

NOTES ON THE ORIGIN AND DEVELOPMENT OF REINSURANCE

BY

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I. INTRODUCTION

During the past few years there has been a quickening of interest internationally in the major aspects of reinsurance history, theory and practice. The peculiar development of the national and international economy of the European countries since the World War has apparently made reinsurance the backbone of the whole of private property insurance. This accounts for the greatly extended literature on the subject in recent years. Classic doctrines of risk, theorems in the calculus of probabilities, principles of insurance law, long neglected, are being brought forward by writers on reinsurance.* There is vitality and depth in recent reinsurance literature which has been lacking in the literature of the direct lines for many a decade. Thorin's recent work^{72†} is one sign of revival. Unfortunately not much has been contributed to this discussion recently in the United States.

Herrmannsdorfer⁵⁵ has set forth admirably the aspects of the newer movement on the legal side. Cruciger,⁹ Rendtorff-Golding,²² Moldenhauer,⁵⁶ Thorin,⁷² Villotte,⁷⁵ Hagens²⁸ and others have dealt with it effectively on the side of practice and with its broader economic and historical significance. The subject is of such scope and intricacy that no one author in recent years has been able to describe adequately more than a few aspects of reinsurance. The purpose of the present paper is to present notes and leading ideas which may, I hope, lead to more comprehensive studies in this country, and possibly to the development of suitable texts in the English language for the use of our members and students.

*The historical development of the economic and mathematical theory of risk, in its relation to insurance and reinsurance, will be discussed in a later paper.

†Numbers refer to bibliography in Part III of this paper.

Fundamentals

In the most widely accepted sense, reinsurance is understood to be that practice where an original insurer, for a definite premium, contracts with another insurer (or insurers) to carry a part or the whole of a risk assumed by the original insurer. By insurers we mean all persons, partnerships, corporations, associations, societies, associations operating as Lloyd's, inter-insurers or individual underwriters authorized by law to make contracts of insurance. We may define insurance as an agreement by which one party, for a consideration, promises to pay money or its equivalent, or to do an act valuable to the insured, upon the happening of a certain event or upon the destruction, loss or injury of something in which the other party has an interest. The insurance business is the business of making and administering contracts of insurance.

Insurance contracts are of two types.* Those which engage merely to pay a sum of money on the happening of an event, or merely to begin a series of payments on or after the happening of a certain event, are *contracts of investment*. Contracts of insurance which engage to pay money or its equivalent, or the doing of acts valuable to the insured, upon destruction, loss or injury involving things, are *contracts of indemnity*. And so, reinsurance may be *second insurance* of (a) contracts of investment and/or (b) contracts of indemnity. There may exist, therefore, two types of insurance business, depending upon which of these two organic contracts the business engages to administer.

Risks Carried by the Insurer

The need for reinsurance arises out of the fact that a first or primitive insurer bears two distinctly different major risks: (1) the risk that the events insured against will happen among a

* (1) *Dalby v. India and London Life Assurance Co.* 15 C. B. 365. (1854) at p. 387. See also: *India and London Life Assurance Co. v. Dalby*, 15 Jur. 982; (2) *Suttles v. Railway Mail Association* 156 App. Div. 435, 438-440, 141 N. Y. S. 1024; (3) *Campbell v. Supreme Conclave etc.*, 66 N. J. L. 274, 49 Atl. 550; (4) *Dover Glass Works v. Amer. Fire Ins. Co.* 1 Marv. (Del.), 32, 29 Atl. 1039; (5) *Nye v. Grand Lodge, A. O. U. W.*, 9 Ind. App. 131; 36 N. E. 429; (6) *Trenton Mut. L., etc., Ins. Co., v. Johnson*, 24 N. J. L. 576, 585. See the following for collected cases: 25 Cyc. 702; Joyce, *The Law of Insurance*, 2nd edn., Vol. I, pp. 123-128.

number of *homogeneous* risks; (2) the risk that certain events insured against will happen among a *heterogeneous* group of risks to one or several insureds entitled by contract to an exceptional payment in money or its equivalent, or entitled to exceptional, costly service. This idea has been set forth by Adan (in his "Importance de la limitation des risques dans les Assurances sur la vie." *Moniteur des Assurances*. Paris, 1870). Adan uses a simple instance in life insurance practice, which applies in principle to any other insurance transaction.

Case 1: An insurer contracts to pay \$10,000 to the beneficiary of each of 806 persons insured by him at 21 years of age, in event of the death of the insured during the contract year. This group is homogeneous in respect to amount insured and class of risk. He charges a net premium of 1.22 per cent., or \$98,332 to meet the expected claims in that year of age.

Case 2: Assume, however, that the insurer has accepted, as a second instance, a heterogeneous group composed of 805 risks at \$10,000 each and one risk at \$100,000. This produces \$99,430 in premiums.

If in Case 1, only 8 deaths actually occur with a uniform coverage of \$10,000 each, the premiums are \$98,332 and the claims \$80,000, leaving an underwriting profit of \$18,332. If in Case 2, the \$100,000 policyholder and seven \$10,000 policyholders die, the premiums are \$99,430, and the claims \$170,000, or an underwriting loss of \$70,570. We had in the first case the carrier of a group of primary, homogeneous risks, with only a slight hazard to him that the number of actual claims would exceed the expected. Against this slight hazard the insurer is supposed to hold paid-in capital and surplus (or "guarantee capital" in case he were a mutual underwriter). Slightly exceptional losses above the expected are to be made up by slightly favorable underwriting profits in the long run of the business. In the second case, the insurer is not only carrying a group of primary, homogeneous risks but also the secondary risk of *selective* loss through the death of the \$100,000 policyholder. The quality of the second group of risks is heterogeneous with respect to the carrier's interests.

Insurers have historically met the second risk through the practice of two varieties of coinsurance: (1) *external*, or true coinsurance or (2) *internal* coinsurance or *reinsurance*. (See glossary in Appendix.)

Purposes of Reinsurance

We may offer one more general remark, this time from Ehrenberg¹⁶ ("*Handbuch des gesamten Handelsrecht . . .*"): "Reinsurance achieves to the utmost extent the technical ideal of every branch of insurance, which is actually to effect (1) the atomization, (2) the distribution and (3) the homogeneity of risk. Reinsurance is becoming more and more the essential element of each of the related insurance branches. It spreads risks so widely and effectively that even the largest risk can be accommodated without unduly burdening any individual." Jahn⁴¹ (in his *Studien über Rückversicherung*) takes the practical view that "one of the major purposes of reinsurance is to permit the original insurer at least to break even on his transactions." Reinsurance and retrocession insure the insurance business. They keep insurance companies out of the "mortuary chapel." Jahn further insists that reinsurance should be an independent branch of the insurance business as distinctly different in law and practice from any *line* of insurance as one line differs from another. Moldenhauer⁵⁶ and many others advance the same philosophy. No valid argument seems to exist against this contention in the abstract.

"Assumption" or Substitution Practices as Reinsurance

I believe we should for the time being decline to view as "reinsurance" the practice of "assuming," "amalgamating" or "fusing" the established business of two or more insurers. That applies in part also to mere "substitution" procedure. These practices by some have been called "reinsurance."* The partial or complete union of the business of two or more insurance companies, solvent or insolvent, may call for a new nomenclature. This was Walford's view (1871).

II. HISTORICAL NOTES ON REINSURANCE

Antiquity

There is nothing in the very early history of insurance which suggests practices that approach in any way our modern reinsurance procedure. The earliest reinsurances first appeared in transport, especially marine insurance, at a comparatively late

*See: Sections 21, 22, 23, 24, 69, 72, 110, 163, 196, 236, 320 and 340. N. Y. Ins. Law for variety of senses in which word "reinsurance" is used.

date (14th or 15th centuries). Marine insurance in antiquity was conducted chiefly by individuals, more or less in a speculative manner, without a statistical foundation and without retrospective data on loss experience. Single ships and their cargoes in ancient times often had a value disproportionately large to other private holdings, and the whole of the private fortune of an insurer often hung on the outcome of a single voyage or marine adventure. The perils of the sea were greater also, considering the rudimentary state of the shipbuilder's art.

It can readily be understood why marine underwriters wanted someone to share their risks. After having effected insurances, whether on the ship, on the cargo or on both, or on the lives of the captain and crew, an underwriter often would become worried and try to sell parts of his contract to others and necessarily at a higher rate. At first risks on parts of voyages were assigned to others, usually the more dangerous parts.

First Recorded Reinsurance Contract

The first reinsurance contract on record relates to the year 1370, when an underwriter named Guilano Grillo contracted with Goffredo Benaira and Martino Sacco to reinsure a ship on part of the voyage from Genoa to the harbor of Bruges. Grillo offered to retain the risk on the voyage through the Mediterranean and to transfer to Benaira and Sacco the risk from Cadiz through the Bay of Biscay and along the French coast. Other arrangements of this kind were, no doubt, made in single instances for many years, but reinsurance contracts in the modern sense of the word were unknown.

As early as the twelfth century, marine insurance began to be transacted through the so-called "Chambers or Exchanges of Insurance," which had for their object, first, the promotion of the marine insurance business on a solid basis and, second, the settling of disputes arising among merchants and others concerned in bottomry and respondentia contracts. In later years, these Chambers or Exchanges of Insurance became corporate bodies and instead of remaining confined to the original function of regulating and registering insurance made by others, actually undertook an insurance business themselves. With the establishment and functioning of Lloyd's in 1710, there was a marked

decline in the transaction of insurance business through these Chambers or Exchanges.

There is a suggestion of reinsurance practice in the "Antwerp Customs" of 1609. Some mention of reinsurance practice is to be found also in the "Guidon de la Mer," a code of sea laws in use in France from a very early date. These marine regulations were consolidated and published at Bordeaux in 1647, and at Rouen in 1671. The author of the consolidations was said to have been Cleirac.

With the shift of centers of commerce from the south, southwest and west of Europe to the north, England's foreign trade grew. Marine insurance followed in its wake. Some underwriters found they could effect reinsurance with others. Underwriters were accustomed to assign parts of risks to others at lower rates, and these reinsurers had hopes of finding other persons who would take parts of these risks at still lower rates. This traffic in premium differences was so greatly abused that in 1746 it was forbidden. (19 Geo. II, c 37, Section 4). Under this statute, reinsurance was permitted only if the party whose risk was re-insured was insolvent, bankrupt or in debt and if the transaction was expressed in the policy to be a reinsurance. The statute was more or less of a dead letter and was repealed by 27 and 28 Vict. c 56, Section 1 on July 25, 1864.

Reinsurance in the Fire Insurance Business

The development of reinsurance in the modern sense may be credited chiefly to the fire insurance business. Following the industrial revolution during the last third of the eighteenth century, the growth of the factory system gave rise to the existence of things and interests which rendered insurance necessary in large amounts. Reinsurance developed slowly at first. Insurers of fire risks had, until the amounts of insurance requested became too great, adopted the practice of charging different premiums for different risk classes and by limiting their commitments in certain areas. Furthermore, fire insurance at its outset seems to have been cultivated largely by mutual institutions having assessment arrangements with their members. At the beginning of the nineteenth century, however, stock companies became more numerous in the fire insurance field. These offices soon learned that offering coverage

in large amounts, especially in areas of concentrated risk, was an exceedingly hazardous procedure. The stock companies could not appeal to their policyholders for assistance in event of calamitous losses as could the mutuals which had an assessment arrangement. And so coinsurance practices developed whereby the companies transferred the business which they felt they could not keep to other insurers by means of direct contracts between the other companies and the insured. We are now at the point where we may consider developments in the several important countries. The countries are mentioned in the order in which reinsurance practices seem to have arisen.

