# Issue Analysis

A Public Policy Paper of the National Association of Mutual Insurance Companies

September 2005

# The Case for Underwriting Freedom: How Competitive Risk Analysis Promotes Fairness and Efficiency in Property/Casualty Insurance Markets

**By Robert Detlefsen, Ph.D.** NAMIC Director of Public Policy

## **Executive Summary**

In many states, property insurance prices are artificially manipulated through government regulation, ostensibly to make insurance more affordable and available to consumers. However, regulation that curtails insurers' freedom to set prices stifles competition and deprives consumers of the benefits that naturally flow from competition. The most obvious form of insurance price regulation is state-administered "rating laws," which require insurers to seek the approval of state insurance departments whenever they wish to raise or lower premiums. However, government-imposed underwriting restrictions – rules that curtail the ability of insurers to assess and classify risk – also strongly affect the price that consumers pay for insurance. Regulation that limits the ability of insurers to engage in risk assessment and classification has far-reaching implications for the entire insurance system.

## **Underwriting Freedom Benefits Consumers and Society**

In jurisdictions where underwriting freedom prevails, insurers compete by trying to assess individual risks more accurately than their rivals do, and by refining their systems of risk classification, which permits them to more precisely forecast the losses that any given individual is likely to experience. Competitive, risk-based underwriting facilitates fairness in pricing, prudent conduct, widespread availability of coverage, and risk sharing among insurers:

• Competitive Underwriting Leads to Equitable Pricing. An insurer whose risk classifications are more refined than those of its competitors will be able to more closely align premiums with the actual level of risk that a policyholder presents. Low-risk individuals will be grouped together and offered premiums that are lower than those offered by insurers who lack accurate risk classification systems. High-risk individuals will be similarly isolated and charged higher premiums that reflect their higher loss costs. If other insurers do not respond by refining their own classification systems, they will lose their low-risk policyholders to their competitor's offer of lower premiums. Competitive underwriting is thus critical to insurers' ability to offer the lowest possible price to each insured, based on the level of risk he presents.

• **Competitive Underwriting Creates Incentives for Risk Reduction**. Competitive risk assessment and classification provide incentives for high-risk individuals to take actions to control losses, because doing so may result in lower premiums. Further, since risk classification involves the pooling of large numbers of similar risks, the insurer is often better able than any individual insured to discover less risky courses of conduct than those its insureds currently follow. Thanks to their superior access to loss experience statistics and greater ability to finance

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The National Association of Mutual Insurance Companies is a full-service trade association with more than 1,400 member companies that underwrite 43 percent (\$194.6 billion) of the property/casualty insurance in the United States. While competition is generally most intense for lowrisk insureds, insurers seeking to improve their market penetration will also wish to compete for high-risk insureds within the same market. research into loss prevention methods, insurers may be able to suggest specific changes in behavior that will reduce risk and lower premiums.

 Competitive Underwriting Increases the Availability of Insurance. To market its products effectively, an insurer must utilize a risk classification system that will allow it to offer insurance to as many potential customers as possible. While competition is generally most intense for low-risk insureds, insurers seeking to improve their market penetration will also wish to compete for high-risk insureds within the same market. Increased market penetration provides economies of scale in the marketing and distribution of insurance, as it does for any product. Competitive risk classification therefore serves to increase the availability of insurance even for high-risk individuals, because the economic advantages of superior market penetration will accrue to those insurers whose refined risk classification systems permit them to price coverage in accordance with the expected costs of each identifiable class of risks within the markets they serve.

• Competitive Underwriting Facilitates Risk Sharing Among Insurers. By accurately assessing particular risks, insurers can avoid situations in which they absorb more of a particular kind of risk than they are capable of indemnifying, effectively sharing such risk with other insurers. For example, competitive underwriting among insurers has led to the development of sophisticated risk-assessment techniques such as catastrophe risk modeling, which allows individual property insurers to avoid overconcentration in geographic areas prone to natural disasters.

### Negative Consequences of Restrictions on Underwriting Freedom

Government restrictions on underwriting freedom ostensibly guard against unfair

business practices and ensure that insurance will be available to meet market demand. In many instances, however, these regulatory interventions only create dysfunctional market conditions that are detrimental to insurance consumers. Among the more harmful distortions to the competitive insurance system caused by underwriting restriction are adverse selection, moral hazard, and cross-subsidies:

• Adverse Selection. Adverse selection occurs when low-risk insureds purchase less coverage, and high-risk insureds purchase more coverage, than they would if the price of insurance more closely reflected the expected loss for each group. When an insurer is unable to distinguish between individuals who have a low probability of experiencing a loss – either because it lacks the ability to accurately assess and classify risk, or because it is prevented from doing so by regulation – adverse selection is the likely result.

• Moral Hazard. Underwriting restrictions that prevent insurers from accurately assessing risk can create incentives for policyholders to conduct their affairs in a manner that is less risk averse than if they had no insurance. The most effective method of addressing moral hazard is to accurately assess and classify risk, varying the price of coverage according to the expected loss of each class of insureds. By making it more difficult for insurers to deal with the problem of moral hazard, restrictions on underwriting freedom increase overall claim costs, thereby driving up the price of coverage for all insureds.

• **Cross-Subsidies**. Underwriting restrictions weaken the link between expected loss costs and premiums, creating cross-subsidies that flow from low-risk insureds to high-risk insureds. In addition to the injustice entailed by such compulsory wealth transfers, cross-subsidization of insurance rates has a number of adverse consequences. When high-risk individuals do not pay the full marginal costs they impose on the insurance system, they lack incentive to take precautions to avoid loss. The net effect of misguided attempts to lower premiums for high-risk individuals through cross-subsidies is likely to be an increase in accident rates and insurance loss costs, adding to the inflationary pressures on insurance premiums.

# Conclusion

The efficiencies that result from competitive, risk-based underwriting lead to increased price competition, and make possible the development of new coverage options tailored to the specific needs of particular consumers. By eschewing underwriting restrictions and allowing competitive insurance markets to flourish, state regulators would realize their common goal of ensuring that property insurance rates are "adequate, not excessive, and not unfairly discriminatory." Insurance rates that are determined by competition among insurers to assess risk with the greatest possible rigor, and to group similarly situated insureds into precisely constructed risk classes, cannot, by definition, be unfairly discriminatory. Nor could rates established through competitive, risk-based underwriting be considered "excessive," because the same competitive forces that promote underwriting accuracy also conspire to drive down prices. Far from improving the lot of property insurance consumers, government-imposed underwriting restrictions prevent consumers from enjoying the full range of benefits that come from unfettered competition.

