



# PAYING A PREMIUM: WHY DO CONSUMERS BUY TOO MUCH INSURANCE?

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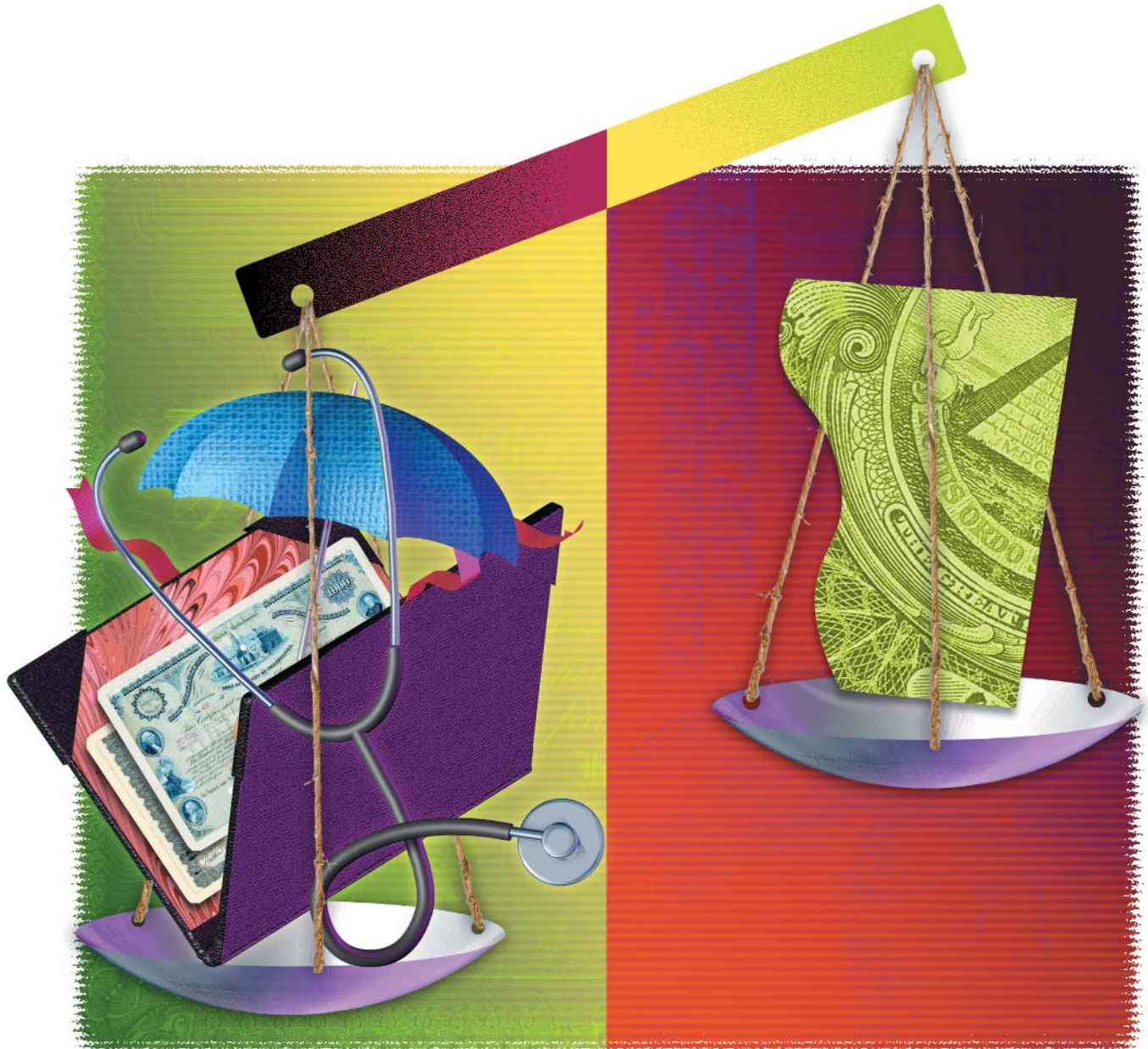
**T**he recent spate of natural disasters, from Hurricane Katrina to the Malibu fires and Nevada floods, has made insurance coverage a focus of heightened concern around the country. One of the most intriguing questions to insurance professionals and academics is why consumers prefer to buy low- or zero-deductible insurance policies. Experts have known for years that consumers are paying too much for

full-coverage insurance policies since they prefer to completely eliminate risk and uncertainty.

