

Focus

On the Implications of the Internet for Insurance Markets and Institutions

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ABSTRACT

By most accounts, the Internet and related advances in information technology significantly affect financial services in general and insurance markets and institutions in particular. Coupled with other important trends such as globalization and regulatory reform, these changes are forcing far-reaching changes upon the insurance industry and making it more competitive. This article focuses specifically on the implications of the Internet for insurance markets and institutions. The conventional wisdom that the Internet constitutes a sufficient condition for the disintermediation of traditional insurance distribution networks is called into question. To the extent that the Internet reduces transaction costs, it will create opportunities for new intermediaries as well as for existing ones. It will also influence product design, in some cases making it economically attractive to unbundle and repackage various forms of coverage. By removing entry barriers and reducing insurance costs, the Internet will also provide a private market solution to a major insurance regulatory concern—enhancing insurance affordability and availability.

INTRODUCTION

By most accounts, the Internet and related advances in information technology significantly affect the economic efficiency and characteristics of the financial services industries. In banking, information technology investments have enabled banks to rely more upon ATMs to carry out teller functions, and the lending function has become standardized and automated to the point where far fewer loan officers are needed to manage a portfolio of a given size (Wilhelm, 2001). Similarly, human capital is being leveraged (and in some cases displaced) in the securities markets by technologies such as electronic order processing systems, electronic limit order books, and electronic auctions (Wilhelm, 2001). In insurance, firms are beginning to offer a wide array of online services, including online sales, needs analysis,¹ and customer service (e.g., online policyholder account

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¹ See Adelman and Dorfman (2002) for an empirical assessment of the quality of life insurance needs analysis on the Internet. The results of their empirical tests suggest that consumers should

information, claims management and processing, and group insurance certificates). Coupled with other important trends such as globalization and regulatory reform, these developments are forcing far-reaching changes upon the insurance industry and making it more competitive.

This article focuses specifically on the implications of the Internet for insurance markets and institutions. It is organized in the following manner. The next section summarizes what we know about Internet trends and related public policy issues. The third section calls the conventional wisdom that the Internet constitutes a sufficient condition for the disintermediation of traditional insurance distribution networks into question. Although the Internet certainly has the potential to create distribution channel conflicts as well as incentives for disintermediation, to the extent that it is successful in reducing transaction costs, it will also set into motion incentives for reintermediation; i.e., the creation of new intermediaries.² Therefore it is far more likely that the Internet will give rise to more, not fewer, intermediaries. The third section of the article formalizes this dynamic process of disintermediation and reintermediation by introducing a concept invented by Saffo (1998) called *disinter-remediation*. The fourth section examines some of the commonly held beliefs about the impact of the Internet on insurer costs and offers an alternative framework for addressing how the Internet might impact cost and profitability. Finally, the fifth section offers a set of concluding remarks.

INTERNET TRENDS, WEBLINING, AND THE DIGITAL DIVIDE

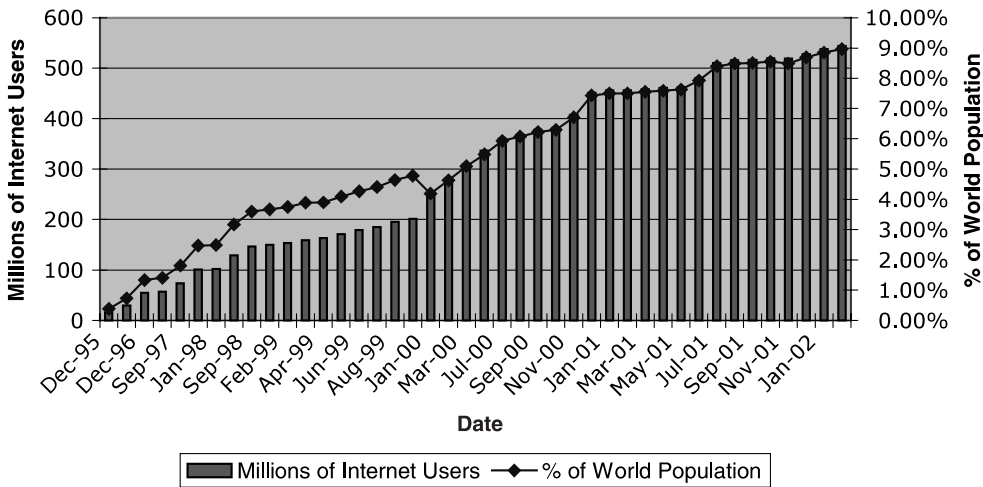
As a starting point for our analysis, it is useful to consider statistics concerning the growth and penetration of Internet connectivity. Worldwide, the number of Internet users has increased more than thirty-fold since 1995. This represents an average annual compound growth rate in the world online population of more than 75 percent per year. As of February 2002, ComputerScope, Ltd., estimated that more than 540 million people were online throughout the world, representing 9 percent of the world's population.³ Of this total, 33 percent live in the United States and Canada, 32 percent live in Europe, 29 percent live in Asia and the Pacific Rim, 5 percent live in Latin America, and less than 2 percent live in Africa and the Middle East. Figure 1 summarizes how the number of Internet users worldwide has grown since December 1995. Figure 2 summarizes year-by-year Internet growth rates in the worldwide population. As one might expect, growth rates were