# Introduction: Underwriting Restrictions and Insurance Pricing

Most businesses operating in the United States enjoy complete freedom in deciding how much to charge for their products and services. The classic exception is the handful of industries in which exclusive private ownership of essential network facilities and equipment (such as pipelines, telephone lines, and rail lines) gives rise to "natural monopolies" that are impervious to the forces of market competition. The "market failure" that results from these circumstances provides a theoretical justification for government regulation of prices.

That justification is notably lacking with respect to property/casualty insurance. As numerous commentators have observed, insurance markets have none of the features of a natural monopoly; indeed, competition among insurers is robust in every line and product category. Nevertheless, in many states, insurance prices are artificially manipulated through government regulation. Invariably the intent of such regulation is to make insurance more affordable and available to consumers. However, what is true of other goods and services is true of insurance as well: A competitive market system is the most effective guarantor of low prices, widespread availability, superior service, and product innovation. Put simply, regulation that curtails insurers' freedom to set prices stifles competition and deprives consumers of the benefits that naturally flow from competition.

The most direct method of insurance price regulation is the patchwork system of state-administered "rating laws," which require insurers to seek the approval of state insurance departments whenever they wish to raise or lower premiums. However, there is another component of many states' insurance regulatory regime that also strongly influences the price that consumers pay for insurance. These are underwriting restrictions – rules that curtail the ability of insurers to assess and classify risk. The close relationship between insurance underwriting and pricing is evident from a standard definition of underwriting:

[Underwriting is] the process of examining, accepting, or rejecting

Insurance markets have none of the features of a natural monopoly; indeed, competition among insurers is robust in every line and product category. The grouping of people and things with similar risk characteristics for the purpose of setting prices is a fundamental precept of any private, voluntary insurance system. insurance risks, and classifying those selected, in order to charge the proper premium for each. The purpose of underwriting is to spread the risk among a pool of insureds in a manner that is equitable for the insureds and profitable for the insurer.<sup>1</sup>

Since underwriting is necessary to determine the "proper premium" for each insured, regulation that affects the underwriting process necessarily affects premiums as well. Indeed, insurers' prices and underwriting criteria are closely intertwined – as they must be in a competitive market. Insurers often distinguish themselves through their underwriting standards: "Preferred" insurers have the most stringent underwriting standards and tend to offer the lowest rates, while "standard" and "non-standard" insurers have less stringent underwriting standards and charge higher rates. Thus, in addition to directly regulating prices, imposing constraints on underwriting selection is another way in which government officials may attempt to override market forces in order to socialize insurance costs.<sup>2</sup> As economist Scott Harrington observes, restrictions on underwriting and risk classification "materially affect the rates charged to different buyers, even if competition largely determines average year-to-year rate changes."3

This paper seeks to demonstrate the indispensability of an unfettered underwriting process. It provides a nontechnical overview of underwriting, examining it as a process for assessing and classifying risk. It explains how competition drives insurers to improve the accuracy of their underwriting methods, and how greater accuracy benefits insurance consumers and society as a whole. The paper also examines the political and economic factors that lead to the enactment of underwriting restrictions, and identifies the negative consequences that typically follow.

## Overview of the Underwriting Process

Underwriting may be understood as a three-step process that consists of:

- 1. assessing the risk exposures of things such as people, dwellings, vehicles, and businesses;
- 2. deciding whether to select or reject particular risks for insurance coverage; and
- 3. classifying the selected risks within groups that pose similar risks.

The grouping of people and things with similar risk characteristics for the purpose of setting prices is a fundamental precept of any private, voluntary insurance system. In order to function, insurance relies upon group rather than individual estimates of expected loss. It is virtually impossible to estimate the expected loss of an individual automobile or homeowners insurance policyholder, because an individual's previous loss experience is simply not credible enough statistically to warrant such an estimate. Indeed, no single individual can truly be said to have an expected loss probability; instead, underwriters use statistical analyses of groups to determine the average loss probability for each group member. Only when a person is treated as a member of a similarly situated group can insurers predict his expected loss. Without group probabilities, it would be impossible to set a price for insurance coverage at all.4

The issue, then, is not whether insurers should be allowed to treat individuals as part of a group for risk assessment and rating purposes, but whether they should be allowed to classify individuals within a system of smaller groups constructed to reflect varying levels of average expected loss probability, or risk. In the absence of competition from other insurers, an insurance company could simply charge each individual a premium based on the average expected loss of all its insureds (plus a margin for profit and administrative expenses) without incurring the cost of assessing and classifying risk. Every policyholder would pay the same premium, regardless of his particular level of risk.

However, when many insurers vie for the dollars that people are willing to spend to protect themselves against risk, insurers compete by trying to assess individual risks more accurately than their rivals do, and by refining their systems of risk classification. This allows them to more precisely forecast the losses that any given individual is likely to experience. An insurer whose risk classifications are more refined than those of its competitors will be able to more closely align premiums with the actual level of risk that a policyholder presents. Low-risk individuals will be grouped together and offered premiums that are lower than those offered by insurers who lack accurate risk classification systems. High-risk individuals will be similarly isolated and charged higher premiums that reflect their higher loss costs. If other insurers do not respond by refining their own classification systems, they will lose their low-risk policyholders to their competitor's offer of lower premiums. Competitive risk classification is thus critical to insurers' ability to offer the lowest possible price to each insured based on the level of risk he presents.

