOG BRIEFING ROOM (Nov. 21, 2019, 1:35 PM), <https://thehill.com/blogs/blog-briefing-room/471522-congress-extends-flood-insurance-program-for-14th-time-since-2017>.

broader proposals have been offered, such as incorporating a variety of catastrophic losses in the standard homeowners policy—windstorm and earthquake in addition to flood, for example.⁷⁴ Until adequate vehicles are found, the failure to insure against flood losses presents a large risk protection gap.

Now consider a more mundane element of the exclusion for water loss—the exclusion of damage caused by “surface water.” Assume heavy rain accumulates, causing a rush of water in the street that flows into a basement and causes major damage to a house. Under the standard homeowners policy, the damage is excluded as surface water, which ordinarily is defined as “water that is on the surface of the ground, generally derived from falling rain or melted snow, and that does not have a permanent existence, has no banks, and follows no defined course or channel.”⁷⁵

Sometimes the loss will be covered by flood insurance, because the definition of flood includes “[a] general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties (one of which is your property) from . . . Unusual and rapid accumulation or runoff of surface waters from any source.”⁷⁶ But often there are problems. Many homeowners, particularly in low-risk areas, will not have flood insurance. The losses covered by flood insurance also are limited; additional living expense is not covered, and finished walls, floors, ceilings, and personal property in the basement are not covered except for elements of the structure such as electrical work and heating and air conditioning equipment.⁷⁷

The lack of coverage for runoff losses is problematic. This is a potentially significant loss. The policyholder’s expectation is that this type of loss would not be excluded as flood damage. It’s much less of a correlated risk, because it sometimes happens over large areas but more often is confined to a smaller area. There is no moral hazard and likely no adverse selection. If a property is in a low-risk flood zone, no one reasonably would purchase flood insurance just to guard against this risk, so there is not a segmentation problem.

⁷⁴ Christopher C. French, *America on Fire: Climate Change, Wildfires & Insuring Natural Catastrophes* (54 U.C. DAVIS L. REV., Research Paper No. 12-2020, forthcoming 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3579734.

⁷⁵ Wayne D. Taylor, Arthur J. Park, Sean O’Brien, *Unique Coverage Issues in Flood Losses*, 48 TORT TRIAL & INS. PRAC. L.J. 619, 631 (2013).

⁷⁶ FEMA, *NFIP Dwelling Form F-122*, 1 § II.A.1.b (Oct. 2015).

⁷⁷ *Id.* at § III (A) (8).

The best argument in support of the exclusion is that it addresses a transaction cost problem. Surface water cases can involve damage to only one or a few properties, or to a much larger number. The exclusion is needed to forestall complex factual disputes and possible error in decision in covering losses that should be excluded as “true” flood losses, which should be excluded because of correlated risk. This is at base an empirical question, but it is likely that many of the cases are smaller cases that should be covered. Some involve more widespread surface water losses that clearly are excluded as flood losses, and only a small number are in between. If so the transaction cost issue is not significant and the runoff exclusion typically constitutes a risk protection gap and is unjustifiable.

C. THE COVERAGE GAP: MATCHING

The coverage gap form of the protection gap arises when a policyholder is insured for some risks, or the class of policyholders generally is insured, and the risk resulting in loss generally is covered, but coverage is subject to other limitations. That is, limitations or restrictions in the insurance policy other than the exclusion of property or risks prevent full coverage for actual or potential losses. Not every limitation or restriction on coverage presents a true protection gap, of course. The typical homeowners policy limits the amount payable for a loss by theft of watches or jewelry. This is not a coverage gap, either because most policyholders do not expect that very expensive items of jewelry are covered or because such a belief would be unreasonable, given the rarity of such items among the pool of homeowners and the availability of additional coverage if such items are owned. To illustrate a true coverage gap, consider the issue of “matching.”⁷⁸

If property is partially damaged under a replacement cost policy, the insurer may assert that it is only required to pay for repair or replacement of the limited portion of the property that is damaged, while the policyholder claims that more is needed to replace the property to the condition it was in

