

INTRODUCTION: TOWARDS AN INTERNATIONAL HISTORY OF INSURANCE

Robin Pearson

Preamble: Culture, Trust and Risk

Unlike commodity trades, where the object of exchange is visible and tangible, insurance is a business based entirely on trust and expectation. Money is handed over in return for a promise to pay back a larger sum in the future, contingent upon the occurrence of an uncertain event, or in one unique case – death – contingent upon a certain event occurring at an uncertain point in time. In the case of whole-term life assurance, for example, the insured by definition will not be around to ensure that his or her claim is paid. Trust in the individual or institution selling the insurance product therefore has to run deep. The purchaser has to have confidence that the product is fairly priced – a much more complicated problem than the pricing of most commodities – and that the insurer will remain solvent over the duration of the policy.¹ The seller has to have confidence that the risk taken is an insurable one and that the moral hazard embodied by the policyholder is at an acceptable level. Why, therefore, should such a business ever take place beyond the boundaries of local communities or outside close-knit groups characterized by high levels of transparency and reputational knowledge? How and why did this trust-based invisible product become traded over long distances and across political, ethnic, religious and cultural borders, and, since the early nineteenth century, in such vast quantities?

The short answer is the need to spread risk. But risk can be diffused in many ways, not all of which involve ‘modern’ forms of social security and insurance. For centuries poor communities in the Philippines have reduced the risks and limited the effects of typhoons and flooding through mutual assistance associations and forms of cooperation denoted by the Tagalog word *turnahan* – literally ‘doing a turn.’² Mutual aid includes cooperative irrigation and rotating credit societies. Less formal reciprocity includes collective actions (known as

bayanihan) such as helping with the rebuilding of houses after typhoons, moving houses onto higher ground before storms, and dam building to protect barrios from floods. Long-run data for the twentieth century suggests a close correlation between the *per caput* density of mutual aid associations and those regions with historically the highest frequency of disasters, so that the latter seems to have been the primary determinant of the former.

This example suggests that different political and cultural environments can shape attitudes to risk and levels of trust.³ With the exception of a few pioneering works on life insurance,⁴ historians have not really begun to explore how consumers and suppliers of insurance in the past have factored in world views and cultural bias when buying or selling cover against different types of risk. The relative balance of influence between cultural perceptions of hazards and scientific knowledge of hazards is likely to have changed considerably over time in different societies, according to a wide variety of external factors such as education, standards of living, lifestyle, economic structures and political institutions. Cultural theorists have begun to examine the ways in which popular perceptions of risk are culturally determined and impact upon power relations in a society, but little of this has found its way into insurance history.⁵ There is no space here to discuss cultural theory at any length, but its principal message warns us against assuming the inevitable triumph of scientific risk assessment with the global diffusion of Western forms of insurance. It also suggests there may be a strong path-dependent effect determining how national markets develop and respond to the arrival of suppliers of insurance from other nations and other cultures. The great variety of such markets and the institutional vehicles through which different forms of insurance have been delivered is highlighted in the survey below.

The Rise of National Markets

Marine and Inland Transport Insurance

The protection of goods and people in transit provided an early motive for various types of mutual association offering non-actuarial forms of insurance. From the middle ages there were, for instance, mutual societies of shipowners in Chinese ports and armed escort services for trade caravans passing along bandit-infested roads between Chinese provinces.⁶ Similarly, merchants in the Habsburg territories paid fees for the military protection of trade convoys travelling along designated routes, the so-called *Geleitregal*, formalized by the imperial law of Henry VII in 1231.⁷

The insurance of ships and their cargoes, however, was the earliest form of premium insurance and, from the outset, the most international. Ocean shipping usually passed between borders and operated under internationally accepted legal codes. Nevertheless, one can still speak of national markets in so far as

recognized centres of marine insurance emerged in different states, and were subjected to taxation by their respective rulers. Such centres were first strung out along the northern Mediterranean, Italian and Adriatic coasts. By the 1600s there were also specialist communities of insurance brokers in London, Antwerp, Amsterdam, Bruges and Hamburg. In London some 150 private marine underwriters were joined in 1720 by two new chartered monopoly companies, the Royal Exchange Assurance and the London Assurance, but these failed to displace the underwriters operating out of Edward Lloyd's coffee house. By this date the London market had extended to include the slave trade and so-called 'cross risks', that is ships or cargoes travelling between two or more foreign destinations outside the United Kingdom.

While private underwriters and brokers continued to operate in many ports, some European states moved to found national institutions for marine insurance. In France, there was an unsuccessful attempt to promote a monopoly company for marine insurance in 1686.⁸ Genoa, Copenhagen and Naples successfully established state monopoly companies between 1742 and 1751. Private companies undertaking both marine and fire insurance also appeared, beginning in Antwerp in 1756. Hamburg and Trieste also developed into major centres for private marine insurance companies. The first Trieste company was launched in 1766 and doubled as a credit bank for local merchants.⁹ Like marine insurance, inland transport insurance was also essentially international. From the late 1760s Trieste fire and marine companies, for example, insured grain and tobacco in transit over land and on river from Hungary to the Adriatic port.¹⁰

Several points can be made about European marine insurance. First, there were multiple organizational forms at an early stage. There were individual underwriters, operating through brokers, as in Lloyd's, perhaps doing the bulk of the business before 1850. There were state monopoly insurers and quasi-monopoly private companies incorporated by the state. There were small private partnership companies and large private joint-stock companies and there were numerous private mutual insurance associations of shipowners. This mixture of organizational forms continued, with some variation in its composition, throughout the nineteenth and twentieth centuries, at least until the collapse of the traditional Lloyd's system of underwriting in the 1990s. The diversity and flexibility of form probably helped marine insurance deliver protection against losses at sea even when one or more particular types of organization were forced to contract or withdraw from the market, due to regulatory barriers or a lack of competitiveness. For example, when the two London chartered companies withdrew from the 'cross risk' business during the Napoleonic Wars, alarmed by the lack of information from overseas, underwriters at Lloyd's quickly moved in to supply that market. Second, in the Mediterranean ports, though less so in northern Europe, marine insurance,

