

A History of Insurance



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Foreword

Dear readers

This year Swiss Re celebrates its 150th anniversary.

Since the time of our foundation in 1863 the world has changed a lot. And insurance has been an instrumental part of this change. We all know that without risk protection, no skyscraper could be built, no products marketed, no goods shipped.

Insurers and reinsurers have become key risk takers and ultimately the shock absorbers in today's evermore interconnected and volatile world. But the insurance industry does still more. Premiums are invested on a long term basis in different financial assets. Through their investments, insurers and reinsurers provide capital to the real economy and support the production and provision of goods and services.

Swiss Re is proud to be part of this process. Initial types of insurance and reinsurance were used long before Swiss Re came into existence, some already in ancient times. But with the expansion of global trade, the industrial revolution, and the advent of social security our industry rapidly gathered momentum, and Swiss Re evolved with it. Our own past and present would not have been possible without our clients and their hard work to develop the global insurance markets.

Contributing to the prosperity of these markets has always been paramount for Swiss Re – be it by helping diversify risk, supporting our clients in growing their balance sheet, or by providing knowledge and expertise and supporting our clients and partners with dedication and reliability.

We would like to express our gratitude to our clients and share some of the highlights of the insurance and reinsurance industry with you. To do this we are publishing a series of insurance history brochures to shed more light on this rather neglected aspect of world history.

We trust you will enjoy this publication. We look forward to continuing to work with you for the benefit of our clients, our markets and ultimately also our economies and societies – protecting this generation, but also the generations to come.

Most sincerely



Michel Liès
Group CEO

Introduction

A total of USD 4 613 billion was spent globally on insurance in 2012. Modern life can hardly be imagined without this form of risk protection. And yet, comparatively little is known about the history of the industry, although it has played a major part in shaping today's society and culture. Industrialisation, welfare, innovation, economic development, or modernisation per se would not have been the same without private insurance.

Since the 18th century, building insurance on solidarity, business acumen, and the logic of calculation has proved an almost unbeatable business idea. It was to conquer the world over the next centuries. Trade and emigration became the two most important enablers for creating a global insurance safety network.

As every history, that of insurance has been exposed to challenges. Many were inherent to the industry. Some large catastrophes proved too big to deal with for some companies. From the San Francisco Earthquake in 1906 to Hurricane Betsy in 1965 or the attack on the World Trade Center in 2001 the industry had to cope with unexpected enormous losses. But challenges also came from the economy and its recurring crises which at times caused bigger losses than the worst insured catastrophes. Also monetary issues caused difficulties with floating exchange rates and fluctuating interest rates.

But overall the insurance industry has proved remarkably resilient to all these challenges. Even in the recent crisis insurance was less affected than other industries. A long history of prudent reserving and risk awareness had taught insurers to act cautiously.



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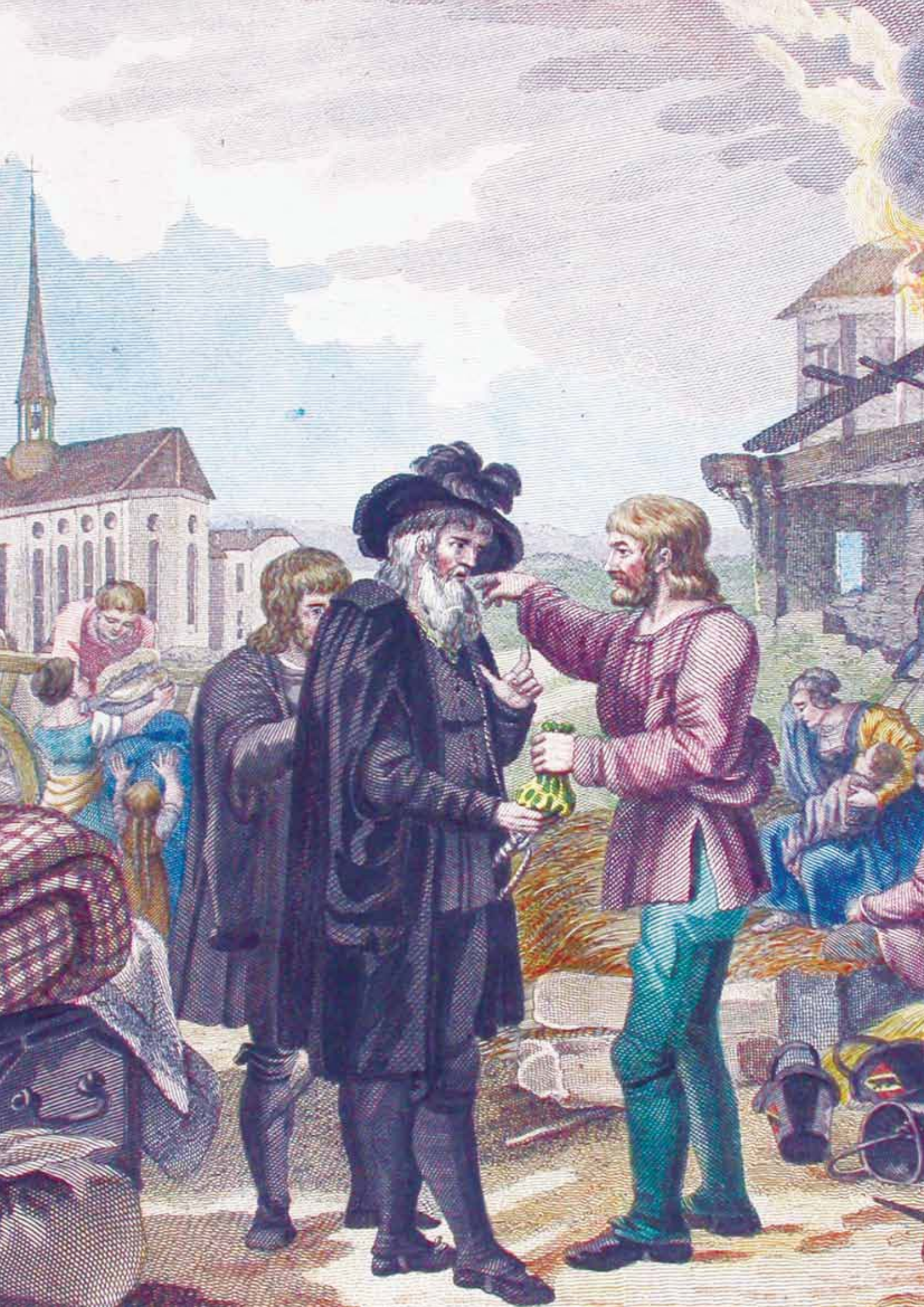
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VAN MENSCHEN EN BEESTEN TE ERICHEM, DOOR
ERVLOED. *(in Louwmanland, 1800.)*

Besf.



Risk tradition and risk trading



Above:

Friendly or benevolent societies, also called fraternal organisations, have a long tradition in many European countries. Before modern insurance such organisations would provide insurance, often for people with a similar working background. With the advent of modern insurance and the welfare state many of these mutual organisations went out of business.

Preceding pages:

A flood at Erichem, the Netherlands, in 1809.

Right:

Members of fire societies were obliged to help each other to secure goods from burning houses of fellow members. The societies had their own fire-fighting equipment. Some of them gradually started collecting money for those affected by a fire and eventually turned into mutual fire insurance companies.

Opposite:

During the Middle Ages, many countries allowed begging for those who had lost their house and goods after a fire. The fire of Berne, Switzerland, in 1405 killed over 100 people and destroyed more than 600 houses.

Risk mitigation based on solidarity was widespread among guilds, trade associations, and village communities.

Today the link between risk, new ventures and growth seems self-evident. And yet this understanding is surprisingly recent.

In antiquity, risk was often seen through the lens of fate and met with acceptance rather than defiance. Protecting against misfortunes was perceived as tantamount to interfering with divine providence. For millennia, prayers, pilgrimages and donations outperformed insurance premiums. Indeed, as late as the 19th century, insuring against death was likely to arouse controversy among clerics.

But there were acceptable ways of alleviating losses, such as sharing risks within social and business communities. Risk mitigation based on solidarity was widespread among guilds, trade associations, and village communities. Most seafaring nations distributed cargo onto different ships to hedge against storms and pirates while fraternal

organisations provided ex-post, and thus morally acceptable, forms of solidarity.

Spreading risk in such a way had its limits, however, and as a business model it faced many difficulties. Ship owners sailing the same route would often experience accumulated losses, as would certain communities, such as mine-workers. A single disaster could far exceed the capacities of a burial club.

Also, early forms of mutual insurance, whereby premiums were paid ex ante, lacked the sophistication of modern enterprises. Operating costs had to be financed out of members' contributions and hardly any such societies had ways to invest the capital professionally. For modern insurance, spreading risk and managing finances was to become vital.

One more element, however, was to be at least as influential.





LE MORIN-D.

From conjecture to calculation

Mortality tables were often the work of clerics who wanted to discover the role and plans of a divine creator.



Above:

Pascal's triangle was used by the Swiss mathematician Jacob Bernoulli who contributed the law of large numbers to actuarial science. This was to become the axiom from which life insurers could calculate expected losses.

Opposite:

Blaise Pascal as a twelve year old boy. Together with Pierre de Fermat he later developed the basis for probability calculations which were to have a lasting impact on life insurance.

In 1654, the French nobleman Chevalier de Méré was vexed by uncertainties in his gambling pastime. He wanted to know what the chances were of rolling a six in a certain sequence. The mathematicians Blaise Pascal and Pierre de Fermat used an old pyramid of numbers and eventually were able to prove that a mathematical probability could be determined.

This triggered a revolution in the development of probability theories and mathematicians all over Europe cooperated and applied their findings to calculate life expectancy.

This attempt at predicting the future was in direct opposition to Church doctrine but, ironically, it was the Church whose mortality tables provided some of the input used in those early probability calculations. Mortality tables were often the work of clerics who wanted to discover the role and plans of a divine creator and prove the clear regularities and divine order behind the apparent randomness of mortality.

Life insurance was slow to adopt the new science. Various forms of annuities prevailed, resembling gambling more than assurance. For some time so-called "tontine" schemes, named after their creator Lorenzo Tonti, had enjoyed great success, especially in Italy and France. Subscribers could buy a share in a kind of life annuity based on the mortality of an appointed nominee. With nominees

grouped by age range, interest was shared out and paid to subscribers annually. When a nominee died, the associated subscriber's share in the annuity became void, and the remaining subscribers within the age range received an increased share of the interest. Many tontines were fraudulent or badly undersubscribed and eventually were turned into simple life annuities.

It was only later in the 18th century that life insurance was put on a healthier footing. James Dodson, a 45-year-old English mathematician, was refused insurance because of his advanced age. This annoyed him so much that he searched for a mathematical solution in order to form a more equitable base upon which to calculate premiums as a percentage of life expectancy.

This principle was to be adopted by the English Equitable Life Assurance Society in 1766. On this basis, the Welshman Richard Price later developed a cost and accounting model. In 1774 he calculated profitability in life insurance for the Equitable Life based on current and expected mortality, so that the current state of the operations could be assessed more precisely.

From then on, life insurance no longer relied on speculation.



The birth of modern insurance

The Age of Reason or Enlightenment of the 17th and 18th centuries provided the grounds for accepting actuarial science as a rational means to conduct better business. Insurance, and especially life insurance, resonated with the search for laws, the statistical recording of natural events and the calculation of future developments. Behind this innovation was the conviction that the world, and its possible future states, could be predicted and computed.

means of communication within the economy and contributed to more and more problems being expressed in terms of costs and time.

Not all cultures adopted such thinking from the start. In Southern Europe, it took a catastrophe to change the perception of risk and the views on destiny. The Great Lisbon Earthquake in 1755 challenged the traditional interpretation of divine omnipotence. Almost the entire city was destroyed, including churches and

Insurance created a vital counter balance to the new and potentially destabilising forces that were transforming the division of labour, urbanisation, and the economics of trade.

