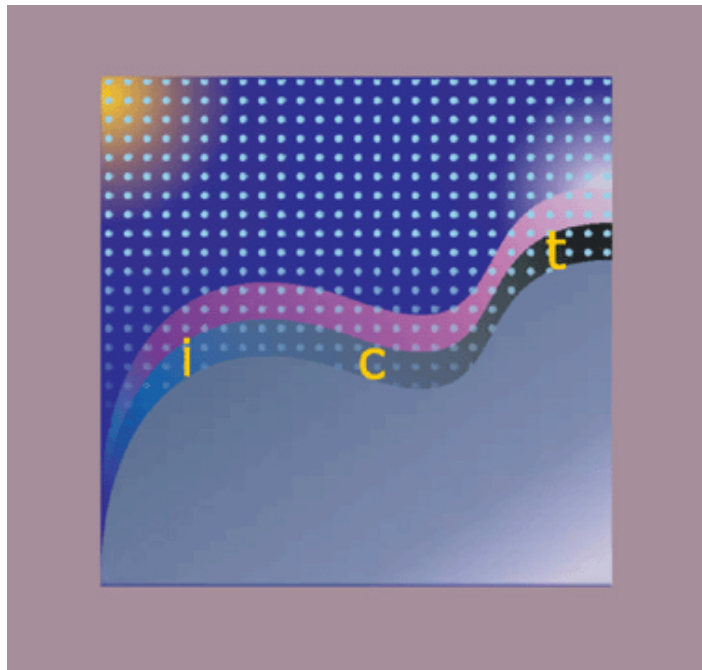


United Nations Conference on Trade and Development

E-COMMERCE AND DEVELOPMENT REPORT 2002

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Chapter 8

E-INSURANCE

A. Introduction

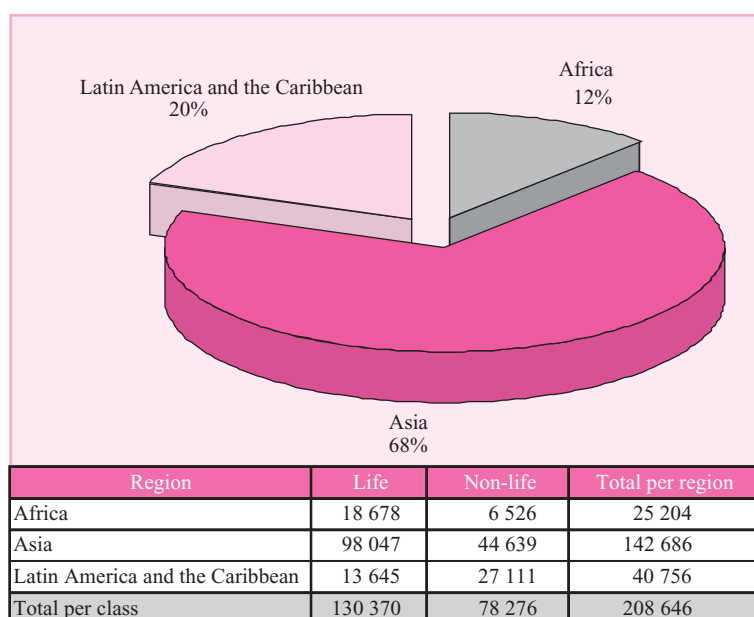
In 2000, insurance companies worldwide wrote \$2,444 billion in direct premiums. In other words, the equivalent of 7.8 per cent of global gross domestic product (GDP) was used to purchase insurance products.¹ During the same year, insurance companies in developing countries generated premiums worth \$209 billion representing 8.5 per cent of global insurance premiums. A regional breakdown of insurance premiums in developing countries is presented in chart 28.

1. Development perspective

A developed and functioning insurance sector is a fundamental condition for economic success.² The objective of insurance is to provide financial stability to individuals, organizations and businesses. As a risk pooling and transfer mechanism, insurance allows the insured to mitigate pure risks (i.e. risks that involve only the possibilities of loss or no loss). Examples of

such risks are fires, flooding, ill health and unintentional damage to a third party.³ Insurance helps business to stay open and individuals to continue their work or education by providing financial compensation if an insured risk occurs and causes damage. Even when no loss occurs, insurance provides peace of mind, a service of considerable, if unquantifiable, value. As a financial sector, insurance is a major investor. Life insurance can stimulate and mobilize personal savings that may, in its absence, become sterile assets. It can also relieve pressure on social welfare systems. Insurance is also needed for trade and commerce where it enhances the creditworthiness of trading partners and can reduce the risk of failure of start-ups and small and medium-sized enterprises (SMEs) as non-diversified risk-takers. The important role of the insurance sector for trade and economic development has been affirmed many times and has been comprehensively analyzed by UNCTAD whose research and policy advice are available at its dedicated Internet website.⁴

Chart 28
Insurance Premium Volumes in Developing Countries
(2000, in millions of dollars)



Source: Sigma (2000)

2. E-insurance

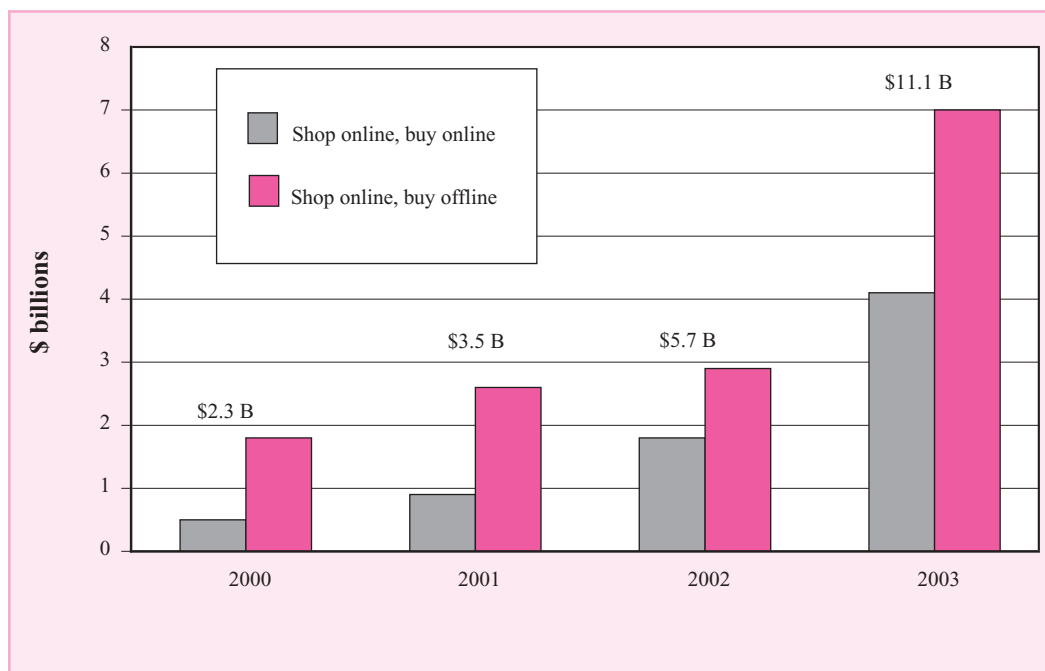
E-insurance can be broadly defined as the application of Internet and related information technologies (IT) to the production and distribution of insurance services. In a narrower sense, it can be defined as the provision of an insurance cover whereby an insurance policy is solicited, offered, negotiated and contracted online. While payment, policy delivery and claims processing may all be done online as well, technical and regulatory constraints may not allow these elements to be subject to full e-commerce application in certain countries.⁵ However, insurance legislation worldwide is being continuously modified to accommodate online payment and policy delivery, and, outside the discussion of e-insurance metrics, these elements should be included in the narrow definition.

The anticipated efficiency effect of e-insurance is two-fold. First, e-insurance should reduce internal administration and management costs by automating business processes, permitting real-time networking of company departments, and improving management information. Secondly, it should reduce the commissions paid to intermediaries since it can be sold directly to clients. For insurance sold to individuals, agents typically receive a commission of 10 to 15 per cent for non-life policy sales and renewals and from 35 to 100 per cent for life insurance policies in the first

policy year, but much less on renewal.⁶ However, some of the income gained in commissions that are not paid to intermediaries must be spent on online customer acquisition and marketing. Assuming cost savings do materialize, in a competitive market they would be passed on to consumers thereby allowing them to buy more insurance, or other products or services. Since insurance penetration⁷ in developing countries is only of that in developed countries, the efficiency gains created by e-insurance may contribute substantially to growth in insurance spending and thus intensify its indisputable role in promoting trade and development.

Of the \$2.5 trillion worth of global insurance premiums, about 1 per cent could qualify as e-insurance, according to the broad definition. Little, if any of the premiums earned in developing countries could be described as e-insurance according to the narrow definition.⁸ In stark contrast, the majority of the \$100 billion global reinsurance business is traded using some form of electronic medium. This general assessment seems almost unchanged in comparison with previous UNCTAD reporting on e-insurance.⁹ Considered along with initial reports¹⁰ indicating that online premium rates are more competitive, this could point to an acceleration in online distribution of insurance covers measured by the overall value of insured assets.

Chart 29
Insurance on the Web
Total Internet Sales



Source: Forrester Research, CSFB.

During the height of the dot.com euphoria, expectations for e-insurance growth were very strong, and many insurance and reinsurance companies and intermediaries have continued to invest in their e-commerce capabilities. Swiss Re's research arm SIGMA estimates that by 2005 e-insurance will have 5 to 10 per cent market share in standardized personal lines insurance. The corresponding figure for Europe is 3 to 5 per cent. While it is difficult to give exact figures,¹¹ online sales of insurance products have been increasing steadily. Already, of the 166 million Internet users in the United States,¹² 25 per cent use the web to find insurance information and 73 per cent of those request rate quotes.¹³ Chart 29 indicates forecasts that 4 per cent of global premiums will qualify as e-insurance by 2003. However, online premium volumes are still modest today, and this begs a number of questions. Are insurance products suitable for e-commerce? Is the insurance industry ready and willing to embrace Internet technology? Is the adoption of e-commerce practice important for insurers operating in developing countries and for their clients? How do clients benefit from purchasing insurance online and what are the pitfalls that require improved regulation?

This chapter will discuss the fundamental suitability of insurance products for e-commerce. It will review existing e-commerce practice in insurance and reinsurance and discuss the use of IT in these industries. Throughout, it will discuss the position of financial intermediaries and the changes IT may bring about in the value chain. It will propose a number of best practice guidelines for companies and will assess the regulatory implications for the sector. Throughout the chapter, where pertinent, reference will be made to issues and initiatives in developing countries. The chapter will also discuss Internet use by insurance companies in Africa and will review the objectives and progress of a joint UNCTAD and African Insurance Organization (AIO) venture aimed at developing operational insurance software.

B. Suitability

If we can establish that the insurance product has the potential to benefit from the application of IT and e-commerce, then we can review e-insurance business and supervisory practice in a cross-comparative manner. We may find it difficult to conclude why certain e-insurance applications work and others do not. However, can we definitely exclude the fallback of unsuitability of insurance products as an explanation

for modest e-commerce growth in the insurance industry?

1. Information and risk

The business of insurance is pure risk. In insurance theory, risk is often defined as the variation between actual losses and expected losses.¹⁴ Insurers' premium rates are based on an assessment of average expected losses and damage.¹⁵ However, premiums collected based on such an average rate may not be sufficient to pay for all the damages in a year, if that year generates greater-than-average losses. Thus, insurers need to have additional funds in reserve.¹⁶ Such reserves are established when an insurer incorporates its business and are often addressed by government insurance regulation and supervision. More importantly, reserves may be replenished during years when losses are less severe than the expected average.