especially in its corporate forms, was closely associated with banking and the provision of commercial credit, and for this reason was encouraged by mercantilist states. This may, however, have added to the volatility of insurance markets in southern Europe and helps explain the high failure rate of marine companies there during the later eighteenth century, although further research is required to substantiate this. Third, regardless of the way it was organized, marine insurance – and other forms of transport insurance to a lesser extent – contributed greatly to the international diffusion of insurance practices. Merchants in eighteenth-century Trieste readily moved their insurances to underwriting centres abroad to obtain cheaper rates. Some of the early stock companies appointed agents or established subsidiaries outside their home territory. Fourth, marine insurance contributed little to actuarial techniques. The risks were non-standardized – by route, by composition of cargo, by type of ship – and underwriters worked largely by instinct, experience and rule of thumb, assisted, importantly, by an increasing flow of information about shipping risks. Some of this information was formally organized in *Lloyd's List* (1734) and *Lloyd's Register of Shipping* (1760), but much of it was passed by word of mouth on the floor of Lloyd's coffee house or among the communities of brokers in ports such as Liverpool, Bristol, Hamburg and Antwerp. This enhanced the problem of adverse selection that was faced by the two London marine insurance corporations in their unsuccessful struggle to compete with Lloyd's, as the corporations did not enjoy access to the same volume and quality of information.¹¹ By the beginning of the nineteenth century the corporations accounted for less than 5 per cent of the £137m estimated to be insured on marine risks in London.

The chartered monopolies of the two London corporations were finally repealed in 1824. During the 1860s new companies were formed in London and Liverpool that benefited from the huge transfer of American marine business to Britain during the American civil war. By the 1870s stock companies had acquired around 40 per cent of the UK marine insurance market. Lloyd's responded by diversifying into other lines, creating a host of new products and expanding others in general insurance, including burglary, loss of profits, credit, professional indemnity, boiler, engineering, bicycle, motor car and aviation insurance. In Britain the large fire insurance companies followed suit, taking over existing accident offices to create giant composite insurance enterprises.¹² Around 1850 there were just six lines of accident insurance available in Britain, Europe and North America. By 1914 this had risen to about fifty.¹³ The benefits of the new types of insurance had to be explained to agents and vigorously sold to customers. In doing so, the level of inventiveness in marketing and product design rose to new heights. Personal accident insurance, for instance, was sold in Britain and America through

slot machines placed at railway stations and hotels. In 1895 a Philadelphia company launched a 'perfection blanket policy', which covered within one contract employers' liability, public liability, steam boiler, elevator, sprinkler and team liability insurance.¹⁴ Liability and accident cover was to become one of the huge growth areas of international insurance during the twentieth century.

Life Insurance

Long before the appearance of actuarial life insurance, the pooling of funds to provide compensation for the costs of death was widely practised. In the later Roman Empire burial societies provided a lump sum to the relatives of deceased members. Similar types of burial provision also occurred among the guilds and fraternities of medieval Europe and Tokugawa Japan, sometimes extended to include mutual protection against other hazards such as losses by fire, confiscation, capture, robbery and theft of cattle.¹⁵ The medieval *Knappschaften*, for example, were formed to provide miners in Germany and Austria with sickness, accident and death benefits. By 1850 they had become compulsory in the German mining industry.¹⁶ To same category belonged the growing number of widows' benefit societies in eighteenth-century Europe. These provided a widow and her children with a perpetual annuity upon the death of her husband, against the payment of regular contributions by him during his lifetime. In some places, the state not only authorized such ventures, but also participated directly in them, most notably in taking over the role of religious organizations in providing pensions and disability and infirmity allowances for certain groups of its key employees, beginning with soldiers.

The insurance of lives began in the fourteenth-century Mediterranean as a by-product of marine insurance when policies on ships and cargoes were extended to cover passengers or slaves on board. On *terra firma*, however, life insurance first appeared in the form of wagers on the lives of rulers and popes, a business that many states soon found morally and politically offensive. In Spain, insurance gambling, including all forms of life insurance, was suppressed by the Ordinances of Barcelona in 1435, the first codification of insurance law. Amsterdam, Middleburg and Rotterdam passed similar prohibitions between 1598 and 1604, Sweden did so in 1666 and France in 1681 (with the notable exception of ransom insurance sold to travellers planning to sail in pirate-infested seas).¹⁷ By contrast in England, following half-hearted attempts by Elizabethan and early Stuart governments to regulate the business, life insurance came to operate entirely beyond the reach of state supervision. Wagers on lives were eventually banned in England under the 1774 Gambling Act.

Where there was the prospect of adding to the public treasury, however, governments were prepared to endorse life insurance in the form of tontines. The tontine was a contribution scheme in which annual payments were shared out among surviving members. The first tontine plan was devised by Lorenzo Tonti in 1652 to raise revenue for the French royal treasury. Some thirteen tontines were launched by Dutch towns in the 1670s as a means of increasing municipal revenue.¹⁸ Tontines were used by the French state to generate revenue until they were finally banned for this purpose in 1763, but private tontine schemes quickly took their place. Similar tontines were found in other European countries. In Germany they were used to finance the military spending of many small states.

None of these schemes relied on *a priori* pricing, risk assessment or classification yet, despite their resemblance to speculative forms of insurance, private mutual schemes, such as contributionships, tontines and reversionary annuities, continued in England and parts of Europe throughout the eighteenth and nineteenth centuries. Between 1696 and 1721, for instance, some sixty mutual life insurance schemes – mostly short-lived – were launched in London. Life insurance in England was also sold on a premium basis from 1721 by the two new marine insurance corporations, the Royal Exchange Assurance and the London Assurance, both of whom acquired the right to sell fire and life insurance under additional charters.¹⁹ These offered fixed fee and fixed benefit plans, in which, unlike the tontines, company profits were dependent on correctly predicting the future mortality of policyholders. This was a more risky business for underwriters than the older and simpler redistributive schemes, in which price was determined *a posteriori*. With just these two premium-based life insurance ventures in England, it was difficult to distribute risks widely enough to offset the uncertainties in accurately estimating the mortality of policyholders. Although eighteenth-century life insurance managers were well aware of the various mortality tables in circulation, calculations of age-specific mortality remained highly problematic, not least because contemporary estimates of the underlying population were so varied. As a rule of thumb life insurers widely assumed that a fairly constant rate of mortality prevailed among younger and middle-aged adults, assumptions that persisted until the end of the century, notwithstanding the introduction of age-specific premiums by the Society for Equitable Insurances on Lives and Survivorships (1762).²⁰

In sum, English life insurance initially developed on a non-premium non-actuarial basis, with variable or fixed contributions and benefits distributed according to mortality. At the end of the century, however, a number of new premium-based life assurance companies appeared, some funded mutually, some by joint-stock, and the industry began to take off. By 1850 some £150m was insured by 141 stock and 42 mutual offices. By 1914 £870m was insured in 94

offices, a growth rate that outstripped that of the UK population and national income.²¹ By 1890 life assurance in the UK had become a mass market, with about 1m Britons holding ordinary life assurance policies, and a further 9.9m holding small industrial assurance policies, together about 30 per cent of the population.²² Similar developments can be seen at this time in other major industrializing economies. In Germany, for example, life insurance premiums increased from RM 86m in the 1880s to RM 278m by the 1900s.²³