not rely on Web-based life insurance recommendations for the amount of life insurance to purchase.

² Indeed, reintermediation in this sense has already occurred with the emergence of various e-commerce companies whose primary business purpose is to intermediate electronically the consumer-insurer relationship in the context of "online insurance marketplaces." Examples of consumer-oriented online insurance marketplaces include Answer Financial (<http://www.answerfinancial.com>), Countrywide (<http://www.cwinsurance.com>), insurance.com (<http://www.insurance.com>), Insweb (<http://www.insweb.com>), Netinsurance (<http://www.netinsurance.com>), Pivot (<http://www.pivot.com>), QuickQuote (<http://www.quickquote.com>), Quotesmith (<http://www.quotesmith.com>), ReliaQuote.com (<http://www.reliaquote.com>), and YouDecide.com (<http://www.youdecide.com>).

³ See ComputerScope's "How Many Online" survey (http://www.nua.ie/surveys/how_many_online/index.html). The numbers presented in ComputerScope's survey represent a composite of research studies from a number of different sources, all of which are documented at this Web site.

FIGURE 1
How Many Online Worldwide, 1995–2002



Source: “How Many Online” (http://www.nua.ie/surveys/how_many_online), downloaded May 2002.

initially unsustainably high and subsequently began to taper off. Interestingly, this pattern of growth declining at a decreasing rate reversed itself during the 1999 to 2000 Internet bubble before apparently resuming its declining pattern during 2001. This dropoff likely reflects the bursting of the Internet bubble, as well as the effects of a slowing global economy during this period.

Although North America only accounts for one third of the online population, the degree of Internet connectivity is significantly greater there than on any other continent. Survey results provided by Gartner Group (see Mi2N Newswire, 2001) indicate that as of June 2001, 61 percent of U.S. households actively used the Internet. Compared with adoption rates associated with other “disruptive” forms of communications and media technology (e.g., the telephone, radio, television, and VCR), the rate of Internet adoption has been much faster (see Leigh and Atkinson, 2001).

Early demographic studies (i.e., circa 1996 to 1997) indicated that the online population was not representative of the general population; specifically, the online population tended to be disproportionately white, male, educated, and affluent.⁴ This gave rise to early concerns about the potential use of the Internet by insurers and other financial service organizations to engage in a form of online redlining, or “Weblining.”⁵ Just as the insurance redlining hypothesis is not well supported empirically in the real world,⁶ the insurance