GERMANY

The First Automatic Reinsurance Treaty

The first fire reinsurance treaties seem to have had their origin in Germany shortly after 1820. According to the records, the *first obligatory or automatic reinsurance treaty* was effected in 1825 by the "*Vaterlandische Feuerversicherungs Gesellschaft*" in Elberfeld. Theretofore, coinsurance practices and facultative reinsurance practices had played the major role. This treaty of 1825 was concluded with the "*Compagnie Royale d'Assurances Contre L'Incendie*," in Paris. Most of the reinsurance on record for Germany during the first half of the nineteenth century, was covered, however, by coinsurance, by facultative reinsurance and by direct writing companies, not by reinsurance companies.

Reinsurance business seems to have been conducted, moreover, in Germany by *domestic* direct-writing companies. This, however, permitted competitors to know too much about each other's business. Hence, it became the practice to offer reinsurance facultatively to foreign companies, chiefly French companies. And here was the germ of international reinsurance; it was to flower fully under Carl von Thieme a half-century later.

In the meantime, the number of different objects offered for insurance and their value rose with the development of manufactures during the early part of the nineteenth century. This strengthened the need for reinsurance. We may note here the law of May 8, 1837, in Prussia, where foreign insurance companies were required to have official approval in order to transact business. The law also required that the amount of fire

insurance which could be closed by one company on one risk must not exceed 10,000 thalers. This was done to check tricky practices in double insurance. Many foreign insurance companies withdrew entirely from the transaction of direct insurance in Prussia as a result of this law. The domestic fire companies in Germany were not therefore in position to handle the whole of the business offered and began to demand reinsurance facilities.

Reinsurance of Mutual Fire Business with Stock Company, 1839

On October 1, 1839, the Aachen and Munich Fire Insurance Company entered into a contract with the *Privat-verein Gegenseitiger Versicherung* in Crefeld, which provided for the acceptance by the Aachen of surplus fire insurance on all immobile risks which the Crefeld society had mutually insured. The total sum to be reinsured was fixed at 1,400,950 thalers in accordance with the statement of risks attached to the treaty. The contract ran for a definite period from October 1, 1839 to January 1, 1843. It appears to have been renewed at least once after 1843, and 15 per cent. commission was then allowed to the direct writer. The important clause in the treaty was a provision for the *settlement of disputes by arbitration* in which respect the contract appears to have anticipated some of the French and Italian contracts.

Catastrophic Fires, Mid-Nineteenth Century

Perhaps the one force which gave reinsurance its greatest forward impulse was the group of catastrophic fires which occurred in the middle of the nineteenth century. The fire at Hamburg on May 4, 1842, was one of the greatest conflagrations of modern times. The total damage was, at that time, estimated to have been more than \$35,000,000. The buildings were mostly insured in the City Fire Fund, founded in 1667, and the fire of 1842 exhausted the treasury of that office. The British offices were interested in the fire to the extent of about \$2,000,000. A number of the German fire companies were very seriously embarrassed.

Development of Running-Mate Companies

There then arose the practice of developing subsidiary or running-mate companies in Germany to take the surplus business of parent institutions. The first organization of this kind was ascribed to the "*Niederrheinische Güter Assecuranz Gesell-*

schaft in Wesel," which caused to be formed the "Wesel Reinsurance Society." This society was to take uniformly a third of the business written by the parent company. The society survived long after the parent company passed out of existence and conducted a reinsurance business for many years under the name of "Vesalia." In the spring of 1925, the society went into bankruptcy. In the years after 1842, a series of direct-writing fire companies founded subsidiaries which operated *only* with the parent companies and did not enter the general market.

The First Independent Reinsurance Company

In 1846, the first independent reinsurance company was founded in Germany,—the Cologne Reinsurance Company. This was the idea of Mevissen. He held that an independent reinsurance company would be no competitor of the direct-writing companies and that it was certain to be welcomed by and to receive a good volume of business from those companies. Mevissen's idea of 1846 did not mature, however. For various reasons the company did not begin business until 1852, and then only with the assistance of considerable French capital. *This marked the establishment of reinsurance as a specific, independent branch of the business.* Out of small beginnings, this company began to prosper and its example began to attract other enterprising persons. During the first three years of its business life the Cologne Reinsurance Company extended its operations in Germany, Austria, Switzerland, Belgium, Holland and France, and then tried to arrange treaty contracts with English companies. It seems that domestic English reinsurance business, at that time, was quite unprofitable to the reinsurers and the Manager of the Cologne was obliged to keep out of the English market.

On June 24, 1853, a fire treaty was concluded between the Aachen and Munchener Fire Insurance Company and its subsidiary, the Aachener Reinsurance Company. This was an early example of a true "first surplus" treaty under which the reinsurer was allotted one-tenth of every surplus risk, with certain modifications in respect to various classes of risk enumerated in the contract. It is interesting to note that the Aachen-Munchener company had an earlier arrangement with *L' Urbaine*, Paris.

In the years 1871 to 1873, no less than twelve independent reinsurance institutions were founded in Germany, of which very few survive today. The pressure of competition led to unwholesome practices, and soon many of these newly formed companies found themselves in dire straits.

In branches of insurance, other than fire insurance, we find no definite tendency in the '70's toward the establishment of separate reinsurance facilities in Germany. Ernst Albert Masius, in his "Rundschau" in 1846, deplored the lack of reinsurance facilities in hail insurance. Even at the present time, this branch of the business lacks adequate reinsurance service.

*Hail Reinsurance in Central Europe**

At the present time, the reinsurance of hail business in Central Europe is covered chiefly by German and Swiss companies, the *Muenchener Rück* and the *Schweizerischer Rück* leading. Some French and Italian companies, and to a smaller extent the Royal Exchange (London) participate. Certain other English and American reinsurers are interested.

Münchener Rückversicherungs Gesellschaft and Carl von Thieme†

The tendency toward effective, ably managed reinsurance business was marked in 1880 by the founding of the *Münchener Rückversicherungs-Gesellschaft*. The founder of the company was Carl von Thieme, second son of Julius von Thieme, director of the "Thuringia" in Erfurt. Thieme was born March 30, 1844, and died in 1924. From his early youth he was associated with the insurance business. After the Franco-Prussian war, Thieme went to Munich as general agent for the "Thuringia," where he soon demonstrated his marked gift for organization. This came to the attention of the business men of the city, and toward the end of the '70's, Thieme was asked to found a fire insurance company.

The narrowness of the scope of the "Thuringia's" operations led him to think, first, of providing real reinsurance facilities for fire insurance. He bore always in mind the possibilities of a monoline, multifield reinsurance business, truly international in scope. And particularly he felt that reinsurance could best

*Bela Deutsch in: *The Policyholder*: Oct. 23, 1929, p. 1749.

†See: Herrmannsdorfer³⁴ and Cruciger.⁹

be conducted as an independent and self-sufficient branch of the business. His first problem was to secure a volume of business from original insurers, or direct writing companies, and his second was to secure the business on terms which would permit an independent company to survive. Both these aims he accomplished by holding a significant or controlling stock interest in direct writing companies. He felt that if his voice were heard by the boards of directors of the companies, his company would be in position to secure business on fair terms. Thieme's internationalism was based on the idea of smoothing out the effects of purely local fluctuations in business, climatic and operating conditions. Losses on one branch of the business in one country could be counterbalanced by gains on another branch in the same country. Or losses on all lines in one country would be compensated by gains on all lines in another country. The internationalization of reinsurance was, in his opinion, the first step toward the atomization and the widespread distribution of risk. Thieme's policy was so effective that just before the War, his company was the largest single reinsurance institution in the world.

Toward the end of 1890, the M. R. established its foreign department in London under Mr. Carl Schreiner (afterwards head of the United States branch). American treaties began to be accepted in 1890. The M. R. entered New York State on October 19, 1898, Wisconsin, on December 1, 1897, and Massachusetts on November 16, 1898. To provide for its foreign business, the company's capital was increased from 10 to 20 million marks in 1898. At that time, Isaac Seligmann, Ernest Thalmann and John A. McCall were appointed trustees for the company in the United States. The M. R. passed through three major crises,—the Baltimore and San Francisco fires and the World War. The San Francisco fire cost the company 11 million marks. How the World War affected the M. R. may be shown by the fact that in 1914 the company had a premium income of 204,000,000 gold marks; in 1922, the income was 50,000,000 marks; and not until 1924 and 1925 did the annual premium volume exceed 125,000,000 marks. In 1927-1928, the premium income was quite close to the 1914 figure. In 1927, the M. R. was second to the Swiss Reinsurance Company (Zurich) as a world reinsurance carrier. Just before the War, 69 per cent. of the M. R.'s business was

derived from foreign sources. Of the total premium income of all the independent reinsurance companies in the world in 1913, 576,000,000 marks, 386 millions, or 67 per cent., was in German companies. A report on the first half century's work of the M. R. will probably be published in 1930.

The comparative volume of business transacted by the Swiss Reinsurance Company and the Muenchener Rück is shown below:

COMPARISON OF PREMIUM INCOME OF SWISS REINSURANCE COMPANY AND MUNICH REINSURANCE COMPANY, 1910 TO 1928

Year	Swiss Reinsurance Company (Swiss francs)†	Munich Reinsurance Company (gold marks)†
1910	35,635,000	166,632,000
1914	55,935,000	204,454,000
1918	126,200,139	253,809,000
1924	208,089,307	64,816,599
1925	236,919,870	126,526,188
1928	319,111,872	197,381,000

Source: Herrmannsdorfer⁵⁴

Reinsurance among Government Fire Insurance Offices in Germany*⁵⁵

The monopolistic and competitive fire insurance offices, chiefly in Prussia, also had a reinsurance problem. The *Verband öffentlicher Feuerversicherungsanstalten* was founded in 1872. This union established a reinsurance section which was reorganized in 1906. Under the new regulations of August 28, 1914, the Union takes a part of the insurances of its members up to 50 per cent. of the sum insured.

Reinsurance among Government Life Insurance Offices in Germany*⁵⁶

The public life insurance offices founded since 1911 have set up their own reinsurance institution, the "Deutschland," as a stock company.

*Post-War Reinsurance in Germany*⁶²

In 1922 and 1923, some 192 reinsurance companies were founded in Germany. These companies did a fairly good business while inflation lasted, but it soon became apparent that they were chiefly gambling in marks and in foreign exchange.

*Öffentlich-rechtlich versicherungsanstalten. See *Assecuranz-Jahrbuch*, Zusatzband, Vol. XLVIII for list; 41 property and 18 life insurance offices in 1928. †Swiss franc=19.3 cts.; German gold mark=23.8 cts.

The young reinsurance enterprises will in the natural course of events succumb under economic crises as did many of the newly formed German companies in the sixties and seventies of the last century.

The new amalgamation movement in Germany—the movement toward “Konzerne”—has already reduced the number of competing company units. The Allianz-Konzern, the most significant alliance of direct writing companies, is itself a unit of the Muenchener-Rück group. The “Konzern” idea does not yet dominate German private insurance, either in the direct or reinsurance field. The following list of “Konzerne” may be of interest: Aachener und Muenchener; Allianz; Deutscher Lloyd; Duncker; Frankfurter; Gerling; Hovad; Iduna; Mutzenbecher. (See: *Bolwin*, “Rückversicherung und Versicherungskonzerne” in *Zeitschrift für die gesamte Vers. Wissenschaft*, Vol. XXII, p. 308, Berlin).⁴

Some idea of the growth of the business by reinsurance companies in Germany may be obtained from the following table:

NET PREMIUM INCOME OF GERMAN REINSURANCE COMPANIES, 1887 TO 1917
(Unit 1,000,000 marks)

Year	Fire Insurance	Transport Insurance	Life and Accident Insurance	Miscellaneous Branches
1887-1890	19.5	6.4	.4	4.7
1891-1895	31.4	7.1	1.2	10.3
1896-1900	60.2	24.0	7.5	11.9
1901-1905	89.9	16.0	18.6	16.0
1906-1910	108.8	17.1	37.6	18.1
1911-1915	141.1	21.2	64.2	33.1
1916	149.8	21.6	66.5	34.5
1917	126.3	28.5	72.9	28.0

(After *Moldenhauer*: From available statistics. In *Manes' Versicherungswörterbuch*, 2d edn. p. 1077-1078).