Fire Insurance

The growth of different forms of financial protection and the expansion of public and private welfare provision in early modern Europe can be judged a major innovation, not in actuarial science or underwriting techniques, but at least in improved levels of security for private property and incomes. The same holds true for what became the largest branch of insurance. Fire insurance developed directly from the medieval tradition of ‘briefs’, official letters authorizing *post hoc* collections, sometimes compulsory, for the relief of victims of fires. In England the collections rapidly died out in the wake of the rise of private fire insurance at the end of the seventeenth century. In several European states they came to be regarded as an obstacle to the development of public fire insurance funds and were banned.²⁴

Across central Europe from the early seventeenth century peasant insurance unions – so-called *Bauernmassesicherung* – also became widespread, in which villagers helped their neighbours with materials, labour and money to rebuild their houses and farm buildings in the aftermath of fires. This was a mutual aid institution, similar in principle to the *turnahan* system in the Philippines noted above. During the nineteenth century, as estate property rose in value, the number of insurance unions grew. Local authorities began to worry about the flight of rural customers away from the public fire insurance associations that charged high rates for farmers’ thatched and wooden buildings, towards the unions that operated with almost zero administrative costs. In Austria, for example, there were around 300 farmers’ insurance unions with 320,000 members in the late 1880s, although numbers subsequently declined.²⁵

In towns there developed public associations for the insurance of buildings. The first, and one of the most successful, was established in Hamburg in 1676, the Hamburger Feuercasse.²⁶ There was no compulsion on existing householders to join the fund – full compulsion was first introduced in 1817 – but whoever built a new house or bought or inherited a house was required to join within six months. In the event that the fund was insufficient to cover payments for losses, members were liable for further calls at rates proportionate to the sums they had insured. The fund was also used to pay the medical bills of citizens injured

fighting fires or lifetime annuities to those rendered permanently disabled, and the burial costs of the victims of fires.²⁷ The Hamburger Feuerkasse provided a model for others to copy. Public buildings insurance associations were formed in nearby Harburg in 1677, in Magdeburg in 1685, in Berlin in 1718 and across the rest of Germany during the course of the eighteenth century.²⁸ In Copenhagen a public fire insurance association was started in 1731. In Stockholm the Brandförsäkringskontor was founded in 1746.²⁹ In Switzerland buildings insurance was organized by canton and by city, beginning with Zurich in 1782. Public buildings insurance associations were mostly local in scope, though sometimes they covered larger territories and, unlike Hamburg before 1817, insurance of buildings was usually compulsory except for a few privileged, often tax exempt, groups. They were essentially extensions of state bureaucracy and revenue systems, managed by civil servants. No actuarial calculations were involved. They mostly charged flat fees for all types of property, which were paid in same way as a tax, and they had no profit considerations.³⁰ Accumulated funds were used, first, to pay for the rebuilding of property destroyed by fire – there was often an obligatory rebuilding clause attached to policies – and, second, to supplement other public spending.

As cities expanded during the nineteenth century and the value of urban property grew, the public associations increasingly suffered from a lack of funds to cover their liabilities. There were concerted attempts to consolidate the many small associations into larger institutions, but as late as 1880 there were still 72 public fire insurance associations across Germany, many of them confined to individual towns. For these and other reasons, the market opportunities in Europe for private for-profit fire insurance increased quickly during the first half of the nineteenth century. With the growing influence of liberal reformers in *ancien régime* governments, traditional suspicions of private enterprise in fire insurance began to wane. In Prussia, a wave of company foundations commenced under the Stein-Hardenberg ministry with the Berliner Feuerversicherungsanstalt of 1812, followed by other stock and mutual companies in Leipzig, Elberfeld, Gotha, Aachen and Cologne between 1819 and 1839. In 1836 the requirement for property owners in the Prussian provinces to insure their buildings in the public societies was abolished. Most other German states eventually followed suit. In Russia the first private fire insurance company was authorized in St Petersburg in 1827. In France five new enterprises were founded for fire insurance between 1819 and 1829.³¹ In Austria an imperial decree of 1819 established a more congenial environment for private fire insurance companies. Five stock companies were founded between 1822 and 1847. Private mutual societies were also founded in Vienna, Graz and Brünn.³²

Progress was not smooth for this first generation of European private insurance companies. First, the level of state regulation and police supervision

continued to be high in several states, which preferred to keep a close rein on their markets via obligatory licensing and reporting systems for companies and their local agents, fines for over-insurance, and a police approvals procedure for those wishing to take out an insurance policy. Second, inadequate risk classification remained typical. Where premium calculations were based on inadequate statistics, company reserves often proved insufficient to cope with large fire events, as the bankruptcies and financial crises in several early Austrian companies demonstrated. Third, the old banking and credit functions inherited from marine insurance remained in some areas of European fire insurance, which may have contributed to the volatility in the performance of the early companies. The 1812 constitution of Berliner Feuerversicherungsanstalt, for instance, stipulated that its share capital could be used to issue loans against good securities.³³

Through to the end of the nineteenth century some states continued to support the public insurance associations, partly for ideological reasons. In several countries there was a persistent risk of the nationalization or the renationalization of individual branches of insurance, and in some places buildings insurance monopolies survived. In Germany from the 1860s the public fire insurance associations conducted something of a fight-back against the private sector as they formed new national associations to represent their interests and lobbied hard for the nationalization of the insurance industry, winning powerful supporters, notably Otto von Bismarck.³⁴

The situation in central Europe stood in sharp contrast to Britain and Ireland, where the state played little other than a fiscal role in insurance, and to the United States, where the ease of incorporation facilitated a rapid increase in the numbers of private companies. There were 30 fire insurance companies in the UK by 1800. By 1850 the number had risen to 70, the great majority organized as joint stocks. The capital invested in English fire insurance offices accounted for 0.8 per cent of national income of England and Wales in 1800, but 2.4 per cent by 1850. Sums insured against fire rose from £206m to £730m, growth being especially rapid after 1815, helped by rising competition and a steep fall in premium rates.³⁵ In the US in 1850 there were some 99 companies writing fire, marine and inland transport insurance, earning cash premiums of \$6m in 1850. By 1890 there were 827 such companies with a premium income of \$157m.³⁶ During the first half of the nineteenth century most American companies remained local in scope, either insuring within their home state or extending their agencies cautiously to neighbouring states. This strategy facilitated the close personal monitoring of agents by the company's officers. There were also legal restrictions, such as hefty deposit requirements and high levels of taxation, in many eastern states, limiting the scope for insurers from out-of-state or abroad. This deterred British entry into the US until the great fire in New