## Examples of Underwriting Criteria that Critics Have Sought to Restrict

Whether because they doubt that certain underwriting criteria are truly related to risk or simply because they regard them as politically or socially undesirable, policymakers and consumer activists have advocated – often successfully – that certain classification systems or rating factors be banned. Risk assessment and classification criteria that have encountered opposition include territorial rating, the age of a dwelling (in homeowners insurance), and consumer credit history. Laws that prevent consideration of these variables are detrimental to the underwriting process, because each is highly relevant to determining both the likelihood that a given individual will suffer a loss, and the probable magnitude of such losses:

#### **Territorial Rating**

Territorial rating is used by providers of automobile insurance to take account of geographic differences in the frequency and severity of auto insurance claims. Statistical analyses of the factors that contribute to accidents and claims consistently reveal stark differences among geographic territories.5 Accidents are much more frequent in urban areas because of greater traffic density and more hazardous driving conditions. Likewise, the severity of bodily injury and physical damage claims tend to be greater in urban areas, as is the cost of medical and auto repair services. The incidence of vandalism and auto theft, which affects claims under auto comprehensive coverage, also is higher in urban areas. Finally, the tendency to litigate is greater in urban areas, which further adds to insurance costs.6

Territory is also an important risk factor for homeowners insurance. Homes located in geographic regions that are unusually prone to devastation by natural forces such as tornadoes, floods, earthquakes, and wildfires are more likely to suffer losses than homes located in areas that do not have a history of such calamities. Under a system of competitive risk classification, insurers would place homes located in areas with a history of natural devastation in higher risk classes for rating purposes. Conversely, homes located in areas that are relatively free of environmental hazards would be grouped together with other low-risk insureds – and their owners would be charged a premium commensurate with the pool's lower probability of loss. Indeed, if a particular territory was known to be extremely hazardous - for example, if devastating hurricanes occurred every year for the past 100 years – an insurer might refuse to offer homeowners insurance at any price.7

Competitive risk classification is thus critical to insurers' ability to offer the lowest possible price to each insured based on the level of risk he presents. One of the biggest misconceptions about insurance is that its purpose is to spread risk among dissimilar insureds. The quality of municipal services in a given territory can also affect the likelihood and magnitude of losses. For example, the equipment, training, and manpower of local fire fighting units – as well as the stringency of local building codes and inspections – can affect the frequency and severity of fires. Moreover, expected property losses due to criminal activity, such as burglary, vandalism, and arson, will vary across territories according to the efficacy of local law enforcement and criminal justice systems.<sup>8</sup>

#### Age of a Home

An insurer examining loss data could well conclude that older homes are more likely to have faulty wiring and heating systems, thereby increasing the risk of loss due to fire. Compared to newer homes, they may also be more susceptible to water-related damage caused by antiquated plumbing or a roof that is in poor condition. In older homes that are in good condition, the presence of uniquely crafted decorative features, such as carved wooden cornices and stained glass windows, can push repair or replacement costs significantly above a home's market value. Consequently, many insurers decline to offer owners of older homes the option of a full replacement-cost policy,9 regardless of whether the home is a Victorian mansion in an exclusive suburb or a modest bungalow in the inner city.

#### **Credit History**

During the 1990s, a growing number of personal lines insurance companies began using consumer credit information to help them decide whether to issue or renew a policy, and to establish its price. Insurers use credit information to assess risk because an individual's experience managing credit is a strong predictor of whether he will file a claim for automobile or homeowners insurance and the potential size of losses.<sup>10</sup> Though no one knows for sure why credit history correlates with loss experience, the Insurance Information Institute has suggested that a person's experience handling credit may indicate certain behavioral characteristics that are directly related to risk:

The character trait that leads to careful money management seems to show up in other daily situations in which people have to make decisions about how to act, such as driving. People who manage money carefully may be more likely to have their car serviced at appropriate times and may also more effectively manage the most important financial asset most Americans own – their house – making routine repairs before they become major insurance losses.<sup>11</sup>

# Competitive Risk Classification vs. Indiscriminate Risk Spreading

One of the biggest misconceptions about insurance is that its purpose is to spread risk among dissimilar insureds. Insurance, according to this view, is a privately administered social welfare program, to which all policyholders contribute and from which those with relatively high levels of risk – those most prone to loss – benefit disproportionately.

Risk spreading occurs when the diverse risks presented by individuals within a heterogeneous risk population are combined and spread equally among all members of that population. An extreme example of risk spreading is "community rating," which has been tried in several states as a health insurance reform. Community rating essentially forbids insurers from assessing individual risk and utilizing risk classification systems. The inevitable result is substantial cross-subsidies among risk types. For example, in the early 1990s, New York instituted mandatory community rating for the state's individual and small-group health insurance markets. The law required that all insureds pay the same premium, regardless of age and other known risk factors. As a result, premium costs for young people doubled or tripled, nine health

insurers abandoned the New York market, and more New Yorkers were without health insurance than before the reforms were instituted.<sup>12</sup>

The notion that insurance ought to operate as a mechanism for indiscriminate risk spreading is reminiscent of the Marxist slogan, "From each according to his ability, to each according to his need." As a theory of social justice, however, this conception of insurance is seriously flawed because underwriting restrictions that operate to spread risk indiscriminately typically are not "means-tested." Law and regulation that is intended to promote social justice usually aims to achieve greater equality of wealth and income. However, insurance regulation that redistributes risk may have the opposite effect, because the level of risk presented by a given individual will not necessarily be correlated with his level of wealth. In other words, risk-spreading schemes may operate to compel low-income consumers with low levels of risk to subsidize high-income consumers with high levels of risk. A fairer system is one in which insurers compete to offer coverage to each individual at a price that is commensurate with the benefits (i.e., the amount of risk protection) he receives from the coverage.

## Social Benefits of Risk-Based Underwriting

In addition to providing the foundation for a rate structure in which the price consumers pay for insurance is commensurate with the benefits they receive, risk-based underwriting benefits society as a whole by influencing behavior and conveying important information. Through competitive underwriting, insurers are able to acquire useful information about risk and strategies for risk reduction that may not be readily apparent or available to individual insureds. Indeed, the knowledge that is generated from riskbased underwriting may actually deter people from unnecessarily purchasing high levels of insurance coverage when they can more cheaply protect against risk by investing in loss prevention. If, on the other hand, coverage is priced below expected cost because of government-imposed restrictions on underwriting, some people may not take safety precautions that would otherwise be worthwhile, because in the absence of riskbased underwriting and pricing, they may be able to more cheaply obtain protection against risk by purchasing insurance than by investing in measures to reduce their level of risk.<sup>13</sup>

## How Competitive Underwriting Facilitates Risk-Sharing Among Insurers

For reasons noted earlier, a system of insurance based on indiscriminate risk spreading among a single group of individuals with widely varying levels of risk is unfair and probably unworkable. A competitive system of insurance, on the other hand, encourages insurers to rigorously assess and classify risk, which fosters the mutually beneficial practice of risk sharing among similar risk types. However, just as competitive underwriting facilitates risk sharing among insureds within particular risk classes, so does it also promote socially beneficial risk sharing practices among insurers. That is, by accurately assessing particular risks, insurers can avoid situations in which they absorb more risk than they are capable of insuring, a condition that can lead to financial instability and, in the worst case, insolvency. Instead, individual insurers use risk assessment techniques to refrain from acquiring more of a particular kind of risk than they are capable of indemnifying, effectively sharing such risk with other insurers. For example, competitive underwriting among property insurers has led to the development of sophisticated risk-assessment techniques such as catastrophe risk modeling, which allows individual property insurers to avoid overconcentration in geographic areas prone to natural disasters.14

Risk-spreading schemes may operate to compel low-income consumers with low levels of risk to subsidize highincome consumers with high levels of risk.