For forty-two German reinsurance companies in 1927,* the reinsurance premium income was 215,453,583 R. M. on fire, casualty and marine accounts and 97,425,683 R. M. on the life account. The year 1929 was marked by the heaviest loss-ratios in recent German reinsurance history.

FRANCE

We find a note in the *Guidon de la Mer* to the effect that “if it so happened that the insurers after underwriting the policy repent of their engagement, or are afraid to encounter the risk, they

**The Review*, London, November 16, 1928.

are at liberty to reinsure; but still they can not prevent the insured from making his demand upon them in case of loss; for, having by their signature engaged to permit indemnity, they can not by any protestations to the contrary discharge themselves from their responsibility without the consent of the insured." This suggests that at an early date there was no privity of contract between reinsurer and the direct insured.

It is fairly well established that reinsurance practices among the fire companies of France developed not long after 1820. In fact, the word "facultative" was apparently first used in a treaty arranged between the *Compagnie Royale* of Paris and the *Compagnie des Proprietaires Reunis* of Brussels, in 1824. It is to be assumed that when reinsurance was new, accepting offices did not at first give up their right to accept or decline risks offered.

Independent Reinsurance Institutions in France Prior to 1871

For some time prior to 1871, it had been the practice in France to found insurance companies whose special business it was to reinsure the surplus risks of other companies. This was more especially the case in regard to fire insurance where the companies were frequently compelled to take very large lines. These French independent reinsurance companies made it unnecessary for the fire offices at that time to have reinsurance contracts with each other as was very generally the custom in Great Britain. In 1869, there was founded in Paris the *Compagnie Special d'assurance et de Re-assurance Maritimes*. In 1874, *La Re-assurance* (capital 5 million francs) and the *Caisse Generale des Re-assurances et de Co-assurances contre Risques d'Incendie* (capital 5 million francs) were in active business. Formerly reinsurance contracts in France were made principally with German and Italian companies; relations with direct writing companies were maintained chiefly with British offices.

French Reinsurance Practices in 1870

The principles which governed French fire reinsurance at the time (1870) were as follows: (1) the reinsurance premiums were to be exactly at the same rates as those on the direct policy; (2) the direct writing company retained on the risk insured a sum equal to that given to the reinsurance company; (3) the accounts were to be settled every three or six months, according to agreement; (4) the losses below 2,000 or 3,000 francs were generally

included as deductions from the current premium account and were not claimed immediately; (5) the larger losses were to be paid by the reinsurance companies as soon as the direct company had paid; (6) all differences between direct writing and reinsurance companies were to be adjudicated by arbitrators and not by the common law courts.

One mode of conducting the business was that risks offered were entered in a book (*carnet*) and the signature by the agent of the reinsurance company denoted acceptance of the risk. The commission paid by the reinsurance companies to direct insurers was usually 25 per cent. Mr. G. W. Kilford was, at that time, the foremost British authority in regard to fire reinsurance in France.

In 1884, the *Societe Anonyme de Re-assurances* (Paris) was organized. This company, separately organized in the United States, did business as the Fire Reassurance Company, with headquarters at Hartford. It was licensed in Connecticut in 1911, and ceased business in that State, September 1, 1920. There were in France in 1928, seventeen companies engaged in reinsurance business, of which four had a small direct business. Only six of this total were in existence before 1914. The oldest of the existing companies was the *Societe Anonyme de Re-assurances* (previously mentioned, 1884). This was followed by the *Atlantide* in 1890, the *Reassurances Nouvelles* in 1904 and the *Havraise* in 1905.

The statistical position of ten French reinsurance companies at the end of 1927* was as follows:

Founded	Company	Premium income (French francs)	
		Fire, Accident, etc.	Life
	Total ten companies	418,292,331	17,495,787
1913	Cie. Europeenne	38,922,978	not given
1916	Francaise de Reass.	131,449,331	2,621,304
1920	Generale de Reass.	16,900,867	1,697,851
1905	Havraise de Reass.	33,200,723	....
1916	Parisienne de Reass.	5,790,297	not given
1921	La France Reassurances.	6,125,549	701,474
1904	Reassurances Nouvelles.	43,802,681	2,845,266
1919	Les Reassurances.	72,988,150	3,187,672
1884	Societe de Reassurances.	66,237,382	6,442,220
1926	Cie. Co.-et Reassur.	2,874,373	....

In addition there were five companies writing "mainly reinsurance" (National Reass.; National Credit and Reass.; La Polaire; Seine et Rhone; and Oceanide). These had some 83,000,000 francs of general premium income and 38,000,000 francs of life premium income.

**The Review*, London, November 16, 1928.

GREAT BRITAIN*

Life Co-insurance in Great Britain, 1583

While very little is known of the early history of reinsurance in Great Britain, it may be of interest to note that one of the earliest life policies in that country was given on the life of one William Gybbons in 1583. This was signed by 16 underwriters, so that in life insurance, also, coinsurance preceded reinsurance. According to Rendtorff, it seems likely that big risks were disposed of in this way for a long time. The authentic history of life reinsurance in Great Britain dates from about the middle of the nineteenth century, according to Mr. H. F. Rothwell, of the Royal Exchange Assurance at Sheffield. A general system of life reinsurance began about 1844, and must have assumed some importance, for in 1854, certain English and Scottish life offices drew up an approved list of regulations to govern the conduct of reinsurance business. They provided for reinsurance on a facultative basis.

It is of interest also that the Standard Life Assurance Company of Edinburgh, Scotland, as early as 1850, and on other occasions since then, limited its liability under a number of annuity contracts which it had in force, and purchased Government annuities on the same lives. This it could do on favorable terms because at that time the yield on Government annuities was extremely favorable to purchasers. Here was an early example of "substitution" practice. This also was the custom of a number of other British and Scottish companies. (Walford).

Park, in his "Law of Marine Insurance" (1800 edition) says that the law of England, prior to 1746, "permitted underwriters . . . to insure themselves against those risks for which they had inadvertently engaged to indemnify the insured, or where perhaps they had involved themselves to a greater amount than their ability would enable them to discharge." He also points out that this facility was so much abused and turned to purposes so pernicious that the Legislature was at last obliged to interpose (1746, 19 Geo. II, ch. 37, Section 4).

Reinsurance was apparently of such slight interest in Great Britain, especially in the marine field, that Gow in his textbook of

* Much of the material on the early history of reinsurance in Great Britain is taken from the Rendtorff collection as compiled by C. E. Golding.²²

1895 makes no mention of it, while the Marine Insurance Act of 1906 devotes two paragraphs of Section 9 to the subject. Trenerry in his "Origin and Early History of Insurance" appears to be wrong in saying that reinsurance was definitely known in 1450. The instance which he there cites where merchants became guarantors of the fulfilment of insurance contracts seems to have been more in the nature of a promise to make good any loss due to the fault of the original underwriter than in the nature of reinsurance.

First British Treaty Still in Force

The first British treaty on record, according to Golding, concerning an English company, was concluded in 1824 between *La Nationale* of Paris and the *Imperial* of London (now merged with the Alliance Assurance Company). No formal treaty was prepared, the binding arrangements being conducted through correspondence with the good faith of both companies pledged. This treaty has remained continuously in force down to the present day. The reinsurance commission was at a rate of 30 per cent to the original writer.

The records of the *Royal Exchange Assurance* show that as early as 1826 it was receiving business in larger amounts than it was prepared to retain. In that year, the question of fixing limits of retention was considered by the Court of Directors of the Exchange. In 1828, the corporation received its first facultative proposal and this was an offer from the *Guardian* to reinsure a share of the risk on which that office had accepted a double line by mistake. The proposition was considered by the Court of Directors and declined.

That the prohibition of 1746 seems to have fallen into disregard with the passage of time is shown by the publicity given to the big reinsurance transaction made in 1828 when the newly formed *Alliance Marine Company* placed a very large line on gold on the ships *Almeria* and *Princess Charlotte*, and reinsured the bulk of it with Lloyd's underwriters at a large difference in premium in favor of the direct writing company.

Mr. H. S. Moore, in a paper before the Insurance Institute of Ireland on March 4, 1910, discussed the development of British reinsurance in the middle of the nineteenth century. Speaking of 1845, Mr. Moore said "It is worthy of note . . . that although

there were upwards of 20 offices transacting fire insurance in this country there was no particular necessity for reinsurance. This was mainly due to the enormous lines held by the offices upon single risks. It was no uncommon thing in those days for an office to retain as much as \$250,000 on a warehouse at a two shilling rate. It was the practice in those days for an office first to help itself to its full holding on a fire risk and then to send the insured, in company with one of its clerks, around to friendly offices to place the balance."

The records of the *Guardian Assurance Company* show that in November, 1856, the directors decided to reinsure a portion of their risks with other companies. This resolution of the Directors may be taken as an indication of the way the idea of reinsurance was then developing. In June, 1879, a further resolution was passed in the *Guardian's* annual meeting, authorizing directors either to grant fire reinsurance to, or accept them from, any company outside the United Kingdom.

British Fire Offices Tariff Association and Reinsurance

In 1858 the Tariff Association of British Fire Offices was founded. This was followed in 1863 by the Fire Offices Committee and that body shortly directed its energies towards the regulation of fire reinsurance business. On November 27, 1863, a circular was issued to members of the Committee saying that "guarantee should not be given to or taken from any office which does not adhere to the Tariff system as to any class of risks in London or elsewhere in the United Kingdom, whether tariff or non-tariff and whether at tariff or non-tariff rates." In 1868, the general rules of the Fire Offices Committee were promulgated and in these the rule above quoted was amended and included.

Finally in 1871, further rules came into force which exist in substantially the same form today as when they were first issued. These rules may be said to establish the complete recognition of reinsurance as an integral and necessary part of fire insurance in Great Britain, but with the qualification that they apply only to facultative reinsurance and do not strictly govern the transaction of treaty reinsurances. Golding²² infers that as late as 1871 reinsurance by treaty was so little practiced in Great Britain as not to call for definite recognition by a large section of the fire insurance companies.

Here we may note the nomenclature of fire reinsurance at or about 1871. A reinsurance of a fire risk was called a "guarantee" and that word is used in the rules of the Fire Offices Committee. When a risk was reinsured by one office with another, the ceding office described the transaction as a "guarantee obtained" while the accepting office called it a "guarantee granted." The same word was used in the transaction proposed between the Guardian Assurance Company and the Royal Exchange Assurance in 1828. The modern tendency is, of course, to use the word reinsurance.

First Independent Reinsurance Company in Great Britain, 1867

The first independent reinsurance company was established in London on July 8, 1867. It was known as the Reinsurance Company, Ltd., with a capital of £100,000. Cornelius Walford* was the Managing Director. At that date there were known to be only nine independent reinsurance offices in existence, five in Germany, two in Austria-Hungary, one in Belgium and one in Switzerland. The next independent British reinsurance company to be formed was the London General, founded October 1, 1873, with a capital of £500,000. The latter transferred its business to the Fire Reinsurance Corporation which was established June 9, 1874. This company also took over the offices and personnel of the London General.

French Companies in British Reinsurance, 1873

In 1873, two French companies opened offices in London for the transaction of reinsurance business. They were the *Caisse Generale de Reassurances et de Co-assurances*, 1873, and *Le Monde Compagnie d'Assurances*, 1874.