York (1835) persuaded state legislators there to relax their punitive regulations on foreign insurers.³⁷

As with marine and life insurance, the growth of fire insurance in Britain, Europe and North America led to a proliferation of organizational forms and widely varying market structures. In the markets dominated by private insurance, there was a fundamental line dividing the market between mutual and stock companies, a line that shifted over time partly as the result of fierce competition. Our data is far from complete but some examples illustrate the point. In France, where the state looked kindly on mutuals as not-for-profit organizations, there were 30 joint stock companies and 43 mutual societies underwriting fire insurance in 1878. The market share of the latter, however, was in decline for much of the second half of the century, falling from 27 per cent of net premiums in 1850 to just 9 per cent by 1889. In Finland in 1893, four mutual companies accounted for 57 per cent of sums insured against fire.³⁸ In Sweden, mutuals accounted for 38 per cent of fire insurance in both 1887 and 1913.³⁹ Within the mutual sector there were often also important differences between large regional or national companies and small and highly localized cooperative associations. In the Netherlands, there were 281 companies in the fire insurance market in 1910, including 72 national stock companies, 36 large mutuals, 21 provincial companies organized either as cooperatives or joint stocks, and 127 local associations, demonstrating how complex a European market could be, even where, as in the Netherlands, there were no state institutions competing.⁴⁰

In countries with a large public fire insurance industry, the market structures were even more fractured. In Russia in 1885 there were 14 stock companies and 174 mutuals writing fire insurance. The latter comprised 79 *gouvernement* institutes, 50 provincial associations and 45 municipal societies, plus several captive mutuals organized by industrial groups, such as the Kiev Union for the Insurance of Sugar Refineries. In 1890 the various types of public and private mutuals together accounted for 36 per cent of fire insurance premiums.⁴¹ In 1878 in German fire insurance there were 28 stock companies, 20 private mutuals, 71 public mutual institutions (*öffentliche Anstalten*) and, in Prussia alone, some 247 local mutual unions (*Vereine* and *Verbände*), plus a small number of foreign companies.⁴² The local mutual unions were very small, but the larger public and private mutuals together accounted for over 50 per cent of total premiums, and they managed to maintain most of this market share through to the First World War.⁴³

In some places, the number of mutual organizations for fire insurance appears to have fallen during the second half of the nineteenth century, and sometimes this was accompanied by a collapse in market share. In New York state in 1859, 28 mutual companies accounted for 24 per cent of fire insurance premiums. By the early 1870s there were seven New York mutuals left, and they held only about 2 per cent of the market. Here the mutuals were squeezed by the growing

competition from native stock companies and foreign corporations, and they also suffered from a tide of public criticism of mismanagement and fraud.⁴⁴ This, however, was not the case everywhere. In Upper Canada farmer's mutuals were first organized in the 1830s and seem to have gone from strength to strength. There were more than 150 mutuals in the Canadian market by 1900, some of them very small, others doing 'a considerable business'.⁴⁵ At present we can only discern such national trends from fragmented data. We are not yet in a position to explain them, but it is clear that there was no simple linear movement towards the dominance of fire insurance markets by private stock companies before 1914.

The Development of International Insurance in the Long Nineteenth Century

Outside the marine insurance market, the first insurance company to export abroad was the Phoenix Fire Office of London. This was founded as a joint-stock venture by a group of London sugar refiners in 1782 and immediately began to use its transatlantic and European trading connections to insure property overseas. Some of these risks were insured by their owners directly in London, for which purpose the Phoenix opened a 'home-foreign' department, but the company also established a network of overseas agencies. By 1815 the Phoenix had made 42 agency appointments in the Iberian peninsula, north-west Europe and the Baltic, in North America, the West Indies, Buenos Aires and the Cape. By the 1820s over half the Phoenix's total premiums came from abroad.⁴⁶ Other new British companies with overseas trading connections followed. The Imperial Fire Office set up agencies in the West Indies and also insured mercantile property around Europe from St Petersburg to Gibraltar. The Alliance Assurance, founded by the Rothschilds in 1824, tracked the *Phoenix* around the Caribbean and North America, and also benefited from its founders' powerful financial connections in Europe. By the early 1830s, 45 per cent of the Alliance's fire insurance premiums came from abroad.⁴⁷ As more and more of the domestic market was covered by insurance, companies looked to expand more rapidly overseas. By 1913 the home market accounted on average for only about one-third of UK companies' gross premiums from fire insurance.⁴⁸

Although the British offices were its principal drivers, the early phase in the international diffusion of fire insurance, marked by agency and 'home-foreign' business, also witnessed cross-border operations by the new generation of private companies in Europe. Following its foundation in 1824, the First Austrian company of Vienna, for example, was quick to move across the borders of the Hapsburg Empire to do business in Bavaria, Saxony, Hanover, Mecklenburg, Bremen, Schleswig-Holstein and northern Italy.⁴⁹ The Riunione Adriatica di

Sicurta of Trieste was operating in Greece, Prussia and Switzerland within a year of its foundation in 1839.⁵⁰

A third means of exporting fire insurance developed in the mid-1820s, when bilateral reinsurance treaties began to be struck between British insurers and some of the new German, French, Belgian and Russian companies.⁵¹ From Europe, North America and the West Indies, fire insurance spread to British India, China and the Malay Peninsula during the 1830s and 1840s, largely through the agencies of British insurers, although local companies were also set up by colonial merchants in Bombay and Canton.⁵² After 1850, led by the large British companies, fire insurance penetrated Australia, New Zealand, South Africa, Asia, Latin America, the Middle East, Spain and the Balkans. Joint ventures were sometimes organized between firms to share the risks of entry into a foreign market. More often, however, reinsurance was employed to operate in markets where it was difficult or illegal for foreign companies to insure directly. By the 1870s reinsurance constituted an important pillar of international fire insurance. For some offices it provided a means of generating revenue from foreign markets without the expense of establishing their own agency network, or of paying for the services of a general agency firm. In some markets, reinsurance supplied from abroad proved essential to local firms wishing to expand their underwriting capacity. In 1896, for example, 53 per cent of the fire insurance premiums earned by the eight Norwegian stock companies were reinsured. The comparative figure for Russian fire insurance companies in the 1870s was 60 per cent.⁵³ The reinsurance trade, however, was invariably reciprocal, so that companies from smaller insurance nations could become heavily involved, sometimes dangerously, in foreign risks without leaving their own shores. Commentators remarked with concern in 1904 that 35 per cent of the gross fire insurance premiums earned by Russia's thirteen stock companies came from accepting reinsurances from abroad, mostly from western Europe and the United States.⁵⁴