Insurance was thus an ideal laboratory for enlightened business ideas. The process of collecting different types of institutional and personal information and using underwriting to transform it into quantifiable costs was important. It created a vital counterbalance to the new and potentially destabilising forces that were transforming the division of labour, urbanisation, and the economics of trade. Insurance also helped money become the

municipal buildings, but, much to the concern of many survivors, the red-light district was left intact. How could a benevolent God allow this, and why did an all-powerful God not prevent it?

Was mankind really meant to take destiny into its own hands? Rational thinkers were increasingly seen to be on the winning side of the argument, and although the Earthquake did not immediately boost the idea of insurance in the South, it gave rise to modern seismology.

Right:

The Old Sugar House in Hull had been set up to compete with London refineries but was abandoned in the 1840s. In 1868 it collapsed killing eight men and boys. Sugar had become an important catalyst for industrial growth in England. Refining of the raw sugar at plants in Europe was associated with a considerable fire risk. In the second half of the eighteenth century, fires at sugar refineries accounted for a large proportion of all bankruptcies in England. Only two of the fire insurance companies at the time also insured sugar refineries, albeit at inflated rates and with meagre policy limits. In 1782, eighty-four sugar refinery owners in London founded a joint-stock insurance company, the Phoenix. They were the first ones to specialise in insuring large industrial risks and, on the trail of sugar, to deliberately export this modern form of insurance.

Opposite:

The Great Fire swept through London from 2 to 5 September in 1666. It destroyed over 70 000 homes, although only six deaths were recorded. It did not take long for the first fire insurance company to be established after the catastrophe.



The birth of modern insurance

In England it was the Great Fire of London in 1666 which had changed public opinion. Hardly any of the 70 000 destroyed homes were insured.

One Londoner, Nicholas Barbon, made a fortune out of rebuilding the city and then turned to insuring the houses. His main motive was not solidarity but business, pure and simple. His rational approach and his experience as a banker and mortgage provider made him realise that his insurance company needed to be built on a different financial foundation, and so, in 1681, he created the first known joint stock insurance company.

The immediate success of such joint stock corporations was, however, dealt a significant blow as it led to speculation and subsequently ruin, as happened in the South Sea Bubble in 1720. The rational business ideas of the Enlightenment also tempted many investors to abuse the sound concepts of insurance to bet on the most unlikely risks, such as the outcome of wars, the danger of dying from excessive consumption of gin, or the date of birth of heirs to empires. The government subsequently banned some forms of insurance. A ban on reinsurance had already come into force in 1746.

Still, it seemed there was an inevitable logic in developing insurance further. The economist Adam Smith praised it as a rational invention and even a moral obligation. Not to insure oneself he considered a "thoughtless rashness and presumptuous contempt of the risk".

Below:

The Phoenix emblem with the Monument in the background. The Phoenix managers were the first to venture out beyond the borders of their own country with agencies. Along with the new joint-stock marine insurance companies and Lloyd's of London, they were among the first to respond to the rapid increase in the interdependence of the global economy that had been under way since the middle of the eighteenth century.

Shareholding was to become essential for modern insurance as it allowed the separation of operating capital from risk capital and provided funds to expand business into new lines and beyond the home market.



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Overleaf:

The 1755 Lisbon earthquake and tsunami.

Below:

The Amsterdam Stock Exchange, engraving by François van Bleyswyck, 1743. The Verenigde Oostindische Compagnie (Dutch East India Company) in Amsterdam established the oldest known stock exchange in 1602. For insurance, shareholding was to become an ideal way to raise operating capital which allowed them to expand their business.

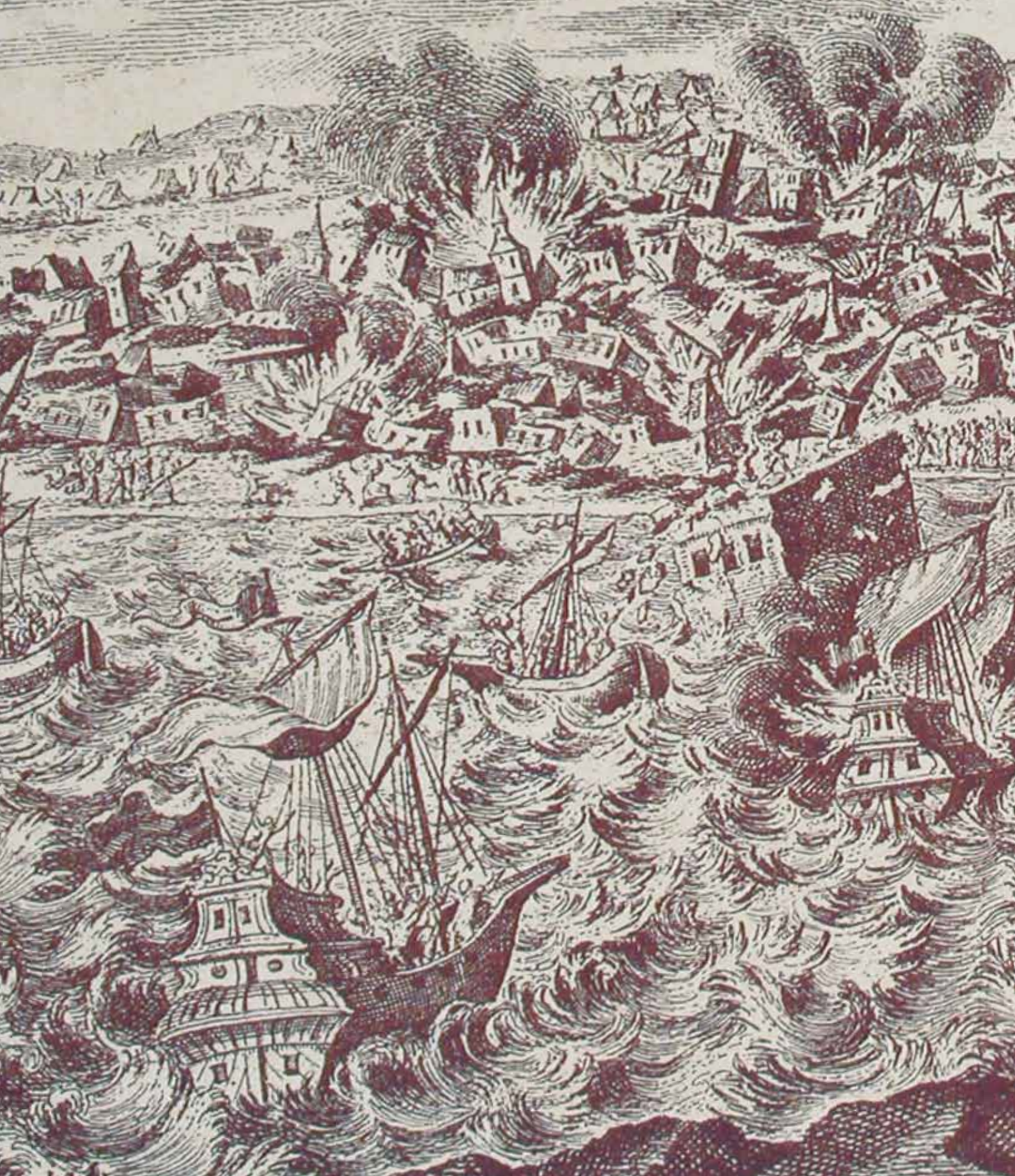
The industrial revolution and the growth of the Empire called for insurance solutions. Towards the end of the 18th century the first truly modern and global insurance company, the Phoenix, was founded by an association of sugar refinery owners in London. Soon after its foundation it insured risks in distant countries and it was the first insurer to establish offices abroad.

And so it was from Britain that property and life insurance started colonising the world, based on modern science, new forms of capitalisation, and the possibility to spread risks across the globe.

Altogether, this was to prove a virtually unbeatable business model.



LISA



BONA



水險 合眾公司 火險



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SOERABAIA DAN SEMARANG

Agent Agent di mana mana
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MAATSCHAPPIJ ASSURANTIE

Oost-Indische Zee- & Brand Assurantie Mij,
Bataviaasche Zee- & Brand Assurantie Mij,
Nederlandsche Lloyd,
Javansche Zee- & Brand Assurantie Mij,
Brand Assurantie Mij "ARMOEN."

Global expansion

As the series of wars in Europe and the Anglo-American conflict came to an end in 1815, insurance was finally able to spread on a broader scale beyond Europe and the USA. But it remained a privilege of the European descendants to insure themselves and their businesses.

As the series of wars in Europe and the Anglo-American conflict came to an end in 1815, insurance was finally able to spread on a broader scale beyond Europe and the USA, which had imported the British invention almost from the start. Based on growing trade, and in the wake of emigration, the British system was gradually adopted in most white settler colonies in the Americas, Australia and New Zealand, and in South Africa.

It remained a privilege of the European settlers and traders to insure themselves and their businesses. Local communities rarely embraced the concept, preferring instead to remain with their traditional ways of guarding against misfortune. Most non-European societies preferred forms of family and village solidarity, alongside trusting in God. And the Europeans, for their part, initially showed no interest in insuring others.

In India, for instance, insurance was restricted to British subjects as locals were suspected of not being morally fit to withstand the temptations of fraud. Also, they were thought to be too big a risk for life insurance on account of their perceived lower living standards. Ironically, the worst risks for life insurers turned out to be young British officers who were often exposed to severe health problems in the tropical climates of the colonies and tended to die prematurely.

Yet, India was to become important as a springboard for the spread of insurance into the Far East. The East India Company dominated insurance on the Subcontinent. But underwriting risks there from a London office was almost impossible, since it could take up to two years to exchange letters with India. The alternative was to demand higher risk premiums, which prompted agency houses in Kolkata to set up their own insurance, thereby bringing the business further into Asia.

Right:

Singapore in 1850. From the early 19th century on Singapore was to become one of the most important trading hubs in Asia. As such it contributed much to the spread of insurance into East Asia. It was also to become important in the development of the automobile industry. In the late 1880s, the Singapore-based trading company Boustead & Co., which had served as an agency for Liverpool's Royal Insurance since 1860, set up the first rubber plantations on the Malay Peninsula.

Opposite:

Dutch insurance brokers in Indonesia targeted Chinese businesses as clients. Advertisement around 1900 of a broker representing various Dutch insurance companies.



Many countries had adopted social insurance schemes based on the German model invented by the Chancellor Otto von Bismarck to appease unrest among the growing proletarian classes.



Above: German Chancellor Otto von Bismarck introduced social security programs in the 1880s. Germany's system was the first of its kind in the world. Old age pensions, accident insurance, medical care and unemployment insurance were afterwards soon introduced throughout the world.

India was to become important as a springboard for the spread of insurance into the Far East.



Left: India with its long tradition of trade has a history which goes back several millennia. Early forms of insurance can be dated back to the third century BCE. In the late 18th century British insurance companies operated on the Subcontinent through agency houses. In 1818, a Scotsman founded the first modern insurance company to be incorporated in India. Indian agency houses helped spread insurance further into Asia. The Swadeshi movement at the beginning of the 20th century led to the foundation of many Indian owned insurance companies. The New India was to be the first wholly Indian owned insurer. By the 1950s it had built a global network of agencies. Swiss Re was very closely associated with the Indian market covering British companies' risks there as early as 1865. From 1929 on Swiss Re dealt directly with the Indian insurers and became the most important reinsurer for life business helping the Indian industry to grow, despite fierce competition from the British insurers.

From 1819 on, thanks to Thomas Stamford Raffles, Singapore was to emerge as the new hub for trade in South East Asia, and it grew to a gateway for many insurance companies on their way to the Dutch East Indies. In the late 1880s, a Singapore-based trading company, which had served as an agency for Liverpool's Royal

Often such companies were based on mutuality, albeit with more modern ways of operating than the traditional friendly societies. The spread of personal insurance was mainly a consequence of the massive migration from Europe that took place in the 19th and early 20th centuries.