There are several fundamental steps an insurer must take. First, it must calculate a premium rate for the risk it intends to insure against particular causes of damage (e.g. when insuring vehicles or homes against theft or fire). It must also establish adequate reserves to cover deviations from average, expected losses. Finally, the insurer must determine whether any particular clients are likely to attract greater than average misfortune and must decide how to adjust the rates it proposes to them individually.

As this simplified outline shows, the fundamental machinery of insurance involves mathematical treatment and statistical analysis of numerous events and the processing of large amounts of data about existing or potential clients. Not surprisingly the application of proprietary IT is widespread and has been a natural development among insurers in developed countries with competitive financial services markets. Today, IT is widely used to handle communication with intermediaries, policy processing, premium notices, market analysis, sales forecasts, and accounting. Clearly, insurance is an information-intensive enterprise and is thus suitable for e-commerce.

2. The information contract

The establishment of an insurance contract does not require much more than an exchange of information. As long as no damage occurs, most insurance contracts, and their performance as un-invoked promises, remain in the sphere of pure information and are therefore highly amenable to the application of IT. Like any other contract, an insurance contract or pol-

icy needs to satisfy the four basic conditions of legality, capacity, offer and acceptance, and consideration.

To ensure legality the client needs to have an insurable interest: the asset to be insured has to be the property of the client and some information confirming this is usually submitted. The requirement of capacity is satisfied by an exchange of information showing that the insurer, agent or broker is licensed and that the client is not a minor, insane, intoxicated or acting outside the scope of assigned authority.

The condition of offer and acceptance is satisfied by having the insurer offer coverage terms and conditions for an insurable interest, against a loss caused by general or named perils under particular conditions of hazard. The client reciprocates the offer by expressing an acceptance of the proposed contract. (Sometimes the offer is preceded by a *solicitation of an offer* by the client. The *subsequent offer* of the insurer should not be understood as an acceptance: it is the client that must express acceptance.) It is apparent that an enormous amount of information may be exchanged to satisfy this contract condition.

The consideration of the insurer consists of the promise of financial compensation for the loss events defined by the policy. The consideration of the client is to pay a premium. The promise is a non-physical information service. Similarly, the transfer of funds is often electronic, and even cash itself has a nominal value unrelated to its physicality. When a loss occurs, the damage is assessed and a claim is submitted. Large amounts of data are again transmitted between policyholders, intermediaries and insurers.

E-insurance requires modern e-commerce legislation that permits insurers and the insured to safely and unambiguously exchange information, make electronic payments and validate their responsibilities through digital signatures. Insurance-specific legal and regulatory issues are discussed on page 207, while fundamental legal issues pertaining to e-commerce have been dealt with in various UNCTAD publications.¹⁷

3. Is insurance bought or sold?

A frequently cited aspect of insurance that may detract from its suitability for e-commerce is that its products are often said to be “sold rather than bought”. The assumption is that without the sales push of a physical agent, consumers would buy fewer and less valuable insurance policies. Business-to-consumer (B2C) e-insurance is not considered pushy enough, and

potential clients are only a mouse click away from other unrelated Internet content.

Certain issues relating to the legal and regulatory environment of a national insurance market can be overcome by having a system of physical agencies. Insurance is difficult to sell online if some or all of the following conditions exist:

- Electronic signatures are not legal;
- Credit card payment is not accepted for insurance purchases;
- Physical documents (policies) have to be delivered to clients and paper copies archived by the agent and insurer;
- Document formats are over-regulated;
- Agents and insurers have to display their license physically;
- Remuneration of insurance portals or markets is prohibited if they do not possess an agent or broker license;
- Physical proof of coverage is requested by third parties (e.g. law enforcement or estate agents).¹⁸

The agency system is deeply ingrained in the insurance industry, and the insurance agent community supports the notion that insurance is sold, not bought. Insurers do not want to alienate their agents, who remain their most important sales channels. Often, insurers define the agent, not the policyholder, as their customer. It is difficult to predict whether direct Internet purchasing by consumers can replace agents.

The establishment of an insurance contract requires the exchange of large amounts of data, often of a personal nature. While the electronic medium is perfect for data transfer, consumers often worry about the extent to which information submitted by them will be kept private, both at the time of contracting and in the future. When submitting data to an agent, clients assume that they can hold the agent responsible and can seek legal remedy if their privacy is transgressed. The anonymous nature of a website can provoke the opposite assumption in that behind the monitor there is nobody to hold responsible. Clients may also suffer data fatigue when filling out lengthy online forms and may, as a result, give up on soliciting a quote without the coaching of an agent.

Thus, many insurers have opted to provide only policy information and insurance education on their websites

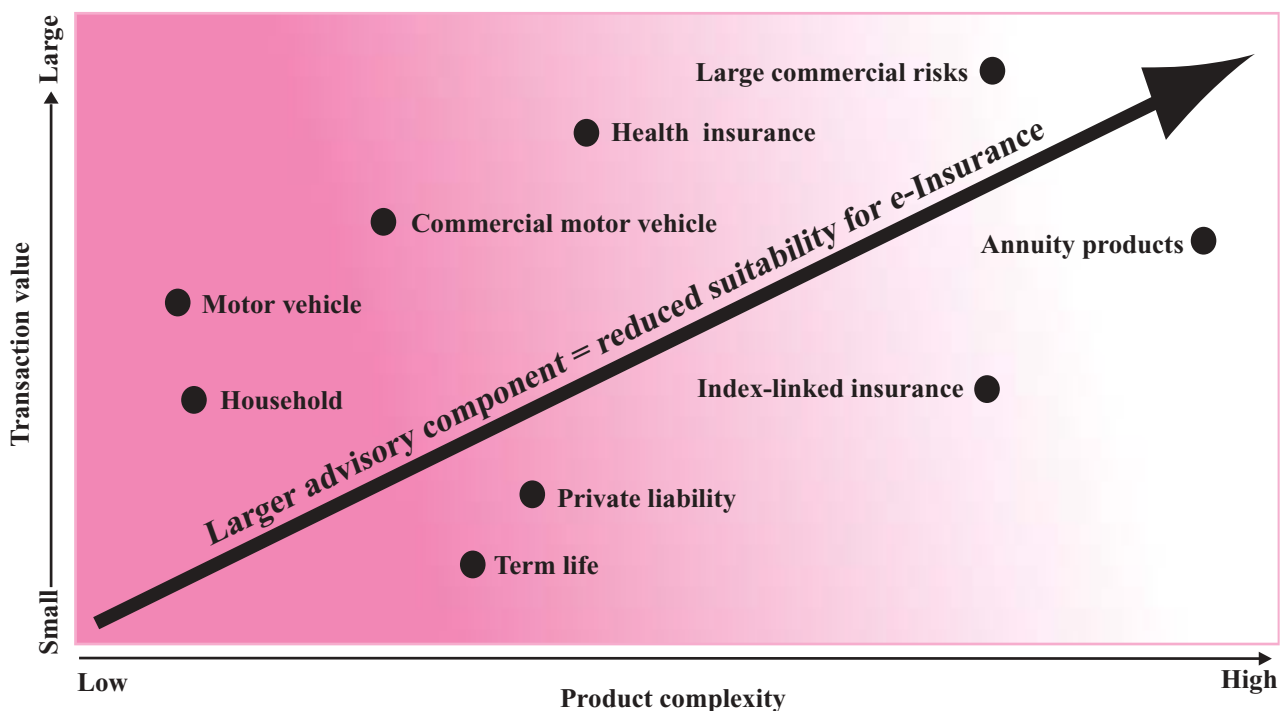
and leave the actual selling to intermediaries. When clients decide to ask for a quote, they are asked for their postal or zip code and are directed to a nearby agent. The problem with this strategy is that insurance agents may not be highly regarded by consumers for their professional honesty and ethics. In the United States, Gallup polls conducted yearly from 1993 to 2000 ranked insurance agents at the very bottom of the credibility scale. Only 9 to 12 per cent of respondents gave insurance agents very high or high marks for honesty and ethics, in comparison with 25 to 37 per cent for bankers and 13 to 19 per cent for stockbrokers, in consecutive polls during the same period.¹⁹ Consumers may be dealing with insurance agents purely for a lack of a better option. This may be their destiny in developing countries for the foreseeable future due to relatively low levels of Internet and credit card penetration.

The modest progress in e-insurance, in developed countries, compared to the online banking sector, can also be explained by the notion that insurance companies consider the use of e-commerce, and its disintermediating effect, a fairly risky business strategy. A recent Swiss Re SIGMA report on e-insurance concluded that “re-engineering traditional business proc-

esses is expensive and often meets with considerable opposition from within the (insurance) company itself.” A similar report by CSFB pointed out that “legacy systems are inflexible and expensive to change... the (insurance) culture is understandably risk averse... (while) the Internet threatens existing distribution systems, creating a thorny channel conflict.”²⁰ A recent survey by KMPG revealed that, while the industry is planning and preparing for e-insurance, for 40 per cent of companies e-business actually a threat because of a lack of strategic vision. Further, a quarter of the 175 insurance executives interviewed affirmed that their companies lacked e-business competencies.²¹ In a recent joint study by the Economist Intelligence Unit and PricewaterhouseCoopers, two-thirds of the insurance managers interviewed said that their own companies do not have sufficient e-business leadership capabilities for success in e-insurance.

The same study noted that few insurers believed they had the requisite in-house technological skills for e-business. It is worth noting that, while insurers employ on average 48 per cent more IT staff than banks do, the majority are used to service and manage unique proprietary IT systems where it is difficult to achieve economies of scale.²²

Chart 30
Product Suitability for e-Insurance



Source: Based on Donaldson, Lufkin and Jenrette (2000), Swiss Re Economic Research & Consulting, Swiss Re Sigma (2000).