In 1877, the Central Reinsurance Company was founded, but no trace of its transactions is available. In the same year, the London Reinsurance Company was established, existed for four years and its business was finally transferred in 1881 to the Glasgow and London. In 1877, also, the Underwriters Association was formed with £250,000 capital and it managed to do some fire and casualty reinsurance until 1885, when it was wound up. The same year also saw the foundation of the United Fire Rein-

*Walford, the greatest scholar in insurance history, was also the founder of group life insurance. This he did in his capacity as consulting actuary to Napoleon III, who initiated the *Securite General* in Paris, 1867-1868.

urance Company, with a capital of £50,000. *The United Fire seems to have been the first foreign reinsurance company to be admitted to do business in the United States.* (Rendtorff). It had a United States premium volume of \$900,000 for the nine months of 1882, and \$1,500,000 for 1883. In subsequent years, the volume was as high as \$3,000,000 per year. This company retired from the United States in 1891 and was itself wound up and transferred to the Paladine in 1893.

In 1879, the East Lancashire Fire Reinsurance Company was founded, but there is no further record of its business. In 1880, there arose the British Reinsurance Company, wound up in 1886, and the Equitable Fire Reinsurance, which ceased business in 1884. A number of others were founded in succeeding years which either left no trace in the statistics, or which failed within a few years. From 1860 to 1894, there were formed in all about 44 companies doing a strictly reinsurance business in the United Kingdom.

Excess Cover Reinsurance First Established in 1880

The so-called "excess" cover, a purely modern development in fire reinsurance, was first established by Mr. Cuthbert Heath of Lloyd's some time between 1880 and 1890.²² This is an arrangement whereby the ceding company retains the whole amount of any given loss up to an agreed figure, and reinsures for the loss beyond this amount, up to a fixed sum. Excess reinsurance, as thus understood, has become a recognized instrument in certain forms of casualty insurance.

In the centenary book of the Indemnity Mutual Marine Assurance Co., covering the period 1827 to 1876, we find that the underwriter, Mr. William Ellis, "never reinsured a risk, only accepting the amount he was prepared to retain." His policy was apparently not one of timidity, since in 1854 he paid one total loss equal in amount to one-sixth of the company's whole year's premium income!

Casualty Reinsurance in Great Britain

Reinsurance practices in Great Britain on casualty insurance have developed, of course, with the growth of the direct-writing side of the business. The great bulk of such business was undoubtedly facultative and this applies to all the main sections of

casualty insurance, except automobile and public liability cover. For these, the excess cover possessed great conveniences and this made the practice quite general. The practice of excess cover reinsurance on automobile lines began with the origin of such insurance in 1896. There are records in Great Britain of excess casualty reinsurances on a small scale as far back as 1889.

Supplementary Legislation in Great Britain, 1891 and 1906

The reinsurance of marine risks was expressly mentioned in the Stamp Act, 1891 (54 and 55 Victoria, Cap. 39, Section 92) and in Section 9 of the Marine Insurance Act, 1906, where it specifically states "the insurer under a contract of marine insurance has an insurable interest in his risk and may reinsure in respect of it."

General Status of Reinsurance Prior to 1914⁶²

Reinsurance seems, therefore, to have had an uneventful history in Great Britain up to the outbreak of the war. In the old days, the business was mainly reinsured facultatively, the rate of reinsurance commission paid to the ceding company being 20 per cent. as against 15 per cent. paid by the ceding company to its agents. This difference in commission did not make it profitable to reinsure, but the ceding company looked to some benefit through reciprocation. With the introduction of the treaty system in Great Britain, in recent years, commission rates went up—27½ per cent. was the rule and then 30 per cent., or even more. Very often commission to an intermediary was frequently thrown in. These higher commissions represented a handsome profit to the ceding concern and this profit became an inducement to accept business at inadequate rates and to pass it on to the treaty company.

"Profit" Treaty Evils

In marine insurance some underwriters seized upon this method of safeguarding themselves with the result that reinsurers were losing heavily on business where the direct writing company made a profit. It has been rumored, in fact, that the downfall of the *Consolidated* recently in Great Britain was largely brought about because it was loaded by the direct writers with non-paying business.

With the outbreak of the war, and the withdrawal of the once popular German reinsurance companies, British underwriters

were left practically without the reinsurance facilities upon which they had previously relied. When the double premiums of war and marine risk policies enabled underwriters to make profits regardless of the quality of the business, the new system of reinsurance functioned well enough. But under post-war conditions millions of pounds have been lost in marine reinsurance. The statistical summary given on page 45, shows this record.

Post-War Marine Reinsurance in Great Britain

It seems that over the period 1920 to 1926, marine reinsurance produced a loss of £799,316 without taking into account outstanding liabilities, nor any consideration of losses resulting from failed reinsurers. If the figures for the failure of the Consolidated, the Profits and Income, the Western Alliance, etc., could be ascertained they would show losses of an appalling nature. It has been estimated that since the war no less than £4,500,000 has been lost by British shareholders in reinsurance companies. The British marine reinsurance market has been severely stricken. It is convalescing under difficult circumstances.

There seem to be two remedies offered for the present situation in British reinsurance: first, there must be brought about better faith between the two parties; second, recognition of the fact that reinsurance can not be accepted at less than the original rate.

Post-War Burglary Reinsurance in Great Britain⁷⁷

In burglary insurance, reinsurance risks in Great Britain are effected on the so-called "surplus" method. Here the original company fixes the portion of the risk it desires to keep and the remainder, called "surplus" is ceded to the reinsurers. Reinsurances are placed either facultatively or by obligatory treaty. In burglary insurance the use of treaties has greatly increased in recent years and may in time supersede the old facultative practice.

On private residence burglary covers, the amount which the ceding company will retain depends on two factors: (1) the amount insured on valuables; and (2) the values of any articles especially insured. Retentions are fixed with these two points in mind and a company will not, in general, retain more than a certain sum in all on valuables, nor more than a certain sum on any one article. It is usual to cede a share of the whole policy including non-hazardous as well as hazardous items. For business

premises burglary reinsurance, four factors are considered: (1) the class of stock; (2) the total value of the insurance; (3) the character of the neighborhood; and (4) whether the premises are unoccupied at night. The more attractive the class of stock, the lower the retention. Practice is not uniform, but depends on the rules of the individual companies. The greater the sum insured, the greater the retention, because on this class of business probable maximum loss does not seem to rise in proportion with the amount insured. Individual consideration governs the reinsurance arrangement.

*Automobile Liability Reinsurance*⁷⁷

On individual automobile risks, reinsurance is not transacted in Great Britain to any great extent. The majority of policies cover for unlimited liability. The question of retention is a general one over the whole of the business rather than on particular cases. The incidence of a particularly heavy liability claim, or of an undue run of large claims, is provided for by excess policies, the premium for which is generally based on a percentage of the total annual premium income for the company on this class of business. The element of catastrophe hazard in automobile insurance can not be said to be as significant as in connection with fire business. Public liability automobile cover is handled through pooling arrangements, by arrangements for excess cover, or by ordinary reinsurance in individual cases.

Automobile Fire Risks

In automobile insurance, the fire risk is handled in much the same way as with public liability cover. Some British companies writing automobile insurance have arranged to take out reinsurance, or to make pooling arrangements, on the whole of the risks carried under motor vehicle policies. By paying a percentage of their total premium income they are protected in respect to any one occurrence whether involving liability to third party claims under vehicles, personal accident payments, fire loss or a combination of these risks. At the present time, it is even possible to arrange such contracts with world-wide scope to cover the whole of the automobile business written by the insuring company both in Great Britain and throughout the world.

The following table shows operating results for a group of British reinsurance companies in 1927:*

Company	Per cent. specified item of premium income:		
	Losses	Commissions	Expenses
Average for group.	58.0	30.4	2.9
Mercantile and General.	58.7	31.1	4.0
Reinsurance Corporation.	60.6	29.8	1.1
Victory.	63.7	29.5	3.6
Tariff Reinsurances.	55.6	32.1	3.1
Treaty Reinsurance.	54.8	30.6	3.0
Associated Reinsurance.	55.7	26.7	2.2
London Associated.	60.6	32.3	2.2
British and European.	60.5	26.6	4.1
Anglo-Scottish.	54.7	33.7	5.9

For both fire and marine a combined premium income of £3,587,466 was reported for 1927, an increase of £363,514 over 1926.

**The Review*, London, November 16, 1928, and November 8, 1929.

The recent statistical history of British fire and marine reinsurance is shown below:

Fire, Accident and General Account—					
Year	Premiums £	Claims £	Expenses £	Balance £	Trading Result £
1920	4,939,190	2,132,659	1,608,029	1,198,502	103,066
1921	4,994,958	3,154,739	1,698,741	141,478	-394,706
1922	4,842,693	3,063,101	1,642,047	137,545	276,394
1923	4,484,072	2,813,215	1,515,526	155,331	218,092
1924	4,727,986	2,768,652	1,569,780	389,554	291,990
1925	4,309,067	2,704,281	1,541,576	63,210	230,777
1926	3,346,195	1,926,250	1,171,872	258,503	149,467
1927	3,770,075	2,104,149	1,339,920	326,206	139,473
Trading Profit. . .					£1,014,553

Marine Account—					
Year	Premiums £	Claims £	Expenses £	Balance £	Trading Result £
1920	2,912,583	2,017,823	350,939	543,821	-33,969
1921	1,788,354	1,711,010	181,515	-104,171	-64,478
1922	1,196,400	1,519,911	129,988	-453,499	-25,411
1923	1,162,457	1,209,175	58,179	-104,897	-74,029
1924	1,600,228	1,417,587	142,885	39,756	-350,216
1925	1,031,053	1,378,642	109,618	-457,207	-1,867
1926	444,880	512,340	26,988	-94,748	-97,708
1927	479,684	573,433	21,023	-114,772	-142,638
Trading Loss. . . .					-£799,316

Source: *The Policyholder* (Manchester), February 27, 1929, p. 309, and February 5, 1930.

British reinsurance companies established since 1901 are listed below:

- 1901 Pall Mall (associated with Fine Art and General).
- 1903 Consolidated (liquidation 1926).
- 1905 Alpha (associated with Fine Art and General).
- 1906 Aldwych (associated with Fine Art and General).

- 1907 Mercantile and General.
- 1908 British and European.
 City Equitable (liquidation 1922).
 City of London (liquidation 1922).
 Reinsurance and Guarantee (liquidation 1919).
 Southern.
- 1909 City Fire (transferred to Tariff Reinsurances).
 Anglo Scottish General Commercial.
- 1911 European General (transacts American business only).
 Metropolitan (to Mutual Property Insurance Co. 1917).
 British (liquidation 1921).
- 1912 Inclusive (subsidiary of Vulcan Boiler).
- 1914 Home and Foreign (subsidiary West of Scotland).
- 1916 Essex Union (liquidation 1922).
- 1917 British Insurance Alliance (associated with Motor Union).
- 1919 Associated Reinsurers.
 First National (liquidation 1923).
 General Reinsurance (liquidation 1923).
 London Associated.
 London and Edinburgh (now a direct office).
 Olympic (transferred Tariff Reinsurances 1925).
 Reinsurance Corporation.
 Tariff Reinsurances.
 Treaty Reinsurances.
 Victory.
 Western Alliance (liquidation 1924).
- 1921 City Equitable Associated (liquidation 1922).
- 1923 St. Christopher (subsidiary British Oak).

Source: *The Policyholder*: (Manchester). February 5, 1930, p. 195.

DENMARK

*"Substitution" Practice in the Seventeenth Century*²²

In the bi-centenary book published in 1926 by the Royal Chartered Marine Insurance Company of Copenhagen, we find an entry to the effect that a broker or agent, one *von der Wiele*, on July 2, 1658, placed five policies with different underwriters covering a voyage from Copenhagen to Portugal and return.

Von der Wiele wrote later that one of the underwriters, Jochin Heusch of Hamburg had become bankrupt, and that Wiele had accordingly attempted, without success, to reinsure Heusch's portion of the risk. The word "*reasseuriren*" was used. According to Rendtorff, this is the earliest use of the word "reinsurance." Since this contract was offered to replace a previous one, it may

not be considered strictly a reinsurance in the modern sense. This is also an early example of "substitution" practice.