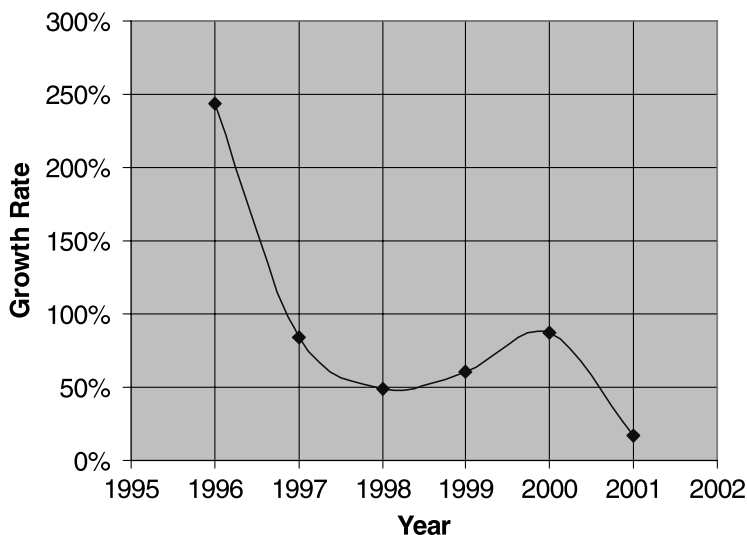
⁴ The reader should note that all references to “online” and “general” populations from this point forward are related only to the United States.

⁵ See Anonymous (1997) for one of the early references in the insurance trade press to Weblining.

⁶ See Harrington and Niehaus (1998) and Klein and Grace (2001). While there is little disagreement that inner-city residents tend to pay higher insurance prices and purchase more limited coverage, at issue is whether these differences are due to risk and demand conditions or whether they are discriminatory. However, the results reported by these and other studies, which use rigorous analytical methods, are generally not consistent with discrimination and suggest higher

FIGURE 2

Year-by-Year Rates of Growth in the Worldwide Online Population, 1996–2001



Source: "How Many Online" (http://www.nua.ie/surveys/how_many_online), downloaded May 2002.

Weblining hypothesis does not appear to be empirically well grounded. Perhaps the most important factor is the Internet's changing demographics. In terms of ethnicity and gender, the online population now more closely resembles the offline population than ever before.⁷ Furthermore, the "gender gap" appears to have all but disappeared. A survey published in 1999 by Nielsen/NetRatings found that although men and women differed in their uses of the World Wide Web, roughly half of all Internet users were female (Hu, 2000). This evidence is further corroborated in NTIA (2002), which notes, "Since August 2000, males and females have had virtually identical rates of Internet use" (p. 15).

Although the online population remains more affluent than the offline population, the differences should become less pronounced as the competition for Internet users continues to drive down the cost of Internet connectivity. The telecommunications industry's significant infrastructure investments over the past few years are beginning to pay off by providing greater bandwidth capacity at significantly lower prices. Broadband access (e.g., cable modems and digital subscriber lines) is becoming increasingly more common in households and businesses, as are alternative (and typically lower cost) Internet access devices such as Internet "appliances" and Internet-enabled telephones, personal digital assistants, televisions, and game players. While it has become fashionable to

risk and lower demand for coverage as the principal causes of high rates and limited coverage in urban areas.

⁷ Walsh, Morrisette, and Maraganore (1999) find that ethnic background does not materially influence the rate at which people adopt and use the Internet. Instead, factors such as income, education, and attitudes toward technology better explain Internet adoption and use.

speak of a “digital divide,”⁸ the market incentives for solving this problem are compelling.

Although the original version of the Weblining hypothesis is largely passé, consumer activists have begun to directly tie this concept to privacy issues. Now a firm is said to practice Weblining by simply collecting and analyzing consumer data so that it can decide how to personalize its product offerings and pricing for individual consumers (e.g., see Stepanek, 2000). The basic premise behind this view is that firms acquire detailed personal information about consumers so that they can malevolently manipulate consumers’ economic decisions. While a detailed analysis of Internet privacy is well beyond the scope of this article, this is obviously an important and emerging public policy issue that will be studied and debated for some time, in all likelihood resulting in some combination of legal, regulatory, and market-based consumer protections. Although this new version of the Weblining hypothesis transcends insurance and financial services, it nevertheless is an emerging area that will present new and unique challenges to insurers and regulators alike.

DISINTER-REMEDIATION

The process of removing the middleman from a transaction is commonly referred to as *disintermediation*. When the notion first arose that firms could actually sell goods and services over the Internet, there was a widespread belief that this would mean the death of the middleman (e.g., see Baatz (1996)). The conventional wisdom emerged at the time that by making it technically possible to interact directly with consumers, firms could bypass wholesalers and retailers altogether. The resulting cost savings would, depending upon how competitively structured product markets were, be enjoyed by producers and consumers.