### How Risk-Based Underwriting Creates Incentives for Risk Reduction

Historically, mutual companies have worked to develop innovative techniques and devices to assist their policyholders' efforts to reduce risk. Competitive risk assessment and classification provide incentives for highrisk individuals to take actions to control losses, because doing so may result in lower premiums and fewer uninsured losses. Further, since risk classification involves the pooling of large numbers of similar risks, insurers are often better able than any individual insured to discover less risky courses of conduct than those its insureds currently follow. Thanks to their superior access to loss experience statistics and greater ability to finance research into loss prevention methods, insurers may be able to suggest specific changes in behavior that will reduce risk and lower premiums.

The rise of factory mutual insurance companies in New England during the early nineteenth century illustrates how riskbased underwriting operates to encourage risk reduction among insureds. One such mutual company, Boston Manufacturers, was among the first insurers to offer fire protection coverage to textile mills in the region. Following a mill inspection in 1865, the company's president, Edward Manton, gave the following instruction in a memo to subordinates: "Renew at same if an additional force pump is added. If not, renew for \$10,000 at 1 1/4."15 By this Manton meant that unless the mill owner took specific action to reduce the likelihood of fire, he would have to pay an additional 1 1/4 cents per \$100 to renew coverage for the mill. Foreshadowing the role that property insurers would increasingly play as risk reduction consultants, Manton not only determined that the mill had a heightened risk of succumbing to fire, he also prescribed the means by which the risk could be reduced - investing in an "additional force pump."

Eventually the early factory mutual companies began requiring inspections of factories both prior to issuing a policy and after one was in force, which could lead either to the sudden cancellation of coverage for a high-risk facility, or to a reduced premium for a facility that instituted loss prevention measures. Risk-based underwriting thus provided a powerful ongoing incentive for textile mill and factory owners to reduce their levels of risk, often by acting on the specific recommendation of their insurers. The mutual companies, for their part, worked to develop innovative techniques and devices to assist their policyholders' efforts to reduce risk. Boston Manufacturers offered lower premiums to policyholders that purchased lanterns that met certain safety criteria, and then worked with lantern manufacturers to create the safer designs that would meet the specified criteria. Another factory mutual company, Manufacturers Mutual of Providence, Rhode Island, developed specifications for fire hoses and advised mills to purchase hoses only from companies that met those standards.<sup>16</sup> As underwriters learned more about the nature of industrial risk and how to reduce it, factory mutual companies routinely refused coverage to firms that failed to adopt specific loss prevention methods. For example, to be eligible for fire coverage, one company, the Spinners Mutual, required factories to install automatic sprinklers.17

## How Risk-Based Underwriting Increases the Availability of Insurance

A society that relies primarily on private enterprise to distribute goods and services necessarily depends on companies and individuals to seek out potential customers and develop strategies for serving the needs of those customers. The companies that are most successful in serving consumers' needs will be rewarded with the largest share of the potential customers. Insurers doing business in the private, voluntary insurance market are no different. Their success as companies hinges on their ability to expand their markets, and to achieve a high level of penetration in the markets they serve. Accurate risk assessment and refined classification systems are essential to that task.

To market its products effectively, an insurer must devise a risk classification system that will allow it to offer insurance to as many potential customers as possible, while simultaneously ensuring that its prices will be adequate to cover its customers' potential losses. While competition is generally most intense for low-risk insureds, insurers seeking to improve their market penetration will also wish to compete for high-risk insureds within the same market. Increased market penetration provides economies of scale in the marketing and distribution of insurance, as it does for any product. Competitive risk classification therefore serves to increase the availability of insurance even for high-risk individuals, because the economic advantages of superior market penetration will accrue to those insurers whose refined risk classification systems permit them to price coverage in accordance with the expected costs of each identifiable class of risks within the markets they serve.18

## Negative Consequences of Government Restrictions on Underwriting

Government restrictions on underwriting freedom ostensibly guard against unfair business practices and ensure that insurance will be available to meet market demand. In many instances, however, these regulatory interventions only create dysfunctional market conditions that are detrimental to insurance consumers. For example, a rigorous process of risk assessment might reveal that a certain risk is so great that it is "uninsurable." That is, the insurer will have discovered that the prospective insured's level of risk is so high, and the magnitude of the potential loss so great, that no premium would be sufficient to justify transferring that risk to the insurer. However, when risk selection freedom is curtailed, insurers can be forced to accept and maintain uninsurable risks, thus threatening their financial stability and possibly jeopardizing their solvency.

Of all the distortions to the competitive insurance system that are produced by underwriting restrictions, perhaps the most harmful are adverse selection, moral hazard, and cross-subsidies.

#### **Adverse Selection**

Adverse selection occurs when low-risk insureds purchase less coverage, and highrisk insureds purchase more coverage, than they would if the price of insurance more closely reflected the expected loss for each group. Thus, when an insurer is unable to distinguish between individuals who have a low probability of experiencing a loss – either because it lacks the ability to accurately assess and classify risk, or because it is prevented from doing so by regulation – adverse selection is the likely result.

To illustrate, suppose an insurer sets a premium based on the average probability of a loss, using the entire population as a basis for its estimate. All things being equal, those at the highest risk for a certain hazard will be the most likely to purchase coverage for that hazard. In an extreme case, the highrisk individuals will be the only purchasers of coverage, because low-risk individuals will regard an insurance premium based on the average expected losses of the entire population as too expensive. When low-risk individuals decline to purchase insurance, insurers are left with an increasing proportion of high-risk policyholders. As its loss exposure increases due to the predominance of highrisk policyholders, the insurer's costs rise accordingly.

To avoid losing money, the insurer raises premiums – not just for its high-risk policyholders, but for everyone (because the insurer is not practicing risk classification). As the average price for insurance continues to rise, coverage remains a bargain for those with

When low-risk individuals decline to purchase insurance, insurers are left with an increasing proportion of high-risk policyholders. As its loss exposure increases due to the predominance of high-risk policyholders, the insurer's costs rise accordingly.