The Royal Chartered Marine Insurance Company (founded 1726) made an indirect reference to reinsurance in an "application" which it made to the Government in 1775. This may be found on file in the Record Office in Copenhagen. It seemed that the monopoly which the company held had met with active competition from private insurers from about the year 1760 onward. In its application of 1775, it said that thousands of private insurers reinsured their heavy risks with the company without the latter being fully aware of the circumstances surrounding the risk. This exposed the company to heavy loss. This is also one of the early specimens of breach of faith between direct and reinsurers. The Royal itself transacted isolated marine reinsurances as far back as 1780, when risks on two ships which had sailed for the West Indies and were long overdue were reinsured at Hamburg at a higher rate of premium. This company's regular reinsurance practices date back to 1841.

For a great many years the insurance of buildings against fire in Denmark was carried on almost exclusively by three old mutual societies, *i. e.*, the Copenhagen Fire Fund, established in 1731, the Kobstadernes General Fire Fund, established in 1861, and the Landbygningernes Fire Fund, established in 1792. None of these ancient institutions appears to have made use of reinsurance for many years. The Copenhagen Fire Fund commenced to reinsure in 1855, the Landbygningernes in 1900 and the Kobstadernes in 1914. The oldest existing independent Danish company transacting reinsurance solely is the Nordisk Reinsurance Company of Copenhagen, established in 1894. Since its inception, the company has been in intimate touch with leading direct writing companies over the world.

In the Royal Concession granted in 1778, to the Royal Chartered Fire Insurance Company of Copenhagen, it was mentioned that the company was permitted to seek protection by reinsuring its large risks. The power seems not to have been exercised at first since in 1817 the company made inquiries as to the possibility of obtaining reinsurance facilities in foreign parts, possibly in Hamburg. It decided not to reinsure owing to the fear of interference by reinsurers in claim settlements or the possible failure of the reinsurers to make good their obligations. In fact this

company seems not to have made general use of reinsurance until about 1870. When the Nye Danske Fire Insurance Company was promoted in 1864, it was mentioned in the prospectus that it was the intention of the company to distribute risks so far as possible by reinsurance.

The Copenhagen Marine Insurance Company, the first to be established after the monopoly of the Royal was broken, made use of reinsurance shortly after the company was founded in 1852.

From the records of the Nye Danske Fire Insurance Company we learn that that company entered into a treaty with a British company in 1878. This was cancelled in 1882, because it was obligatory only on the Danish and not on the English company. In 1883, the Nye Danske again entered the English market, opening an agency at Manchester. This agency was closed after two years on account of the unfavorable results. No further treaty reinsurance was done by the company in the United Kingdom until 1890.

Certain results for 1927* may be of interest for Danish Reinsurance Companies.

Founded	Company	Premium Income (Kroner)†
		Total nine companies.....	59,842,228
1916	Dana.....	2,957,700
1917	Dansk Veritas.....	2,402,673
1915	Kjobenhavnske Reins.....	1,089,909
1894	Nordisk Gjenforsikrings.....	6,688,113
1915	Reassuranceforeningen.....	2,246,560
1916	Royal.....	1,134,382
1918	Salamandra.....	29,610,090
1898	Nye Dantes Reassurendorer.....	758,593
1918	Rossia Re.....	12,954,208

In thirteen additional companies, writing reinsurance mainly, the total premium income was 82,221,043 kroner.

**The Review*, London, November 16, 1928.

†Danish crown=26.8 cts.

SWEDEN*

From the by-laws of the Skandia Insurance Company, established in 1855, we learn that the company could not accept more than Rd. 150,000 on one risk without reinsuring in another company. The company probably practiced reinsurance from the time it was founded. It concluded at least two treaties in its

*Courtesy of Mr. Bertil Jochnick, Stockholm.

first year: one with the Prussian National Insurance Company of Stettin, 1855, and one with the *Assicurazioni Generali* of Trieste, dated October 1, 1855.

As far back as 1894, an attempt was made in Sweden to carry on risk-premium life reinsurance.* The *Thule*, at that time, established a reinsurance company, the *Egid*, which was to grant risk-premium life reinsurance. It did not receive support and ceased business after a few years.

In 1907, the *Trygg* established a reinsurance company, the *Atlas*, which grants life, accident, fire and third-party insurance. The company had a capital of 1,000,000 kroner. It has today a combined premium income of about 5,000,000 kr. In May, 1914, the life reinsurance idea was carried into further effect by the Clearing Institute for Reinsurance, established at that time by the Swedish life insurance companies. The facility established was the *Reassurance Company Sveriges*. This company was founded as a limited liability corporation with a capital of 600,000 kroner fully paid-up by the contracting companies. This company had a premium income of about 3,500,000 kr. last year. One aim was to keep in the country the money which had formerly gone abroad, estimated at 50 per cent. of the business in 1914. This company operates on the risk-premium basis. The *Sverige* had 229,000,000 kr. in force at the end of 1927.

In 1919, the *Vala*, a life reinsurance company, was founded in Gothenburg with a capital of 1,000,000 kr. Its premium income was about 2,000,000 kr. in 1928. There are 23 reinsurance companies in Sweden at the present time with a combined premium income of about 30,000,000 kr.

The following data on reinsurance in Sweden for 1927 may be of interest:

Type of Reinsurance	Premium Kr.†	
	Gross	Retrocession
Swedish Life reinsurance (3 companies) . . .	12,248,891	8,028,669
Swedish fire reinsurance (16 fire, and one fire and life companies)	12,304,247	2,909,508
Swedish marine (fire and marine)	3,102,007	2,287,496
Swedish casualty (4 casualty and 6 casualty, fire and miscellaneous companies)	2,299,000	466,000
Totals (approx.)	29,900,000	13,700,000

*Insurance for difference between reserve and face amount of policy.⁴⁰

†Swedish crown = 26.8 cts.

NORWAY

Through the Christiania General Insurance Company (Storebrand), Mr. Rendtorff²² obtained some early reinsurance history for Norway. Marine business was first transacted in that country by mutual marine insurance societies and these began about 1840 to reinsure the whole of their undesirable risks on the cheapest terms possible, the business being placed in Hamburg. Facultative arrangements between the societies date from about 1843. Obligatory treaties did not appear until about 1880 among the mutual societies in the country.

Among the stock marine companies, reinsurance appears to have been first discussed about 1850. In 1854, some 16 per cent. of the premiums of the Christiania Marine Insurance Company were reinsured.

Very little information is available on the beginnings of fire reinsurance in Norway. The *Storebrand* reinsured small amounts from 1849 and the *Lillebrand* from 1848. The Ganle Bergen, established in 1838, shows no reinsurance premiums in its accounts until 1865 and then only in very small amounts. By 1871, this had grown to approximately 9 per cent. of the business in force.

It seems that the disastrous fire in Christiania, in 1855, made the necessity of reinsurance imperative. Up to that time the *Storebrand* had, broadly speaking, carried the whole of its liability for its own account. In 1862, the *Storebrand* entered into its first reinsurance treaty with a British company, which treaty was still in force in 1922. It was chiefly through the early adoption of the reinsurance treaty system that the *Storebrand* has maintained its British reinsurance connections. In 1880, the *Storebrand* opened a reinsurance office in London, but the unsatisfactory results achieved by the arrangement caused the office to be closed in 1883.

Up to 1917, life-reinsurance methods in Norway left much to be desired. An essential part of the Norwegian companies' funds went to foreign countries, chiefly to German companies. The Norwegians in the spring of 1917 established the *Norske Folk* to accept life-reinsurance from Norwegian companies. The reinsurance arrangements of the *Norske Folk* with direct writing companies were patterned after the practice of the *Sverige*. (Sweden).

Three Norwegian companies report as follows for 1927*:

Founded	Company	Net premium income(Kroner)†
	Total three companies.....	18,646,821
1919	Anth. B. Nilsen's Reassurance.....	10,748
1916	Norske Assurance Union.....	1,470,608 ‡
1847	Christiania General (Storebrand).....	17,165,465

For Finland we have the following:

	Total four companies.....	16,134,608
1917	Finska Reassurances.....	401,348
1923	Norma Återforsakrings.....	1,044,738
1899	Osmo Återforsakrings.....	7,312,806
1906	Verdoni Forsakrings.....	7,375,716

*The Review, London, November 16, 1928

†Norwegian crown = 26.8 cts.

ITALY

The *Riunione Adriatica di Sicurta* of Trieste, established in 1838, has records which suggest that in its early days it transacted facultative reinsurance. There are also extant records of its first operations under the treaty system. It entered into a contract with the Azienda in 1842, an agreement whereby the *Riunione Adriatica* took over the whole fire portfolio for Lombardy of the Azienda, thus effecting complete cession of the whole business.

The *Riunione* shows an item for reinsurance premiums in its first balance sheet. This must have been for facultative business since its earliest treaty was not made until a later year. Even after treaty methods were established, facultative methods continued. A copy of a reinsurance contract issued by the above company to the *Assicurazioni Generali*, in Trieste, covering a third share of a fire insurance on the Florence Gas Works, is shown in the Rendtorff "History of Reinsurance." This policy was dated December 3, 1849.

From some records which were furnished to Mr. Rendtorff²² by the *Assicurazioni Generali*, it seems that at the Board meeting of July 19, 1832, it was decided to effect reinsurance in two cases, one a fire risk and one a marine risk. In respect to the fire risk, the Board resolved to reinsure even though at a higher rate of premium. They preferred to incur a small loss rather than run an immoderate risk. They seemed to have understood well the purpose of reinsurance. In 1833 the *Generali* issued instructions

to various agents that certain risks might only be accepted subject to reinsurance, thus showing that facultative practices had become a regular and normal feature of its business.

In 1843, a marine reinsurance arrangement was concluded by the *Assicurazioni Generali* and the *Riunione Adriatica* which possessed all the attributes of a treaty. It applied to hull insurance only and was arranged on a reciprocal basis. In 1850 a fire treaty was arranged between the Schlesische Fire Insurance Company of Breslau and the *Riunione Adriatica*. In the same year a fire treaty was also arranged between the *Riunione*, as reinsurer, and the Parisian *Compagnie d'Assurances contre l'Incendie* as the ceding company.

In 1922, the *Unione Italiana di Riassicurazioni* was founded in Rome. No systematic history of reinsurance in Italy has been written.

Premium volume for reporting Italian companies in 1927* was as follows:

Founded	Company	Reinsurance premiums (net Lira)†
	Total six companies	99,880,991
1898	Ansonia	5,741,166
1923	Generale de Riassicurazioni	4,267,612
1918	Riass. Consorziale	11,048,777
1918	Riassicratrice	34,109,784
1917	Unione Italiana	35,842,405
1920	Istituto Italiana	8,871,247
Reinsurance accounts of five Italian direct writing companies:		
Founded	Total five companies, 1927	50,573,301
1831	Assicurazioni Generali	17,993,860
1896	Italiana Infortuni	7,443,841
1889	Italiana Incendio	7,232,449
1898	Italiana Vita	7,921,561
1898	Assicuratrice Italiana	9,981,590

**The Review*, London, November 16, 1928.

†Italian lira = 5.3 cts. since December 22, 1927.

SWITZERLAND

There are on record a number of early treaties for the Swiss Annuity Institution, particularly one for October 1, 1858, with the Frankfurter Reinsurance Company and in 1865 with the Swiss Reinsurance Company to cover life risks. The Cologne Reinsurance Company, Germany, transacted life reinsurance during the period 1854 to 1860. Life reinsurance treaties were,

however, slow in development as is indicated by the fact that from 1865 to 1880 no reinsurance company other than the Swiss Reinsurance Company seems to have transacted the business. In 1880, the Muenchener Rück commenced business in Switzerland and extended its operations to life reinsurance some years after its foundation. In 1885, the Cologne Reinsurance Company resumed life reinsurance in Switzerland after a lapse of 25 years.