A final phase in the international diffusion of fire insurance began around 1880 with the increasing establishment of subsidiary companies in overseas markets by British and European companies, and the growing number of acquisitions of native offices by foreign companies. These developments were stimulated by the need to circumvent the growing tide of protectionist legislation and taxation that discriminated against non-domiciled companies. The rising costs of doing business at a distance through brokers, commissioned agents or general agency firms was probably also a factor. As the above survey suggests, there was a wide range of methods by which insurance was sold across borders during the nineteenth century. Pearson and Lönnborg have identified at least ten different vehicles employed by companies to export fire insurance before the First World War.⁵⁵

The range of nations involved in the export of fire insurance by the later nineteenth century was also remarkable. Although British exporters were most

numerous almost everywhere, many markets experienced a diversity of foreign entrants. In 1879, for instance, there were 50 foreign fire and marine insurance companies operating in California, namely 22 British, 8 German, 5 Swiss, 5 Chinese, 4 New Zealand and 1 Austrian.⁵⁶ The share of national markets captured by foreign entrants varied considerably. Pearson and Lönnborg have compiled data for 21 markets in 12 countries during the period 1870 to 1914, covering fire, marine, inland transport, non-life or all branches of insurance as the sources allow. They found that these markets were divided almost equally between those characterized by low import penetration levels, such as Germany, Japan and Sweden, where less than 30 per cent of fire and marine insurance was done by foreign companies, and those, such as fire insurance in Canada, Finland and the Netherlands, where foreign insurers captured more than 30 per cent of the market. Only 3 of the 21 markets crossed the 30 per cent threshold during this period.⁵⁷

Of course, import penetration was complete in developing economies without local firms or state monopolies, such as Romania before 1868, Japan before 1879, Turkey before 1893, Egypt before 1900, and much of Central America, the West Indies and south-east Asia before the First World War. Nevertheless, in the markets where native insurance companies were successfully established, the domination of foreign insurers generally diminished over time. In some places this was partly due to the hostility to foreign competitors taking premium revenue out of the country. In the Habsburg Empire, for instance, nationalist politicians were prominent in the foundation of the first native insurance companies in Hungary, the Czech lands and Rumania. The manifestation of Hungarian nationalism in insurance forced a response from the Austrian companies operating there. In 1857, for example, the *Riunione Adriatica di Sicurtà* converted its Budapest agency into a Hungarian-speaking office at a time when the accepted language of business was German, issued its policies in Hungarian and appointed Hungarians to its sub-agencies.⁵⁸ We do not know much about the growth of native companies in emerging economies since the late nineteenth century, however, it is clear that early efforts were made by many of them to move into the export business. Four fire and marine insurance companies from New Zealand, for instance, set up operations in California between 1875 and 1882. In the latter year two of them also joined a syndicate with an Australian company to do business in the UK.⁵⁹

As yet we have only limited data with which to compare the growth of property insurance across different markets and in relation to the development of national economies before 1914. Fire insurance premiums in England grew much faster than national income or population between 1760 and 1850,⁶⁰ and, as Tables I.1–2 show, the British fire insurance industry continued to outstrip demographic and economic growth during the second half of the nineteenth century, although this impressive performance owed much to the growing level

of insurance exports. However, while *per caput* fire insurance increased in all the nations listed in Tables I.1–2, the insurance industry did fail to keep pace with economic growth in some of these countries when they were growing particularly rapidly, such as Germany and France before 1900 and the United States after 1900.

Table I.1: *Per caput* Fire Insurance Premiums in Five Countries, 1850–1912 (US \$ current).⁶¹

| Year | France | Germany | Britain | Japan | US |
|---------|--------|---------|---------|-------|------|
| 1850/1 | 0.15 | 0.27 | 0.35 | – | 0.26 |
| 1882 | 0.54 | 0.56 | 1.69 | – | 1.71 |
| 1900/2 | 0.62 | 0.78 | 2.43 | 0.04 | 2.40 |
| 1910/12 | 1.05 | 0.99 | 2.84 | 0.09 | 2.86 |

Table I.2: Net Fire Insurance Premiums as a Percentage of GDP.

| Year | France | Germany | Britain | Japan | US |
|---------|--------|---------|---------|-------|------|
| 1850/1 | 0.20 | 0.62 | 0.23 | – | 0.23 |
| 1882 | 0.37 | 0.60 | 0.98 | – | 0.70 |
| 1900/2 | 0.37 | 0.55 | 1.14 | 0.14 | 0.97 |
| 1910/12 | 0.43 | 0.58 | 1.20 | 0.19 | 0.75 |

As the legal proscriptions on life insurance in Europe were gradually lifted during the early nineteenth century, this also became an export business, although to lesser extent than fire or marine insurance. Here too the British were pioneers. The Pelican Life Office, founded in 1797, insured British and foreign nationals residing abroad, and military personnel travelling overseas. The Gresham Life, founded in 1848, established branches and agencies in France, Belgium, Germany, Austria, Hungary and Spain, as well as Canada, Egypt, India and South Africa. Few British insurance companies, however, were formed as specialist life exporters. Large composites, such as the Royal and the Liverpool, London & Globe, captured overseas life insurance business through their network of fire insurance agencies, but the general pattern was one of early British entry followed by decline as local companies squeezed the British out. In the United States, competition from local mutuals and stricter regulation of foreign life insurers from the 1850s discouraged UK life offices. A dozen British offices established agencies there between 1844 and 1854, but their market share dropped from 7 per cent in 1855 to just 2 per cent ten years later.⁶² In Canada, Australia and South Africa British life insurance fared better and acquired a large market share in the decades after 1850, but by 1914 that share had also declined with the rise of native offices.