Underwriting restrictions that prevent insurers from accurately assessing risk can create incentives for policyholders to conduct their affairs in a manner that is less risk averse than if they had no insurance. the highest levels of risk, but becomes less valuable to those with lower levels of risk. A dynamic has been set in motion in which the ratio of high-risk to low-risk insureds grows ever larger, to the point where the only policyholders that remain are a small number of very high-risk individuals paying very high premiums.

The logic of adverse selection can be demonstrated further by a simple mathematical calculation. Suppose some homeowners have a low probability of suffering damage to their homes while others have a higher probability. The lowrisk homeowners stand a 1 in 10 probability of loss; the high-risk homeowners, a 3 in 10 probability. Assume that there are 50 potentially insurable individuals in each group, and the combined loss for each group is \$100. The expected loss for a member of the high-risk group will be \$30 (.3 x \$100), while for a member of the low-risk group, the expected loss will be just \$10 (.1 X \$100). For a random individual in the entire population, the expected loss will be \$20 (calculated as follows:  $[50(.1 \times 100) + 50(.3 \times 1$ x \$100)] / 100 = \$20).<sup>19</sup>

If the insurer charges a premium of \$20 based on the average loss probability of the entire population, only members of the high-risk group would normally purchase coverage, since they would be delighted to pay only \$20 for insurance that will compensate them for \$30 in probable losses. On the other hand, it is unlikely that members of the low-risk group would be interested in paying \$20 for coverage, given that their probable losses are only half that amount. If only the high-risk homeowners purchase coverage, the insurer will suffer an expected loss of \$10 (i.e., \$30 - \$20) on every policy it sells.<sup>20</sup>

#### Moral Hazard

Underwriting restrictions that prevent insurers from accurately assessing risk can create incentives for policyholders to conduct their affairs in a manner that is less risk averse than if they had no insurance. Insurers must contend with the fact that once an individual has purchased insurance, his or her incentive to control losses decreases. Moral hazard is the resulting tendency of an insured individual to underallocate resources to loss prevention after purchasing insurance.<sup>21</sup>

For example, when an individual purchases homeowners insurance, he has protected himself against loss due to hazards such as fire, and against liability for injuries suffered by visitors to his home. But thanks to the protection afforded by insurance, the policyholder has less incentive to be careful around the house than he did before he purchased coverage, because he no longer bears the full cost of his carelessness. Undoubtedly the policyholder will still take many safety precautions; after all, he will not want to see his home damaged or his guests injured, regardless of how much money these events might cost him. Still, there is no getting around the fact that insurance against loss reduces the policyholder's incentive to prevent the insured event from occurring.<sup>22</sup> Once the policyholder has paid a premium, he alone does not have to shoulder the cost of a loss. "In effect," explains insurance law expert Kenneth Abraham, "the loss is borne by the other holders of homeowners insurance, each of whom also has a reduced incentive to take loss prevention measures. In this broad sense, the problem of moral hazard plagues all forms of insurance and tends to produce an underallocation of resources to loss prevention."23

To some extent, the behavioral tendencies that are associated with moral hazard can be counteracted by contractual devices, such as coinsurance and deductible provisions, that are designed to give the insured a stake in loss prevention. But the insurer's most effective method of dealing with the problem of moral hazard is to accurately assess and classify risk, varying the price of coverage according to the expected loss of each class of insureds. By raising or lowering the price of coverage based on a policyholder's loss experience – "experience rating" – the insurer can create incentives for policyholders to minimize the likelihood that they will suffer a loss. When risk classification based on previous loss experience leads to an increase in the cost of coverage for a given policyholder, the message sent to that individual is that he could obtain insurance more cheaply by allocating more resources to loss prevention.

By making it more difficult for insurers to deal with the problem of moral hazard, restrictions on underwriting freedom increase overall claim costs, thereby driving up the price of coverage for all insureds. As Scott Harrington explains, "Higherrisk persons or businesses [...] will be more likely to engage in risky activity and less likely to take precautions. In the case of automobile insurance, for example, lowering rates for high-risk drivers will encourage them to buy more expensive cars, to buy policies with larger limits and lower deductibles, and to exercise fewer precautions to prevent accidents and theft losses than would be true if competition among insurers determined rates."24 As noted earlier, effective rate competition can only occur when insurers are free to compete with respect to underwriting. Moral hazard – and the heavy cost it imposes on consumers – can be averted only if insurers are free to use the most accurate risk assessment techniques, together with the most homogeneous risk classifications, that they are capable of devising.

#### **Cross-Subsidies**

As the foregoing discussion suggests, underwriting restrictions serve to weaken the link between expected loss costs and premiums, creating cross-subsidies that flow from low-risk insureds to high-risk insureds. Applied to automobile insurance, for example, underwriting restrictions tend to force drivers in the voluntary market to subsidize drivers in the residual market. Apart from the injustice entailed by such compulsory wealth transfers, cross-subsidization of insurance rates has a number of adverse consequences. If highcost drivers do not pay the full marginal costs they impose on the insurance system, they will have no incentive to drive less or to drive more carefully.<sup>25</sup> The net effect of misguided attempts to lower premiums for some drivers through cross-subsidies is likely to be an increase in accident rates and insurance loss costs, adding to the inflationary pressures on insurance premiums. While examples of regulatory cross-subsidies can be found in many states with respect to both automobile and homeowners insurance, the auto insurance regulatory regimes of Massachusetts and California offer particularly striking illustrations of how cross-subsidies are facilitated by underwriting restrictions.