The Swiss Reinsurance Company was founded in 1863. The reports of this company show that life treaties were first accepted by that company in 1868 and accident treaties in 1880. The company had assets of 358,000,000 Swiss francs in 1927, and a premium income of 297,000,000 Swiss francs. This made it the largest single reinsurance institution in the world.

In 1911, the Union of Cantonal Fire Insurance Institutions was established.³ This organization handles reinsurance business for its constituent members.

The 1927 accounts for Switzerland, as reported by "The Review," London, November 16, 1928, were as follows:

Founded	Company	Premium Income*	
		Fire, Accident and Marine (Swiss Francs)	Life (Swiss Francs)
	Total nine companies	222,931,458	45,410,560
1863	Swiss Reinsurance	135,894,357	23,872,439
1875	Prudentia	53,781,491	9,579,817
1919	Allgemeine Rück	8,385,667	2,949,108
1923	Rheinische Rück	7,489,716	7,724,506
1923	Union Re	7,625,012	696,063
1869	Switzerland General	3,091,052	....
1926	New Insurance and Reinsurance	3,101,875	588,627
1869	Baseler Rück	1,899,032	....
1910	Swiss Cantonal Rück	1,663,256	....

*Swiss franc = 19.3 cts.

AUSTRIA

A mutual fire insurance office in Vienna, the *Wechselseitige Brandschaden u. Janus Versicherungsanstalt*, arranged on August 9, 1824, to reinsure a certain share of its business with the *Azienda Assicuratrice* of Trieste. The idea was to cede the business at lower rates than those for the original policies in order to permit the direct writer to be assured of a certain profit. The *Azienda* was prepared to accept up to 30,000,000 kroners at a

premium 25 per cent. below that of the direct writer. It does not appear that the proposal was ever completed, but it is of value in showing a procedure which has never been subsequently adopted to any great extent in fire reinsurance.

The growth of treaty reinsurance seems to have been persistent in Austria as evidenced by the inquiry addressed on September 25, 1845, by the Imperial and Royal First Privileged Insurance Company of Vienna to the London Assurance Exchange. This company is still in existence though having changed its name to the Danube General Insurance Company.

Figures for four Austrian companies in 1927* are given below:

Founded	Company	Total premium income (Schillings)
		Total four companies.....	17,751,813
1906	Internationaler Rückversicherung.....	7,845,201
1869	Wiener Rückversicherung.....	6,018,720
1897	Bundeslander Rückversicherung.....	3,335,886
1885	Wechselseitiger Rückversicherung.....	552,006

**The Review*, London, November 16, 1928.

RUSSIA

Russian reinsurance business had been placed certainly as early as 1870 among eleven English fire companies, all among the front rank among such companies of the period. This arrangement was effected through brokers in London.

Russia has attempted reinsurance on a national scale.⁵⁶ Reinsurance institutions in foreign countries had been taking much money out of the country. In 1896, under Finance Minister von Witte, a Russian reinsurance institution was founded. In a few years, however, this enterprise was dropped and reinsurance was again effected through foreign companies. Activities of the Russian companies in the United States will be related further on.

The Soviet Russian Insurance Law of September 18, 1925, contains the rules for the reinsurance of Russian risks in foreign companies. (*Eastern Underwriter*, June 21, 1929, p. 24). The law authorizes reinsurance for all lines except compulsory insurance. Transportation risks under Article 5 are given practically a free hand. The rules specifically authorize treaty reinsurance and particularly by the excess loss method. Mr. N. Herziani, of *La Reassurance*, Paris, has made an intensive study

of Russian reinsurance problems. The *Eastern Underwriter* for October 25, 1929, reviews the Russian experience for 1928.

HOLLAND

The risk-premium system of life reinsurance has been regularly in effect in Holland since 1914.⁴⁰ The companies interested notified the central office of the surpluses, which in turn were assigned to one or more companies. The assignments were made on a fixed treaty basis, no preference or selection being shown as between companies. In 1921, three companies withdrew; a reorganization took place and the original plan was modified to avoid certain cumbersome administrative practices. This was done by pooling the ceding risks. Notice of a ceding risk is given to the central office which for the time being only debits the ceding company with the premium. At the end of the calendar year, it is determined how much each of the companies has to pay. If the pool has suffered a loss, this loss is apportioned among the companies at agreed rates. The pool is only an administrative body not having any money under its control. The pool takes only homogeneous risks of certain grade. Certain tropical risks are taken and rated up seven years of age.

Data for four Netherlands companies in 1927* follow:

Founded	Company	Premium income (Florins)†
	Total four companies.....	
1889	Nederlandsche Her.....	446,265
1899	Tweede Nederlandsche Her.....	204,866
1899	Derde Nederlandsche Her.....	204,866
1924	Universelle Reassurantie.....	1,021,252

*The Review, London, November 16, 1928.

†Netherlands florin = 40.2 cts.

HUNGARY

One of the first of the Continental companies to take interest in British reinsurance business was the *Fonciere Pester*, of Budapest, established in 1864. This company was represented in England in 1877, and some of the companies who placed their reinsurance with that office in those days still maintain close business relations with the Hungarian company. A report is available for the *Pannonia Rück* for 1927. This showed a premium income of 1,635,519 *pengoes*.

JAPAN²²

The first treaty known to be entered into in Japan was contracted between the Yokohama Insurance Company and the Commercial Union Assurance Company. This treaty began either in 1904 or in 1905, and was afterwards transferred by the Yokohama to the Liverpool & London & Globe Insurance Company in 1908. The further introduction of treaties into Yokohama was brought about largely through the agency of Dr. Schultz, formerly the General Manager of the South Germany Reinsurance Company. On the return of Prof. Kambe of Yokohama from Europe in the autumn of 1910 he reported on insurance practice in Europe. The rapidly developing industrial situation in Japan and other factors led to the formation of such companies as the Kyodo Fire Insurance Company, Osaka and the completion of fire treaties between Dr. Schultz's company and the Kyodo. Three independent reinsurance companies (Dai-Nippon, 1919; Tatsuuma, 1919; and Nissho Fire and Marine, 1917) showed premiums of more than 4,000,000 *yen* in 1927.

TURKEY

Under the law of June 7, 1927, Turkey established a reinsurance monopoly. Fifty per cent. of every risk written by any national or foreign insurance company must be reinsured with *National Reinsurance*, and the latter must be bound to accept such risks. In this way 50 per cent. of all the insurance premiums encashed in Turkey by companies working in Turkey will be paid over to the monopoly company. Owing to the fact that the capital is limited to approximately \$500,000, it is obvious that the company will be unable to assume any but an unimportant share of the total risks involved—some \$50,000,000 per annum—and it will, therefore, be obliged to look to the European insurance market for cover. In point of fact this has already been found principally in Switzerland.

At least 60 per cent. of all premiums to the reinsurance monopoly will thus leave the country in the form of direct retrocessions from the monopoly company to foreign reinsurers. It is probable, too, that this will be the fate of a further substantial proportion in the form of indirect retrocessions made abroad by national companies, created and controlled by foreign insurance

companies, whom the monopoly company propose to interest by way of reinsurance. Thus it seems that the bulk of the profit which the *National Reinsurance* hopes to make is not from the small proportion of the premium income which it will retain, but the commissions which it will earn as intermediary for placing the reinsurances.

The monopoly may, at the discretion of the Government, be vested for a period not exceeding 25 years in a limited company established for the sole purpose of transacting such business. Sixty per cent. of the capital must be in Turkish hands. Under the decree of March 19, 1929, the monopoly was granted to the *Banque d'Affaires* for a period of fifteen years.

CZECHOSLOVAKIA*

The First Bohemian Reinsurance Bank is the only purely reinsurance company in Czechoslovakia. It was organized in 1872. The business of the Company is chiefly in the fire field. Its 1928 accounts stood as follows:

Item	kc.
Gross premiums.	63,234,049
Retrocessions.	44.1 per cent.
Net premiums	35,338,642
Fire.	28,703,111
Miscellaneous.	6,635,531

POLAND

In 1920, the "Warta" Reinsurance Company was established in Pozna. The office was later removed to Warsaw. The largest proportion of the capital stock is owned by the *Powszechny Zaklad Ubezpiecze Wzajemnych*. The "Warta" transacts all branches of reinsurance in all European countries and in England. Its premium income in 1928 was Zl. 13.6 million. The capital is Zl. 1 million.† Mr. Emile Betscher is General Manager.

UNITED STATES

Colonial and Early Nineteenth Century Status

There seems never to have been any definite, general prohibition of reinsurance in the United States in the eighteenth century

**Insurance Record*, London, October 11, 1929.

†Polish Zloty = 11.2 cts.

except as the statute of 1746 (19 Geo. II, c 37) applied before the Revolutionary War. It was held in an early Maryland case that this English statute of 1746 was in force in that State, but that it related exclusively to marine insurance.*

The Eagle Fire Insurance Company of New York, in 1906, said in its Centennial Book that "the first case of *reinsurance* noted in the history of the company was in August, 1813, when it *assumed* all of the outstanding risks of the Union Insurance Company (formerly the Jersey Bank) for a premium consideration of \$2,950.83, being for the unexpired time of \$689,200 at risk. The last of these risks did not expire until 1819, when a balance being drawn showed losses of \$429.50. The deal thus resulted in a profit to the company of \$2,521.33. This seemed to be the first case of "reinsurance" of one company by another in United States fire underwriting history. The Aetna, of Hartford, followed by reinsuring the outstanding risks of the Middletown Fire in September, 1819, and some three years later the Hartford Fire reinsured the business of the New Haven Fire. By these transactions the reinsuring companies took over whole portions of business from companies which had presumably failed.

According to the Secretary of the Eagle Fire Insurance Company of New York in a memorandum relating to the insurance of factories from 1806 up to November 1, 1817, it seems that the fire insurance business had run badly over that period, and certain suggestions were made as to the premium which might be paid for reinsurance, though there is no actual record that any such transaction was carried out.

An interesting early example of the striving after reinsurance through coinsurance practices is given in a publication by the Aetna Insurance Company wherein it is mentioned that that company arranged with the Hartford Fire Insurance Company to take half of a risk of \$15,000 as a direct insurance.

In July, 1837, the Supreme Court of New York in the case of the New York Bowery Fire Insurance Company *v.* the New York Fire Insurance Company, said: "reinsurance in this State is a valid contract* as well in cases of fire as marine policies. The risk assumed by the fire assurers gives them such an insurable interest as renders the reinsurance a valid contract."

*See *Merry v. Prince*, footnote, page 59.

Hone v. Mutual Safety Ins. Co. Case, 1847

We now come to an 1847 case which has bulked large in whatever discussions of reinsurance philosophy and practice there have been in this country,—*Hone v. Mutual Safety Insurance Company*, 1 Sandford (N. Y.) 137.

This is the leading American case on the subject of reinsurance as a monofield business, and, in the opinion of some, seems to establish an organic distinction between the reinsurance risk and the risk originally insured. A policy was made by the defendant in favor of the American Mutual Insurance Company. In the great fire of New York, July 19, 1845, the property insured by the American Mutual Insurance Company was destroyed and the company became insolvent. Defendants gave notice that they would prove on trial that by universal usage among insurers, they were liable for a sum which should bear the same proportion to the amount of the property destroyed as the policy of reinsurance bore to the original policy.

Here the court said "From *Le Guidon de la Mer* to the last edition of Mr. Justice Park's work, and the publication of M. de Alauzet in France, the contract of reassurance is described as a *contract of indemnity* to the party obtaining it; and in all the modern treatises such indemnity is explicitly declared to be the whole sum reinsured The case of *Merry v. Prince* (2 Mass. [Tyng] 176)* (November term, 1806) sustains the same view of the reassurer's liability The reassurer has nothing to do with the payment by the insurer."