It may be true that insurance consumers may find certain products difficult to understand and may be hesitant to buy online. However, the research cited indicates that insurers have not yet found a way to put the “e” into insurance. Results in banking, stock broking and tourism show that the online consumer in developed countries has the technology and willingness to engage in e-commerce.²³

There are ongoing debates about the suitability of individual insurance product for e-commerce. The conventional wisdom is that obligatory, very simple or low-price products do not require a seller’s push and thus can be distributed through e-commerce. The greatest demand is for motor vehicle insurance, followed by health, homeowner’s and term life insurance.²⁴ In line with the general relationship established in chart 30, insurers selling online directly to clients are offering a very restricted portfolio of products. Progressive.com, a leader in the United States online insurance market, is currently offering only motor vehicle insurance and related products. Another prominent online insurer, Allstate.com, is more ambitious and offers motor, homeowner’s, life and small business insurance policies. Amica.com provides only motor and

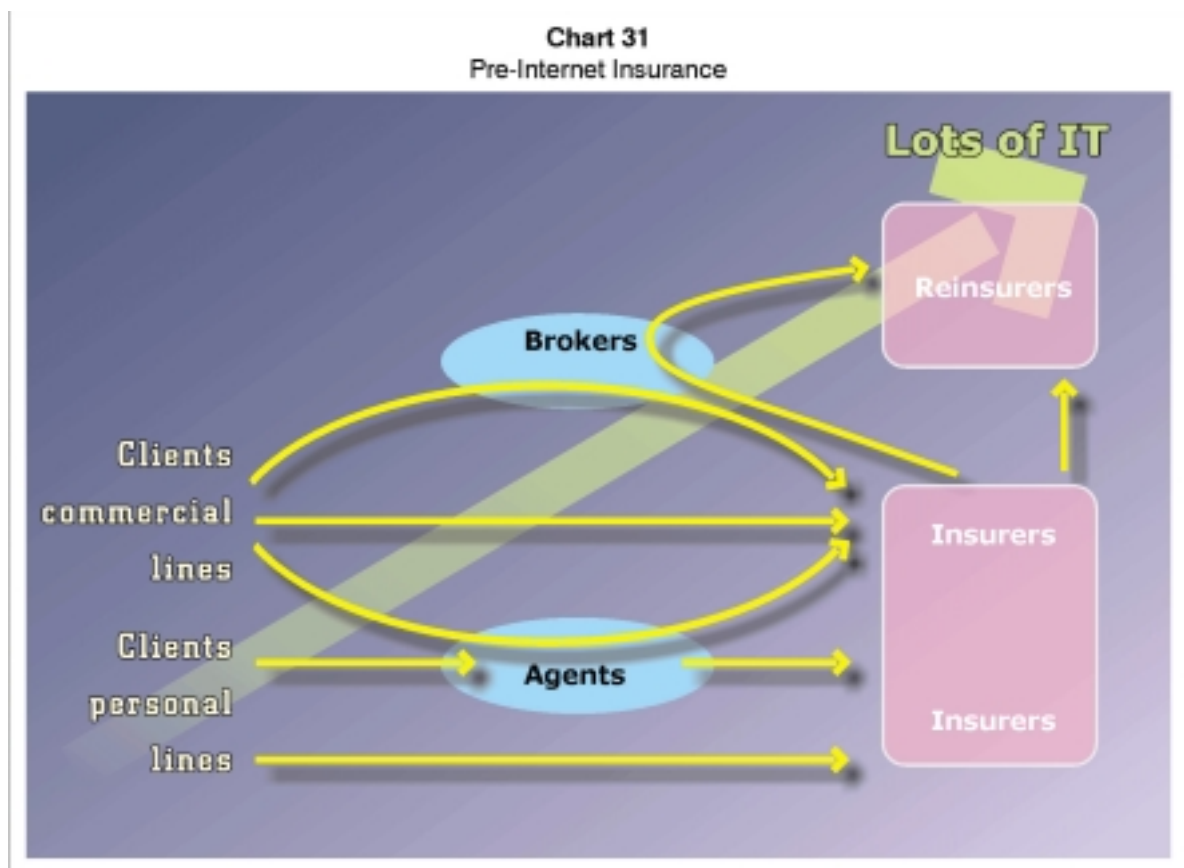
homeowner’s policies, and several types of life insurance. European insurers also vary in the scope of offered insurance policies. For example, Ineas.com provides motor vehicle, homeowner’s and accident insurance while esure.com offers only motor vehicle insurance.

While many insurers continue to rely on their agency networks and cling to the “sold not bought” paradigm, there is little real evidence supporting it, apart from pronouncements about its genuineness that are often articulated by insurance agents and managers. What is needed to bring insurance online is the implementation of best-practice management and technology suited to e-commerce.

C. Best Practice

1. How things have changed

Internet and e-commerce technologies are already changing the structure of the insurance industry. The magnitude of the change can be best appreciated by comparing charts 31 and 32. As chart 31 shows, the



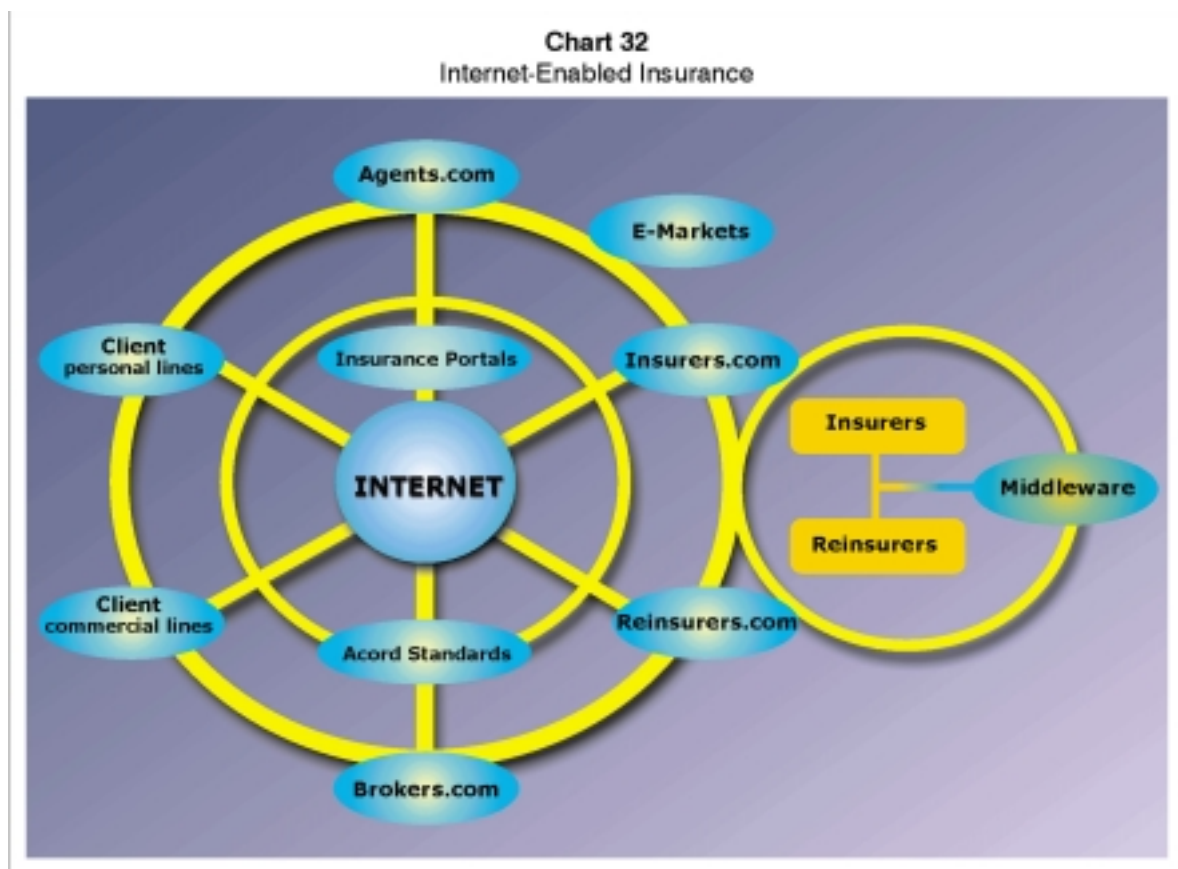
pre-Internet insurance world is largely linear, with individuals (personal lines) or businesses (commercial lines) moving risk to insurers, sometimes directly, but more often through the intermediation of brokers and agents. Intermediaries are responsible for processing more than 90 per cent of all premiums collected. The application of IT increases diagonally down the chart and is most prevalent in the reinsurance sector.

Chart 32 describes an Internet-enabled insurance industry and market. Its main characteristics are that technology can be evenly distributed and information intermediation is no longer a necessity but a preference. Gone is the linear travel of payments and risk information from client to (re)insurer. Buyers of personal and commercial insurance and reinsurance can choose to pursue multiple paths to acquire price and policy information. Insurers and reinsurers have extended their reach through their online incarnations. Brokers and agents may do so as well. Using data standards can positively facilitate the resulting increase in communication and data exchange and a new entity in chart 32 is the

standard-setting body of ACORD, whose role is discussed in box 23. Another novelty is middleware, which provides connectivity between insurers' legacy IT systems and the Internet economy and is briefly discussed on page 206.

Agents and brokers were an irreplaceable link in the pre-Internet insurance industry. Agents intermediated sales of policies to non-businesses, such as personal life insurance, motor vehicle insurance, homeowners insurance and various savings and investment schemes. They also intermediated insurance for small and medium-sized business. Brokers intermediated insurance between large organizations, or businesses, and insurers, as well as between insurers and reinsurers. Their economic role was to enhance market efficiency by diminishing information asymmetries between buyers and sellers caused by any of the following situations:

1. The insurer is not fully informed of the scope of the demand, or the insured is not knowledgeable about the selection of insurance policies and prices available; or



Box 23

ACORD insurance standards

ACORD is a nonprofit insurance association whose mission is to facilitate the development and implementation of data standards for the insurance and related financial services industries. Standards improve efficiency, expand market reach and eliminate friction and cost from the process of contracting and servicing insurance.

Established in 1970, ACORD began by developing paper forms to streamline the distribution system between independent agents and brokers and their markets for property and casualty insurance. The data requirements have remained basically the same as the standards moved from paper to electronic format and as the electronic formats evolved. Today, ACORD standards cover all lines of national and international business (life, non-life and reinsurance), and include all distribution channels and all business models.

After a recent merger with Joint Venture, a standard-setting body for reinsurance and large commercial risks insurance and other organizations in the United Kingdom, United States and Europe, ACORD also established relationships with regional management groups in South Africa and Canada, thus becoming the de facto keeper of global insurance standards. As the goal of global insurance standards can only be achieved through collaboration, ACORD works in partnership with all the standards organizations across the globe to harmonize, assist convergence and build standards on behalf of its collective members.

ACORD works within the United Nations CEFAC community building ebXML (electronic business XML) compliant core components and technology-neutral process models alongside partners in Europe (eEG7) and Canada (CSIO) that will allow interoperability around the globe and across industries.

There are many business drivers fueling interest in standards. E-business and e-commerce expansion is a primary driver. Others include the convergence of financial services, economic globalization and mergers and acquisitions.

Success in standard setting requires the integration several key activities:

- **Cooperation:** It is through cooperative efforts that redundancies in data and process modeling are eliminated and progress is made toward straight through processing.
- **Education:** In the rapidly evolving e-business environment, educating the industry about the application and strategic value of standards is critical.
- **Implementation:** It is not enough to develop standards. Strong implementation campaigns and certification programs are all necessary to drive the implementation numbers to critical mass.
- **Technological neutrality:** Remaining independent of a specific application or system is an important principle. All suppliers and solution providers are encouraged to join in and build the standards into their solutions so that the industry has a broad selection of best-of-breed tools and applications.
- **Cross-industry commitment:** There is no business that the insurance industry does not touch in some way. Because of that, the standards must be able to operate in an international cross-industry environment.

Having released the 1.0 version of its XML standards in August 2001, ACORD will be developing eMerge, a global insurance business message specification based on a technology-neutral model and a common data dictionary.

Source: ACORD

2. The insurer has not fully mastered the technical and economic details of the proposed risk, or the insured does not clearly understand the insurance policy's proposed terms and conditions.

In practice, agents are generally authorized to sell policies from only one or a few insurers. Further, the terms and policy wordings of different insurers, even if distributed by the same agent, often do not match. To clarify these differences and enable cross-compari-

sons is perhaps the most important role of the agent. The obvious question is: can Internet and e-commerce technologies do better than the physical agent-broker system at improving market transparency and competitiveness and educating consumers and insurers about policy and risk technicalities?

The answer is a qualified yes. Online buyers compare a wide range of prices and policy conditions for a particular type of policy and then choose the lowest-

priced product. In theory, this practice should cause overall price decreases in specific insurance product categories. Early research suggests that the price of term life insurance in the United States fell 8 to 15 per cent in the late 1990s, a drop attributable to increasing Internet use by prospecting clients.²⁵ Insurance companies selling online can, on their end, exploit cost efficiencies arising from the application of IT in production or distribution and pass these savings on to consumers, while still staying profitable.