#### Massachusetts

According to the Automobile Insurers Bureau of Massachusetts, drivers in some Massachusetts rating classes and geographical territories receive cross-subsidies as high as 60 percent of the premium they would have paid if prices were strictly based on expected loss costs. Meanwhile, drivers in other rating class or territory combinations have seen their premiums increase by as much as 11 percent in order to subsidize higher-cost drivers. On average, territories outside of Boston pay a subsidy of two percent of premiums to support premium reductions averaging 20 percent for Boston drivers.<sup>26</sup>

In Massachusetts, cross-subsidies arise from a variety of sources. The capping and "tempering" of rates introduces crosssubsidies from low-risk classes and territories to high-risk classes and territories. Further, prohibitions on the use of risk-assessment variables such as age, gender, and marital status introduce cross-subsidization from low-risk to high-risk drivers within each of the various "rating cells" prescribed under state law.<sup>27</sup> Because insurers are prohibited from canceling policies based on loss or accident experience, those drivers who are most costly to insure remain in the system, driving up costs. The higher premiums charged due to the high accident costs of any one driver are shared across all members of the rating cell, dampening individual incentives to reduce

If high-cost drivers do not pay the full marginal costs they impose on the insurance system, they will have no incentive to drive less or to drive more carefully.<sup>25</sup> In April 2004, Commissioner Garamendi's apparent campaign to institute cross-subsidies by eliminating territorial rating received a significant boost from the California Supreme Court. costs. The result, according to economists Sharon Tennyson, Mary A. Weiss, and Laureen Regan, is that accident rates "will be higher, and expected accident losses higher, under the Massachusetts regulatory system than otherwise."<sup>28</sup>

Massachusetts' experience illustrates another familiar consequence of government restrictions on underwriting and pricing freedom: Few insurers will wish to enter or remain in a market governed by a set of rules that prevents them from competing. That axiom was confirmed by a report prepared for the Massachusetts Division of Insurance by Tillinghast Towers and Perrin, which found that between 1990 and 2004, the number of auto insurers in the state declined from 53 to 19 – a 64 percent decrease.29 The report found that "certain urban risks, youthful operators, and youthful males" are charged premiums significantly below the costs associated with providing coverage, and that "the rating shortfall on these classes is made up by overcharges on other risks." Accordingly, "about 14 percent of the states' drivers are subsidized (i.e., their insurance premiums are less than the expected costs of providing the coverage), and 86 percent of the market pays more than the cost-based premium."30 Vowing to "give our consumers more choice and the advantages that come with safe driving," Governor Mitt Romney responded to the report by appointing a task force "to form a consensus for a fair and smooth transition to a competitive marketplace."31

#### California

An important provision of California's Proposition 103, enacted by the state's voters in 1988, requires insurers to use a specific, hierarchical order of rating variables to determine the individual insured's premium. As interpreted by California Insurance Commissioner John Garamendi, this provision may essentially prohibit insurers from classifying risk based on the territory in which an insured's automobile is operated. In a March 2004 news release, Commissioner Garamendi announced his intention to determine "whether [postal] zip codes unfairly influence the price of insurance for California drivers." Noting that insurers' practice of considering zip codes "has drawn heavy criticism from cities and consumer groups," Mr. Garamendi promised to "provide a fair and equitable system for all."<sup>32</sup> As economist David Appel observes, if Proposition 103's underwriting provisions are interpreted to remove territory from the rate determination process, the effect will be to "impose significant cross-subsidies from rural to urban consumers" since "expected costs for urban drivers clearly exceed those for rural drivers."<sup>33</sup>

In April 2004, Commissioner Garamendi's apparent campaign to institute cross-subsidies by eliminating territorial rating received a significant boost from the California Supreme Court. Ruling on a case brought by consumer and civil rights activists against State Farm, the Court authorized the insurance commissioner to release documents submitted by insurers that break down policies sold by zip code.<sup>34</sup> Proposition 103 requires auto insurers to file that information with the commissioner's office, but State Farm and other insurers had expected the information to be held in confidence so as to protect their proprietary underwriting techniques and marketing strategies.

The Court's ruling will almost certainly harm competitive underwriting in California in two ways. First, it will undermine insurers' incentive to develop innovations in underwriting and marketing, because competitors can easily copy any innovations once they are publicly disclosed. And second, the ruling will give plaintiff attorneys access to statistical data that could be used to file class action lawsuits based on the dubious "disparate impact" theory of discrimination. While such lawsuits would probably lack legal merit, the prospect of defending against multiple class actions could force auto insurers in California to abandon territorial rating rather than endure costly litigation. If that occurs, opponents of competitive underwriting will have achieved through

the courts what they could not accomplish legislatively: the imposition of insurance cross-subsidies from rural to urban drivers.

## Competitive Risk Analysis vs. Social Regulation

Cince they serve neither to correct market Jfailure nor to advance public health and safety, measures that subsidize the insurance costs of high-risk groups by means of regulatory underwriting restrictions are best understood as "social regulation" - that is, as a form of regulation that is designed "to achieve social goals that are not fully valued in the market."35 While traditional public interest regulation seeks to reduce or prevent harms confronting workers and consumers (e.g., from environmental pollution, dangerous products, and unsafe working conditions), social regulation aims to provide particular constituencies with benefits whose costs are borne by regulated business firms. As a previous NAMIC public policy paper observes, "the end result of social regulation is that it corrupts markets and shifts unjustified costs to businesses. It is purely political. Its goal is not to prohibit illegal conduct, nor is it intended to strengthen competition. Rather, it is a way for government to mandate socially engineered outcomes with no impact on budgets or tax levels."36

The persistence of social regulation in property/casualty insurance markets is perhaps best explained by the *political* entrepreneurship theory of regulation.<sup>37</sup> This theory holds that certain regulatory policies can be engineered by political entrepreneurs such as candidates for public office or consumer advocates. The theory suggests that under some circumstances, political entrepreneurs can exploit public dissatisfaction over market outcomes in specific industries and motivate consumers to express their frustration through the political process. For example, in states such as New Jersey and Massachusetts, auto insurance prices have been a prominent

issue in legislative and gubernatorial elections for decades. California's Proposition 103, although it was framed as a ballot initiative and characterized by the media as the product of a grassroots movement, may also be regarded as the result of opportunistic behavior by electoral candidates and consumer activists.<sup>38</sup>

Moreover, though they are praised by some as the purest form of democracy, ballot initiatives tend to attract the interest of those voters who have the most to gain from a particular electoral result.<sup>39</sup> This is especially so when, as in the case of Proposition 103, the voters who will bear the cost of a benefit provided to others are unaware of the negative consequences that the initiative holds for them. Thus, when an initiative promises to reduce the insurance premiums of highrisk insureds through a system of hidden cross-subsidies, voters who stand to benefit from such "relief" will participate in greater numbers than those who will eventually be harmed by cross-subsidization. This happened in California, where the electoral outcome of Proposition 103 was disproportionately influenced by voters in predominantly urban counties where the cost of providing coverage is highest.