It has been held by some insurance men that a contract of insurance is a contract to indemnify against loss, whereas a contract of reinsurance is a contract to indemnify against liability. This may be true if one overlooks that there are two primary species of insurance contracts subject to "second" insurance: (1) contracts of investment and (2) contracts of indemnity. In the *Hone* case only property loss was involved. Contracts insuring against loss or liability may be sub-species of contracts of indemnity. And reinsurance may be multi-field and monoline only *within* each of the two fundamental categories.

*"A policy of reassurance is a valid contract. The statute 19 Geo. II c37 did not extend to the British Colonies, and has never been adopted in this Commonwealth."

Philadelphia Reinsurance Practices

Fowler mentions a suit in Philadelphia in 1848 on a marine reinsurance liability case by the Philadelphia Mutual against the Washington Mutual. It seems also that French companies were transacting fire reinsurance in Philadelphia about the middle of the nineteenth century. New York State, in the act of June 25, 1853, provided for the incorporation of fire insurance companies, providing in Section 2 that "any company organized under this Act shall have power to effect reinsurance of any risks taken by them respectively." The Act of June 24, 1853, providing for the incorporation of life and health insurance companies under Section 1, authorized: "every company organized under this Act shall have authority to reinsure any risk herein authorized to be undertaken."

Fire Insurance Practices, 1872

In Griswold's "Fire Underwriters Textbook" (1872) we find it stated: "Reinsurance is general throughout the Continent of Europe as well as in the United States. In the United States there is no organized system of reinsurance by companies chartered especially for that purpose, although such an office is in contemplation in New York City." The Continental Insurance Company, in 1877, announced: "as a rule we do not wish to reinsure any company. It is, however, sometimes admissible to reinsure a company having a larger line than it ought to carry. In those cases where it may be necessary or advisable to reinsure our lines, we prefer to do so in the New York office."

Chicago and Boston Fires, 1871-1872

The Chicago Fire of October 9, 1871, directed attention toward the rudimentary state of the reinsurance business in this country at the time. Some 12,000 buildings were destroyed involving a loss of about \$165,000,000. The insurance on the property destroyed was about \$100,000,000, and the adjusted losses about \$90,000,000. Six British fire offices lost about \$5,100,000; the Aetna of Hartford adjusted about \$4,000,000; the Home of New York about \$3,000,000; the Chicago Firemen's, \$6,500,000; Merchants' of Chicago, \$5,000,000; Germania of Chicago, \$3,300,000; and Equitable of Chicago, \$2,000,000. Quite a number of United States offices were ruined. On November 9, 1872, the Boston

fire occurred, consuming 748 houses and causing a loss of \$75,000,000, covered by about \$65,000,000 of insurance; some \$35,000,000 was in Massachusetts companies. Many small, local companies went into liquidation.

The subject of reinsurance was discussed thoroughly by Commissioners of Insurance after the Chicago fire. Superintendent Miller of the New York Department pointed out in his 1871 report (p. 45, Barnes' Condensed Edition, 1871-1877) that some fire companies had assumed single risks which often exceeded the entire capital of the companies.

British Reinsurance Company Enters United States, 1882

The United Fire Reinsurance Company of Manchester, England, commenced business in the United States April 1, 1882, and its first obligatory treaty was arranged with the Fire Association of Philadelphia and this was followed shortly afterwards by treaties with the Hartford and the Queen. The first year's business showed a volume for this company of more than \$900,000. All the early American treaties seemed to be placed either with foreign unadmitted reinsurers or with the few native reinsurance offices, of which the first was the Reinsurance Company of America which was wound up in 1890. It was not until 1898 or 1899 that foreign reinsurance companies were admitted to business in the States under current conditions. In that year the Cologne Reinsurance Company and the Salamandra Reinsurance Company, and a number of others were admitted, since which time there was a great development of reinsurance on the North American continent.

The case of *Manufacturers Insurance Company v. Western Assurance Company* (145 Mass. 419) (1888) is of interest as an indication of the reaction at that time to the philosophy of reinsurance in this country. The court said: "while in a sense it was an insurance upon property, it was strictly a *contract of indemnity against risk under another contract which had been entered into by the insured.*" This suggests that reinsurance has at times been considered in this country as a form of insurance *sui generis*, that it has its own attributes and status, and that the only obstacle to its growth as in foreign countries has been the restriction upon the classes of business which a reinsurance company may write in a given State.

Baltimore and San Francisco Fires

Direct writing insurance companies were again to be tried sorely by two catastrophic fires,—the Baltimore fire of February, 1904, and the San Francisco earthquake and fire of 1906.

The latter catastrophe occurred on April 18, 1906, and caused a total estimated loss of \$350,000,000, on which there was about \$235,000,000 of insurance, and about 80 per cent. of this insurance was paid. Professor A. W. Whitney issued a comprehensive report on the insurance aspects of the fire on behalf of the San Francisco Chamber of Commerce. Many of the companies which did not pay their direct claims in full, paid their reinsurance claims fully. The 1905 report of the Insurance Commissioner of California gives the essence of Prof. Whitney's report (pages 20-35).

Later Developments in Fire Reinsurance

In 1914, there was operating in New York State the Reinsurance Bureau, an organization fostered by 58 direct writing fire companies, which, in the opinion of Superintendent Hotchkiss (N. Y.), would not have needed to exist if proper and sufficient reinsurance facilities had then been available. The Bureau was simply a reinsurance clearing house, for business submitted by contributing direct writing members.

The Pilot Reinsurance Company of New York was incorporated April 14, 1925, in New York to write fire, marine and allied lines of reinsurance. Mr. Carl Schreiner is President. At the close of 1928, the company had \$1,992,283 net premiums in force and assets of \$3,554,186.

Farmers' Mutual Fire Insurance

A most interesting development of reinsurance practice in the United States relates to farmers' mutual property insurance. Here we may note particularly the experience and practices in Iowa. In that State, there are 160 county mutual associations. Their business is primarily to insure farm property within their respective territories against hazards of fire and lightning. The diversity in size of these county associations is illustrated by the fact that the smallest has a total of \$85,700 of risks in force, while the largest carries a total risk of \$30,100,955. The average association carries \$6,058,398.

It has been shown that the aggregate of these small local associations provide property insurance to the farmers at a rate which is, on the whole, much lower than for larger organizations operating throughout a wide area. These farm fire risks are by no means attractive to stock companies operating from the big cities. Among the farm mutuals, it has been found possible to incorporate, by means of a reinsurance plan, some of the advantages of a statewide organization and to retain thereby the advantage of controlling moral hazard which these local associations seem to have. The insurance associations of Iowa stand at the forefront of the development of reinsurance facilities for farmers' organizations.

The Iowa Farmers' Mutual Reinsurance Association of Greenfield, Iowa, was organized April 19, 1908, and for more than a decade confined its work to specific reinsurance. It now carries blanket reinsurance to the extent of \$225,000,000, or something less than a quarter of the total insurance that all county associations have in force.

Methods in Blanket Reinsurance for Farmers' Mutuals

Upon applying for blanket reinsurance, each local association submits a schedule of its gross risks in force and its gross losses for each of the preceding ten years. On these data, the reinsurance association computes a normal loss ratio for that association. The net amount of risks in force in the reinsuring association is multiplied by the normal loss ratio to obtain the loss budget or the total amount of loss which might normally be expected during the year. The reinsurance association agrees to pay any losses of the reinsuring association in excess of 125 per cent. of the loss budget up to 225 per cent. Any losses in excess of this per cent. must be borne by the local association. Funds for the payment of these losses are gained by an equitable assessment upon member associations based upon the loss budget.

Some have maintained that this blanket reinsurance plan operates to the disadvantage of the larger local associations, but this has not been definitely established.

Mutual Fire Insurance Generally

Reinsurance was placed by mutual fire companies for many years with stock companies. Later, agents' associations in the

mutual field became insistent that this practice be dropped and that arrangements for the exchange of business be effected between mutual companies. At the present time most of the mutuals reinsure with other companies in the same field. Eight or ten years ago the Mutual Reinsurance Bureau was founded (Belvidere, Illinois). This Bureau serves many companies. Large mutuals act as reinsurers, and companies taking risks beyond their capacity are given reinsurance service through the Bureau. This Bureau seems to have been the first of its kind in the United States. Excess loss reinsurance for assessment fire mutuals is not lawful in Illinois. (Opinion Attorney-General, Illinois.)

Life Reinsurance Developments

There are on record individual instances where life insurance companies at an early date entered into agreements with other companies to effect reinsurances. One instance of this kind was the contract between the Pacific Mutual Life Insurance Company and the California Mutual Life Insurance Company, November 6, 1868. The Pacific Mutual's limit on one life at that time was \$10,000.

The risk-premium method in life reinsurance has been in use in the United States since about 1903, according to Messrs. Laird and Cathles.⁴⁰ It does not today appeal to the large mutual life insurance companies in the Northeast, but is used extensively by companies in the West and South. It has not been generally adopted in Canada. Of one and one-quarter billion dollars of reinsurance in force in the United States and Canada, at the end of 1926, less than one-half was handled on the risk-premium method.

The Reinsurance Life Company of America, Des Moines, Iowa, was incorporated in 1917 and began business on August 18, 1918, with a paid-in capital of \$500,000 and \$500,000 surplus. It is in business to reinsure life, double indemnity and disability policies on the non-participating yearly renewable term plan (risk premium), or as coinsurance. Five and ten year term reinsurance policies are also issued. At the end of 1928, the company had \$62,651,000 in force.

On February 15, 1919, the Metropolitan Life Insurance Company organized a separate Reinsurance Division. It was found

that the reinsurance of the surplus business of other companies could be handled much more expeditiously and satisfactorily by a separate division than by having such reinsurance merged with the regular ordinary business, as had theretofore been the case. Another factor influencing the establishment of the Reinsurance Division was the fact that during the War the business of two German reinsurance companies, the Prussian Life Insurance Company and the Mercury Reinsurance Company, was taken over by the Alien Property Custodian, and the Metropolitan was asked by the Government to assume the business of the two German Companies. Life reinsurance is transacted by the Metropolitan on the coinsurance and yearly renewable term (risk-premium plan) and through either fixed (automatic) or facultative agreements. At the present time the total life reinsurance outstanding in the Metropolitan is \$437,000,000, the largest single life reinsurance unit in the world.

In 1923, the North American Reassurance Company was incorporated with a paid-in capital of \$1,000,000, and a paid-in surplus of \$1,000,000. A majority of the stock is owned by the Swiss Reinsurance Company of Zurich, founded 1863. The North American operates exclusively in the United States and Canada. This company is the first life reinsurance company to be operated on such a large scale in the United States. It writes life reinsurance only. At the end of 1928 it had \$159,457,000 in force.

The Pilot Life Reinsurance Company was incorporated on April 28, 1928. At the end of 1928 the company had admitted assets of \$1,035,000 and had not up to that time transacted any business. In October, 1929, it was decided to liquidate the company.

The growth of life reinsurance practice in the United States may be gauged from the following table:

PERCENTAGE, REINSURANCE PREMIUMS FOR LIFE
INSURANCE OF TOTAL PREMIUM INCOME FOR 19 LIFE
COMPANIES HAVING PREMIUM INCOME OF MORE
THAN \$20,000,000 IN 1927*
(Constant group, 1918-1928)

Year	Premium Income* (own account)	Reinsurance Premium*	Percentage, Reins. Prem. of Total Premium Income
1928	\$1,872,502,015	\$37,220,809	1.99
1927	1,703,686,091	31,548,778	1.85
1926	1,556,815,696	26,365,886	1.69
1925	1,423,364,035	21,613,886	1.52
1924	1,272,048,677	13,861,847	1.09
1923	1,147,158,113	9,651,029	.84
1922	1,031,369,494	8,114,829	.79
1921	944,933,656	5,310,006	.56
1920	875,512,239	3,604,136	.41
1919	750,409,317	3,212,711	.43
1918	636,266,227	1,994,224	.31
Percentage, 1928 of 1918	294	1869	....