⁷⁸ For summaries of the relevant law, *see* Jay Feinman et al., “Matching” In Replacement Cost Homeowners Insurance Policies (Rutgers Law School, Apr. 2016) https://www.uphelp.org/sites/default/files/publications/matching_memo_4-2016_to_post.pdf; MATTHIESEN, WICKERT, & LEHRER, “Matching Regulations” and Laws Affecting Homeowners’ Property Claims in all 50 States (Oct. 2019) (unpublished report) <https://www.mwl-law.com/wp-content/uploads/2019/02/MATCHING-REGS-AND-LAWS-AFFECTING-HOMEOWNERS-PROPERTY-CLAIMS-CHART.pdf>.

prior to loss. This is the issue of matching—matching the damaged part of the property to the undamaged part to restore the property to the condition prior to loss, such as a roof with a uniform appearance. For example, if a portion of a roof is damaged, replacing only the damaged shingles restores the functionality of the roof to its pre-loss condition but does not restore its appearance because the new shingles do not match the existing shingles. On the one hand, the homeowner has suffered a significant loss, because prior to the loss the roof had a uniform appearance, and uniformity may have an effect on economic value or simply may have aesthetic value to the homeowner. On the other hand, if the entire roof must be replaced, the cost may be very high and if the roof is replaced, the policyholder would be in a better economic position before the loss, having been provided an entirely new roof, which violates the principle of indemnity.

Traditional policy language requires the insurer to pay “the replacement cost of that part of the building damaged with material of like kind and quality and for like use.”⁷⁹ Some more recent policies limit matching by, for example, requiring only “common construction materials and methods,”⁸⁰ or using limiting language or proportional coverage for roof damage.⁸¹ The NAIC Unfair Property/Casualty Claims Settlement Practices Model Regulation states, “[w]hen a loss requires replacement of items and the replaced items do not match in quality, color or size, the insurer shall replace all items in the area so as to conform to a reasonably uniform appearance.”⁸²

A policyholder’s ordinary expectation is that replacement cost coverage provides for complete repair of damage and restoration of property. That reflects the difference between a replacement cost policy and an actual cash value policy.

Replacement cost coverage was devised to remedy the shortfall in coverage which results under a property insurance policy compensating the insured for actual cash value alone. That is, while a standard policy compensating an insured for the actual cash value of damaged or destroyed property makes the insured responsible for bearing the cash difference necessary to replace old property with new

⁷⁹ Insurance Services Office Inc.’s Homeowners Form. HO 00 03 10 00 (1999).

⁸⁰ Insurance Services Office Inc.’s Definitions and Loss Settlement. HO DP 05 30 07 14 (2014).

⁸¹ *E.g.*, ISO HO 06 46 04 16 (2015).

⁸² NAIC Model Laws, Regulations and Guidelines, 902-7 § 9.A2 (1997).

property, replacement cost insurance allows recovery for the actual value of property at the time of loss, without deduction for deterioration, obsolescence, and similar depreciation of the property's value.⁸³

This expectation applies where the loss is substantial in economic terms or otherwise is of significant value to the policyholder. Residential property is commonly understood to be more than an economic asset, and the insurance relation is constructed on that understanding. Some of the property has the characteristics of and is held partly as an economic asset—the structure of a home. Some of the property is not—furniture, which is purchased for use and, once used, has little or no economic value on the market. Here there is applied a functional conception of indemnity, not an economic conception, where “the purpose of a measure of recovery could be to return the insured to roughly the same style of life as he or she occupied before loss.”⁸⁴ In this conception, payment of replacement cost does not violate the indemnity principle:

A homeowner whose twenty-year old garage is destroyed by fire needs a new garage. If recovers only the market value of the garage, he has the same net worth before and after loss, be he is worse off nevertheless—because he either has no garage, or must take money out of his pocket in order to build a new one.⁸⁵

However, the expectation of complete repair may be qualified in two ways. The policyholder's reasonable expectation may differ depending on the size of the loss; the large-loss principle states that full coverage is important for large financial losses, but less so for smaller losses, so matching is important for large losses but less so for small losses. A fundamental expectation also is that insurance provides indemnity against economic losses. “Replacement cost coverage, therefore, in contravention of the general rule that an insured cannot profit through insurance, results in the insured being better off than he or she was prior to the loss, since the insured

⁸³ 12A COUCH ON INS. § 176:56 (3d ed. 2020).

⁸⁴ KENNETH S. ABRAHAM & DANIEL SCHWARCZ, INSURANCE LAW AND REGULATION: CASES AND MATERIALS 262 (6th ed. 2015).