With growing national concerns over the domination of the British, many Latin American countries later resorted to legal reforms designed to protect local insurers against foreign companies. Many countries thus saw a large diversity of local insurers soliciting the business, and catering to the different needs of clients with Italian, Spanish, English, or German backgrounds, often signalling their origin and target segment in company names such as la Anglo-Argentina, Franco-Argentina, or Germano-Argentina.

Across the African continent, especially in Sub-Saharan Africa, it was South Africa that was to take the lead. Dutch and British immigrants founded combined fire and life insurance companies already in the 1830s. In the early 20th century the South African state took a unique approach by choosing to do without social insurance and leaving old age provision to life insurers. At the time, many countries had adopted social insurance schemes based on the German model invented by Chancellor Otto von Bismarck to appease the growing proletarian classes.

In Latin America insurance was imported on a large scale by European immigrants. The British companies concentrated in trade related risks while immigrants spread insurance to a larger population.

Insurance since 1860, set up the first rubber plantations on the Malay Peninsula. This kind of combined business approach had entrepreneurs or agencies provide insurance to their own and others' businesses. In those days this was common and practised by large Asian corporations.

In Latin America, insurance was imported on a large scale by European immigrants. The British companies concentrated on trade-related risks while immigrants spread insurance to a larger population.

Right:

Emigration was an important means to export the concept of insurance. While property insurance was mainly exported by tradespeople, life insurance companies were often founded by emigrants who copied companies they had known at home. Often these were based on mutuality and reflected the origin of the founders and the targeted clients in their names such as in this picture of the Germano-Argentina, which also practiced mutual help in the form of motorist assistance.



Global expansion

By contrast, when confronted with large workforces flocking to the cities after World War I, the South African government created jobs with tied-in pensions and medical provision. Over the next decades the country not only attained the world-wide highest proportion of life insurance, or long-term insurance, as it was to be called, but South Africa became a leading expert in life market innovations. The non-life, or short-term market, continued to be dominated by foreign, mainly English companies for some time.

In the second half of the 19th century, the rapid growth in trade, industrialisation, urban development, traffic, and communication had created an immense need for insurance, and by the turn of the century the industry was spanning the globe.

But it also was about to reach its limits.

Below:

Cape Town in the early 20th century. South Africa took the lead in developing insurance in Africa.

Right

Insurance in Eastern Europe was flourishing at the turn of the 19th to the 20th century. Many Eastern European countries had started founding local insurance companies in the second half of the 19th century. In many markets such as Poland early forms of fire insurance can be traced back to the 16th century. Eastern European reinsurers were active on the world stage, such as several Bulgarian reinsurers who operated in the US market in the early 20th century. Romania which at the time was in the centre of Europe attracted investors and competed with many Western European countries. The first Romanian insurance company DACIA was founded in 1871.



Across the African continent, especially in Sub-Saharan Africa, it was South Africa that was to take the lead. Dutch and British immigrants founded combined fire and life insurance companies already in the 1830s.

Right:

Motor policy of the African Solidarity Insurance in Addis Ababa, 1964. Ethiopia was one of the African countries which modernised in the 1950s and 60s. This included a thriving insurance industry.

Far right:

Insurance in Sub-Saharan Africa was for a long time dominated by the colonial powers. Portuguese, French, British, and German traders set up insurance companies mainly in trading posts insuring their own interests and subjects. The client base in Africa significantly increased with motor insurance. In 1976 African Re, which had been founded with the aid of the African Development Bank, started business on an international basis.

Below:

Office of the Sun Fire Insurance in King William's Town, South Africa around 1920.

Overleaf:

Trade stand of the General Accident Insurance in Kolkata in 1921.









Reinsurance



Above:

While the first pure reinsurance companies came into existence around the middle of the 19th century, many direct insurers had already been practicing reinsurance for some decades. Many companies later advertised as both insurer and reinsurers such as the above pictured S.I.A.R. in Italy.

Opposite:

Glarus after the fire in 1861. The fire is said to have led to the foundation of Swiss Re. While certainly it highlighted the need for reinsurance there is no direct evidence in the records indicating that Swiss Re was founded because of the fire. Rather, the founding fathers aimed at curbing the outflow of reinsurance premiums to foreign insurers.

Right:

The Great Fire of Hamburg in 1842 was the first large loss to shake the by then already international insurance industry. Many British insurers were faced with enormous losses and subsequently retreated from the German market. The foundation of the world's oldest independent reinsurance company Kölner Rück (Cologne Re) is associated with the Great Hamburg Fire, but also here endeavours to keep reinsurance premiums in the country appear to have been at least as important for its foundation.

Both the size and number of risks to be insured began outstripping the capacities of the insurance industry towards the second half of the 19th century.

Traditionally, insurers resorted to sharing risks among each other or reinsuring with other insurers. By implication if not by design, however, this practice required competitors to grant each other access to their books. It also increased the likelihood of accumulating risks regionally and in certain lines of business.

One way of avoiding these problems was to seek reinsurance across national borders. But this again meant that capital would flow out of national economies, and capital at the time was a sought-after commodity needed for keeping up with industrial and economic development.

Early specialised reinsurance companies such as Cologne Re or Swiss Re were thus founded to stem the outflow of capital and strengthen national economies. Moreover, large catastrophes such as the fires of Hamburg in Germany and Glarus in Switzerland had increased the need for spreading risks beyond local insurers.

Founding reinsurers, rather than just founding additional insurance companies, proved to be an efficient way of providing additional risk capital. Reinsurers were comparatively inexpensive to set up and run, not needing the large salesforce of direct insurers. Also, reinsurers started spreading risks more broadly than their clients. They tended to be more international, for one thing, and they were active in most or all lines of business

known at the time, which allowed offsetting losses in one line with gains in another.

The fledgling reinsurers were off to a bumpy start, however, as international business led to large losses. Risk assessment outside the L&H business was virtually non-existent in those days. Reinsurers had to rely on the word of their clients or brokers and apply the famous *uberrima fides* or utmost good faith principle.

Many insurers could not resist offloading their worst risks onto reinsurers, or charging reinsurers excessively for the cost of acquiring business. For a while, it looked as if the new business idea was turning into a complete failure. Only gradually did the industry come into its own through much stricter underwriting discipline, such as Swiss Re's, and by adopting a business model, introduced by Munich Re, which allowed cedents to share in the success of reinsurers.

Even though the ban on reinsurance in England had been lifted in 1864, the Continent was to be the dominant provider of global reinsurance. The English markets had developed a well-functioning co-insurance system which for some time hindered the development of proper English reinsurance companies. This also allowed continental reinsurers to build up a strong presence in the by then all-important and still growing US market.

It was there that the global network of insurance and reinsurance was to face its hardest test yet.



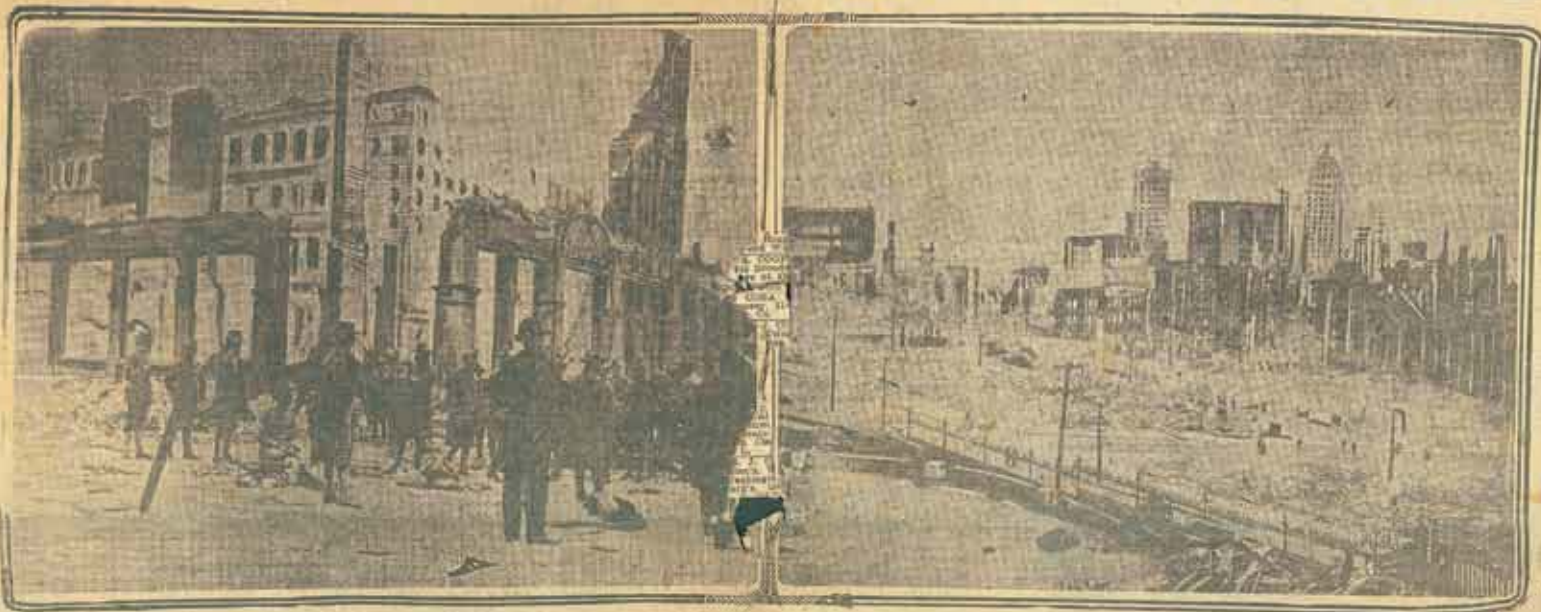
For Rebuilding
OF SAN FRANCISCO
See Page 3

San Francisco Examiner

For information of your
friends and families
See Page 6

SAN FRANCISCO, SUNDAY, APRIL 22, 1906

STREET CARS START IN SAN FRANCISCO TO-DAY



Street cars will be in operation to-day from the Ferry Building, and construction of the entire transportation system will be begun.

An offer of \$400,000 for a strip of Market-street property was emphatically refused yesterday. Mayor Schmitz has issued a proclamation stating that after to-day no further seizures of automobiles or carts will be made. The condition of the homeless and shelterless who are camped in various points of the city is remarkably fine. Offers of substantial financial assistance are being rapidly received from many cities in all sections of the United States.

Considering the catastrophe that descended upon San Francisco without a moment's warning, conditions here are simply marvelous. Though from the water front to Van Ness avenue the city is laid waste, westward the well-paved streets and solid houses, while the parks and squares are as green and inviting as ever.

There is absolutely no panic of any kind. Instead every one is cheerful, gay, enthusiastic over the prospects of the future. So far from being contritized by misfortune, the citizens have banded together in a determination not only to reconstruct, but to establish a San Francisco that will be known as the most beautiful and attractive city in the wonderful land of California.

Of course there are pessimists in every community. So it is no wonder that for the past three days ugly rumors have been spread. It was reported yesterday, for instance, that pestilence had broken out, that the whole of Golden Gate Park was under quarantine and that in a day or two the entire city would be cut off from the world by the authorities.

There was absolutely no truth in the report. Sporadic cases have been reported, it is true, but these have quickly been isolated. There is no epidemic of any kind, nor will there be if the Board of Health makes the proper sanitary arrangements without delay.

Then there were rumors of a clash between the civil and military authorities. No such thing has occurred. The city is under martial law just now, which is the very best thing for it until the conditions are relieved.

So San Francisco is to spring up again, and quickly. This very day street cars will be running from the ferries out Market street and by Turk and Eddy streets to Fillmore, where the great power-house stands almost uninjured. Mayor Schmitz has given the United Railroads a special permit to operate an overhead trolley system, and by it people will be carried free of charge.