Of course, as was the case with many of the early predictions concerning e-commerce, this disintermediation hypothesis has proven to be completely wrong. In practice, disintermediation often creates more jobs than it eliminates. Furthermore, the process of disintermediation often creates opportunities for new and different forms of intermediation. This dynamic process in which disintermediation and reintermediation occur simultaneously is referred to by Saffo (1998) as *disinter-remediation*.

Historically, technological innovation typically catalyzes the business environment. For all its awe and hype,⁹ the Internet is essentially the latest manifestation of a dynamic interaction between technology and commerce that dates back many centuries. Saffo (1998) cites the example of how Gutenberg’s printing press made possible the wide dissemination of knowledge about basic skills such as arithmetic and double-entry bookkeeping, thereby “democratizing arithmetic and creating a numerate class of shopkeepers” without which capitalism would have been impossible.

⁸ Indeed, as of May 2002, this character string appeared in nearly 500 articles published in major newspapers, magazines, and journals tracked by Lexis-Nexis during the previous year. See Leigh and Atkinson (2001) for a recent study on this topic.

⁹ One favorite example of hype is the famous quote attributed to John Doerr, partner at Kleiner Perkins Caufield & Byers (a prominent Silicon Valley venture capital firm), who once referred to the Internet as “the largest legal creation of wealth in the history of the planet.” See Cavallini (2001).

It is completely wrong to assume that just because a need can potentially be served much more efficiently by a new technology, human behaviors traditionally related to meeting such needs will necessarily diminish. Indeed, technological innovation often has the opposite effect. Saffo argues that by making it cheaper to be a middleman, one can reasonably expect more intermediation, not less. Consider the case of the World Wide Web. By reducing transaction costs, the Web will render ever smaller and more unique transactions economically viable, thereby making it possible to have more, not less intermediation.¹⁰

A simple hypothetical example will demonstrate how disinter-remediation works in the context of an online insurance transaction. Suppose Jim decides that he wants to receive a term life insurance quote on the Internet. Since Jim's recently purchased computer came with Microsoft's Internet Explorer Web browser software installed, by logging onto the Web he is automatically routed to the home page for the Microsoft Network, www.msn.com. In the search box he types the phrase "term life insurance quotes." This takes him to a page that lists various Web sites offering online term life insurance quotes. By clicking on a link entitled "InsWeb - Accurate Quotes, Top Companies," Jim's search is routed through the www.overture.com search engine to the www.insweb.com site, where he is prompted to indicate his ZIP code. After providing this information, Jim is routed to a term life insurance quoting application that resides on servers operated by www.insweb.com. After filling out a brief questionnaire, he is presented with a page that lists quotes, S&P and A.M. Best ratings, the period of time for which the premium is guaranteed, and company size for insurers whose underwriting screens he passes. Although one of the companies offers a very attractive quote, this company also has the lowest S&P and A.M. Best ratings, so Jim selects another company that has higher ratings (along with a somewhat higher premium). After providing some more information on the form, Jim is subsequently called by a call center-based insurance company representative who completes the transaction over the phone.

While this represents a fairly routine buying expedition on the Internet, consider the array of intermediaries that made money off the purchase of Jim's term life insurance policy in addition to the insurance company that wrote the policy. The entire transaction began on the home page of [.com](http://www.msn.com) because Jim's Web browser was set by default to start at that location. By building search services offered by companies such as [Overture.com](http://www.overture.com) into the search engine located on its home page, MSN receives a "micropayment" every time a visitor clicks through to the [Overture.com](http://www.overture.com) site. However, unless Jim was paying very close attention, he probably did not even realize that [Overture.com](http://www.overture.com) was involved in the transaction, since he was immediately handed off to [Insweb.com](http://www.insweb.com). [Overture.com](http://www.overture.com), for its part, participates in strategic partnerships with various e-commerce companies which give them preferred treatment on searches that are initiated and processed on the [Overture.com](http://www.overture.com) site. In this case, since [Insweb.com](http://www.insweb.com) is one of [Overture.com](http://www.overture.com)'s "preferred" vendors for term life insurance quoting services, Jim's request quote was completed on [Insweb.com](http://www.insweb.com)'s servers.