### Social Regulation and the Politicization of Insurance Underwriting

The predominance of social regulation in insurance, especially where underwriting and pricing are concerned, reflects the degree to which insurance has become politicized in many states. The politicization of insurance is fueled in part by the belief that insurance is an entitlement, and that social regulation is needed to ensure that everyone shares equally in the benefits that insurance provides.

Those who regard insurance as an entitlement seem especially troubled by underwriting and rating systems that classify people as especially risky because of factors they cannot control, such as age, gender, geographic residence, or credit score. In these circumstances, well-intentioned policymakers The politicization of insurance is fueled in part by the belief that insurance is an entitlement, and that social regulation is needed to ensure that everyone shares equally in the benefits that insurance provides. Allowing insurers to accurately assess and classify risk does not mean, however, that government policy must be indifferent to the plight of high-risk individuals. who believe that government should help the less fortunate are confronted with a private insurance market that sometimes seems to "blame the victim." Their inclination often is to eliminate the perceived unfairness of riskbased underwriting and pricing by imposing restrictions on underwriting practices.

Consider the inner city resident who cannot afford the high premiums for auto or homeowners insurance that prevail in his congested, crime-ridden neighborhood. Suppose that a woman files frequent property-damage and medical insurance claims because of violent acts perpetrated against her by an abusive husband or boyfriend. Should insurers be allowed to isolate these people and others like them in high-risk classes, charging them more for insurance than other policyholders who are not beset by these misfortunes? If insurance is to preserve its risk-sharing function and avoid becoming a mechanism for indiscriminate risk spreading, the answer must be "yes."

Allowing insurers to accurately assess and classify risk does not mean, however, that government policy must be indifferent to the plight of high-risk individuals. For example, it would not be difficult - from a technical standpoint, at least - for governments to use taxpayer dollars to directly subsidize members of high-risk classes. Direct subsidies of this sort have long been employed to provide an array of social goods (e.g., food stamps, Medicaid, and housing subsidies) to particular subgroups within the population. Targeted insurance subsidies that operated like food stamps would not interfere with the ability of insurers to engage in competitive underwriting and pricing, nor would they deter insurers from continuing to search for ways to more closely align the price of coverage with the particular benefits that individual insureds derive from coverage.

Unfortunately, policymakers usually avoid direct methods of risk redistribution in favor of ad hoc regulatory adjustments to the system of risk classification. Rather than raise taxes to subsidize the insurance costs of high-risk groups, politicians and regulators prefer to attack risk-based underwriting practices as "unfair." The reasons are not hard to fathom. Like other governmentadministered social welfare programs, direct methods of risk redistribution - and the costs they entail – would be more transparent to the public than is the hidden system of cross-subsidies that result from underwriting restrictions. Politically, it is far easier to pretend that insurers are to blame for the cost disparities that exist among different risk classes. As former South Carolina Insurance Commissioner Ernst N. Csiszar explains, the tendency toward political expedience often leads to "bold" regulatory intervention in the competitive insurance system:

State regulators [are] restless as their careers and futures often hinge on the boldness of their regulatory actions. Consumers, dissatisfied with ever-increasing premiums and everdecreasing coverage, only encourage such boldness. Moreover, politicians love a populist cause, as it is easy to raise the specter of corporate greed and regulatory incompetence. So the pressure is on to do something – and that something often turns out to be ever more of the trivial and intrusive regulation of the past.<sup>40</sup>

## Conclusion

The tendency of underwriting restrictions to produce adverse selection, moral hazard, and cross-subsidies makes clear that as a strategy for improving the availability and affordability of insurance, curtailing underwriting freedom is irrational and counterproductive. The main effect of underwriting restrictions is to require some policyholders to pay more for coverage so that others can pay less. Moreover, by distorting incentives for loss control, underwriting restrictions lead to increased claim costs, thereby causing premiums to rise for all insureds and reducing the availability of insurance, especially for those with higher levels of risk.

In the absence of government-imposed restrictions, competitive underwriting forces insurers to strive continuously to improve the accuracy of their risk assessment techniques, and to make their risk classifications narrower and more homogeneous. The efficiencies that result from this process lead to increased price competition, and make possible the development of new coverage options tailored to the specific needs of particular consumers.

By eschewing underwriting restrictions and allowing competitive insurance markets to flourish, state regulators would realize their common goal of ensuring that property insurance rates are "adequate, not excessive, and not unfairly discriminatory." Insurance rates that are determined by market-driven efforts to assess risk with the greatest possible rigor, and to group similarly situated insureds into precisely constructed risk classes, cannot, by definition, be unfairly discriminatory. Nor could rates established through competitive, risk-based underwriting be considered "excessive," because the same competitive forces that promote underwriting accuracy also conspire to drive down prices. Far from improving the lot of property insurance consumers, government-imposed underwriting restrictions prevent consumers from enjoying the full range of benefits that come from unfettered competition.

## **End Notes**

<sup>1</sup> Harvey W. Rubin, *Dictionary of Insurance Terms* (Hauppauge, NY: Barron's Educational Series, 1995), p. 497.

<sup>2</sup> See, e.g., Dwight K. Bartlett, Robert W. Klein, and David T. Russell, "Attempts to Socialize Insurance Costs in Voluntary Insurance Markets," Center for Risk Management and Insurance, Georgia State University. Available at http://rmictr.gsu. edu/Papers/Socialize\_Insurance\_Costs.pdf.

<sup>3</sup> Scott E. Harrington, *Insurance Deregulation and the Public Interest* (Washington, DC: AEI-Brookings Joint Center for Regulatory Studies, 2000), p. 14. "Indeed," adds Harrington, "classification restrictions can have a much greater effect on rates in the long run than does prior approval regulation of rate changes..." n. 9, p. 47.

<sup>4</sup> Kenneth S. Abraham, *Distributing Risk: Insurance, Legal Theory, and Public Policy* (New Haven: Yale University Press, 1986), p. 79.

<sup>5</sup> Insurance Services Office and National Association of Independent Insurers, *Factors Affecting Urban Auto Insurance Costs* (New York and Des Plaines, Ill., 1989).

<sup>6</sup> Insurance Research Council, "Trends in Auto Injury Claims," (Malvern, PA, 1996).

<sup>7</sup> James Ridgeway, "Redlining the Coasts," *Audubon*, July 1993, p. 16.

<sup>8</sup> Orin Kramer and Richard Briffault, *Inner City Insurance: Problems and Solutions* (New York: I.I.I. Press, 1994), p. 22.