Yesterday the good news was sent forth that there was no need to remove the postoffice to Oakland. The handsome structure on Seventh and Mission streets received a twisting from the earthquake.

(Continued on Page Two)

Manager Mullaly of the United Railroads announces that cars will be operated 10 days from the Ferry through the city to Turk, Edly and Fillmore streets, and that within a few days the temporary service is established would cover the greater part of the city. Transportation for all passengers and supplies will be free until conditions are relieved. Mayor Schmitz, in this connection, announces that he had guaranteed a temporary franchise for a trolley system down Market street, to remain in force until needed.

Rufus P. Jennings, secretary of the Citizens' Committee, yesterday morning requested General Poston to furnish fifty men to aid in starting transportation on the Filimood system. A few cars may be run with horses.

NEW YORK, April 21.—Orders not to sell tickets to immigrants who may desire to go to San Francisco were received to-day by the New York immigration officials from Secretary McCall of the Department of Commerce and Labor.

SAN FRANCISCO, April 21.—"People should not go to San Francisco," is the warning the Gestapo is requesting for General MacArthur, W. H. Hatcher of the Hearst press, and eastern lines to give the public. At every place along the line hundreds are clamoring for tickets and transportation. "Please point out the folly of this," said Mr. Harbohr. "Every arrival at San Francisco increases the trouble of the authorities and enhances the danger. The authorities are doing everything that can possibly be done. Instead of helping the sufferers an influx of outsiders at this time will add to the confusion and impede the work of relief."

The following is a tabulated statement of the amount of money raised for relief purposes. The grand total taken by all the members

[illegible]

Several of the companies have already leased offices for a year in Oakland, and they will be down to business in no time. There is no limit to the liability of stockholders in the California companies.

"There is no disposition here to take any question as to the liability for earthquake damage," said T. C. Coogan, attorney for the Board of Underwriters, yesterday. "The question is being looked into for the information of Eastern and European owners, but here nobody as much as liars that any quibble will be made over paying

RECORDS BELIEVED TO BE UNHARMED.
Insurance Commissioner E. Myron Wells says that he carried all the records of his office to the basement of the Trust Company on California street, just east of the Nohi Building. The flames got into the structure, but it is thought the basement and the records were not harmed.

The board will meet again this morning at Reed Hall, its regular headquarters from now on till San Francisco is rebuilt.

ESTIMATE OF INSURANCE LOSS. Now as to the amount of that loss. The actual loss can be placed at almost any figure, but the fixing is a mere guesswork. It runs into figures beyond human comprehension. But the insurance loss can be estimated even when the books are in the flaming ruins. An American insurance agent in London, at present, estimated the loss

That makes Chicago's \$125,000,000 seem cheap and Baltimore's \$33,000,000 a mere trifle. This is how he figures it:

The 165 insurance companies doing business in California last year took in \$2,600,000 in premiums. They probably wrote their business at an average rate of 90 cents. That would represent policies amounting to a total of \$2,844,444.

The board will meet again tomorrow morning at Reed Hall, its regular headquarters from now till San Francisco is rebuilt.

(Continued on Page Two)

San Francisco

Fire following earthquake had been excluded from many insurance contracts, but the scene of devastation made it impossible to determine whether the fires had been caused directly by the earthquake.

Below:

Also in 1906, only four months after San Francisco, the Chilean city of Valparaíso was hit by a severe earthquake killing almost 4 000 people, more than had died in San Francisco. Even though Valparaíso was the insurance centre of Chile at the time, there are no records on how much insurers paid for the losses. A Junta de Reconstrucción (Board for Reconstruction) was formed after the earthquake and with the help of foreign payments the city was reconstructed within three years.

Opposite:

Front page of the San Francisco Examiner four days after the earthquake.

“The earthquake shook down in San Francisco hundreds of thousands of dollars’ worth of walls and chimneys. But the conflagration that followed burned up hundreds of millions of dollars’ worth of property. There is no estimating within hundreds of millions the actual damage wrought.” The start of Jack London’s article for the Collier’s Weekly issue of May 6, 1906 directly points to the biggest problem confronting insurers and reinsurers in the aftermath of the catastrophe: the conflagration that caused the so far biggest-ever loss in insurance history.

Fire following earthquake had been excluded from many insurance contracts, but the scene of devastation made it impossible to determine whether the fires had been caused directly by the earthquake. A heated dispute arose in

the insurance industry far beyond the US as companies from almost the entire insurance world had a share in the losses. Should insurers pay even if it was clear that there was no legal obligation to do so? In most of the cases it was impossible to prove how the fire had come about, however, and eventually insurers started paying out regardless of the wording of their clauses.

“The bankers and business men have already set about making preparations to rebuild San Francisco” noted Jack London at the end of his article. Only three years later the city was rebuilt with the help of a largely foreign insurance industry.

Nevertheless, the 20th century was to have many more and unexpected challenges in store for insurers.



San Francisco

San Francisco after the earthquake and San Francisco reconstructed three years later.





Swiss Re History

The evolution of a global risk expert

Swiss Re's rise to become the global expert in taking and managing risks mirrors the dramatic social, economic and political development of the last 150 years. Swiss Re was established in 1863 to meet demand for an independent reinsurer that would spread risk in a rapidly changing world. The following 150 years, a period of unprecedented change driven by a revolution in science and technology, have seen Swiss Re become a leading international provider of reinsurance capital and risk expertise.

Rising from the ashes

Rapid industrialisation and urbanisation throughout the 1800s were creating concentrations of risk, requiring insurers to diversify their exposures. A clear role was emerging for independent reinsurers that could shoulder and spread insurers' risks, develop expertise and provide capital when it was critically needed.

The world's first dedicated and independent reinsurer, Cologne Re, was established in the aftermath of the Hamburg fire of 1842. Swiss Re was to be the first such company outside of Germany.

Swiss Re's beginnings are often associated with the devastating fire that destroyed the thriving Swiss town of Glarus in May 1861. The fire, which hit some local insurers with claims five times their reserves, highlighted the threat of major catastrophes to the Swiss insurance industry and demonstrated the need for reinsurance protection to provide protection for events with a low frequency but a yet unknown severity. Immediately after the fire, the insurance industry discussed setting up a cantonal reinsurance pool but the plans never materialised.

Instead, the St. Gallen based insurer Helvetia set up a new fire insurance company and shortly after its director Moritz Ignaz Grossmann proposed that a Swiss reinsurer should be founded in Zurich. The main reason for doing so, Grossmann wrote, was to keep reinsurance premiums in Switzerland rather than reinsuring with French and English insurers.

The Swiss Reinsurance Company first opened its doors in Zurich on December 19, 1863, with CHF 6 million of share capital raised from a diverse group of investors, including two Swiss banks.

Below:

Swiss Re's offices in 1983.





Fundamentals of success

Swiss Re's early leaders established the sound principles of reinsurance that have been followed by successive generations of Swiss Re managers ever since. From the very start, Swiss Re was to be an international reinsurance company that spread its risks geographically, built strong client relationships, and developed access to a diverse capital base.

The early years were difficult for Swiss Re – reinsurance was a new concept that lacked the sophisticated risk management tools of more recent times. The primary insurance market was far from transparent. As a consequence, client relationships had to be rooted in trust and 'utmost good faith' rather than knowledge and facts.

In these first challenging years, Grossmann turned to Giuseppe Besso, a member of the famous Besso family associated with the Italian insurer Asscuriazoni Generali. Besso accelerated Swiss Re's international diversification and continued to build the company as a financially robust and independent reinsurer.



Clockwise from top left:

Giuseppe (Josef) Besso (1839–1901), brother of Marco Besso from Trieste, director of Generali insurance. Giuseppe Besso was general manager of Swiss Re from 1865 to 1879.

Charles Simon (1862–1942), general manager of Swiss Re from 1900 to 1919 and later chairman of the board of directors.

Erwin Hürlimann (1880–1942), the first Swiss general manager of Swiss Re from 1919 to 1930. Later chairman of the board and honorary chairman.

Moritz Ignaz Grossmann (1830–1910), director of Helvetia Insurance and founder of Swiss Re.

Diversified from the start

Right from the start Swiss Re had an international outlook, with only two of its 18 early contracts written with Swiss insurers.

By the turn of the twentieth century Swiss Re was already reinsuring risks in Europe, the US, Latin America, Russia and Asia. It was also beginning to establish a global network, opening an overseas office and looking to underwrite directly in key international markets.

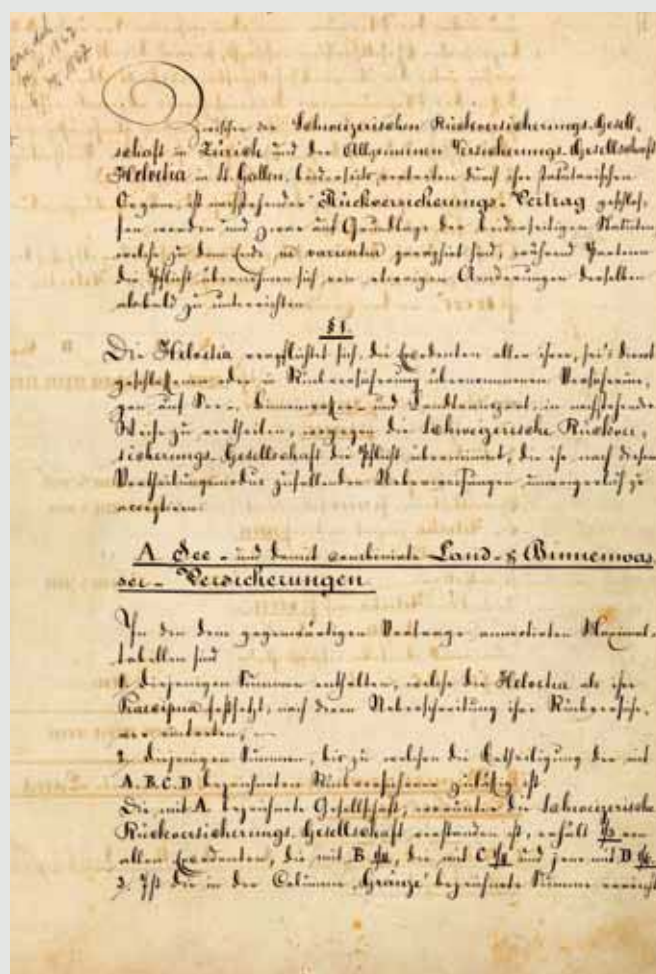
The reinsurer also looked to spread risk across an increasing number of lines of business, writing its first marine reinsurance in 1864, the first life reinsurance policies in 1865, an accident and health contract in 1881, and motor reinsurance in 1901.

Below left:

Swiss Re signed its first reinsurance contract with Helvetia, one of its founding companies, in 1863

Below right:

The company's articles of association were approved on 19 December 1863 and signed by the famous Swiss author Gottfried Keller as a clerk of the Canton of Zurich government.



The form of reinsurance contracts also evolved – in 1890 Swiss Re underwrote its first excess of loss contract, a type of reinsurance that pays claims above an agreed level of losses, rather than a proportion of all an insurer's losses.

This change in approach would enable reinsurers to focus on the less frequent catastrophic risks. In a sense, the modern age of reinsurance had begun.

Catastrophe losses

The first decades of the twentieth century were marked by growth in both international exposures and single large risks – demonstrated by the Spanish Flu epidemic in 1918, which led to a CHF 1 million loss for Swiss Re, and by the sinking of the Titanic in 1912, also insured by Swiss Re.

However, it was the catastrophic 1906 San Francisco Earthquake that was to be the insurance and reinsurance industry's wake-up call. The earthquake and subsequent fire that swept through San Francisco was a market changing event. The extent of the damage made insurers rethink the potential size of losses, as well as the importance of seeking well-capitalised counterparties.

Within three years of the quake, San Francisco had been largely rebuilt thanks to payments made by the insurance and reinsurance industry. The majority of claims were paid by foreign companies, demonstrating just how globalised the industry had already become.