However, research on the relationship between e-commerce and prices is still limited, and the notion that the Internet makes insurance, or any other service or product, cheaper and influences its market to be more competitive should not be treated as an axiom. For example, the ease of price discovery may equally help sellers collude in price fixing. Further, promoting brand names and advertising online services, combined with investments in technology, imposes high fixed operating costs and can lead to market concentration and an overall decrease in competitiveness. Sellers may also pursue different strategies to decrease market homogeneity, from bundling products with “free” services and promoting loyalty schemes, or locking-in clients by offering policy upgrades. Finally, the Internet enables insurers to conduct client profiling and discover their lifestyle and Internet habits, which may push the information balance back in favor of the insurer.²⁶

E-insurance cannot happen if clients, intermediaries and insurers cannot exchange policy data in a meaningful and standardized way. Pre-Internet proprietary IT systems were unique to particular insurers and their agency network. Reincarnating these systems on the Internet requires establishing broadly accepted and public data definitions and standards. A key technology is XML (extensible markup language), which provides a way of labeling data so that they can be exchanged online in a coherent and meaningful way. The insurance industry needs to avoid the technological exclusion of any of the entities in chart 31, and thus steer clear of anti-competitive technology practices that would neutralize the efficiency and welfare gains offered by e-commerce technology.

The following discussion will review recent developments in personal lines and commercial lines business and in the reinsurance sector.

2. Personal lines

Personal lines insurance refers to coverage bought by individuals such as motor vehicle insurance, property insurance, personal liability cover, and health and life insurance. In the pre-Internet scenario, personal lines occupy the least IT-intensive area and are therefore subject to the greatest disruption from the introduction of e-commerce technologies. The disruption level is further increased by the intensity of agents' intermediation in these insurance lines.

Table 29 provides a ranking by Gomez.com of the United States online insurance market based on the quality of its e-commerce websites. The total revenues generated online by both markets and carriers are difficult to assess. Of the markets, Insurweb and QuoteSmith are public companies and reported revenue figures of \$24.9 and \$8.7 million respectively, year on year, in the first quarter of 2002. The listed insurance carriers, which are public companies, do not report separate revenue figures for online business.

Data and analysis for Europe are even less accessible and more fragmented. Table 30 provides an overview of the main players in the European online personal insurance business. None of the listed markets or pure-play²⁷ carriers is a public company, while those insurance companies that are publicly listed do not provide separate data regarding their online or e-insurance revenue or income in their financial statements. Suffice it to say that European insurers generate less than 1 per cent of their premiums online and only one out of twenty has integrated Internet and e-commerce technologies throughout their systems.²⁸

Tables 29 and 30 are not exhaustive and should not imply any permanence in the present scope of players or strategies. Indeed, the sector is in flux, and many businesses are continuously re-examining their business models hoping to strike a profitable and promising balance of online, direct and agency-based distribution. For insurers in developing countries, it may be particularly useful to track these companies, as their fates may indicate promising strategies or dead ends. All the listed insurance markets and carriers can provide product information and at least an unconfirmed quote. Business models begin to vary when a firm quote is requested. Certain insurers will guide the client to an agency for further processing, while Internet pure-play insurers should be able to complete the contract, issue the policy, accept payment online, and handle claims and renewals.

Table 29
Online personal insurance markets and carriers in the United States

Top 10 U.S. Online Insurance Markets*	Top 10 U.S. Online Insurance Carriers**
Insweb	Progressive Insurance
Answer Financial	Allstate
insurance.com	Safeco
Pivot	Amica
YouDecide.com	GE Financial Network
QuickQuote	Geico Insurance
Countrywide	State Farm Insurance
Netinsurance	Nationwide
Quotesmith	Esurance
ReliaQuote.com	Electric Insurance Company

* Insurance markets are online agents that do not have financial underwriting capacity.

** Insurance carriers accept risk and manage premium and reserves funds to assure liquidity for reimbursing claims.

Source: Gomez.com (2001).

Table 30
Selected examples of European online personal insurance markets and carriers

Insurance markets	Direct insurance carriers	Multi-channel insurers**
eInsurance (Germany)	Ineas (Netherlands)*	Allianz (Germany)
Screentrade (United Kingdom)	HUK24 (Germany)*	Royal & SunAlliance (United Kingdom)
Insurancewide (United Kingdom)	eSure (United Kingdom)*	Pohjola (Finland)
Onsecure (Germany)	Elephant (United Kingdom)*	Generali (Italy)
InsuranceCity (Germany)	Genialloyd (Italy)*	R+V (Germany)
Asuro (Germany)	CosmosDirekt (Germany)	LVM (Germany)
Censio (Germany)	Sicher Direkt (Germany)	Sampo (Finland)
eGeas (Italy)	Royal (Italy)	Zurich (Switzerland)
Autocity (Spain)	Norwich Union Direct (United Kingdom)	HUK-Coburg (Germany)
MoneyXtra (United Kingdom/Spain)	Direct Assurance (France)	AXA (France)
Insure (United Kingdom)	L'equite (Italy)	CGNU (United Kingdom)
	okassurance (France)	Cornhill (United Kingdom)
	Reflex (France)	
	DirectSeguros (Spain)	
	Regal (Spain)	
	Direct Line (United Kingdom)	
	Genertel (Italy)	
	Linea Directa (Spain)	

* Internet pure-play insurers.

** Insurers that use a model combining online sales and physical agency distribution.

Source: Datamonitor Corporation (2001).

However modest the progress, many insurers see e-commerce, and its disintermediating effects, as a source of increased competitiveness. This judgement has affected the expectations within the agents community. As a counter-strategy, many physical agents see their future in improving their e-commerce capacities vis-à-vis the carriers they serve. Examples of pro-

agent IT providers are Applied Systems and Doris Inc.. An interesting entity is MarketScout whose business model is outlined in box 24.

The agency system was previously discussed from the point of view of the nature of the insurance product and the role of intermediaries in the industry market

Box 24

MarketScout: An e-market for insurance agents

MarketScout is an independent portal through which agents and brokers can easily find and explore specific insurance products and market segments online. It is an Internet-interactive marketing vehicle based on e-commerce technology that provides an online conduit between the independent agent/broker and MarketScout's approved companies.

The portal is designed to help retail insurance agents locate insurance quotes from insurance companies with proven success in a particular insurance line or coverage class. The approved insurance carriers are designated as "Best of Class". Apart from striving to provide quality carriers to its associated agents and brokers, MarketScout sees its "Best of Class" designations as part of an overall branding strategy. Insurance quotes are provided from over 60 different insurance companies with new ones signing on regularly.

Within MarketScout, specialized insurance line experts work with insurance agents and their clients to define policies and their terms and conditions, and to secure the most favorable insurance quotes from approved insurance carriers.

Source: MarketScout.com

structure. Their position in the online business models that insurance carriers intend to implement is also often debated.

In general, insurers are wary of alienating their agents. In a recent survey in the United States, the majority of insurers confirmed that they were "focusing their technological efforts on upgrading outdated IT infrastructure that strengthens the independent agent distribution channel."²⁹ The same survey found that only 15 per cent of insurance carriers practiced e-insurance, broadly defined. Among agents there is a similar, if not identical, approach. The majority of agents in the United States use the Internet to communicate with insurers, while only 15 per cent use it to generate leads that may bring new business. An UNCTAD analysis in 2000 suggested that the growth of e-insurance would not meet expectations if insurers focused their investment on marketing, customer support and support of intermediaries rather than on establishing Internet sales.³⁰

Whereas many insurers have extensive internal IT applications, policy and client data are not easily accessed outside the physical confines of the company office. Such introverted IT systems have been made possible by the agency distribution system, which has insulated insurers from their policy-holding clients. At the same time, insulated IT has satisfied the need for security, an important consideration since insurers use clients' private and personal data in everyday business. Chart 33 describes how insurers in the United States enable agents to quote premium rates to prospecting clients. It is interesting to note that more

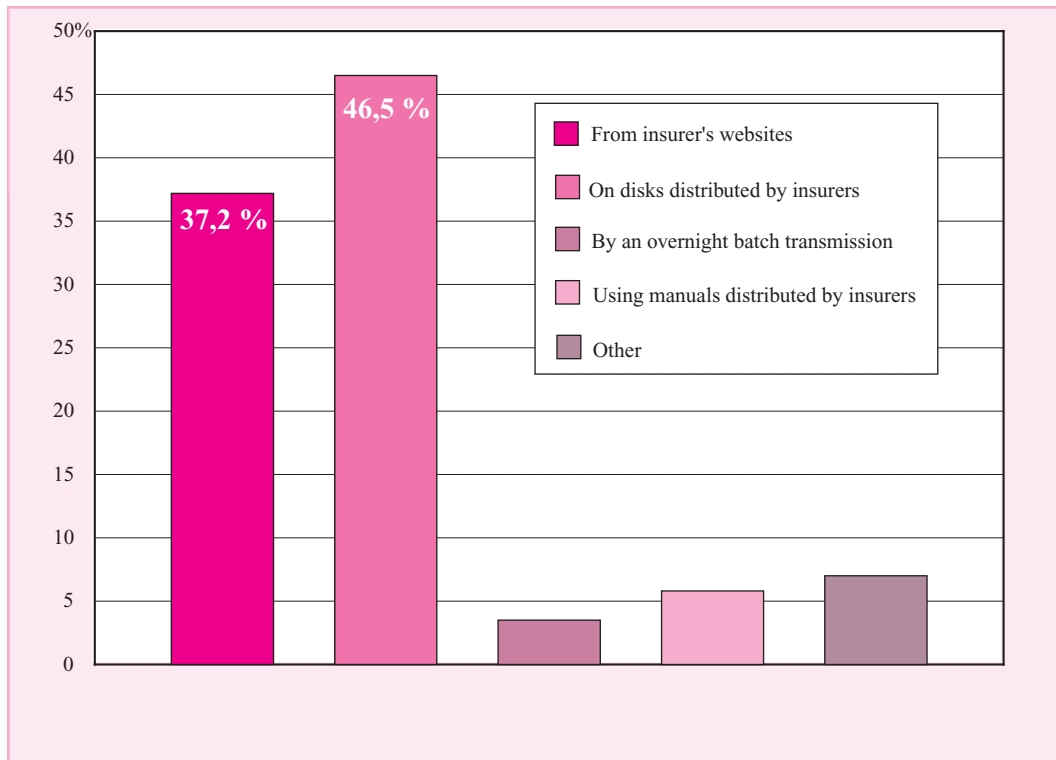
than 50 per cent of agents do not have real-time connectivity with their insurers.

In fact, the physical agency system addresses what is perhaps the greatest weakness of online insurance distribution: the low frequency of website repeat visits. Typically, once a policy is contracted online, the policyholder sees little reason to periodically check the insurer's site: there is little or no account activity between policy renewals, unless the policyholder acquires new assets needing coverage, or submits a claim. A client's contact with an agent for policy renewals is seen as an opportunity to push and sell other insurance products. However, it may well turn out that banks, not the e-insurer, are the insurance agents' worst enemy.

In countries where banks are licensed to sell personal insurance products, insurers and their agents may be under threat. While clients renew insurance policies yearly, they typically check their bank accounts, offline and online, on a daily or weekly basis, thus providing opportunities for banks to promote their own insurance and investment products.