During the nineteenth century, therefore, British life insurance never achieved the powerful foothold in world markets enjoyed by its fire and marine counterparts. The most vigorous exporters of life insurance before 1914 were

undoubtedly three New York offices, the Equitable, the Mutual Life and the New York Life. During the 1870s and 1880s this trio pushed their way into Europe and Latin America with adventurous sales strategies and cheap tontine-type endowment products, supported by a flow of investment income from high interest funds and mortgages back home, but they were met with fierce hostility by the native offices and regulators in many of the countries they operated in.⁶³ They were eventually forced to wind up much of their overseas operations in the wake of the New York senate investigations of 1905 and the subsequent restrictions on their investment activities. They seem to have captured a significant share of some foreign markets, but by the First World War this had begun to decline. In 1914, for example, they earned less than £1m of the £31m total ordinary life premiums in the UK.⁶⁴

As in fire insurance, the rise of native companies made the export of life insurance more difficult before the First World War. In Japan, for example, thirty native life offices were competing with five foreign insurers by 1911. The latter accounted for just 12 per cent of total life business in Japan.⁶⁵ Switzerland witnessed a huge growth in life insurance – by 1880 it had the second highest level of *per caput* insured of all the countries listed in Table I.3. This expansion, however, was accompanied by a decline in the foreign share of the market, from 57 per cent of premiums in 1886 to 45 per cent by 1912.⁶⁶

Table I.3: Life Insurance in Twelve Countries, 1860–90 (£m insured).⁶⁷

| Country | 1860 | 1890 | Number Insured per 100,000 Inhabitants in 1880 |
|---------------|-------|--------|---|
| UK | 170.0 | 550.8 | 2659 |
| USA | 35.4 | 840.6 | ? |
| Germany | 15.9 | 215.6 | 148 |
| France | 9.2 | 160.1 | 68 |
| Austria | 5.2 | 75.1 | 80 |
| Russia | 1.2 | 25.8 | 23 |
| Belgium | 0.9 | 3.0 | 213 |
| Holland | 0.5 | 11.4 | ? |
| Switzerland | 0.3 | 11.2 | 1,313 |
| Italy | 0.1 | 5.2 | 30 |
| Australia | – | 40.0 | – |
| Canada | – | 24.8 | – |
| Rest of world | 0.7 | 28.4 | – |
| World total | 239.4 | 1992.0 | – |

Table I.3 charts the eight-fold increase in life insurance around the world during the late nineteenth century, but also indicates how uneven that process was between countries in terms of *per caput* coverage. In 1869 the US accounted for 44 per cent and the UK 37 per cent of the total sums insured on lives. These

shares inevitably changed as national insurance industries grew at different rates. By 1925 the US had risen to two-thirds of global life insurance premiums, but the UK had fallen to just 10 per cent.⁶⁸ At the end of the twentieth century, the UK share of the world life insurance market remained almost the same, but the US share had fallen to 28 per cent, equal to the share held by Japan.⁶⁹

What Factors Promoted or Obstructed the Global Diffusion of Insurance?

During the nineteenth and twentieth centuries innovations of different types both facilitated the spread of risk and also gave rise to new risks. Material innovations that helped reduce or eliminate hazards have been legion. These include the replacement of timber with brick, iron and steel in construction, the substitution of candles by gas and electric lighting, the introduction of traffic lights and road signs, and the development of antiseptics and antibiotics. Some of these were supported by state regulation, such as public health and factory inspection, building controls, and public welfare systems to provide support for citizens in times of sickness, unemployment and old age. Some materials and technologies, of course, have also increased risks or created new ones: the steam engine, electricity, the motor car, nuclear power and asbestos spring to mind.

Information innovations have also been important in reducing risk and facilitating the spread of insurance. There are countless examples of the interplay between information technologies, the reduction of the costs and risk associated with distance, and the growth of insurance. These include the telegram and telephone, weather stations, surveying and mapping, and modern data processing that has speeded up rating and loss adjustments and reduced insurers' costs.⁷⁰ Was international insurance, however, simply an offshoot of technological innovation, economic development and the expansion of world trade? Or did it possess its own dynamic and create its own markets? To address these questions we also need to examine the supply side: why do firms move insurance across borders? The theoretical literature on multinational enterprise (MNE) offers a variety of possible answers.⁷¹ A firm may move abroad to avoid losing market share to another domestic competitor expanding abroad. There is support in the insurance evidence for this. The profits made by British and German fire insurance companies that had already crossed the Atlantic encouraged others to enter the United States in the 1880s and 1890s, leading contemporary observers to criticize the 'follow my leader' mentality.⁷² Some firms adopt a market-seeking strategy, establishing businesses in areas without any direct relation to existing customers or competitors.⁷³ This was not true of the first British insurance exporters, who used their founders' existing trading connections to determine the initial pattern of their overseas business. A market-seeking strategy, how-

ever, became more attractive during the nineteenth century when transport and communications improvements provided greater access to new customers and greater managerial control over operations at a distance. Structural market failure has also been posited as an explanation for multinational enterprise.⁷⁴ Direct investment abroad was often the consequence of having to jump tariff barriers. Protectionism could both push and pull insurance companies across borders. Establishing a subsidiary from scratch in a foreign land, or purchasing a native office and then continuing to operate it under its own name, usually retaining the previous managers and staff, were devices motivated, at least in part, by fear of restrictive or burdensome regulation.⁷⁵ From the 1880s this was a common practice for foreign insurers operating in the United States, and to a lesser extent in Europe. State restrictions on direct underwriting by foreign companies, such as the legislation passed in Prussia in 1837 and in Russia ten years later, also encouraged the use of foreign reinsurance by native companies.

Local production also gave foreign companies a greater sensitivity to local tastes and enabled them to respond to local market needs more quickly. New firms lack information and experience, so their risky first ventures are usually into relatively familiar low-risk foreign environments. Bilateral affinities between home and foreign markets, such as language, culture or similar *per capita* income levels, may play a role in influencing locational decisions. Chain theory suggests that firms go through a sequential expansion process, the so-called 'establishment chain'. Due to 'psychic distance' and uncertainty, firms at the beginning of their foreign ventures will limit investment and stay close to their domestic market.⁷⁶ After gaining international experience, they will gradually invest further away (and on an increasing scale) from the domestic market. There are numerous examples of this establishment chain in insurance during the nineteenth century: Swiss companies underwriting first in France and Germany, the early presence of French companies in Spain, Austrian companies in Italy, Swedish companies in Norway, American companies in Canada, and Chinese companies insuring the property of Chinese communities in Singapore, the Philippines and California. Two qualifications, however, might be made. First, early mover advantages were important. Those companies that were first to enter a market from abroad, or indeed those that created a market from nothing, were invariably price makers and difficult to shift from pole position. Second, the size of a domestic market was often a factor in determining the timing and extent of its exports, especially before the 1860s when specialist reinsurance capacity had still to develop. Insurance companies moved abroad in the search for premium volume as much as profits. Foreign operations could help reduce income volatility and increase premium flow, but only if the market was large, hence the growing attraction of the United States after 1850.