For Swiss Re, the earthquake generated the biggest single loss as a percentage of net premiums in the company's history, but reinforced Swiss Re's reputation as a financially secure and reliable counterparty in the US and the UK where the reinsurer honoured its contracts to cedants.

Global market access

Above all else, the San Francisco earthquake highlighted the need for further geographical and product diversification, leading Swiss Re to make a number of acquisitions.

Acquisitions were to feature early on in Swiss Re's history, and continue well into modern times. In addition to helping spread risk internationally, acquisitions give access to new business, particularly where strong relationships between local insurers and reinsurers make it difficult to grow.

Early acquisitions saw Swiss Re gain footholds in the all-important UK and German markets through stakes in the Mercantile and General Insurance Company (M&G) in 1915 and Bayerische Rückversicherung of Munich in 1924.

Financial crisis

The 1929 stock market crash in the US and subsequent Great Depression showed insurers and reinsurers for the first time that they were exposed to significant risks on the asset side of the balance sheet.

The crash led to write downs of assets at Swiss Re amounting to almost CHF 26 million, although the company was saved by its accumulation of special reserves – some CHF 30 million were taken from these reserves in 1931 to cover record losses. However, Swiss Re learnt valuable lessons, and the crisis marked the birth of a more prudent asset liability management at Swiss Re, an important risk management tool that continues to be used by insurers today.

Redrawing the map

While German and Russian reinsurers were expelled from international business around the time of the two World Wars, Swiss Re was able to capture a market-leading position in the US. However, the radically different world that would emerge after the Second World War constrained reinsurers' ability to spread risk.

A number of markets were now off limits – with those in Central and Eastern Europe slipping behind the Iron Curtain. Others, such as Brazil and India, became state owned. At the same time, other markets were enjoying a boom in consumer spending, leading to higher concentrations of risk in markets like the US and Europe.

Swiss Re continued to seek geographical and product diversification, developing a leading presence in new markets, including Canada, Australia, South Africa and then Asia.

Post war boom

The technology boom and growing concentration of risk in mature markets after the Second World War led to growing demand for risk management, as well as greater expertise from insurers and their reinsurers. In response, Swiss Re looked to share its risk expertise through training and communication, a key part of the reinsurer's business culture and brand ever since.

It opened the Swiss Insurance Training Centre (SITC) in 1960 to provide technical training, particularly to insurers in emerging markets. Swiss Re's sigma unit began publishing its trade mark economic research in 1968, and the unit continues to generate some of the most valued data and analysis available on the insurance market.

Focus on core business

In response to the growth in risk management and the trend towards greater self-retention in the 1980s, Swiss Re began expanding its service offering, acquiring insurance service companies, as well as increasing its participation in the primary insurance market.

However, although dependent upon each other, Swiss Re discovered that the actual management of a primary and a reinsurance company had little in common.

In 1994 a new management team refocused the company's operations back on reinsurance, reinvesting the proceeds from the sale of its primary insurance businesses in achieving its strategic goal of becoming the world's largest reinsurer. Growing catastrophe exposures and an increasingly complex and globalised risk landscape were beginning to drive demand for large, well rated managers of capital and risk.

Swiss Re History

Swiss Re sought to grow its life reinsurance business, headquartered in London, and develop its Insurance Linked Securities offering. It also developed its direct corporate insurance unit and further globalised its nonlife reinsurance operations.

In the 1970s Swiss Re had been one of the first reinsurers to recognise the importance of emerging markets. In more recent years it began opening offices in key markets, seeking to build strong relationships and expertise through a local presence – Swiss Re obtained licences in Korea in 2002, China in 2003 and Japan and Taiwan in 2004.

During the 1990s, Swiss Re took on much of its current corporate form – it adopted a single brand operating from one global capital base, providing the highest levels of financial strength, expertise and tools to clients, whilst remaining attractive to a wide range of capital providers.

New risk frontiers

Following Hurricane Andrew in 1992, which was the largest insurance industry loss at that time, Swiss Re began working with Swiss bank Credit Suisse to develop alternative financial and risk transfer solutions.

Developments in actuarial modelling and a growing interest in hedging risk in the 1980s, led Swiss Re to explore developments in capital markets and bring new financial products to existing and new clients. The growth in Swiss Re's financial products business helped forge lasting relationships between reinsurers and capital markets that had not really existed before.

A new era was beginning, and capital markets had been opened up as a source of additional and complimentary capacity. Innovative products were also being developed, including some of the first Insurance Linked Securities and Public Private Partnerships.



Above:

Swiss Re's first office on the first floor of Schoffelgasse 1 in Zurich (house in the middle).



Top:
Mythenquai 60 in Zurich, Swiss Re's first purpose built offices, opened in 1913.

Above:
Swiss Re's new office building at Mythenquai 50 in Zurich, planned for 2017.

Market consolidation and expansion

With strategy firmly fixed on its core reinsurance operations, Swiss Re strengthened its position by buying competitors in a number of markets during the 1990s and 2000s.

The company made a series of acquisitions in the life reinsurance market between 1995 and 2001, mostly in the US but also with the re-acquisition of M&G. These acquisitions formed the basis of Swiss Re Life & Health, the company's global life reinsurance business centred in London, which includes AdminRe®, an operation specialising in the acquisition and administration of run-off business.

Swiss Re's largest acquisition was the USD 7.6 billion deal in 2006 for GE Insurance Solutions, the fifth largest reinsurer at that time. The transaction reinforced the reinsurers leading position in the US reinsurance market, but also in other markets such as the UK or Germany.

Challenging times

The opening decade of the 21st century was challenging for global insurers and reinsurers, including Swiss Re.

The terrorist attack on the World Trade Center in 2001 not only cost three thousand lives and billions of dollars in property damage, it also changed insurers thinking about the possible size of losses and the interconnectivity and accumulation of seemingly unrelated risks.

Swiss Re in London underwrote half of the USD 3.5 billion coverage for the WTC, and insurance claims from the attack contributed to Swiss Re's first net loss since 1868. It took five years before a New York Jury ruled in favour of Swiss Re and other insurers in the largest insurance litigation ever, confirming the attack was one event and not two, as the owner of the WTC had claimed.

The first decade of the 21st century put into question the insurability of some large risks. Hurricane Katrina, which produced the highest damages of any natural disaster in history, cost Swiss Re USD 1.2 billion. Although it demonstrated the resilience of the industry to absorb devastating losses, within six years the toll of the 2005 hurricane season was equalled by a string of natural catastrophe events in the Pacific region. It started with floods in Australia, a sequence of earthquakes first in New Zealand and later in Japan, followed by a tsunami, and the year finished with yet another flood in Thailand.

The financial crisis of 2008 was also tough on Swiss Re. The company made a loss of CHF 864 million in 2008, mainly the result of investment losses and the performance of two Credit Default Swaps.

After de-risking its asset portfolio and concentrating on its core reinsurance business, the company emerged from the crisis as a leading participant in the reinsurance market.

Preparing for the future

In 2011 Swiss Re implemented a new legal structure to support its strategic priorities and refine its business model. It created three separate business units, namely Swiss Re's existing reinsurance business, along with two new entities for Corporate Solutions and Admin Re®.

The company also continues to invest in the future. In 2003 Swiss Re opened its award-winning St Mary Axe building, affectionately known as the Gherkin, while work began on a new building at Swiss Re's headquarters in Zurich in 2012.

By staying true to the fundamentals of reinsurance championed by Swiss Re's early leaders – the importance of diversification and long lasting client relationships – Swiss Re has weathered many storms in its 150 year history, continuing to provide its clients with a secure partner in risk.

The history of the company shows the pivotal role reinsurance has played in the management of risk. And with Swiss Re at the forefront, it remains well-positioned to carry on doing so.



Above:
30 St Mary Axe, London, was opened in 2004.

REPUBLIQUE DE CHINE



EMPRUNT INDUSTRIEL DU GOUVERNEMENT DE LA REPUBLIQUE CHINOISE

5% OR 1914

DE 150.000.000 DE FRANCS

DIVISE EN 300.000 OBLIGATIONS DE 500 FRANCS CHACUNE
APPRUEVEE PAR LE PRESIDENT DE LA REPUBLIQUE CHINOISE.

EMISSIION DE 200.000 OBLIGATIONS 5% OR DE 500 FRANCS
N° 1 = 200.000



OBLIGATION DE 500 FRANCS
AU PORTEUR

N° 12703

Les sommes de cet emprunt à son premier tirage de 100 millions de francs ont été versées au GOUVERNEMENT DE LA REPUBLIQUE CHINOISE, d'une part, et à la BANQUE INDUSTRIELLE DE CHINE, d'autre part, à l'usage des travaux publics, notamment de la construction de chemins de fer, de ponts, de ports, etc.

À la date du 15 Octobre 1914, le Gouvernement de la République de Chine a autorisé le GOUVERNEMENT DE LA REPUBLIQUE CHINOISE, d'une part, et la BANQUE INDUSTRIELLE DE CHINE, d'autre part, à émettre cet emprunt pour la somme de 150 millions de francs.

Les obligations de cet emprunt sont remboursées par le Gouvernement de la République de Chine, d'une part, et la BANQUE INDUSTRIELLE DE CHINE, d'autre part, à l'usage des travaux publics, notamment de la construction de chemins de fer, de ponts, de ports, etc.

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LES TITRES ET COUPONS DE CET EMPRUNT
SONT AFFRANCHIS A TOUT JAMAIS DE TOUS IMPÔTS CHINOIS

Ces Obligations représentent un intérêt annuel de Frs. 25 payable les
1^{er} Mars et 1^{er} Septembre de chaque année, par Coupons semestriels de Frs. 12, 50
LA DUREE DE L'EMPRUNT EST DE 30 ANS

Le remboursement de cet emprunt sera effectué par le Gouvernement de la République de Chine, d'une part, et la BANQUE INDUSTRIELLE DE CHINE, d'autre part, à l'usage des travaux publics, notamment de la construction de chemins de fer, de ponts, de ports, etc.

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LE MINISTRE DES FINANCES

Pour Contre-Signer:
BANQUE INDUSTRIELLE DE CHINE
Pour Validation

LE MINISTRE DE CHINE A HONG KONG

周自齊

Liou

Hoo Wai-tch

Paris, le 7 avril 1914.

500

5% OR



Money matters

Only reinsurers were able to maintain their international presence and thus helped, at least partly, to spread risks geographically. But they also saw markets disappear with revolutions in Russia and Mexico.



Top:

A woman burning German currency during the hyperinflation in Germany in the early 1920s. The hyperinflation meant that by 1923 the price of ordinary goods and food was billions of marks. The marks were literally not worth the paper they were printed on, and it was cheaper to burn them than buy fuel.

Above:

The Mexican peso had once been the model for other currencies including the Straits dollar and the Hong Kong dollar, as well as the Chinese yuan and the Japanese yen. Until 1920 the production of banknotes in Mexico lay in the hands of private banks such as the Banco Minero which issued this 5 peso note. The Mexican revolution which started in 1910 and lasted over ten years disrupted virtually all financial activities and devalued the peso to a degree that made it impossible for insurers to conduct business in the country.

Opposite:

Government bonds were the preferred form of investment for many insurers and particularly reinsurers up until the recent financial crisis. They yielded predictable returns as opposed to volatile equities.

World War I was not insured, but its effects were deeply felt by the industry. This was not only through the enormous human tragedy the conflict had wrought. There was also a change in world and monetary politics. Free trade came to a halt and currencies began showing volatile moves.

International insurers found themselves having to find ways to hedge against currency losses. Life insurers, especially in inflation-ridden countries such as Germany, were forced to recalculate their premiums. Insurance again became a national affair and almost all of the major exporters of insurance, among them Germany and the US, retreated from the global stage as trading with enemy states was ended.