To compete successfully for attention online, insurers and agents must provide clients with reasons to visit their sites. The content should reflect the clients' or communities' interests and lifestyle, as determined by an analysis of data submitted by policyholders for insurance purposes. However, such analysis may raise legal concerns, as policy data is submitted for specific and restricted purposes and often may not be used otherwise. Where regulations permit, insurers may

Chart 33
How Insurers Enable Agents to Quote
 (Figures are for the United States, sample size: 175 insurance company)



Source: Ivans 2001.

explore offering financial products related to mortgages, investments and financing of motor vehicles and durable goods.

In developing countries, the issue of disintermediation in the personal lines business will become critical when access to and use of the Internet, credit cards and other means of online payment increase significantly. As in developed countries, in many developing countries clients do not hold the agency system in high regard. When online insurance and *bancassurance*³¹ become a real alternative, one can expect a decrease in agency-based delivery of insurance products.

Monitoring national and regional Internet user and financial demographics can help insurers in developing countries predict when and how to move in becoming a competitive online player. Even where the figures do not necessarily justify investing in a full-blown e-commerce infrastructure, it is advantageous for all insurers to have a web presence with the following components:

- Corporate and financial information;

- Insurance education and awareness building;
- FAQs;
- Product descriptions;
- Examples of typical policies and prices;
- Contact information;
- A functioning e-mail help desk; and
- Agent locators.

An UNCTAD survey of 249 insurers in Africa found that only 54 had websites. Of these 42 provided insurance and policy information. The rest provided only basic company information and contact details. Twenty-nine insurers had e-mail addresses, but very few seemed to be functional. While this is a start, even considering the underdeveloped IT infrastructure, there is much room for growth in Internet presence.

Insurers in developing countries should not assume that establishing a basic Internet functionality constitutes an e-commerce strategy or presence. When the time comes to adopt a more intense Internet and

e-commerce practice, insurers may find their operational business process IT system out of date or underdeveloped and may be unable to interface it with their website. This problem has been recognized by UNCTAD which, to help remedy such deficiencies, is cooperating with the AIO in developing operational insurance software tailored for small and medium-size insurers in Africa. Part 5 of this subsection will give more details on its significance and progress made to date.

The main threat to insurers in developing countries may come from foreign insurers incorporating locally that have substantial IT budgets and international and regional experience in transplanting their IT solutions. Companies like John Hancock, AIG, Manulife Financial, Prudential Financial, ING and New York Life International have made forays into a number of developing countries. However, implementing IT and e-commerce technology is never a goal in itself. AIG has suggested that it would not implement an IT-based processing solution in a developing country if it were cheaper to hire people to do manual processing.³²

A further issue for insurers in developing countries is the use of business process outsourcing (BPO) by global insurers. Hartford Life has been transferring operations to Argentina, while MetLife has established partnerships to outsource business processes to India. Prudential has been outsourcing to Barbados and India for a number of years.³³ This indicates that, as far as e-readiness is concerned, the human resources needed for e-insurance are within reach in a number of developing countries.

3. Commercial lines

Buyers of commercial insurance often require tailored underwriting as many of them are large businesses operating in multiple locations with varying degrees of hazard, or running sophisticated industrial systems.

Companies with significant assets normally set up their own risk management departments. These departments are knowledgeable about the risk profiles and exposures of their business and are indispensable in coverage negotiations. Due to the size and complexity of commercial risks, few insurers have made progress in offering commercial lines insurance via the Internet. In a recent survey conducted by the fifth largest workers' compensation insurer in the United States, Kemper Insurance, not one of the surveyed SME businesses said it would buy commercial insur-

ance online.³⁴ A similar study by IVANS, a U.S. insurance e-business integrator, found that only 4 per cent of small businesses would definitely buy insurance online, while 51 per cent are interested in using the Internet to research insurance products.³⁵

One of the largest global financial companies and insurers, AIG promotes its commercial insurance activities online but does not actually give quotes. After requesting existing policy information that may be submitted online, AIG follows up with a response from a particular expert or department.³⁶

An important reason for the relatively minor role of e-insurance for commercial lines is that large businesses do not consider the transfer of risk to an insurer by way of a policy to be the only or even the primary motivation for purchasing insurance. A recent study suggests that a "company's purchase of insurance is intended to introduce the external monitoring role of the insurance underwriter, hence inhibiting opportunistic behavior on part of the company and so enhancing the degree of co-operation among stakeholders and reducing transaction costs."³⁷ Large companies may choose to do business with insurers even when they have the financial capacity to self-insure in order to have the insurer as a neutral advisor. Further, insuring own assets with own capital may be imprudent in cases of catastrophic risks.³⁸ Finally, a company's stake- or shareholders may look askance at the insured's diversification into insurance underwriting through self-insurance. Investors can always diversify their portfolios on the securities markets, should they wish to do so.

For all these reasons, commercial lines e-insurance may eventually face the challenge of providing intelligent online risk management consultancy. However, in the near future, its scope may be limited to providing contact and product information and generating leads.

4. Reinsurance

The application of IT in reinsurance has traditionally been intense, both internally and among reinsurers and reinsurance brokers. The three original European networks, Limnet, Rinet and WIN, and Joint Venture merged in 1999 and operated until November 2001 under the name WISE (Worldwide Insurance Electronic Commerce). Before the merger, Limnet estimated that, among its members, 15 per cent of all risks were being handled electronically as opposed to 90 per cent of claims.³⁹ Rinet estimated that 60 per cent of world and 80 per cent of European reinsurance

Box 25

inreon.com

inreon is an independent, Internet-based marketplace founded in December 2000 by the world's two largest reinsurers, Munich Re and Swiss Re, together with Accenture and the Internet Capital Group. inreon is an independent company and its management is separate from that of its founders. inreon's aim has been to build a trading platform that delivers improved efficiency and reduced costs for all participants in the reinsurance sector.

inreon was set up to take better advantage of the enormous efficiency gains that have been achieved in other financial services through the use of IT and standardized instruments and trading practices. While some reinsurance requirements need tailored solutions, in many areas there is considerable scope for a more standardized approach and a more open marketplace where contracts can be freely exchanged.

inreon has developed a simplified trading process using robust and sophisticated technology. Trades are initiated by reinsurance buyers entering submissions for cover. Key parameters for the risk are defined within specific fields. The buyer also chooses the time frame for a response and the sellers to whom it wishes to submit the risk. Sellers may then either decline or quote the risk. All quotes offered to buyers on the platform are binding.

Participation in this electronic marketplace enables improved trading efficiency and immediate, convenient access to a wide variety of new business partners. Comprehensive management information reports and full online administration support allow members to exploit the benefits of online trading.

Initial criticism that inreon was a "sellers" platform was provoked by the fact that the founding partners were the world's two largest reinsurers. The business model was, however, designed to be a market-wide platform to provide value and service to all sections of the reinsurance sector. Acceptance from reinsurance buyers has grown steadily and there are now around 60 brokers and primary insurers operating on the platform. Brokers and insurers have influenced the development of the platform, and inreon aims to widen its initial shareholding to incorporate major reinsurance buying groups.

Concerning trading volumes, to date there have been around 350 submissions on the platform representing an original gross premium of over €255 million. While the majority of inreon members are from developed countries, several insurers, brokers and reinsurers from the Republic of Korea, Taiwan Province of China and Hong Kong (China) have recently joined.

Source: inreon.com

income was transacted through its network, as well as 50 per cent of United States gross reinsurance premium income.⁴⁰

In addition to its basic mission to develop e-commerce solutions for insurers, WISE was involved in developing e-insurance data standards through its Joint Venture activities. In October 2001, WISE merged its standard-setting activities with ACORD. As a result ACORD has become the *de facto* global e-commerce standards body for insurance. WISE's commercial activities have since been acquired by Ins-sure, which provides the London insurance market and European insurers with electronic business processing, policy administration, premium and claim settlement services.

Reinsurance is rapidly coming online. While examples abound, approaches vary. Certain companies are marketing and distributing their own reinsurance products

on their websites. Others have engaged in cooperative strategies and are attempting to set up reinsurance markets or exchanges. The world's second largest reinsurer, Swiss Re, debuted in 2000 with an online reinsurance capacity auction system called Elix. Today, all of its efforts have been thrown behind inreon.com, a joint venture with Munich Re, another global insurance giant. Box 25 provides a brief description of inreon.com.

Other e-market-based or exchange platforms include RI3K, backed by BRIT Insurance Ltd. and assisted by AXA and Citibank; UniRisX, backed by the technology company Unisys and the reinsurance broker Price Forbes; and E-Reinsurer, backed by Chubb. RI3K intends to use the 2002 reinsurance renewals as a test, when it would trade a designated \$100 million. Other prominent reinsurers, such as Frankona GE, St. Paul and AXA-ACS, are developing company-specific e-commerce platforms as well.⁴¹

The essence of the debate in the reinsurance sector is which will prevail: the reinsurance e-markets or the individual reinsurance company portals. While it is too early to judge, the following list of the pros and cons of reinsurance e-markets may give some guidance:

Pros

- Buyers get access to multiple quotes from several reinsurers;
- Capacity can be larger;

Cons

- Few players are fully committed, many are developing own solutions in tandem;
- Standardized products may not satisfy buyers' needs;
- Aside from reinsurers, e-markets need to attract brokers and cedants.

Proprietary reinsurance portals or markets that meet the narrow definition of e-insurance may not be trading more than 1 per cent of global reinsurance premiums by the end of 2002. However, because reinsurers have been operating in an IT-enabled environment for almost two decades, e-insurance is expected to catch on quickly. The fact that reinsurers' clients are ceding insurers and brokers (i.e. insurance professionals) may hasten the adoption of e-commerce in reinsurance.

The implications for developing countries will become material when reinsurance markets and exchanges start trading a significant part of global reinsurance premiums. Developing-country insurers will be expected to work with the e-insurance infrastructure being set up by the market leaders; failing to do so will increase the risk of technological marginalization and may also increase their costs of reinsurance cession and acceptance. There is a need to anticipate these developments and be prepared.

5. IT and insurance

This subsection will touch on a limited number of IT issues that are often discussed in the context of e-insurance.

*M-insurance*⁴²

In the insurance context, the main application for m-insurance (insurance using m-commerce methods) will probably be in enhancing the performance of the field agent or employee. Wireless devices will enable

field staffers to access data resources that will enhance distribution, improve cross-selling, and appreciably speed up loss assessment, claims submissions and reimbursements.

Attitudes to m-insurance vary in line with the general acceptance level of m-commerce technology. In Japan, where wireless communications have made significant progress, the Tokio Marine & Fire Insurance Company has a fully developed m-system. Agents use mobile devices to access the company's Intranet to source quotes, and for e-mail communication. New York Life is also preparing a mobile initiative for implementation in Asia.⁴³

A mobile strategy for insurance agents in developing countries may be a workable proposition especially since it does not necessarily have to be related to a sales oriented e-commerce strategy. The objective is to increase agents' efficiency and enhance their ability to close a contract. Chapter 4 of this report sheds light on the particular issues and potential of m-commerce.

Business process IT

While many insurance carriers in the developed world are concerned about how to bring their proprietary/legacy computer systems online, many insurers in developing countries are still working with paper-form-based administration systems. They are motivated to start building company IT infrastructures for three reasons:

1. Markets are liberalizing, and competitive pressures are forcing insurers to increase productivity and efficiency;
2. Their counterparts in developed countries require Internet-based electronic data interchange for ceding or accepting reinsurance;
3. Any prospective e-commerce strategy needs back-office IT that can communicate with an Internet-based front end or website.