⁸⁵ *Id.*

ends up with a more valuable property.”⁸⁶ Where matching does not result in an economic loss, or where matching would put the policyholder in a better position than before the loss occurred, matching may be unjustified. The competing factors suggest that there are three types of cases.

First, the failure to match would have a significant economic effect; for example, where some kitchen cabinets are destroyed, the failure to replace all cabinets in order to match would reduce the value of the house to a prospective buyer by thousands of dollars.

Second, the failure to match would not have a significant negative economic effect but would disappoint ordinary expectations, and matching could put the policyholder in a better position than prior to the loss. The appearance of the mismatched roof would be unsightly but the economic value of an older roof which has damage to some shingles is not materially reduced by adding non-matching shingles; although the value of the house to a potential buyer is decreased by the mismatched shingles, the diminution in value may not be great. If the entire roof is replaced, in turn, the value of the home is substantially increased by the substitution of new for old.

Third, neither the economic value nor the noneconomic value to the homeowner would be affected materially by the failure to match; only a few nonmatching shingles on a roof likely would have this effect.

The balance of expectations in the first and third cases are relatively clear—matching in the first⁸⁷ but not the third. The second case is more difficult and requires consideration of the reasonableness of a policyholder’s expectation of matching.

The need to match is an insurable risk. It is readily calculable in both individual cases and in the aggregate. Insurers have access to vast amounts of information about repair and reconstruction costs in general. In individual cases, information about the property such as the age of the roof can and usually is factored into the premium. Matching losses are not correlated and do not present moral hazard, adverse selection, or risk segmentation problems. The social effect of the failure to match arguably is not substantial.

The keys to deciding difficult cases are expectation, which is larger in the case of large losses, and the economic feasibility of providing full matching and transaction costs. If providing matching in situations like the second case would substantially raise the premium, to the point at which many policyholders would prefer not to pay it, matching is less justified. This requires calculation of the number of such cases and the additional cost if

⁸⁶ 3 INS. CLAIMS & DISP. § 11:35 (6th ed.) (citations omitted).

⁸⁷ *See, e.g., Alessi v. Mid-Century Ins. Co., Inc.*, 464 S.W.3d 529, 530 (Mo. Ct. App. 2015) (citations omitted).

matching is required. And distinguishing among the three cases is not costless; if disputes are likely to arise in a large number of cases as to whether matching has a significant economic effect or is cost-justified, then matching also is less justified. In short, coverage should be provided for matching except in a class of cases in which coverage could not be provided at a reasonable premium. If it is too hard to construct that category, then matching generally is less attractive.

A related issue is cosmetic damage. Cosmetic damage involves dents, scratches, or other minor imperfections in appearance that do not affect functionality.⁸⁸ Because cosmetic damage does not involve a functional impairment of the property and rarely involves a significant economic effect, under the large-loss principle it may not be included in an ordinary expectation of coverage. In addition, cosmetic damage creates moral hazard problems, and the cost of coverage for cosmetic damage may be much more than a reasonable policyholder would pay. Therefore, cosmetic damage is not a key term of coverage that presents a protection gap, and coverage should be available only as an option. Of course, there is a transaction cost issue presented by a line-drawing problem. Some cases will require fact-finding and may lead to disputes; dents in a metal roof may be purely cosmetic or they may affect the roof's functional operation. But as with water runoff losses, the number of cases in which there are significant transaction cost issues likely is small enough that it does not undermine the primary conclusion of lack of coverage.

IV. CONCLUSION

Insurance plays an important economic and social role in protecting individuals and firms from financial disaster, permitting the efficient transfer, pooling, and distribution of losses, and benefiting society as a whole. To serve those roles effectively, the right amount and kind of insurance needs to be in force. Where insurance is inadequate, protection gaps result. This article offers a definition of the protection gap concept that enables the determination of how much insurance of what kind should be in place to avoid protection gaps.

⁸⁸ The Florida "chipped tile" cases are the most notorious. See *Ergas v. Universal Prop. & Cas. Ins. Co.*, 114 So. 3d 286 (Fla. Dist. Ct. App. 2013); Chip Merlin, *Framing the Chipped Tile Claim*, MERLIN LAW GROUP (Apr. 29, 2013), <https://www.propertyinsurancecoveragelaw.com/2013/04/articles/insurance-claim/framing-the-chipped-tile-claim/>.