In the transaction described above, no fewer than three intermediaries ([MSN.com](http://www.msn.com), [Overture.com](http://www.overture.com), and [Insweb.com](http://www.insweb.com)) had pieces of Jim's term life insurance transaction. Of course, the "traditional" insurance transaction might possibly have only involved one insurance

¹⁰ Carr (2000) has coined the term *hypermediation* to describe this process. However, we prefer Saffo's term because it better characterizes the dynamic nature of this process.

agent, but in all likelihood this would have taken considerably more time and Jim would have had no way of knowing how competitively priced the insurer's product offerings were or how its ratings compared with other companies who were willing to provide quotes for Jim's business.

Another important aspect of this transaction relates to the increased level of transparency from the viewpoint of the consumer. Jim was able to choose not only on the basis of price, but also on that of financial strength. Of course, one of the traditional rationales for regulating insurance policy forms and insurance prices derives from the difficulty with which consumers typically shop for insurance coverage and observe cost/quality tradeoffs in an offline setting. Offline, consumers may be tempted to shop based solely on price while not realizing that (1) contracts might not be directly comparable across companies and (2) the low-price insurer may provide inferior claims service and have a higher likelihood of insolvency. However, in the online example outlined above, the consumer is able to make an informed purchase decision based upon credible comparisons of cost and quality.

Another way that disinter-remediation might occur could involve the unbundling of traditionally packaged policies into their component parts: For example, one might find it advantageous to purchase uninsured motorist coverage from one carrier and third-party bodily injury liability from another. An important rationale for bundling coverages in the first place is that a bundled policy generates lower agency costs than an unbundled policy.^{11,12} However, whether this would continue to be the case in a world with significantly lower information costs is not at all obvious. Berger et al. (2000) show that for some types of financial service providers, conglomeration is a more economically efficient business strategy, whereas for others, it is better for firms to provide one line of services, focusing on their area of core competence.

When Charles Schwab, Inc., first came on the scene in the early 1980s, many predicted the demise of full-commission stockbroker firms. The discount broker concept introduced competition into an industry that didn't have much of it, and the brokers who have survived have repositioned themselves in terms of the products, services, and pricing that they offer to their clients. There is every reason to believe that the Internet will have a similar impact on agents and brokers in the insurance industry. If anything, the Internet will create an added competitive pressure that, in combination with other market forces, will ultimately improve the quality of the services provided by the agents and brokers who survive.

In the marketing and distribution of many types of goods and services, disinter-remediation often gives rise to network effects of various forms, which in turn can bring about the creation and evolution of complex product sets. To illustrate this principle, Saffo (1998) cites the example of the airline industry. Originally (in the 1950s and 1960s), airlines used direct distribution methods to market their services to consumers. However, the airlines soon discovered that they could not keep up with market demand. In response to this

¹¹ The theoretical framework for the analysis of agency problems and their attendant costs is set forth in the seminal papers of Coase (1937), Jensen and Meckling (1976), and Fama and Jensen (1983).

¹² Another important motivation for offering so-called bundled or multi-peril policies is that such policies are more efficient than single-peril policies from a risk management perspective. See Doherty (2000, pp. 523-536) for a lucid discussion of this issue.

problem, IBM and American Airlines executives collaborated on the development of the Sabre reservation system. Although this was a cost-effective and efficient solution to the original problem, American Airlines soon found it economically advantageous to outsource Sabre system-based reservations capabilities to travel agents. Rather paradoxically, the Sabre system was created before it became economically feasible for American Airlines to meaningfully incorporate the travel agent as part of its “value chain.” Once computer technology had become cheap enough, it became feasible for the airlines to offer frequent flyer programs and to eventually tie these programs to all sorts of cross-selling arrangements, including credit cards and long-distance services that award users with frequent flyer mileage. The effect of all these interdependencies is to create complex products. No longer are consumers buying a trip to a specific location. Rather, they are buying a complex and interdependent set of transportation, communication, and financial services. Essentially, the airlines and their strategic allies have used technology to create a “value web” that features a much higher degree of intermediation than was ever possible before. Of course, with the advent of the World Wide Web, the next logical step is for a travel Web site operator such as Expedia (<http://www.expedia.com>) to form its own strategic partnerships with the airlines, credit card companies, and long-distance carriers to further capitalize on these network effects. Indeed, Expedia might even find it advantageous to contract with insurance carriers to also offer insurance coverages such as trip cancellation insurance, collision damage waiver insurance, and flight insurance.

