Chapter 2

E - Insurance
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.

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.

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 twofold. 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.
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 penetration 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.

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. Considered along with initial reports 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.

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, online sales of insurance products have been increasing steadily. Already, of the 166 million Internet users in the United States, 25 per cent use the web to find insurance information and 73 per cent of those request
rate quotes. About 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?

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?

In insurance theory, risk is often defined as the variation between actual losses and expected losses. Insurers' premium rates are based on an assessment of average expected losses and damage. 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. 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.

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 uninvoked 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 policy 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. 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.

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).

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. 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 processes 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."

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.
In a recent joint study by the Economist Intelligence Unit and Price Waterhouse Coopers, 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, 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.

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.

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.

In line with the general relationship, 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.

Internet and e-commerce technologies are already changing the structure of the insurance industry. 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 main characteristics of an internet-enabled insurance industry and market 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. They 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

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-comparisons 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.

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 favour of the insurer.

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 labelling data so that they can be exchanged online in a coherent and meaningful way.

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.
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..

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."

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.

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

In developing countries, the issue of disinter-mediation 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 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.

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.

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. 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.

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 insurance online.

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. 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.

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 behaviour on part of the company and so enhancing the degree of cooperation among stakeholders and reducing transaction costs."

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. 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.

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. Rinet estimated that 60 per cent of world and 80 per cent of European reinsurance income was transacted through its network, as well as 50 per cent of United States gross reinsurance premium income.

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 Elrix. Today, all of its efforts have been thrown behind inreon.com, a joint venture with Munich Re, another global insurance giant.
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.

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.

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. 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.

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.

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.

Middleware is a general term for software that provides an interface for two separate and usually already existing software applications. For example, middle-ware is often used to enable two or more distinct data-bases 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.

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. 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. 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.

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.

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.

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 nonexistent 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.

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 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.
Supervisors and regulators typically maintain that sales over the Internet increase opportunities for insurance fraud, money laundering and the misselling of insurance products. 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.

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.

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. 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.

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.

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 websites 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.

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.

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.