Finally there were other factors that facilitated foreign ventures, notably the increased levels of business and scientific cooperation evident in the insurance industry towards the end of the nineteenth century, as well as the growing market for managers and actuaries that saw leading personnel move frequently between firms in different countries. International congresses functioned to facilitate the exchange of ideas and the standardization of underwriting technologies and business practices. Examples discussed in Martin Lengwiler's chapter below include the International Congress of Social Insurance (founded 1886), the International Congress of Actuaries (1895) and the International Congress on Life Assurance Medicine (1899).

The march towards internationalization, however, was not irreversible. There is unambiguous evidence that insurance markets around the world were becoming more protected and regulated before 1914, and some evidence too, though more conclusive for some markets than others, that insurance was becoming less international in scope. Peter Borscheid has estimated that the 'internationalization' quotient of the German insurance industry – measured as the sum of the foreign premiums of German insurers and the premiums of foreign insurers in Germany divided by total premium income in Germany – was already declining before 1914, ahead of its collapse in the inter-war years. The quotient, which was 12 per cent in 1901, dropped to just 2 per cent by 1938.⁷⁷ Elsewhere, Borscheid has charted the precipitous decline of foreign company participation in Switzerland – from 35 per cent of premiums in 1914 to less than 5 per cent by the late 1920s; in Japan – from 35 per cent of fire insurance premiums in 1917 to less than 5 per cent in 1939; and in Italy and Germany, where the premiums earned by foreign insurers fell by 27 and 30 per cent respectively during the 1930s. The large US life offices disposed of almost all their non-Canadian foreign business during the 1920s.⁷⁸ Other examples of insurance retreating behind borders include Spain, where the proportion of direct insurance written by foreign companies fell from 39 per cent in 1910 to 14 per cent by 1954.⁷⁹ In many countries the retreat worked in both directions. The number of foreign life insurance offices working in the Netherlands, for example, peaked at 51 in 1900, but fell to 19 by 1930, while Dutch life companies had 34 offices abroad in 1904, but just nine by 1927.⁸⁰

Borscheid describes this trend as a 'globalisation backlash', and there were several causes. As noted above, the rise of native offices and growing public hostility to foreign insurers stirred up by the press, insurance lobby groups and by nationalist or populist politicians, contributed to this trend well before the First World War. Poor results in overseas markets, where monitoring problems were greatest, also forced companies to return home. Protectionist legislation, discriminatory regulation and taxation, however, were the principal forces behind the globalization backlash. The increasing rigour of state supervision from the 1890s raised

the costs of operating in foreign markets and drove some companies out as well as encouraging others to establish domiciled subsidiaries.⁸¹ There is no doubt the global regulatory environment for insurance exporters was becoming tougher before the First World War. The ultimate threat to the internationalization of insurance, however, was the growth of state-owned insurance, which between the 1920s and 1960s was associated in many places with economic nationalism. Where there was a powerful state institution, or where insurance was nationalized, private companies, including foreign ones, could find themselves effectively excluded. In several countries, particularly those where communist or nationalist governments came to power, or in newly independent colonies, various branches of insurance were transferred entirely to new state-owned institutions. Life insurance, for example, was nationalized in Italy in 1912 and in India in 1956. Turkey established a joint state-private reinsurance monopoly in 1929, while state monopolies were established for reinsurance in Chile and Uruguay in 1927 and in Argentina in 1952.⁸² Accident insurance was nationalized in Spain in 1963, the culmination of a long policy of autarky that had begun with the dictatorship of Primo de Rivera 40 years earlier.⁸³ Between the wars these developments frequently occurred in states marked by political instability and financial crises. The widespread distrust of some regimes led to the operations of foreign companies being wound down. The instability of currencies between the wars also raised obstacles to the international trade in insurance. For example, foreign distrust of the Reichsmark after it collapsed in 1918 led some countries to respond with hostile legislation. Switzerland passed a law in 1919 requiring foreign life offices to keep three-quarters of their reserves there in Swiss francs. Due to the hyperinflation of the Reichsmark this was ruinous for German companies that could not afford to pay their claimants in Switzerland at current exchange rates. In this way 60,000 Swiss holders of German life insurance policies became indirect victims of the German currency crisis, which in turn encouraged more Swiss to insure at home than abroad. The market share of German life offices crumbled, as it did in Denmark and the Netherlands for similar reasons.⁸⁴

The New Globalization of Insurance in the Late Twentieth Century

Not until the 1980s did German insurers begin to recover the international profile that they had lost so rapidly after 1918. There was renewed expansion overseas and acquisitions of foreign companies. The final quarter of the twentieth century and the first decade of the twenty-first century witnessed major changes in the structure of international insurance. This was the era of the second great globalization, when markets were being liberalized and multinational companies were expanding into all corners of the world economy. Paradoxically, the greatest insurance exporter of all, the UK, experienced a dramatic decline

in the importance of its overseas business, especially in non-life lines. In 1961 foreign markets accounted for about two-thirds of UK companies' global net non-life premium income, about the same proportion as in 1914. By 2006, this proportion had fallen to just 22 per cent. Part of the decline was due to the nationalization of insurance markets in newly independent countries in Africa and Asia, and part was due to the high costs of entering some large European markets such as Germany, or to the restrictions on foreign entry imposed by some nations, notably Japan. The main factor, however, was the increasing difficulty of doing business in the US. Rising management and litigation costs, and heavy losses in motor, liability, property and casualty insurance caused, among other things, by hurricanes, riots and terrorist attacks, made the US a persistently unprofitable market for the big UK non-life companies from the 1960s. Only investment returns earned on companies' technical reserves held in the US, as well as the huge premium volumes generated, explain why the British persisted in America for so long.