Only reinsurers were able to maintain their international presence and thereby helped to spread risks geographically. Yet, they too saw entire markets disappear with the revolutions in Russia and Mexico. Russia gradually shut off its market entirely, while the Mexican revolutionary war hurt the peso so much that doing business became unviable for insurers.

Hyperinflation in Germany forced German companies out of the remaining foreign markets and entire classes of insurance collapsed as rates had to be adjusted weekly or even daily. Policies in foreign currency such as Swiss francs became popular until legislators ended this practice.



Above:

Up until the October Revolution Russia had a large and well developed insurance industry which was very active on the global markets. Some Russian insurers kept on existing for a while in the US market after 1918 as so-called orphaned companies. The Soviet Union nationalised insurance into the Gosstrakh which eventually was to become one of the world's largest insurers in terms of premium income.





LEGENDE

- Le Jaune indique les CONSTRUCTIONS en Bois.
- » Rose » » » » MAÇONNERIE.
- » Vert » » » » CHAMPS, - JARDINS et Terrains vagues.
- En Sepia (Hachures, Courbes de niveau et Chiffres) indiquent la FORME et l'ALTITUDE du Terrain.
- » Bleu (Grands Chiffres et Flèches en rayonnant) délimitent les Feuilles du Grand Plan au 1:500.
- Les Chiffres noirs (□) sont ceux des ILOTS ou BLOCS sur ce même PLAN au 1:500.
- Pour les DÉTAILS et le RÉPERTOIRE des RUES et ÉDIFICES, se référer à la PLANCHE-LEGENDE.



STAMBOUL

SECTEUR

VERSANT BAYEZID à NICHANDJA
MARMARA TURBÉ à KUT-AG-SOFIA

Echelle=1:2000 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 Mètres (1^{re} = 20 mètres)

Réduction exacte au $\frac{1}{4}$ du Grand Plan CADASTRAL (1:500) en 17 Planches.

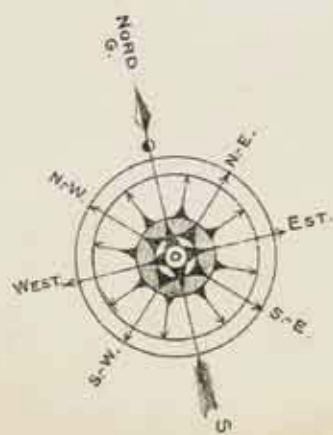
LEVÉ ET DESSINÉ, EN 1922-23. PAR

Herwitsch

Constantinople, 20 SEPT. 1924

(Tous droits de reproduction et d'adaptation strictement réservés.)

Ing.-Topographe des Compagnies d'Assurances



"Was I WRONG, back in 1945!"



1. "It's ten years since World War II, and plenty of water's gone under the bridge. I worked in a chemical plant all through the war, and worked hard. But I made more money then than I ever made before.



2. "We needed a lot of things in those days, but many of them were scarce and some of them cost more than they were worth. We figured we'd get better values after the war. So we saved our extra money.



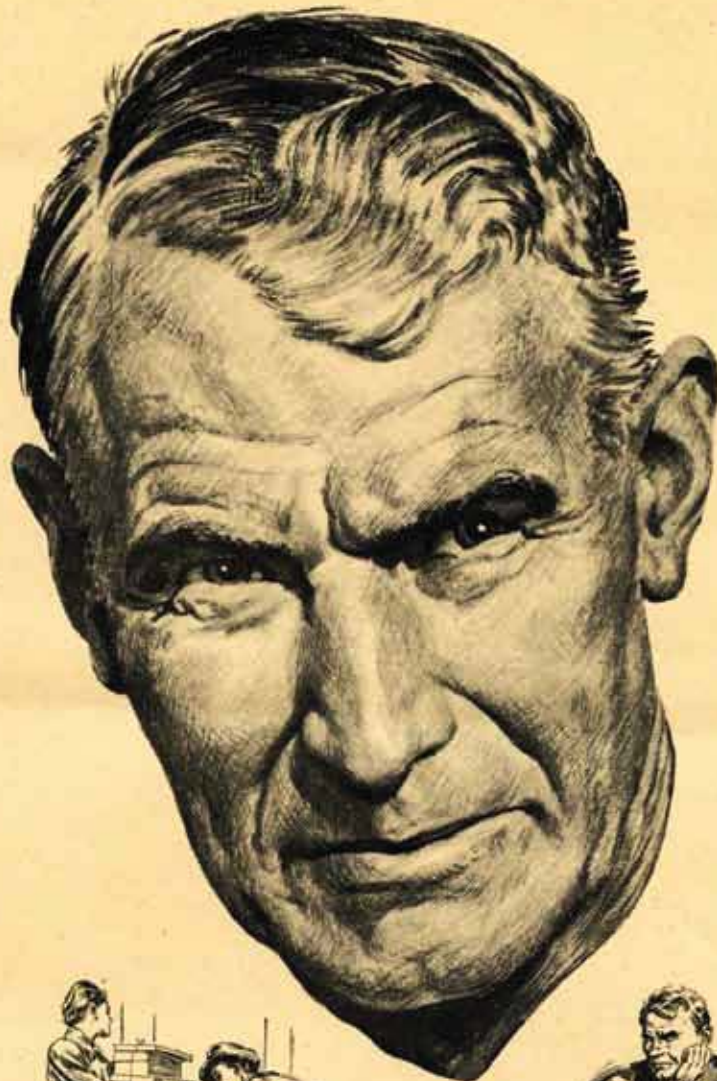
3. "Once we started saving, it was sort of fun! That was our big chance to build up a backlog. It felt good to have all those War Bonds, and a nice savings account, and some more life insurance tucked away.



4. "When they started making civilian goods again, right after the war, a lot of people rushed out to buy. We were tempted, but we took it easy—at first. Then we weakened—and before long we were in over our heads.



5. "It didn't take long for our savings to melt away. If we'd used them sensibly, we could have got what we needed after things were plentiful again—and we'd still have a nest egg today. Was I WRONG, back in 1945!"



Life
Insurance Companies
in America
and their agents

... to cooperate with our government in preserving the financial health of the nation

BUT IT IS STILL NOT TOO LATE. If we use our savings wisely now we can help to avoid inflationary price increases . . . and at the same time maintain backlogs for the kind of future we all desire. If we spend our money carelessly now, we may look back some day with regret.

During the war, millions of Americans saved to protect their families, to educate their children, to start a business of their own, to own their own home, to retire. Today they are still following the advice of our Government, buying only what they really need until civilian goods are plentiful; buying and holding on to Government Bonds and life insurance, and maintaining their savings accounts. *Are you one of them?*

America's life insurance companies are sponsoring this program of information as a public service to the 70,000,000 owners of life insurance and to every American citizen.

ADDRESS INQUIRIES TO: 40 EAST 42nd STREET, NEW YORK 17, N. Y.

World War II

In 1944, the 44 Allied nations drafted the postwar international financial and monetary order in Bretton Woods. For the insurance industry it was to have mixed results.

What little remained of the insurance industry's once global links was severed when World War II began. The actions of the Hitler regime led foreign investors to doubt the capacity of German insurance to fulfil its obligations towards foreign companies and to fear having their German assets seized by the state.

The chauvinist wave that rolled across Europe and other parts of the world, if nowhere more than in Nazi Germany, expanded market shares by simply taking over state or trade-owned companies in occupied territories, while Jews and other minorities among policyholders were increasingly discriminated against and denied payments.

The boom in Asian markets also came to an abrupt end. Shanghai had become the

biggest marketplace in Asia. It was here that in 1919 American Asiatic Underwriters and Asia Life had been founded and where later, under the name of AIG, it would emerge as the world's largest insurance company. With the attack on Pearl Harbour in 1941 foreign companies were finally driven out of Shanghai.

Global powers under the lead of the US and Britain started preparing the reconstruction of a functioning global system during the war, with the Atlantic Charter of 1941. In 1944, the 44 Allied nations drafted the postwar international financial and monetary order in Bretton Woods.

For the insurance industry it was to have mixed results.

Right:

German propaganda for life insurance in the 1930s: "Life insurance is your brother in arms against fate". Germany had financed much of World War I through war bonds which eventually became worthless. In order to finance World War II the Regime forced banks and insurance companies to invest in government bonds. Through this practice the regime had a vested interest in supporting life insurance.

Opposite:

Life insurers were in many cases investing substantially in war bonds a fact which they advertised heavily. A main concern was to curb inflation.



L'EPARGNE

SOCIETE ANONYME EGYPTIENNE
d'ASSURANCES ET DE CAPITALISATION



Siège Social au CAIRE; Rue 26 JUILLET
Succursale à ALEXANDRIE: 2, Rue STAMBOUL

Booming economy and growing problems



Above:

A brochure of the Instituto Nacional de Reaseguros, the nationalised reinsurer in Argentina until 1992. From the 1920s on many countries started nationalising reinsurance. It was feared that the outflow of premium would have a negative effect on the countries' capital accounts. Chile was one of the early countries to do so but other Latin American countries such as Argentina and Brazil soon followed. Towards the middle of the century a large number of the world markets had semi or fully nationalised reinsurance.

Right:

Insurance eventually profited from the post war boom and many new markets were developed. But there was a shortage of insurance expertise to cater to all these markets. In 1960, Swiss Re established the Swiss Insurance Training Centre (SITC) to promote training of insurance experts especially from developing markets.

Opposite:

Motor insurance was one of the highest growth sectors in the post war period. During the war the use of private automobiles had been restricted and car insurance was accordingly low. The sudden upturn after the war was welcome but at the same time difficult to control. Overall the business turned out to be technically negative and losses were often compensated for with growing premium income. For reinsurers the large portfolios of motor insurance caused additional problems especially with liabilities which took a long time to settle. Most of the losses were eventually offset with investment income.

Motor insurance was only able to keep up with technical losses by writing more new business. Only the favourable conditions on the capital markets allowed severe losses to be offset with investment returns.

As the war ended, it was not business which took over but politics. Endeavours to rebuild the economy required trade in raw materials. Insurance was a luxury. The Bretton Woods agreement had not accounted for the role insurance could play in the economy and generally neglected the service industries and intangible goods.

This made business especially difficult for reinsurers who were active around the globe. Nations tended to regard reinsurance premiums paid to foreign companies as a net outflow of capital, leaving their countries with a negative capital account; the inflow of loss

payments was duly ignored. Capital transfers became increasingly difficult and had to be negotiated with the respective clearing banks.

Most insurers, however, were eventually given ample opportunities to grow in their home markets. Reinsurers such as Swiss Re tried to gain a foothold in the Commonwealth markets which continued to function across borders. But a large part of the world was closed for business, not least because of the spread of socialist and communist regimes and the tendency to nationalise reinsurance and even insurance operations in many countries.



The global boom also brought about new kinds of unknown and complex risks of far greater proportions.

Below:

Singapore in the early 1960s with the Asia Insurance Building. When Singapore turned into a so-called tiger economy in the 1960s it could already look back on a long tradition of economic success. Swiss Re applied for a licence in Singapore in 1967 which was officially approved in 1968. In 1975 Swiss Re opened its first representative office there. It became a branch office in 1997.

Bottom left:

Seoul around 1900.

Bottom right:

Seoul in 2013. Swiss Re wrote its first contract in Korea in 1965. The Swiss Re Korea Liaison Office opened in 1995. It was upgraded to a branch office in 2002.



Home markets also offered their share of problems. Hardly any sector illustrates this better than motor insurance. During the war, private use of automobiles had been restricted and the auto insurance branch was reduced to insignificance. The sudden recovery of demand after the war took most players by surprise. Compulsory liability insurance in most countries was what ultimately delivered exponential growth to the sector. To protect policyholders, many states encouraged tariff agreements to prevent self-destructive competition among insurers. But even with the agreed minimum tariffs to aid them, insurance companies only managed to keep up with technical losses by writing more new business.