The explanation that we propose is that consumers generally think that policies with deductibles cost too much, and that the greater the deductible, the more overpriced the policy. We wanted to understand why this misperception was so common.

We conjectured that the tendency to buy too much insurance is caused by an initial and erroneous assump-

tion people make about how a policy should be priced with and without a deductible. This initial assumption, together with the resulting method people use to calculate and judge the fairness of (in this case) a policy's price, follows the anchoring heuristic. We theorized that the specific anchoring heuristic works as follows: people first consider the price of a full-coverage policy, then work backward, subtracting the amount of the deductible from the price of the full-coverage policy,



with no consideration for the probability or likelihood that they will not get into an accident in any given year and thus will not have to shell out the deductible amount. A policy with a deductible priced according to the true expected payments may, therefore, seem overpriced to the insured, we hypothesized. And because consumers do not tend to think that full-coverage policies are similarly overpriced, they may consider them relatively better “deals.”

We set up a series of experiments

to investigate our hypothesis. We also explored whether professionals in the field of insurance are less prone to such a bias.

### Everyday Decisions

In the marketplace, there is a high demand for full-coverage policies and policies with very low deductibles. For example, almost all liability insurance policies provide full coverage or a zero deductible. Consider also collision damage insurance for rental cars. While spe-

cific rates vary by location, a typical collision damage waiver (CDW) for a rental car costs on average \$15 per day, which is equal to \$5,400 on an annual basis. In stark contrast, comprehensive automobile insurance for one’s own car does not cost more than \$1,000 per year in most locations in the US. The difference in price is clearly non-trivial. Why are people willing to pay such high rates for CDW when renting a car?

In another example, merchants who sell various electronic products,



such as cell phones costing \$200 or less, also offer insurance against loss for a non-trivial additional cost, which many consumers purchase. Even when those policies include a service component, buying them does not seem rational compared to their cost to the consumer over the life of the product. Yet such policies are valuable profit centers for many companies.

**M**edical insurance presents another striking example of the consumer preference for full coverage. The US Bureau of Labor Statistics reports that during the years 1994 to 1997, 34 percent of full-time employees in the private sector who were enrolled in non-HMO medical care organizations had no deductibles in their medical plans. This percentage rose to 42 percent for “preferred provider organizations” (US Department of Labor, 1999). HMOs, of course, typically have zero deductibles.

We tested our theory that the anchoring heuristic affects the preference for full coverage experimentally. We argued that the price of a full-coverage policy is a natural starting point for evaluating a policy with a deductible. Insureds continue from this starting point and calculate the price of policies with partial coverage by “anchoring” on the value of the deductible. In focusing on this amount, as we have pointed out, they neglect to take into account the probabilities associated with actual damages – that is, the fact that it is far from a sure thing that they will get into an accident and incur damages in any par-

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ticular year. Since they do not adjust for this probability, they end up underestimating the worth of such policies. Insurance companies are unlikely to make such errors, and hence the prices they set for policies with a deductible may seem unjustifiably high to customers. On the other hand, insureds are less likely to underestimate the values of full-coverage policies, and hence they may deem such policies as more adequately priced – “fairer,” perhaps – than the partial coverage policies offered by the insurance companies and so prefer them to policies with a deductible.

We conducted three experiments to test our hypothesis, asking three groups of subjects, whether amateur or professional, to play the role of insurance sellers, and to price policies with and without a deductible. We assumed that insurance sellers would pay more attention to pricing decisions than buyers would pay to their purchasing decisions. The reason is that sellers need to think of their competitors as well as their potential customers in pricing their products. However, we have no reason to expect sellers to be less prone to biases such as the anchoring heuristic, unless they have had some real experience in selling insurance policies in the past. They competed with other sellers, and their objective was to set prices so as to maximize

their profits.