Network effects are also an important feature in the convergence of financial services. Since banks and brokerages naturally tend to have higher transaction volumes than insurers, it is not surprising that bank and brokerage Web sites tend to be much more highly utilized than Web sites offered by insurance companies. Irwin, Lockmiller, and Altman (2001) note that in mid-2000, the top ten insurance Web sites attracted 5 million unique monthly visitors, compared with more than 10 million and 18 million unique monthly visitors for the top ten brokerage and banking sites, respectively.¹³ Furthermore, visitors spent an average of 13 minutes on insurance sites, compared with 22 minutes on bank sites and 36 minutes on brokerage sites. Consequently, banks and brokerages have an easier time getting their marketing messages in front of Internet users than do insurance companies. This makes it very attractive for banks and brokerages to add insurance to their online product portfolios and, conversely, this makes it very attractive for insurers to ally themselves with highly trafficked financial Web sites operated by banks and brokerages that are interested in outsourcing insurance services.

COST AND PROFIT ADVANTAGES FOR INTERNET-BASED INSURANCE DISTRIBUTION—REAL OR IMAGINED?

The professional literature is virtually unanimous about the cost advantages for insurers

¹³ The concept of a “unique monthly visitor” merits further explanation. A unique monthly visitor is an individual who visits a Web site at one or more times during the course of a month. Another commonly cited Web site metric is the “monthly page view” measure, which corresponds to the number of times a Web page is downloaded during the month. By definition, the number of page views must be greater than or equal to the number of unique visitors. Therefore, if the average number of monthly page views for a Web site is 1 million but the number of unique monthly visitors is 200,000, this implies that each unique monthly visitor downloaded five Web pages.

selling over the Internet. Here are some typical excerpts:

Traditional prices will be undercut by those insurance companies that exploit the new Internet cost structure, although many are reluctant to fully adopt the Internet because they are worried about the impact on their agency force. (Conning and Company, 1997)

Internet insurers have a 23.0% cost advantage over agency insurers... [and a] 5.1% cost advantage over their nearest rivals, the direct response insurer... The Internet is the most cost-effective means of selling insurance ever devised... This is important since consumers buy basic "commodity-type" insurance products on price considerations in the majority of cases. (Data-Monitor, 1996)

Insurance companies selling and servicing over the Internet will have a cost advantage over traditional insurers in the range of 58% to 71% over the lifetime of a customer. Savings are driven by reduced sales costs, lower customer service and operations costs, and cheaper and better information capture. (Booz-Allen & Hamilton, 1997)

To put these statements into perspective, it is useful to consider the outcome of a long-standing academic debate about the independent agency versus the direct writer system. For years, economists have vigorously denigrated the independent agency system as an exceedingly costly method for distributing insurance products. A typical assessment is that offered by Joskow (1973), who argued a quarter of a century ago that the independent agency system (1) was "grossly inefficient" compared to the direct writer or exclusive agency system and (2) had been preserved primarily as a result of regulatory and legal complicity. Mayers and Smith (1981) adopted an entirely different approach. They posited an alternative "product quality" hypothesis that holds that independent agents provide higher quality services and that consumers are quite willing to pay for such services.

An article by Berger, Cummins, and Weiss (1997) pretty much settles the score in favor of Mayers and Smith's product quality hypothesis. Specifically, Berger, Cummins, and Weiss show that while the independent agency system is clearly more expensive than the direct writer system, the *ceteris paribus* profit differentials between insurers employing independent exclusive agents are not statistically significant. In view of these results, it would be wise to consider extending the Berger, Cummins, and Weiss framework to a consideration of companies employing alternative direct marketing technologies such as Internet sites and call centers versus using the more traditional agent-based methods. While cost benefits are likely, what really matters to firms is the impact upon overall profitability. Berger, Cummins, and Weiss make it clear that it is important to consider the value that alternative distribution methods create for consumers and whether this value is reflected in prices that consumers are willing to pay for services.