<sup>9</sup> A replacement-cost policy pays to rebuild the structure as it currently exists.

<sup>10</sup> See, e.g., Michael J. Miller and Richard A. Smith, "The Relationship of Credit-Based Insurance Scores to Private Passenger Automobile Insurance Loss Propensity," EPIC Actuaries, LLC (June 2003). Also see Bruce Kellison, Patrick Brockett, Seon-Hi Shin, and Shihong Li, "A Statistical Analysis of the Relationship Between Credit History and Insurance Losses," Bureau of Business Research, McCombs School of Business, University of Texas at Austin (March 2003).

<sup>11</sup> "Credit-Based Insurance Scoring," Insurance Information Institute. Available at www.iii. org/media/hottopics/insurance/creditscoring. Insurance rates that are determined by market-driven efforts to assess risk with the greatest possible rigor, and to group similarly situated insureds into precisely constructed risk classes, cannot. by definition, be unfairly discriminatory.

<sup>12</sup> John Merline, "Insurance Reform Can Backfire," *Consumers' Research*, May 1996, p. 10; M. Stanton Evans, "'Simple' Reforms Could Damage Health Care," *Consumers' Research*, April 1995, p. 14.

<sup>13</sup> Abraham, op. cit., p. 78.

<sup>14</sup> Howard Kunreuther, "Insurability Conditions and the Supply of Coverage," in H. Kunreuther and R. Roth, eds., *Paying the Price: The Status and Role of Insurance Against Natural Disasters in the United States* (Washington, DC: Joseph Henry Press, 1998), p. 18.

<sup>15</sup> John Bainbridge, *Biography of an Idea: The Story of Mutual Fire and Casualty Insurance* (Garden City, NJ: Doubleday, 1952), p. 112.

<sup>16</sup> Kunreuther, op. cit., p. 21.

<sup>17</sup> Ibid.

<sup>18</sup> American Academy of Actuaries, "Risk Classification: Statement of Principles," available at www.actuarialstandardsboard. org/pdf/appendices/risk.pdf.

<sup>19</sup> Kunreuther, op. cit., p. 34.

<sup>20</sup> Ibid., pp. 34-35.

<sup>21</sup> Abraham, op. cit., p. 14.

<sup>22</sup> Interestingly, this observation also applies to insurers, whose risk of insolvency is reduced by the presence of state guaranty funds. Depending on how they are financed and administered, state guaranty funds can have the effect of discouraging prudent behavior on the part of insurers with respect to pricing and overall risk management. For this reason, some analysts have urged policymakers to consider changes to the manner in which government guaranty systems are financed and operated. See, e.g., Elijah Brewer III, Thomas S. Mondschean, and Philip E. Strahan, "The Role of Monitoring in Reducing the Moral Hazard Problem Associated with Government Guarantees: Evidence from the Life Insurance Industry," Wharton Financial Institutions Center, University of Pennsylvania, May 1996. Available at http://fic.wharton.upenn. edu/fic/papers/96/9615.pdf.

<sup>23</sup> Ibid., pp. 14-15.

<sup>24</sup> Harrington, op. cit., p. 43.

<sup>25</sup> Scott E. Harrington and Helen I. Doerpinghaus, "The Economics and Politics of Automobile Insurance Rate Classification," *Journal of Risk and Insurance*, 1993, pp. 59–84.

<sup>26</sup> J. David Cummins, "Property-Liability Insurance Price Deregulation: The Last Bastion?" in Cummins, ed., *Deregulating Property-Liability Insurance: Restoring Competition and Increasing Market Efficiency* (Washington, DC: AEI-Brookings Joint Center for Regulatory Studies, 2002), p. 12.

<sup>27</sup> Sharon Tennyson, Mary A. Weiss, and Laureen Regan, "Automobile Insurance Regulation: The Massachusetts Experience," in Cummins, ed., *Deregulating Property-Liability Insurance: Restoring Competition and Increasing Market Efficiency* (Washington, DC: AEI-Brookings Joint Center for Regulatory Studies, 2002), pp. 50-52. Also see Simon Rottenberg, *The Cost of Regulated Pricing: A Critical Analysis of Auto Insurance Premium Rate-Setting in Massachusetts* (Boston, MA: Pioneer Institute for Public Policy Research, 1989).

<sup>28</sup> Ibid.

<sup>29</sup> Massachusetts Division of Insurance, "Analysis of the Commonwealth Automobile Reinsurers," April 2004, p. 15.

<sup>30</sup>. Ibid., pp 20-21.

<sup>31</sup> "Romney Turns Ignition on Auto Insurance Reform," press release, April 29, 2004, available at http://www.mass.gov/portal/ govPR.jsp?gov\_pr=gov\_pr\_040429\_auto\_ insurance\_reform.xml.

<sup>32</sup> "Insurance Commissioner John Garamendi Holds Fresno Town Hall Meeting to Address 'Unfair' Use of Zip Codes in Auto Insurance Rating System," news release, March 9, 2004.

<sup>33</sup> David Appel, "Comment on Chapter Five," in Cummins, ed., op. cit., p. 246.

<sup>34</sup> Bob Egelko, "Insurers Must Release Records: Geographic Date Could Reveal Illegal Denial of Coverage," *San Francisco Chronicle*, April 27, 2004, p. C-1.

<sup>35</sup> Joseph V. Kennedy, "A Better Way to Regulate: What Government Can Learn From the Market," *Policy Review*, October-November 2001.

<sup>36</sup> "Regulation of Property/Casualty Insurance: The Road to Reform," National Association of Mutual Insurance Companies, 2002, pp. 12-13. <sup>37</sup> Paul L. Joskow and Roger G. Noll, "Deregulation and Regulatory Reform During the 1980s," in Martin Feldstein, ed., *American Economic Policy in the 1980s* (University of Chicago Press, 1994), pp. 367–440.

<sup>38</sup> Cummins, op. cit., p. 10.

<sup>39</sup> For a general critique the initiative process, see David S. Broder, *Democracy Derailed: Initiative Campaigns and the Power of Money* (Harcourt, 2000).

<sup>40</sup> Ernst N. Csiszar, "Competitive Markets and Regulatory Reform in the U.S. Insurance Industry," paper presented at the Centre for Risk and Insurance Studies, University of Nottingham, UK. Available at http://www. nottingham.ac.uk/business/cris/papers/ Grif%20-%20Ernst%20Csiszar.pdf.

Notes

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