Our amateur subjects were groups of American MBA and Israeli MBA students. Prior to participating in the experiment, the students completed several courses in economics and statistics and at least one course in finance. The students were offered incentives based on the profits they generated in the experiment, in the form of \$100 and \$50 gift certificates for first and second place. Our group of professional subjects ranged between 30 and 55 years old and had at least five years experience in the insurance industry. They were pursuing advanced courses in insurance at the time.

### **Almost Pavlovian**

In our experiment, the amateurs tended to underestimate the value of policies with a deductible. As we hypothesized, they were inclined to estimate the value of such policies by calculating the value of an equivalent full-coverage policy, and then subtracting the deductible. In this case, the higher the deductible, the higher the undervaluation of the policy. For example, the American MBA students’ average price for the zero-deductible policy was \$181.30; it was \$125.60 for a policy with \$60 deductible, and \$87.50 for a policy with \$120 deductible.

Our subjects clearly appear to have followed the anchoring heuris-

tic in solving this problem. Often people adjust insufficiently from values they generate themselves as starting points while knowing that these values are incorrect but close to the target value. Such self-generated anchors help simplify the complex cognitive process involved in making judgments. Along these lines, it appears that our subjects might have gone through a similar process. They were not provided with an anchor, but the amount of the deductible was construed by them as a good enough figure with which to determine the price of a policy with a deductible, even though they did not verify that it was the correct value. It definitely helped them come up with what they considered a plausible value without expending much effort, but they came out with a biased perspective.

In comparison with the amateurs, we found that the professional subjects were less likely to exhibit the above bias. Professionals were likely to value and price deductible policies reasonably, i.e., according to the true expected payments: whereas, the general public (amateurs) may find the prices the professionals set for policies with a deductible to be too high compared with their own underestimated expectations. Though the professionals in our studies had similar academic backgrounds to that of the amateurs, their experience in the field helped them perform better than the amateurs. Possibly the professionals' experience minimized the tendency to anchor on the deductible when evaluating policies with deductibles.

The fact that consumers prefer

low deductibles is often interpreted as an indication of high-risk aversion, a preference to forestall or avoid any damages. Our results suggest that such behavior can also result from cognitive biases. Although it could be argued that such a bias may not significantly affect market behavior because more sophisticated insurance sellers may eventually lead the market to a more rational equilibrium, the truth may actually be the opposite. Even if professional insurance sellers are relatively immune from this bias, the fact that consumers are affected by it has direct implications, since two sides are needed for market transactions.



A real-life example can illustrate this argument. During the time we ran one of the experiments, the Direct Insurance Corp., one of the largest insurance companies in Israel, advertised insurance rates for policies with different levels of deductible for a \$30,000 2004 Toyota Corolla for drivers whose age was 25 or higher. We circulated a survey among MBA students enrolled in a graduate course on risk management and insurance at the Hebrew University, asking them to indicate what level of coverage they would choose. Of the 43 students responding to the survey, 22 (51 percent) chose the lower three levels of deductible. When the deductible was raised from \$137 to \$180, an increase of \$43, the insured saved \$35. Practically, unless the insured is certain that he or she will have an accident, or is

extremely risk-averse, the lower deductible would seem to be an inferior alternative. By increasing the deductible from \$180 to \$245, an increase of \$65, the insured saves \$42. Again, unless there is a very high probability of an accident, which in order for this policy to be reasonable would have to be an unlikely 71 percent, the higher deductible makes more sense. We do not have data on the percentage of insureds that buy policies at each level of deductible from Direct Insurance, but it is reasonable to assume that if the insurer advertised this price list, there was demand for all those deductibles.

The fact that the amateur insureds in our sample failed to comprehend the implications of the alternatives presented to them has direct market implications. Our findings certainly have some ramifications both from the point of view of consumer groups and from the perspectives of regulators and practitioners in the insurance industry. In particular, consumers are not as well informed as they are sometimes assumed to be, and educating them would be beneficial. ■

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