The early empirical evidence on the impact of the Internet on insurance prices is limited to a study by Brown and Goolsbee (2002). Brown and Goolsbee noticed that term life insurance prices, which had been declining along with mortality rates during the 1990s, fell particularly sharply during 1996 and 1997. Interestingly, 1996 and 1997 also marked the launch of a number of Web sites offering term life insurance price quotes. To see whether a statistically and economically meaningful connection existed between these

two events, Brown and Goolsbee matched 1992 to 1997 data on household Internet usage with data on the cost of term life insurance policies purchased during the same period. Holding other factors constant, they found that term life insurance costs were negatively related to Internet use. Interestingly, the cost of whole life insurance (for which online quotes were unavailable at the time) hardly changed. Their empirical results indicate that by 1997, annual savings to consumers of term life insurance policies purchased in the United States totaled \$115 to \$215 million.¹⁴

As e-commerce becomes more fully integrated into insurers' business practices, it will provide researchers with opportunities to empirically measure the extent to which e-commerce affects insurance costs and insurer profitability. With the higher degree of competition brought about by e-commerce, we would expect to see any revenue, cost, and profit differentials between the various forms of insurance distribution become further minimized.

CONCLUDING REMARKS

The growing importance of e-commerce represents a watershed event for insurance markets and institutions, as it does for most industries. By lowering information costs, e-commerce will enable insurers to classify, underwrite, and price risk as well as settle claims more accurately and efficiently. Competitive market forces will compel insurers to pass their cost savings on to consumers in the form of lower insurance premiums, thereby significantly expanding the overall availability of private insurance.

E-commerce causes insurers to move away from a product-oriented approach to more of a consumer-oriented approach. Since search costs will be lower for consumers, more pricing and service quality transparency will exist. This will strengthen market discipline in an already competitive environment by making consumers less reluctant to switch from their current carrier.¹⁵ More transparent pricing will further empower consumers and encourage companies to experiment with alternative pricing methodologies such as reverse auctions, where insurers bid for the insureds' business. Although some agents and brokers may not survive in an e-commerce-enabled environment, others will adapt and prosper. Furthermore, by reducing transaction costs, e-commerce will cause insurance products and services to become even more highly intermediated than they are currently; thus new intermediaries will come into being. E-commerce will also have important implications for product design, thus giving consumers more flexibility in managing their risks.

E-commerce also presents opportunities and challenges for regulators. By making it easier for consumers to compare prices and product attributes across insurers, e-commerce should enhance the private market's ability to resolve informational asymmetry problems that exist between policyholders and insurance companies. To the extent that e-commerce enhances the informational efficiency of insurance markets, this will like-

¹⁴ For qualitatively similar results in auto and book markets, see the papers by Zettelmeyer, Morton, and Silva-Risso (2001) and Clay, Krishnan, and Wolff (2001).

¹⁵ D'Arcy and Doherty (1990) present empirical evidence of "lowballing" in U.S. automobile insurance markets. Lowballing is a pricing strategy in which the insurer attracts new business by initially underpricing, but subsequently extracting rent from business that has been on the books for some time. Obviously, if e-commerce lowers switching costs, then it will also reduce the incentive for insurers to engage in this practice.

ly weaken the case for price and policy form regulation. The good news for insurance regulators is that this will likely free resources that can instead be focused on addressing market conduct and solvency issues.

Overall, the Internet will significantly enhance the efficiency of insurance markets and institutions and benefit consumers by lowering transaction and information costs. By making insurance more affordable, the Web will likely allow for more insurance to be purchased.¹⁶ If the regulatory system cooperates by allowing the private market to pass these cost savings on to consumers, insurance will be better able to live up to its potential as a mechanism for not only funding the costs of accidents but also providing society with better incentives for loss prevention and mitigation.

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¹⁶ An obvious problem caused by increasing the level of insurance coverage is that consumers may become more careless and invest less in loss prevention and safety. This moral hazard problem is typically addressed by making premiums sensitive to the observed level of care and investment in loss prevention and safety. By lowering information costs, e-commerce will very likely enable insurers to classify, underwrite, and price risk more accurately and efficiently, as well as more effectively monitor policyholders. Consequently, whether the greater availability of affordable private insurance results in higher moral hazard costs remains to be seen.

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