By the 1980s many countries were beginning to relax their restrictions on foreign entry or deregulate their markets. India, Korea, Japan and China, for example, either denationalized their state insurance corporations or opened up their markets to foreign companies. Within the European Union the legal framework for a single market for life and non-life insurance was finally put into place between 1992 and 1994. Deregulation, however, remains incomplete, even in the EU. Areas such as health insurance in Germany bear witness to how difficult it is to overturn a century of protection barriers and exclusive behaviour.⁸⁵ Foreign penetration remains limited in many markets. Only 7 per cent of insurance premiums in Asia, for example, are accounted for by foreign firms. Moreover, the development of insurance remains stunted in many parts of the world. In 1992 just 22 per cent of South Africa's population had health insurance. In China *per caput* spending on insurance in 1999 averaged just \$13, compared to \$2,921 in the US. The combined insurance premiums of India and China were less than those of Switzerland.⁸⁶

The Organization of this Book

As noted in the preface, there was but a general theme to the conference sessions from which the following chapters originate, and no common objective was set for their authors. The essays were selected in part to illustrate the breadth of geography and topics covered by current research on insurance history around the world. Part I below comprises four chapters on different aspects of non-life insurance in Europe and the Americas during the nineteenth and twentieth centuries. Manuel Llorca-Jaña attributes the decline in the insurance costs of the textile trade between Britain and the South American cone during the early

nineteenth century to technical innovations in packaging and shipping. Based on the records of British merchant houses, he presents one of the first historical premium rate series for marine insurance, and also investigates the choices faced by merchants in selecting different insurance products. Christofer Stadlin describes the attempts at risk classification in accident insurance in nineteenth-century Europe, which were hampered by a lack of data and the difficulty of identifying relevant sample populations. Looking in detail at two Swiss firms, he argues that trial and error remained the basis of rating, and that premium tariffs, despite the illusion of actuarial precision, were first and foremost 'a marketing instrument to sell policies' (below, p. 60). Jerònia Pons Pons surveys the insurance market in Spain during the Franco era. Growth during the 1950s was accompanied by the gradual mechanization of back-office processes. However, mechanization, and the transition to computers that followed in the 1970s, brought its own problems, not least the shortage of skilled operators and the difficulties caused by strict controls on foreign exchange. Welf Werner examines the moves towards the multilateral liberalization of insurance markets after 1948, and identifies the constraints on that process, including the difficulties of monitoring the deregulation process in member states of the Organisation for European Economic Cooperation, the Organisation for Economic Cooperation and Development, the EU and the World Trade Organization. From the late 1980s the EU's Single Market Programme introduced an element of competition between states to provide the optimum conditions for insurance services, and this finally led to a leap forward in liberalization.

Part II comprises five chapters on life insurance and social insurance. Takau Yoneyama asks who bought life assurance in Meiji Japan and why. He finds differences in the target markets of first-mover and follower companies. The former focused on the demand from the western-oriented urban business and professional classes and used marketing strategies appropriate to these groups. The latter invested in a rural sales force and sold smaller policies as a vehicle for family savings. Liselotte Eriksson reports that the primary object of industrial life assurance in the UK and the US around 1900 was to cover the cost of burials and final medical bills, while in Europe endowment insurance with a primary savings element was the main characteristic of industrial assurance. The chief factor was the difference in the relative cost of funerals: higher in the US and the UK because the business was privatized and commercialized; lower in Europe because funerals were less commercialized and there was consequently less demand for burial insurance. Adrian Jitschin argues that the nationalization of life insurance in India in 1956 reduced the potential growth of that market by half. The original aim of the government was to seize control of insurance assets but, paradoxically, the state-owned Life Insurance Company of India subsequently presided over a fall in the proportion of its assets held in govern-

ment securities and an increase in equities and loans for house-building. Grietjie Verhoef traces the development of life insurance in twentieth-century South Africa, and emphasizes the importance of the investment prescriptions required of companies there from 1943. Forced to invest in government securities, the funds of life insurance companies provided the South African state with a means to finance infrastructural and industrial projects, and helped stabilize the economy during the country's increasing political isolation between the 1960s and 1980s. Finally, Martin Lengwiler shows how the promotion of a mixed welfare system for social insurance was the consistent goal of the private insurance companies (though not their statutory counterparts) organized in the International Congress of Actuaries (ICA) from the 1900s to the 1950s. The ICA and other international expert bodies were influential in shaping what Lengwiler calls the 'epistemic framework' (below, p. 183) of welfare policies. He also finds, however, that the international convergence pursued by the ICA in this period was largely thwarted by national interest groups.

Although the chapters extend across a great variety of subjects, some common themes can be identified, which may form a basis for future comparative work on insurance history. First, several chapters focus upon the importance of national policy in shaping the structure and determining the direction of growth of insurance industries. This was most obvious in Franco's Spain (Pons Pons) and in Nehru's India (Jitschin), but that influence can also be detected in the different state policies towards the burial of the poor between Anglo-Saxon and European countries in the late nineteenth century (Eriksson). In his chapter Lengwiler outlines the interventionist (Swiss, German, Austrian) versus liberal (British) models of state supervision and the debates within the insurance industry about their relative merits. Regulation could block or stimulate the relationship between insurance and the growth of an economy. The chapters by Verhoef and Jitschin, on the role of life insurance investments in South Africa and India respectively, demonstrate this point well.

Second, the importance of cultural praxis in the international development of insurance also emerges from some chapters. Eriksson argues that cultural differences, alternatively emphasizing social welfare or market opportunity, help explain different attitudes towards funerals between Europe and the UK and US and thus the type of industrial assurance that developed there. Jitschin notes that the relative stagnation of foreign life insurance companies in India, when confronted with a rapid growth in native competition, was in part due to the cultural difficulties they faced in adapting to the Indian life market, for example, with regard to Hindu funeral practices. Arguably, the 'misconceived' determinism (below, p. 61) of nineteenth-century Swiss accident insurers that Stadlin describes, with their fixation on accident probabilities, may also have been culturally driven.

Third, several chapters point to external factors that have influenced the diffusion of insurance technologies. In Spain during the 1950s rising labour costs and the availability of finance stimulated the mechanization of back-office processes. The largest companies with the deepest pockets were the first to invest in this technology (Pons Pons). The different cost of funerals in the UK, the US and Europe helped determine the organizational forms taken by industrial life assurance in different countries (Eriksson). The availability of appropriate data for accident insurance tariffs in the late nineteenth century shaped the pricing strategy of firms in this field (Stadlin). The international transfer of insurance technology also hinged in places on the key role played by individuals and publicists, and on the process of imitation, so that German mathematicians were central to the pricing of accident insurance in Switzerland from the 1860s (Stadlin), and early Indian life assurance borrowed from UK models (Jitschin). At the beginning and again towards the end of the twentieth century transnational bodies and international networks of experts have played an increasing role in shaping, and to a limited extent standardizing, insurance technologies, insurance regulation and social welfare policies (Lengwiler, Werner). Some of these themes tap directly into the new body of research on modern business and professional networks and their influence in policymaking.⁸⁷ Such links between insurance history and more general themes and theories in business and economic history are certainly to be encouraged.