While many IT companies in developed countries produce software for the insurance business, developing countries need not necessarily look very far for suppliers. An interesting example is Infosys, an IT services and consulting company from Bangalore, India. Aetna, Aon Corporation, AXA Online Japan, Fairfax Financial Services, Marsh Canada, New York Life, SunAmerica, Suncorp Metway and Swiss Re have all been listed as insurance clients on the Infosys website. In its most recent collaboration with Northwestern Mutual Life Insurance, Infosys has developed an

online funds transfer option for variable life and annuity policyholders. Customers can now log on and make immediate transfers from their accounts, thus eliminating potential delays associated with processing allocation change and asset transfer requests.⁴⁴

While a number of off-the-shelf products are available in developed countries, due to the differing operating

standards and national regulatory principles, it is no easy task to find an application that works out of the box. Having reviewed the possibilities, the African Insurance Organization and UNCTAD have established a project to produce a fully functional software application for SME African insurance companies. An overview of this venture is presented in box 26.

Box 26

AIS-AIO Insurance Software

The software grew out of the various management and computerization seminars the AIO has organized for its members over the years. These seminars revealed serious deficiencies in the IT capability of the African insurance industry. It was noted that the available software was inadequate and too expensive for a large number of AIO member companies. The AIO Secretariat embarked on developing insurance operations software in collaboration with UNCTAD and a number of African and international Insurers and reinsurers. The software currently covers all non-life (general) insurance classes and is under trial in 3 companies. So far, 20 African insurance companies have indicated that they will join the venture and buy the software.

The objective was to provide AIO members with affordable and functional software that handles underwriting, claims, reinsurance, accounts, and management information and enables e-business capability. AIS is PC-based, runs in the MS Windows operating system environment and was built using Visual C++ and Visual Basic 6 and MS-SQL server 7.0. It is designed to handle multiple languages, currencies, and calendars. It can operate in single- or multi-user mode, is modular, and has user-defined setup options and context-sensitive online help.

AIS was designed for insurance professionals who typically do not have much or any programming knowledge, and it has a uniform presentation and set-up suitable for all classes of insurance business. A detailed operating manual for each class and activity is provided. The software allows the set-up of its main options at the head office level for functions that are common throughout an entire insurance company.

The software provides a uniform approach to performing underwriting operations in 35 classes of insurance arranged into 10 groups. Various codes, rates and underwriting details can be defined in accordance with the specific requirements of the insurer. All standard reports generally required by insurance companies have been predefined, while particular insurers can easily define additional report formats. The system produces all reports and outputs required by an insurance company such as policy documentation; statements for clients, reinsurers, agents and tax authorities; and internal management reports.

AIS enables insurers to maintain up-to-date information on the status of claims, whether paid or outstanding. It also handles allocation of claims to reinsurers and co-insurers, accumulation and analysis.

The system provides treaty set-up procedures for proportional and nonproportional reinsurance. Underwriting and claims transactions are automatically applied to the appropriate reinsurance programme. Quarter-end and year-end procedures, treaty renewal and cancellations, and other similar procedures can be fully handled by the system.

AIS can be used as a stand-alone module, or can be fully integrated with financial accounting software running in an MS Windows environment. Insurance companies can use an accounting module of their picking, while the preferred choice is Microsoft Dynamics, which is currently used by AIO.

The AIO provides general advice and guidelines for insurers converting from an existing information system. Specific assistance with installation, training and maintenance, as well as free upgrades and enhancements, are provided to all users. Data and system security have been addressed at all levels and are continually being reassessed and improved.

Source: www.africaninsurance.com. For more information contact: aio@sprynet.com.

Middleware

Middleware is a general term for software that provides an interface for two separate and usually already existing software applications.⁴⁵ For example, middleware is often used to enable two or more distinct databases to exchange data. The movement in the insurance industry from proprietary IT systems to Internet-based IT and e-business applications for e-insurance may require extensive and robust middleware applications. Apart from e-insurance, mergers and acquisitions and the globalization of the financial services industry also support the demand for middleware. The speed of e-insurance adoption may also depend on how much support integration middleware developers show for the adoption of XML for data transformation, exchange and integration. Those developers that can provide solutions for integrating existing or legacy systems while ensuring that users can easily and cost-effectively transform data between other data formats and XML using Acord standards may have a competitive advantage.⁴⁶

D. Regulatory and supervisory issues and insurance activities on the Internet

The development of e-commerce, particularly on the Internet, presents new challenges and concerns for insurance regulators and supervisors from developed, as well as developing countries.⁴⁷

1. Background

The establishment of Internet-based insurance businesses offers both individual insurance consumers and insurers and intermediaries potential efficiency and cost benefits. E-insurance improves information symmetry and market transparency conditions and may enhance competition that can lead to reduced prices.

For insurance regulators from developing countries, Internet-based supervisory tools may increase efficiency by streamlining and speeding up reporting from insurance enterprises. The possibilities offered by Internet communication can also greatly improve the delivery of information to the public, insurers and local and international investors regarding market conditions, rights and obligations. Also, secure Internet communication could be a major tool for fostering international cooperation among regulators to improve the security of insurance markets.

From the perspective of a supervisory authority in a developing country, major concerns pertaining to e-insurance relate to cross-border activities and how to safeguard the interests of consumers if they contract policies in other jurisdictions. However, as most countries continue to require local licensing for insurers offering products in the domestic market and prohibit cross-border activity, cross-border trade in personal lines and mass insurance products has not expanded. Also, the cost of establishing e-insurance platforms, along with related marketing costs, has deterred financially unsound operators from establishing a significant web presence.

E-insurance provides a new channel for distributing insurance products that accelerates transaction processes, creating more opportunities for fraud. It imposes on supervisors the burden of developing supervision methods that permit quick responses to threats to the interests of insurance consumers. However, the emergence of e-insurance does not fundamentally alter the principles on which today's insurance supervision is based.

For regulators, the essential question relating to e-insurance, as well as to other distribution methods, is how to protect insurance consumers. Supervisors have therefore approached e-insurance operations in the same way they supervise business and market of traditional insurance operations, including rate monitoring, surveying the marketing of insurance products, responding to public complaints, conducting consumer education and fraud monitoring.

To tackle the particularities of e-insurance supervision, the International Association of Insurance Supervisors (IAIS) established a working group on e-commerce and the Internet.⁴⁸ This working group has issued "The Principles on the Supervision of Insurance Activities on the Internet" that were approved by the IAIS at its annual conference in Cape Town on 10 October 2000. The full text of the principles is contained in the annex to this chapter.⁴⁹

More generally, insurance supervisory authorities have the same concerns as those regulating other e-businesses, particularly e-finance businesses: business continuity, personal data privacy, payment procedures and security, electronic signatures and IT platforms.

2. Supervision of established E-insurance operations

E-insurance was once perceived as a distribution channel that would erase national boundaries, since a single e-insurance platform established in one jurisdiction could offer insurance services globally. This has not occurred, since in most countries the establishment of a locally licensed business is required before insurance services can be offered to domestic consumers.

E-insurance platforms thus fall under the laws and regulations of the respective jurisdictions where services are offered. More precisely, existing regulations relating to market conduct determine how insurance providers may conduct their business online. Competition rules and transparency and information requirements form the core of market conduct regulations. Monitoring of rates, marketing of insurance products, handling of public complaints, consumer education and fraud are areas included under this aspect of supervision.

3. Approval of rates, terms, conditions and contractual documentation

In many developing countries, insurers are required to file rates, terms, conditions and contractual documentation for approval by supervisory authorities before the underlying product is offered to the public. E-insurance offerings too, are governed by such requirements.

Often minimum and maximum rates are established for compulsory individual insurance products such as motor vehicle insurance, workmen's compensation and some fire exposures. This is making it difficult for e-insurance operators to undercut prices offered by traditional competitors. Supervisory authorities should pay particular attention to the terms, conditions and contractual documentation that are presented on insurance providers' websites. The supervisory authority should ensure that the contractual relationships have a legal basis that is not prejudicial to the interests of the insured, since the insured does not generally participate in the negotiations relating to policy clauses.

In the case of life insurance, supervisors should require that certain clauses be contained in the policies published on websites. This includes clauses such as incontestability, under which the insurer, after a certain period, can no longer contest statements made by

applicants. Also, a clause on nonforfeiture should be shown. Such a clause protects the cash value of the policy and provides for a grace period after the premium is due, during which the policy cannot lapse. Such a clause is particularly pertinent for Internet transactions where contracting and payment cannot occur at the same time.

In the developing country context, because of a general lack of insurance education and in order to allow consumers to make informed decisions, a large degree of comparability between contracts offered over the web should be maintained during the initial phase of establishing e-insurance operations. Two other problems to be addressed are that (a) because of different hardware and software configurations, information presented on the web may look different to different viewers, and (b) computer proficiency may lead to an unintended contractual result. Certain guidelines regulating basic website content may be needed: for example, companies could be required to inform who is the supervising body and who are the final risk carriers in the cases where purchases are made from an agent's or broker's website.

Electronic signatures are important not only to confirm the existence of a contract but also for specifying the starting date of the purchased insurance coverage. The validity and effectiveness of a contract may be influenced by failures in data transmission. A consumer may be under the impression that a contract is in place, while the insurer may have received corrupted data that does not allow a policy to be issued. The existence of a problem may not be obvious until the insured attempts to make claim under the non-existent policy. Also, after a policy takes effect, it may be necessary to cancel, change or complement it. Possible reasons for such an intervention include the discovery of an error or a fundamental change in the insured's risk profile. In such a case, it may be prudent to ask whether online insurance products should carry a "return or exchange of goods policy" and what kind of security is needed to prevent accidental or unauthorized cancellation.

Also, supervisors should determine whether an insurer posting offerings on the Internet is discriminating against certain categories of consumers. The traditional roles of supervisors - to ensure that compulsory mass products or personal lines are affordable and available, and to ensure the fair treatment of consumers - should be maintained with regard to products offered on the Internet.

4. Marketing of E-insurance products

Supervisory bodies should preserve the fairness of information presented to consumers and should attentively monitor the marketing of e-insurance products. Advertisements should not be misleading, past experience should not be used to predict future results, and products should not misrepresent benefits. Often insurers differentiate their products from those of competitors by inaccurately describing or overstating advantages and benefits. When an intermediary (an agent or broker) offers insurance products over the Internet, such a seller should be required to obtain a license before establishing a presence on the web. The licensing procedure should require the intermediary to undergo competence tests, and the its e-insurance platform and website should be screened in the same way as those established by insurers.

5. Combating fraud

Supervisors and regulators typically maintain that sales over the Internet increase opportunities for insurance fraud, money laundering and the misselling of insurance products.⁵⁰ Some criminal groups engage in mass subscription of single policies under false or given identities, redeeming the policies quickly thereafter in order to launder money. As no direct contact is established between parties to an insurance contract established via the Internet, e-insurance is an obvious target for money laundering operations. Supervisors should ensure that e-insurance providers have sound mechanisms in place for authenticating the identity of policyholders.

Also, to trace unsound or fraudulent operators and consumers, it is paramount that supervisory authorities establish communication networks among themselves to share information on such perpetrators. E-insurance, like other e-finance businesses, is at risk from both internal and external security threats (infiltration, corruption and theft of customer data files). Increased connectivity, in particular the connection of internal networks with the Internet, introduces new vulnerabilities that require the deployment of more advanced and effective security tools.⁵¹ Regulators should take steps to ensure that e-insurance providers have the necessary security in place to protect the integrity of information and the privacy and confidentiality of policyholders' data, whether the data storage is performed by the e-insurance provider or outsourced to Internet service providers.