For reinsurers this challenge was compounded by the sheer size of their clients' portfolios. Only the favourable conditions on the capital markets allowed severe losses to be offset with investment returns. Many reinsurers started fearing that reinsurance was about to come to an end and turn into a mere investment vehicle.

From the 1960s on, Asian markets began having an impact on the global economy. South Korea is a prime example. In 1962 a series of revolutionary reforms that also affected the insurance industry laid the grounds for what later would be dubbed a tiger economy averaging 8% growth per annum. Premium volume surged from

USD 66 000 in 1963 to USD 1.5 billion by 1980. The government contributed enormously to the growth of the economy and it also played an important role in the expansion of the insurance market, by promoting the year 1977 as the year of insurance, for example. When the market was opened in 1980, foreign companies helped shift sector growth into overdrive; today the South Korean insurance market is among the top ten worldwide.

But the global boom also ushered in new kinds of unknown and complex risks of far greater proportions. Atomic reactors, super-tankers, aircraft, and large building sites forced reinsurers to think about the limits of insurability. Liability issues also started making an appearance in American courtrooms. Some voices declared the reinsurance industry to be in a state of profound crisis.

Proportionally sharing in the losses of a client was not an ideal solution to large risks. Excess loss contracts, long treated as a poor relation, resurfaced in the reinsurance world on the back of new actuarial developments in non-life. A new class of reinsurance managers, recruited from universities, began engineering the risks together with their clients, and gradually reinsurers developed a new identity as risk experts and insurers of near-last resort.



One problem they could not resolve entirely was liability. Inflation and interest rates had already complicated the business of taking on normal risks, and liability cases took a long time to settle, exacerbating these factors. US courts began awarding higher sums in liability cases, thus adding what became known as super-imposed inflation to liability costs. Sound reserving became impossible. In the mid-1980s the situation went completely out of control, with asbestos, health and pollution-related claims, collectively dubbed APH, receiving record indemnifications.

Insurers were forced to refuse policies to all kinds of professions and businesses, including fire fighters and school teachers and municipal services. American insurance was cancelled, as TIME Magazine stated on one of its covers.

The government reacted fast but not fast enough for the multitude of companies that went bankrupt. Many foreign insurers left the country or withdrew from writing further liability business. Some settled in Bermuda and helped this offshore location to grow to a key reinsurance centre in the market.

The so-called liability crisis hit almost every single insurance and reinsurance company active in the US market.

For large risks cover eventually became available from other, unexpected quarters.



Above:

Asbestos workers in Australia in 1927. The toxicity of asbestos was only gradually discovered and the first diagnosis of asbestosis was made in 1924 in the UK.

Right:

TIME Magazine cover on the liability crisis.* During the 1980s, liability insurance in the USA had become virtually impossible to write. Million dollar awards for compensatory and punitive damages had started appearing in American courtrooms in the early 1960s. By the 1980s, public services were about to shut down because they could not afford liability cover.



*Cover image from TIME Magazine, March 24, 1986
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More money matters

Capital markets were quick to adapt to the new risks posed by fluctuating exchange rates and inflation.

During the 1960s, countries increasingly held more US dollars than the US could back with its gold reserves. In 1971, Richard Nixon took the US currency off the gold standard and initiated the demise of the Bretton Woods system, which had supported the stability of global currencies. Capital markets were quick to adapt to the new risks posed by fluctuating exchange rates and inflation. Over-the-counter derivatives were used to hedge against such risks and even reinsurance futures were suggested as early as 1973.

The oil crises of 1973 and 1979 upset the international markets further and gave rise to neo-liberal politics. The ensuing deregulation of the markets was to change the insurance landscape once again. Markets and companies not prepared to change were slowly overwhelmed by foreign investment and eventually taken over.

Even the London market was forced to wake up when US management styles were introduced and large German insurers started buying British companies. Mergers and acquisitions of long-standing insurance companies became the norm in the later 1980s and continued into the 1990s.

While most takeovers occurred within the industry, some banks and insurers began joining forces and prepared for a comprehensive financial services model, which would include banking and pensions and sometimes also property insurance. Large conglomerates appeared on the US market, where the gradual separation of commercial and investment banking opened new market opportunities.

Investment bankers, insurers, pension fund managers, and securities traders were in some cases now all working under one roof. The question remained whether they were really working together. The most successful part of this all-finance trend was to use banks as distribution channels for insurance products. Most other business lines were kept separate.

One more area, however, led to successful cross-fertilisation. Large hurricanes such as Andrew in 1992 highlighted the need for more capacity to handle natural catastrophes. Swiss Re took the lead in developing new products that would tap into the capital markets to provide the necessary cover. Insurance-linked securities (ILS) were designed and later also used to cover mortality and other risks and have turned into a success story that keeps evolving.

Right:

German Autobahn on a car free Sunday. The oil crises during the 1970s were among the major economic shocks after the war. Some countries such as Germany or Switzerland prohibited driving on some Sundays to save fuel.

Opposite:

The London Stock Exchange ca. 1983, when several industries such as Associated British Ports (AB Ports) were privatised. The "Big Bang" of 1986 was to transform the City with a subsequent wave of mergers and acquisitions, which also heavily affected the British insurance industry.



Swiss Re took the lead in developing new products that would tap into the capital markets to provide the necessary cover.

For investors ILS presented a welcome opportunity to invest in products that were not linked to conventional economic cycles and helped them diversify their investment portfolios.

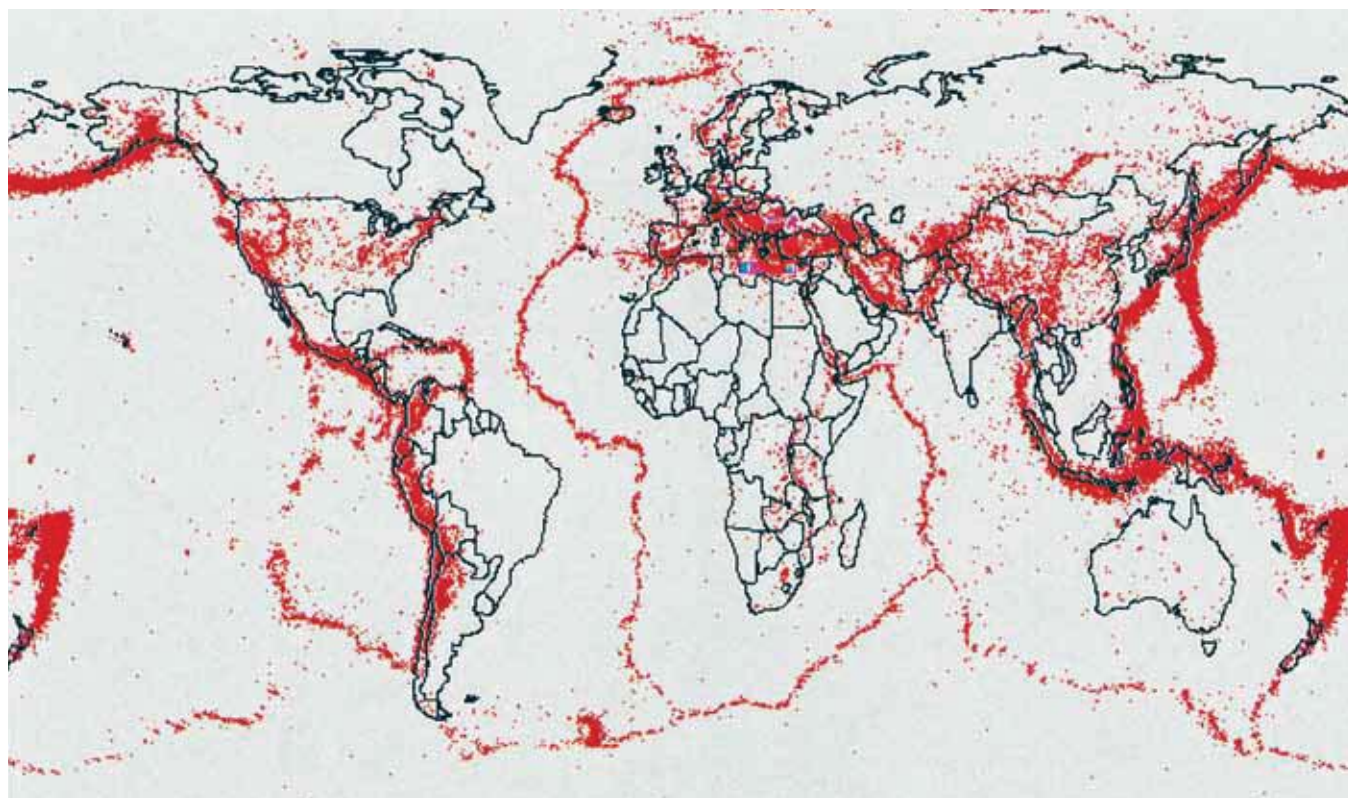
All in all, during the 20th century, the pace of globalisation quickened and rising Asian and Eastern European economies joined the competition. Insurance was in greater supply than ever to meet growing demand in existing and new markets. But risks, too, were becoming more and more global.

Towards the end of the 20th century the threat of a global collapse of computer systems caused by the so-called Y2K or millennium bug alarmed every single computer owner across the planet and businesses and government organisations even more. In the end it turned out to be a non-event. The risk had been overestimated, as had been the performance of many new-technology companies before the so-called dot-com bubble burst, causing a severe stock market crash.

Yet the largest man-made insured catastrophe of all times was to happen somewhere else and in a way that no-one had foreseen.

Below:

A print from Swiss Re's Natural Perils Assessment Program, 1997. Swiss Re invested substantially in developing software tools to help calculate premiums for insurance and reinsurance against natural perils based on event simulation and evidence of past activity.



Towards the end of the 20th century the threat of a global collapse of computer systems caused by the so-called Y2K or millennium bug alarmed every single computer owner across the planet.

Right:

Store in Singapore in December 1999 offering special deals for those worried about supply problems caused by the Y2K bug.

Below left:

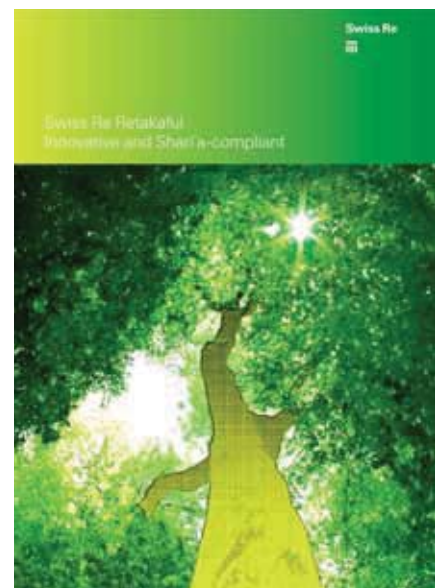
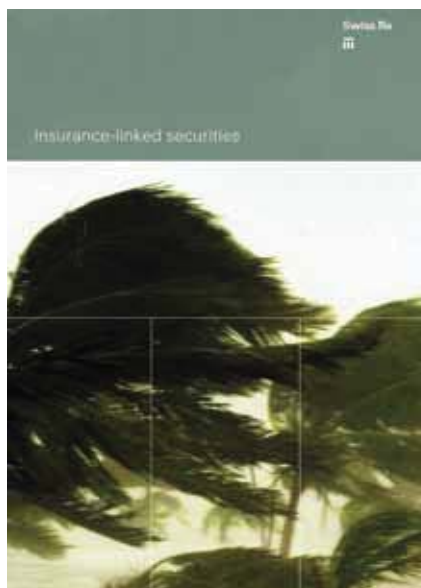
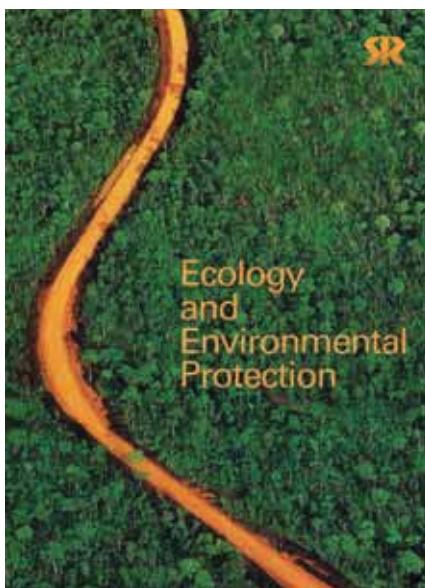
Swiss Re brochure on environmental protection, 1979. Liability issues for pollution had highlighted the need for the insurance industry to deal with environmental aspects. Swiss Re was among the earliest companies to provide in-depth studies of environmental impacts.