6. Public Complaints

Internet-based reporting and monitoring of public complaints could prove an indispensable tool for insurance supervisors. In a number of countries, formal offices within the supervisory authority have been established to respond to insurance customers' complaints. Their purpose is to streamline administrative procedures and sometimes to serve as an alternative to judiciary proceedings. For supervisors, the monitoring of complaints provides a very useful source of information for holding insurers responsible for their offered services. To resolve complaints, supervisors should facilitate communication between insurers and complaining customers. They should make sure that companies have complied with the law and have responded promptly and fairly, and they should inform insurers of problems that customers experience with contract language, customer service or technical aspects of the website. Also, websites posting insurance offerings should give contact information for the official authority dealing with consumer complaints, and the site should clearly describe the mechanism for dispute settlement.⁵² One of the simplest and most useful Internet tools is the FAQ (frequently asked questions) page. A well-structured, comprehensive and easily navigable FAQ page can satisfy the vast majority of public queries.

7. Consumer education

To build consumer's awareness and understanding of insurance and to improve market efficiency, consumer education is paramount. E-insurance offerings should include educational material to help consumers understand the products they buy. Also, supervisory authorities should provide guidance and educational material on their websites for consumers interested in purchasing insurance online. Insurance laws, regulations and statistics can be made more easily and widely accessible through the Internet. Most Latin American and Asian as well as many African and Central and Eastern European insurance supervisory authorities have already established websites designed to inform the public.

8. Supervisory efficiency

The advantages that the electronic format offers for compiling and processing data allow supervisors to devote more time and resources to analysing periodic financial reporting by insurers. Many supervisors in developing and emerging markets have dedicated web-

sites for the submission and processing of reporting from insurance companies, and several have developed Internet-based solutions. The Egyptian Insurance Supervisory Authority is offering a financial reporting application, on a cooperative basis to its counterparts in other African countries.

Whenever an insurance provider establishes an e-insurance operation in a country, a continuous dialogue should be established between the e-insurer and the regulatory body to resolve areas of uncertainty before the operation is launched, and to contribute to regulatory development. Authorities should continually adapt their insurance legislation to the needs of their insurance consumers, taking into account shifting consumer interests.

9. Supervising cross-border E-insurance activities

Among factors that have inhibited the development of cross-border e-insurance are the wide variations regulatory and supervisory requirements between national and state jurisdictions. If an e-insurance operator wants to offer services in several jurisdictions, it needs to undergo obtain licenses and comply with the respective jurisdictions' supervisory, tax and other authorities. It may be difficult to incorporate all the different and sometimes contradictory requirements into a single e-insurance platform.

Recent studies have concluded that the actual differences between national approaches are so extensive that e-insurers are unlikely to do business on a multi-country basis in the near future. A more likely development would be increased targeted penetration of national markets, with whose regulatory and supervisory requirements e-insurers are familiar.⁵³

To avoid being indicted by a national supervisory authority for unlawfully offering insurance services in that national market, e-insurers should clearly indicate on their website their identity (address, home country) and the jurisdictions in which they are legally permitted to provide insurance services. Also, e-insurance providers should post strong specific disclaimers and risk warnings directed to citizens of countries where the e-insurer is not authorized to operate. The home country supervisory authority should oblige e-insurers to post such disclaimers and warnings.

The growth of cross-border e-insurance will necessitate a harmonization of regulatory and supervisory frameworks, the recognition by insurers of home

country regulators and of home country complaints and dispute settlement mechanisms. Thus it will require extensive cooperation between regulatory bodies around the world. Such developments could be part of international negotiations on the opening of national financial markets such as those conducted under the aegis of the World Trade Organization.

E. Conclusions

It is evident that the insurance industry is gearing up for e-insurance. Insurers, intermediaries and reinsurers are investing in IT and trying to determine the proper business model to follow. The fundamentally information intensive nature of the insurance product will eventually make full e-business treatment a workable option provided that efficiencies do materialize and are passed on to consumers. To succeed as e-insurance, online personal insurance has to be cheaper *and* better than the traditional offline option. For commercial lines insurance the situation is less clear-cut as covers tend to be less commodified and clients often require bespoke risk management services. The reinsurance industry has been an early adopter of IT, and embracing Internet-based e-insurance technologies should come naturally.

Many insurers and intermediaries have realized that e-insurance is not just about distributing insurance products on the Internet and have incorporated their e-business plans into their overall business strategy. Initial market analyses should consider present and potential structures and partnerships. Adopting e-insurance and introducing change in IT systems is an incremental process, not an event, and should stem from a fundamental need to reengineer and modernize business processes in order to better respond to client demand, as well as to the client's own adoption of Internet technology. Substantial investments may be required and open communication with stakeholders and policyholders should be a given. Insurers should focus on growth as well as on cost reduction. Efficiencies may materialize, but forecasts and calculations must not undermine the costs of online client acquisition and retention, and marketing, in particular if the insurer is of the Internet pure-play type.

E-insurance faces three serious challenges. The first is to redefine relationships with agents and intermediaries. The ideal solution would be to pursue multiple-channel distribution on technologically neutral platforms with open data standards. Each e-insurance actor would then compete for business on the basis of

value added. The second is to bring existing proprietary IT systems out of the back office and online. An important angle of this debate is whether and how to outsource IT development and maintenance. The answer may be related to the universal or niche qualities of an insurer's line of business. The third challenge is to interface the business process into a fully functional website thereby bringing e-insurance to the client's computer screen.

Website functionality is an issue in its own right, requiring a proper definition of customer and product profiles. It also needs precise interlocking with powerful back-office IT. Insurers and intermediaries need to examine how they can achieve the most possible value added through an online presence. A fundamental problem of all insurance websites is the low rate of repeat visits by existing customers: insurance policies are purchased once and then renewed annually, without much contact or interaction between the insurer and the insured. Increasing repeat visits, as well as new traffic, to the insurers website is essential.

Unfortunately, there is no clear recipe for success and e-insurers may have to look very closely at the Internet habits, demographics and lifestyles of their clients to find answers. Once improvements are achieved, the existing e-insurance infrastructure must be used to market financial products related to a customer's insured assets, within the limitations set by insurance and financial regulations of the market. Functionality also depends on planning for system failures and having back-up schemes in place. Regular updates are a requisite feature. Online traffic should be analyzed from the point of view of how it can be converted to income and whether the website and the general IT infrastructure are well matched.

For insurers and intermediaries from developing countries, the adoption of e-insurance practices will most likely be stimulated from abroad. The first push

towards e-insurance will come from business relations with international reinsurers. The subsequent motivating event will probably be the entry and local incorporation of foreign personal lines insurers transplanting tried and tested e-insurance operations. Commercial insurance may be the last to be affected by e-insurance practices; however, this is a broad generalization, and insurers must carefully scrutinize market developments. Achieving efficiency gains is not a simple procedure even in developed countries, although, lacking the burden of proprietary IT systems, insurers in developing countries may leapfrog directly to e-insurance without the problems and costs of re-engineering and middleware.

Having an Internet-ready business process IT system is particularly critical for developing countries. Existing applications may not be well suited for developing countries, in particular for many African insurers, which may be regarded as financial SMEs. A positive e-insurance presence with modest but robust website functionality should, however, already be within the reach of most insurers.

The same applies to insurance supervisors and regulators in developed and developing countries. The power of the Internet should be harnessed to improve consumer protection and education and awareness building. It can also be used to receive and process periodic financial reports, thereby freeing up resources for supervising management and insurance practices. Finally, national insurance supervisors can use Internet technologies to communicate among themselves and coordinate activities related to preventing fraud and money laundering. Once seen as a potentially important regulatory issue for e-insurance, cross-border sales of personal lines have not yet reached significant levels. That said, regulators should stay tuned and actively monitor online offerings from suspect or fraudulent websites.

Notes

- 1 SIGMA (2001), *World Insurance in 2000*, No. 6, Zurich.
- 2 A detailed discussion on the development role of insurance can be found in Outreville, JF (1990), *The economic significance of insurance markets in developing countries*, Journal of Risk and Insurance, 57 (3).
- 3 Pure risks do not provide the risk taker with an upside. Pure risks are always a net loss for society, and a rational way to deal with them is to transfer and pool them and then redistribute them among large number of concerned entities. Business, speculative and gambling risks are considered uninsurable, as someone's loss is another party's profit. These risks are collectively called "speculative risks".
- 4 See www.unctad.org/insuranceprogramme/.
- 5 For example, some national or state regulatory regimes do not allow credit card payment for certain types of cover. Further, regulations sometimes require the physical delivery of a printed policy with a strictly prescribed format. Finally, claims processing may require physical inspection of damage by assessors.
- 6 Bender A and Marks J (2000), *E-Insurance: Revolutionizing Insurance*, CSFB Equity Research; SIGMA (2001), *The Impact Of E-Business on the Insurance Industry: Pressure to Adapt – Chance to Reinvent*, No. 5, Zurich; Frey J (2000), *Hidden Rivers of Incentive: How Agent Commissions Affect Your Insurance Shopping* Insure.com.
- 7 Premiums as a percentage of GDP.
- 8 Forrester Research, quoted in Bender A and Marks J (2000), *E-Insurance: Revolutionizing Insurance*, CSFB Equity Research; SIGMA (2001), *The Impact Of E-Business on the Insurance Industry: Pressure to Adapt – Chance to Reinvent*, No. 5, Zurich.
- 9 UNCTAD (2000), *Building Confidence: Electronic Commerce and Development*, UNCTAD/SDTE/Misc.11, Geneva.
- 10 Brown J R (2000), *Does the Internet Make Markets More Competitive? Evidence from the Life Insurance Industry*, Harvard University, Research Working Papers Series, RWP00-007; and gsbwww.uchicago.edu/news/capideas/win02/lifeinsurance.html.
- 11 Many online brokers are not public companies and do not publicize their financial statements. Insurers, which are mostly public companies, do not report online sales as a separate item in their income statements.
- 12 Nielsen//NetRatings, <http://pm.netratings.com/nnpm/owa/NRpublicreports.usagemonthly>.
- 13 See LOMA Cybertalk, Improving the Internet Distribution System, www.loma.org/cybmay98.htm.
- 14 In insurance practice, the term *iriski* is also used to describe the insured asset. Thus, an aircraft or an industrial plant is a *iriski*. The reason for this is that underlying risk characteristics are inseparable from the asset itself. For academic discussions of risk and insurance terminology refer to Green M R and Treischmann J S, *Risk & Insurance*, 6th edition; Reigel R and Miller J S and Williams C A, *Insurance Principles and Practice*, 6th edition; and Rejda G E, *Principles of Risk Management and Insurance*, 7th edition.
- 15 In fact, premium rates are highly subject to supply and demand conditions as well as to conditions prevailing on the international capital markets, to the point where charged rates may sometimes bear little relation to the initial actuarial and statistical calculations.
- 16 To maintain the discussion's focus, the issues of administration and management expenses and investment income have been omitted.
- 17 UNCTAD, *E-commerce and Development Report 2001*, Chapter 6: Overview of selected legal and regulatory developments in electronic commerce, UNCTAD/SDTE/ECB/1, 2000; UNCTAD, *Electronic Commerce: Legal considerations*, UNCTAD/SDTE/BFB/1, 1998.
- 18 Walker T (1999), NAIC Electronic Commerce and Regulation Working Group, NAIC Research Quarterly, 5(2).
- 19 Carlson D K (2000), *Nurses Remain at Top of Honesty and Ethics Poll: Car Salesmen Still Seen As Least Honest and Ethical*, Gallup Poll Analyses, www.gallup.com/poll/releases/pr001127ii.asp.
- 20 Bender A and Marks J (2000), *E-Insurance: Revolutionizing Insurance*, CSFB Equity Research; SIGMA (2001), *The Impact Of E-Business on the Insurance Industry: Pressure to Adapt – Chance to Reinvent*, No. 5, Zurich.

- 21 The results of the KPMG LLP e-insurance survey were reported at www.ivans.com.
- 22 Insurance Networking (2001), *The Business Context for IT Investment*, special issue: 2001 Top Technologies, August.
- 23 Newsfactor.com (2002), *How Big is E-commerce?*, www.newsfactor.com/perl/story/18403.html
- 24 Technology Decisions for Insurance, *The Tangled Webs They Weave*, www.technologydecisions.com/backissue/0102/1_18_02_23.asp.
- 25 Brown J R (2000), *Does the Internet Make Markets More Competitive? Evidence from the Life Insurance Industry*, Harvard University, Research Working Papers Series, RWP00-007; and gsbwww.uchicago.edu/news/capideas/win02/lifeinsurance.html.
- 26 Smith M D, Bailey J and Brynjolfsson E. (1999), *Understanding Digital Markets*, MIT, ecommerce.mit.edu/papers/ude/ude.pdf; and Daripa A and Sandeep K (2001), *Pricing on the Internet*, University of London, Birbeck School of Economics, Economics Working Papers, www.econ.bbk.ac.uk/faculty/kapur/personal/epricing.pdf.
- 27 An Internet pure-play insurer, agent or broker is one that has only an Internet-based operation.
- 28 Datamonitor (2001), *eInsurance Strategies in Europe 2001*, DMFS1406.
- 29 IVANS (2001), *Emerging Strategies in Insurance and Technology*, September.
- 30 UNCTAD (2000), *Building Confidence: Electronic Commerce and Development*, Section IV, E-commerce in Insurance, UNCTAD/SDTE/Misc.11, Geneva.
- 31 Insurance sold by banks at their retail counters or online.
- 32 Helwig D B (2001), *Burning Issues: CIOs Detail Their Top Priorities*, LOMA, www.loma.org.
- 33 Helwig D B (2001), *Burning Issues: CIOs Detail Their Top Priorities*, LOMA, www.loma.org.
- 34 Reported in PropertyandCasualty.com, December 2001.
- 35 BusinessWeek Online (2000), *Wanted: Reassurance about Online Insurance - Business Owners Say They Need Guidance and Trust before Buying Coverage on the Web*, September.
- 36 See www.aigdirect.com.
- 37 Main B G M (2000), *Large Companies and Insurance Purchases: Some Survey Evidence*, The Geneva Papers on Risk and Insurance, 25(2).
- 38 An indicative example is the national earthquake insurance scheme of New Zealand, where regulation expressly forbids the investment of reserves in New Zealand assets or securities.
- 39 Limnet was a consortium of the Institute of London Underwriters, the London International Insurance and Reinsurance Market Association, Lloyd's and Lloyd's Insurance Brokers Committee. Rinet was a Brussels-based association of insurers and reinsurers. Limnet and Rinet were established in the late 1980s. Six prominent insurance brokers established WIN in 1996.
- 40 See UNCTAD (2000), *Building Confidence: Electronic Commerce and Development*, Section IV – E-commerce and Financial Services, UNCTAD/SDTE/Misc.11, Geneva.
- 41 Dyson B (2001), *Online Reinsurance: Exchanges Built on Shifting Sands*, Reactions, October.
- 42 Chapter 4 of this publication deals extensively with m-commerce and the reader is invited to refer to it for definitions and a general discussion.
- 43 Helwig D B (2001), *Burning Issues: CIOs Detail Their Top Priorities*, LOMA, www.loma.org.
- 44 Infosys Press Release, www.infy.com/media/NM_26-Mar-2002.pdf, May 2002.
- 45 See www.whatis.com.
- 46 An extensive discussion on the role of XML and middleware can be found at www.datamirror.com/resourcecenter/download/dbxmlvision/pdfs/dbxmltransform/XML_Solutions.pdf.

- 47 For a comprehensive review of regulatory issues see UNCTAD (1995), *Establishment of effective insurance regulatory and supervisory systems*, TD/B/CN.4/52; Carmichael J and Pomerleano M (2002), *The Development and Regulation of Non-Bank Financial Institutions*, World Bank.; and OECD (1997), *Insurance Guidelines for Economies in Transition*, April.
- 48 The IAIS is an international body that issues guidelines and principles for insurance supervisory authorities worldwide.
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ANNEX I

IAIS PRINCIPLES ON THE SUPERVISION OF INSURANCE ACTIVITIES ON THE INTERNET

Contents

1. Background
2. Supervision of insurance activities on the Internet
 - Principle 1: Consistency of approach Principle
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1. Background

1. The development of electronic commerce, particularly on the Internet, presents insurance supervisors and regulators with new kinds of opportunities, challenges and questions. The use of the Internet will undoubtedly affect the ways in which insurance companies, intermediaries and insurance supervisors function in the future. For example, the number of cross border insurance transactions will increase.
2. In principle, there are benefits for insurers and consumers alike from the development of the Internet. The use of information networks has the potential to make the offering of insurance products more efficient and less costly than before. Insurance companies and intermediaries are provided with the technical capability to reach many millions of potential policyholders with good quality information on their products and services. Consumers increasingly have access to more and more sophisticated programs for searching for, identifying and purchasing insurance products.
3. However, whilst the Internet creates a new environment in which insurance products can be advertised, sold and delivered, it does not alter the fundamental principles of insurance and insurance supervision. It is a new medium through which to transact business.
4. Current concerns over the security of concluding contracts over the Internet are being addressed, but there remain substantial risks to consumers. Sales over the Internet extend the opportunities for insurance fraud, money laundering and the miss-selling of insurance products. It presents insurance supervisors with new challenges in delivering the level of protection that consumers in their jurisdiction expect. In particular it raises questions for consumers and insurance supervisors alike over the contract law applicable, and means of redress where there is a dispute between the insurer and insured.
5. One of the most important tasks of insurance supervision is the protection of policyholders and potential policyholders. The Internet does not change this basic premise. Where it helps is in offering insurance supervisors a new kind of medium for cooperation.
6. This paper proposes an environment for the supervision of insurance activities on the Internet which aims at ensuring that relevant information is available to consumers, insurers and insurance supervisors. Due to the extremely fast development of electronic commerce, the framework for the supervision of insurance activities on the Internet needs to be regularly reviewed.

2. Supervision of insurance activities on the Internet

7. Insurance supervisors should require that the sale, purchase, and delivery of insurance over the Internet is conducted in a secure environment, and that policyholders are adequately protected. The primary responsibility for the supervision of insurance activities rests with the supervisors of the insurers' home jurisdictions.

8. IAIS members are encouraged to adopt and implement the following principles.

Principle 1: Consistency of approach

The supervisory approach to insurance activities on the Internet should be consistent with that applied to insurance activities through other media.

9. Insurance supervisors should seek to apply standards of consumer protection to Internet related activities equivalent to those applied to the provision of services off-line. They should not constrain the legitimate use of the Internet.
10. Insurance supervisors should be prepared to provide guidance on the circumstances under which they will seek to assert supervisory authority over Internet activities. Factors that may support an assertion of authority may include evidence that:
- an internet site is targeted at residents and/or risks within the supervisor's jurisdiction;
 - insurance services are, in practice, being provided via the Internet site to residents in the supervisor's jurisdiction; and
 - attempts are made to present information to potential policyholders within the supervisor's jurisdiction through proactive means, e.g. e-mail.
11. Factors that may support a decision not to assert supervisory authority over Internet activities may include evidence that:
- the insurer or intermediary clearly states that the services are offered to persons and risks outside the supervisor's jurisdiction;
 - the Internet site contains a list of those jurisdictions in which the insurer or intermediary is entitled to provide services and the list does not include the supervisor's jurisdiction; and
 - the insurer has in place effective systems and procedures that are designed to prevent sales to residents in the supervisor's jurisdiction.

Principle 2: Transparency and disclosure

Insurance supervisors should require insurers and intermediaries over which they exercise jurisdiction to ensure that the principles of transparency and disclosure applied to Internet insurance activities are equivalent to those applied to insurance

12. The level of consumer protection should not be dependent on the medium used for insurance activities. The same basic principles of transparency and disclosure should apply for the Internet as for other media.
13. For example, the information provided to consumers should be broadly equivalent to that which would be expected in a traditional transaction, and should always be adequate for a consumer to make an informed decision on whether or not to avail of the services offered.
14. In order to protect the consumer, insurance supervisors should require that insurers and intermediaries over which they exercise jurisdiction and which offer insurance products over the Internet display certain minimum information on their Internet sites. In addition to the information that is mandatory in the jurisdiction in which services are being offered, the minimum information should generally include:
- the address of the insurer's head office, and the contact details for the supervisory authority responsible for the supervision of the head office;

- b. contact details for the insurer, branch or intermediary, and for the supervisory authority responsible for the supervision of the business, if different from the above;
- c. the jurisdictions in which the insurer or intermediary is legally permitted to provide insurance services;
- d. procedures for the submission of claims and a description of the insurer's claims handling procedure; and
- e. contact information on the authority or organisation dealing with consumer complaints.

Principle 3: Effective supervision of Internet activities based on cooperation

Supervisors should cooperate with one another, as necessary, in supervising insurance activities on the Internet.

15. The regulation of Internet activities based purely on actions capable of being taken within a single jurisdiction is often inadequate. It is evident that the regulation and supervision of Internet activities requires a greater degree of cooperation amongst insurance supervisors. Therefore insurance supervisors should have the ability to cooperate with one another, for example in providing assistance when needed or in dealing with cases of abuse in each other's markets.
16. Internet operations are highly dependent on system reliability and integrity and, as a result, are vulnerable to operational risks. Insurance supervisors should require that their supervised companies that offer insurance services over the Internet have sufficient control systems in place (including security, confidentiality, control of personal data, back-up and record-keeping systems) to transact that business in a proper manner. Supervisors should look closely at any outsourcing arrangements to ensure that appropriate contracts are in place and that risks are being addressed effectively.
17. The exchange of information between supervisory authorities is a key element in pursuing effective supervision of Internet activities. The Internet can be an effective tool for exchanging basic information.
18. Insurance supervisors should generally make the information listed below available on their own websites:
 - a. Structure and organisation chart of the supervisory authority, including contact information;
 - b. A listing of relevant insurance legislation;
 - c. A list of supervised insurance and reinsurance companies, including contact information or a central point within the supervisory authority from whom such information can be easily obtained; and
 - d. A link to the website of the IAIS.
19. Insurance supervisors may also consider making available the information listed below available on or through their own website:
 - a. Texts of the relevant insurance legislation;
 - b. A list of licensed intermediaries, including contact information;
 - c. The Annual Report of the supervisory authority;
 - d. Annual insurance statistics;
 - e. Links to the websites of other relevant supervisors in the same jurisdiction; and
 - f. Other information, as the supervisor deems relevant.