Below middle:

The size of insured losses from natural catastrophes had grown significantly for some decades due, among other factors, to the concentration of insured risks. In the wake of hurricane Andrew in 1992, Insurance Linked Securities became a viable addition to traditional reinsurance products. Swiss Re was and keeps being at the forefront in developing such products.

Below right:

Swiss Re retakaful brochure, 2010. Retakaful is a form of reinsurance that complies with the fundamentals of the Shari'a (Islamic law). It adheres to a Shari'a-compliant investment strategy and has an independent supervision board of Shari'a scholars.





A poor start for the 21st century

In many ways the new millennium began amid widespread optimism. The benefits of globalisation and technological progress were having a dramatic effect on the lives of millions around the globe, and brisk international trade signalled that the world's economy was growing.

However, this optimism was soon overshadowed by fear and uncertainty and the first decade of the 21st century was to epitomise the major challenges the industry is dealing with today: terrorism, financial crises, natural disasters, pandemics, longevity, and changes in the regulatory environment.

The terrorist attack of 11 September 2001 claimed the lives of almost 3 000 people, many of whom worked for insurance and other financial services firms. In addition to the tragic loss of life, 9/11 ushered in a period of persistent political volatility and global security concerns.

with little consideration for price and accumulation of exposure – terrorism cover was immediately withdrawn by all but a handful of specialist insurers. The aviation and property insurance markets, however, were quick to respond with alternative solutions, and the standalone terrorism insurance market was born.

The size and complexity of losses would force companies but also society at large to think differently about risk. Although the stock markets remained reasonably robust in the aftermath of 9/11, the attack brought the global economy to a grinding halt, due to uncertainty of the effect on stocks worldwide.

Insurers had to contend with unstable financial markets during this volatile period. The dot-com bubble preceding 9/11 and the ensuing political uncertainty of wars affected the investments of insurers and reinsurers, causing many to write down the value of their assets

Optimism was soon overshadowed by fear and uncertainty and the first decade of the 21st century was to become an epitome of the major challenges the industry has to deal with.

The insurance industry shouldered much of the economic burden. Insurers paid an estimated USD 23.8 billion, making 9/11 the most costly insured man-made disaster ever – and, at the time, the second most expensive insured loss after Hurricane Andrew.

Assessing the insured loss was a highly complex undertaking; large claims were filed for a number of seemingly unrelated risks including aviation, property, liability lines, business interruption and life insurance. Losses and potential exposures were not confined to New York, either – airlines were grounded, restrictive security measures were implemented and events were cancelled around the world.

Insurers realised they could no longer offer terrorism insurance on the same terms as in the past. Once offered as a blanket cover with property insurance – and

and reduce their exposure to equities. Some insurers, and European reinsurers in particular, embarked on an accelerated programme to strengthen their risk management, governance, and asset management. They fortified their systems to manage accumulations of risk and liabilities in their asset portfolios and developed the first economic models.

All of this occurred at the end of a soft market. Low rates and increasing liability claims had started to erode the profits of US insurers, and prices began growing firmer in some commercial lines. The losses of 9/11 accelerated this trend, and almost overnight the cost of insurance went up.

The hardening market for insurance helped restore profitability, but within four years the market was to face a second major catastrophe.

Opposite:

New York fire-fighters at Ground Zero one week after the attack.



Natural catastrophes

Katrina first made landfall as a Category 1 hurricane in Florida on 25 August 2005; four days later it came ashore again as a Category 4 storm. Katrina caused massive damage to New Orleans before moving inland to wreak havoc across the southern US.

At the time, Hurricane Katrina was the most expensive catastrophe ever recorded, with total losses of USD 135 billion. It has since been surpassed by the 2011 Tōhoku earthquake and tsunami which caused USD 210 billion in losses, although Katrina remains the most expensive insured loss at USD 75 billion.

Yet despite the magnitude of the losses inflicted by Katrina, the hurricane failed to bankrupt a single company. This was largely due to reinsurers who over the previous decades had specialised in providing cover for natural catastrophe

risks and had done so to a much greater degree than had other organisations.

Besides prompting a greater focus on analysing accumulated exposures, the hurricane was a boon to the growing catastrophe bond market, which enjoyed its best year ever in 2007, issuing some USD 8.5 billion of protection.

A series of large catastrophes in the past few years dramatically reminded the world of the need for reinsurance cover. The Chile earthquake in 2011, European windstorm Xynthia, floods in Australia both in 2011 and in 2012, the Canterbury earthquake in New Zealand, Hurricane Sandy and the largest insured loss in Japanese history, the Tōhoku earthquake and tsunami, were exceptionally severe tests of strength for the insurance and reinsurance industry.

Despite the magnitude of the losses brought about by Katrina, the hurricane failed to bankrupt a single insurance company thanks largely to reinsurers who over the previous decades had specialised in providing cover for natural catastrophe risks to a much greater degree than other organisations.

Opposite:

Monsoon rain in Mumbai, 2005.



Above:
Floodwaters from Hurricane Katrina in New Orleans, 2005.



Above:
The Chile earthquake 2010.



Above:
Flooded village in Southern Spain after windstorm Xynthia in 2010.



Above:
Tōhoku earthquake and tsunami 2011.



INVESTMENT BANK



Financial catastrophes, regulation, and a positive outlook

With a business model and regulation that is different from banks, insurers weathered the financial storm unleashed by the subprime mortgage crisis. Overall, the insurance industry has proved remarkably resilient to the problems of other sectors.

For the global banking sector, the financial crisis of 2008 was a catastrophe; for the real economy it brought on the most severe and dramatic decline since the Great Depression. Insurers, however, were better prepared. With a business model and regulation that is different from banks, insurers weathered the financial storm unleashed by the subprime mortgage crisis and failure of Lehman Brothers in 2008. Overall, the insurance industry has proved remarkably resilient to the problems of other sectors.

The crisis demonstrated how insurers are not exposed to the same liquidity issues as banks. Confidence in the insurance business model was reinforced. All the same, there were lessons for the sector – namely in regulation, risk management, and investment. Government bonds, for example, for decades a preferred low risk investment, could turn toxic very quickly, as the finances of sovereign states have come under increasing scrutiny.

Insurers caught in the financial storm of 2008 fell into two camps: financial guarantee insurers and those that had participated in banking-like activities such as credit default swaps and derivatives. However, the vast majority of insurers around the world experienced few issues besides the impact of volatile investment markets. And even at that level, previous financial crises had taught them the importance of rebalancing their portfolios, which to a degree mitigated underwriting losses.

To be sure, the crisis did have other implications for insurers. It alerted policymakers and regulators around the world to the need for consistent regulatory standards and increased cooperation between supervisors. It also reinforced the need for more robust risk management and governance, reflected in insurance regulatory reform mainly in Europe and the United States, which was to spread to other markets.

In the US, the Dodd-Frank Wall Street Reform and Consumer Protection Act brought sweeping reform of banking and established a Federal Insurance Office to collect data on insurers and recommend changes to state regulation of insurance.

European legislation lagged the US to some degree. In the mid-1990s the US had already adopted an overall risk-based model for capital requirements (RBC) in insurance companies. Europe at that time was still using the Solvency I system, largely based on the solvency regime which the EEC had put in place for insurers in 1973 and which mainly relied on defining capital requirements for insured risk.

But more sophisticated risk measuring models and methods had been made available over the thirty years prior, and so the Solvency II Directive was drafted with a much wider scope but also with a broader impact on insurers. This is because the costs of tighter capital requirements for insurance ultimately feed through to products but in some cases cannot be passed on to consumers.

Opposite:

An investor reads a newspaper at a private stock market gallery in Kuala Lumpur, Malaysia, January 2008.

More sophisticated risk measuring models and methods had been made available over the last thirty years and the Solvency II directive was drafted with a much wider scope but also with a broader impact on insurers. Increasing underlying capital for insurance ultimately results in more expensive products which cannot in all cases be passed onto consumers.



Although many countries around the world adopted the US-type risk-based capital regulatory system, the Solvency II directive has had a huge impact on insurers worldwide, even before its pending implementation. Not only in Europe, many states outside the EU are evaluating the Solvency II model with a view to adapting it for their use. In fact, the directive provides useful guidelines to setting up comprehensive enterprise risk management for insurers, but it may also prove very costly to implement.

Certainly, the Great Recession also reaffirmed some of the fundamentals of insurance and reinsurance: to understand the underlying risks, to challenge models that suggest the future will follow the past, and to think the unthinkable.

Today's issues and challenges for insurers are plentiful: ageing populations, natural catastrophes, pandemics, terrorism, energy solutions, financial stability, food security, or climate change are only the top of a long list that requires attention from insurers and reinsurers. Solutions can be found in both traditional products and in financing such risks on the capital market by means of securities. In essence, the art of risk management has remained the same over the last 150 years; what has changed is the complexity of those risks, their global distribution and their interdependency. But the many lessons that have been learnt over the long history of insurance and reinsurance have prepared the industry to cope with more challenges in the future.

Above:
The first EEC directive to regulate the insurance industry.

Right:
Medical advances have helped increase life expectancy, but with this good news come challenges in retirement financing. Governments, insurers and pension funds should work together to help plan for longer lives. Swiss Re has developed funding solutions to assist the insurance industry and pension funds in addressing their longevity exposure.

Far right:
Food security is one of the many challenges of the 21st century. Millions of people depend on agriculture for their livelihoods, but vulnerability to weather and climate-related shocks is a constant threat to their food security and well-being.



The value of reinsurance

Today, insurance is an integral part of our lives. Building a house, marketing a product, driving a vehicle, all would be unthinkable without taking appropriate insurance cover.

By contrast, reinsurance remains virtually unknown by the general public, even though it plays a key role in taking on risk and enabling economic growth and progress.

Reinsurance is “insurance for insurers”. It carries out one of the fundamental principles of insurance, namely that risks need to be spread as widely as possible. The more broadly they are shared, the more cost effective it becomes to cover them.

From the very beginning the reinsurance business was international, helping its clients offset their risks across the globe. Similarly, its breadth of activity

across lines of life and non-life business, let specialised insurers diversify their risks over a wider range. And through its long-standing client relationships, some dating back to the 19th century, a third dimension has opened up of distributing risk over extended periods of time.

Reinsurers accept risks of virtually every kind, from natural catastrophes to higher mortality and motor insurance to aviation liability. These risks are transferred to them by the primary insurers, who then need to keep less risk capital tied up and can write more business as a result.

As the premiums paid for reinsurance are invested via the financial markets, both primary insurers and reinsurers contribute significantly to the economy, which helps drive growth and benefits society in general.

Reinsurance naturally researches risks and the nature of risk more than any other part of the financial services industry. Knowledge accumulated over centuries today is harnessed in statistics and state-of-the art models to better understand the risks of the 21st century. This effort directly benefits clients and society as a whole.

And reinsurers are also an active voice in the public discussion on risk. For addressing the big issues of our time and coping with natural perils or epidemics, insuring large-scale projects and consumer products, and, ultimately, insuring our everyday lives, reinsurance has become indispensable.

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Swiss Reinsurance Company Ltd
Mythenquai 50/60
P.O. Box
8022 Zurich
Switzerland

Telephone +41 43 285 2121
Fax +41 43 285 2999
www.swissre.com