*Includes total and permanent disability.

Life reinsurance premium volume is apparently growing much faster than are premiums for "own account."

Casualty Reinsurance

In 1911, the European General Reinsurance Company was organized in England as the European Accident Insurance Company, Ltd. Its present name was adopted in 1920. The company writes general casualty lines and only in the United States. While registered as a British company, its administrative office is in Switzerland. Recent changes in its administration indicate a closer connection with its associated company, the Swiss Rück. At the end of 1928 it had admitted (U. S.) assets of \$15,395,000 and its net premiums written were \$6,988,705. Since organization in the United States, the company received \$66,956,000 in premiums and paid \$28,261,928 in losses.

The Employers Reinsurance Corporation of Kansas City, Mo., was incorporated January 30, 1914. It was organized by E. G. Trimble who has been its president ever since. In 1928, the net premiums written were \$3,071,000 and the admitted assets \$6,823,000. The company will continue exclusively as a casualty and surety reinsurance concern.

In 1917, the American Reinsurance Company, of Pennsylvania, was organized to transact excess reinsurance on general casualty lines. It is licensed in 21 States and is managed by Ream,

Wrightson and Company, insurance underwriters. Its net premiums in force December 31, 1928, were \$1,060,197.

The General Reinsurance Corporation was organized March 21, 1921 as the General Casualty and Surety Reinsurance Corporation, with a paid-in capital of \$800,000 and \$900,000 net surplus. In June, 1921, it took over the United States' business of the Norwegian Globe of Christiania. In 1923, it assumed its present title. Its present capital is \$1,500,000 and the surplus is \$1,603,035.72. In 1928, the General Alliance Corporation was organized to acquire and hold the shares of the General Reinsurance Corporation and a half interest in the holdings of the Royal Exchange Assurance Group (London) in the United British Insurance Co., Ltd. On March 15, 1929, the General Alliance Corporation owned all the stock of the General Reinsurance Corporation, and, jointly with the Royal Exchange Group, a controlling interest in the United British. At the end of 1928, the General Reinsurance Corporation had \$13,000,000 in admitted assets, and, during that year, net premiums of \$5,450,000, paid losses of \$2,600,000 and total expenses, commissions, and taxes of \$2,240,000. Early in 1929, the United British Insurance Co., Ltd. established a United States Branch with an initial deposit capital and surplus of approximately \$1,450,000. This United States Branch of the United British transacts casualty reinsurance as a "running-mate" for the General, and has the same management as the General. The two companies transact practically all forms of casualty and surety reinsurance and constitute the first example of a "Group" in the history of American casualty reinsurance.

The Excess Insurance Company of America was incorporated under New Jersey laws December 7, 1926, and began business February 18, 1927. It has paid-up capital of \$750,000 and net surplus of \$1,247,000. It writes general casualty and surety reinsurance and excess insurance business. In 1928, its underwriting earned income was \$695,427; losses and expenses incurred \$258,995; underwriting loss, \$252,947 and investment profit of \$72,306. Since organization it has received \$1,235,738 in premiums.

The International Reinsurance Corporation was incorporated February 15, 1928, in California. It writes general casualty and surety lines, is licensed in eight States and on September 30, 1929, had assets of \$7,040,730. The total premiums written between

July, 1928, and September, 1929 were \$3,603,000. The Company has established connections in Great Britain recently.

Workmen's Compensation

According to Mr. Michelbacher* the problem in workmen's compensation insurance seems to be the proper approach to the so-called "shock" loss. The "shock" loss is that which occurs infrequently, but which may be of considerable magnitude. Mr. Michelbacher emphasizes Ehrenberg's principle that in many lines of insurance the ideal procedure is to secure the most minute subdivision of risk and the distribution to the utmost extent of this subdivided risk among risk carriers. The acceptance of obligations by companies in connection with workmen's compensation and employers' liability insurance involves catastrophic risk of unlimited extent in some cases. Here it resembles the unlimited liability assumed by some companies under public liability automobile insurance contracts.

"Shock" losses originate from multiple claims arising from a single accident (gas explosions, collapse of structures, conflagrations, railway disasters, boiler explosions and the like). Liability cover supplementing workmen's compensation has in it possibilities of calamitous loss. In Mr. Michelbacher's article and also in *Michelbacher and Nial* (Workmen's Compensation, N. Y., McGraw-Hill Book Company) the details of workmen's compensation reinsurance practices are related historically. Mr. Michelbacher will discuss reinsurance in the forthcoming text on casualty insurance to be issued by the McGraw-Hill Company late in 1929.

Personal Accident and Health Insurance

Full details on practice in this field are not available. In January, 1916, an individual underwriter in Chicago began to devote all of his time to accident and health reinsurance. At that time reinsurance practices were new in this field in the United States. In 1916, the surplus business of twelve accident and health companies in the Middle West was arranged for through automatic treaties. In April, 1925, catastrophe accident reinsurance was arranged for a cover of \$1,000,000 above a net loss of \$50,000 on \$1.00 newspaper accident policies for a

*"Distribution of Shock Losses in Workmen's Compensation Insurance," *Proceedings* Casualty Actuarial Society, Vol. III, p. 235.

company whose premium on this plan amounts to more than \$1,000,000 annually. The policy is still in force.

Large benefits are sometimes provided for small premiums in accident insurance,—\$15,000/\$30,000, principal sum, four weeks deductible weekly indemnity for \$50 to \$100, for a premium of \$30 annually. Small companies may thus assume greater liability than can be carried safely, hence some method must be devised to safeguard direct writers. Reinsurance is practiced in the industrial health and accident field also.

One type of contract provides, on an "excess" basis, reinsurance of all the weekly indemnity on every policy issued, where the indemnity runs beyond the first four weeks of an accident and health claim. Reinsurance of the double indemnity feature of life insurance policies can be obtained.

Livestock Insurance

The historical and comparative aspects of reinsurance in this field have been set forth by Kopf in *Proceedings*, Casualty Actuarial Society, Vol. XIV, Part II, p. 291. This covers principally the experience in foreign countries.

* * * *

PERCENTAGE REINSURANCE PREMIUMS OF TOTAL PREMIUM INCOME. INDIVIDUAL CASUALTY LINES FOR MISCELLANEOUS U. S. STOCK COMPANIES HAVING MORE THAN \$9,000,000 OF PREMIUM INCOME IN 1926
(Constant Group, 1918 to 1927)

Year	Accident	Health	Non-Can. Acc. & H'lth	Auto. Liability	Liab. other than auto.	Workmen's Comp.	Fidelity	Surety
1927	7.9	5.4	17.2	1.2	1.9	.1	26.2	28.4
1926	7.1	5.4	17.2	1.0	1.7	.1	24.6	31.1
1925	6.4	5.3	16.2	1.1	1.8	.1	24.2	29.1
1924	5.8	6.0	16.1	1.1	1.8	.1	23.5	26.7
1923	6.7	6.9	..	1.0	1.6	.03	29.0	28.6
1922	5.8	6.1	..	.9	1.4	.04	33.3	24.6
1921	6.5	7.1	..	.6	1.3	.5	31.1	23.9
1920	5.7	6.7	..	*	.7	.5	26.0	24.3
1919	5.1	6.1	..	*	.5	.7	21.7	18.2
1918	4.9	5.9	..	*	.3	.6	14.3	17.2

	Plate Glass	Burg. & Theft	Steam Boiler	Eng. & Mach.	Auto. & Teams Prop. Dam.	Auto. Collision	Prop. Dam. & Collision not auto.	Other Classes
1927	.01	18.0	22.9	76.3	.1	.3	1.1	14.6
1926	.01	20.5	19.0	59.7	.02	1.1	2.1	22.4
1925	.01	22.1	20.5	56.7	.3	.7	1.8	22.9
1924	.01	22.5	16.1	63.8	.3	.7	1.0	22.5
1923	.04	21.8	14.3	41.4	.3	.8	.01	19.5
1922	.01	26.6	15.0	42.0	.4	1.2	.01	24.8
1921	..	32.9	22.7	66.9	.5	..	.01	21.5
1920	.02	31.0	20.6	53.4	.5	..	..	8.8
1919	.01	27.0	15.5	38.6	.3	..	..	5.5
1918	.1	25.1	13.6	47.9	.3	..	..	2.5

*Included in "Liability Other than Auto" for 1918-1920.

REINSURANCE PRINCIPLES IN GENERAL DURING RECENT DECADES

Prior to 1909, only ten reinsurance companies had been admitted to New York State. Between 1909 and 1914, fourteen others entered in the State. In 1914, 22 were doing business in Massachusetts and New Jersey; in Pennsylvania, 26,—all but two such companies being limited to fire business. The increase in the premium volume of such business in New York State was from \$18,340,000 in 1909 to \$38,321,000 in 1913.

First Mono-line, Multifield Reinsurance Company in the United States, 1912

The First Reinsurance Company of Hartford was organized on November 13, 1912, in Connecticut by special charter. Mr. Carl Schreiner, Mr. Morgan G. Bulkeley and eleven other prominent insurance men in Hartford organized the company to "*carry on a reinsurance business and to make reinsurance on insurance risks of every kind and description undertaken by other companies, associations or persons.*" It began business January 1, 1913, with \$500,000 paid-in capital and a like amount of surplus. Its charter authorized capital increases up to \$5,000,000. The Munich Rückversicherungs Gesellschaft owned 4,505 of the 5,000 total shares at the outbreak of the War. The stock was sold by the Alien Property Custodian at \$175 a share, principally to ten insurance companies. In April, 1925, interests allied with the *Rossia Insurance Company* secured control of the company at \$225 a share. The *Rossia* now owns the majority of the capital stock, which was increased in 1926 to \$800,000.

The company is a pioneer American reinsurance company and has the distinction of being the only company which operated in the United States, writing *all* lines of coverage, including fire, life and casualty. In 1925, all the outstanding life business was reinsured with the Sun Life of Canada and toward the end of 1925 all fire and allied lines were disposed of. At the beginning of 1926, no other than casualty lines were written. Its business is now confined strictly to casualty insurance. It operates in 18 States. At the end of 1928, it had assets of \$3,278,000; in 1928, \$1,151,311 in net written premiums, paid \$508,794 in losses and paid out \$513,457 in management expenses. After the adjustments as to lines written (1925), the company has shown steady

gains in casualty reinsurance. It seems to have been the first native company to do a *general* reinsurance business exclusively.

The Mono-line, Multifield Reinsurance Principle in Discussion, 1912-1915^{29 30}

We come now to the report of Commissioner Hardison in Massachusetts for 1913. In Volume I, Mr. Hardison said: "There is another phase of the reinsurance question which has been forcing itself upon public attention, and that is the contention that a reinsurance company ought to be given authority to reinsure all kinds or classes of risks, in spite of the fact that in this country it has always been considered sound policy to confine a direct writing company to covering only certain classes." This shows again the development of the idea that a reinsurance company operating in a multi-field may be considered a single-line company. It may be considered to be one *line* reinsurance—insurance of the *liability* of direct insurers. It is held that this lies in the essential difference between a reinsurance risk and a risk originally insured.

Much the same philosophy was advanced by Commissioner Mansfield of Connecticut in 1914. Three papers³⁰ were presented to the 1914 convention of insurance commissioners directed at the general topic of multi-field and mono-line reinsurance. Hon. Burton Mansfield (Conn.) concluded that the abandonment of American restrictions upon the classes of business written both by direct and reinsurance companies would be but a step, and a wiser and better system of classification of the business than had heretofore been in use. Mr. Hasbrouck (N. Y.) did not agree that multi-field operations would show the same efficiency, growth and soundness as would restricted-field business.

A year later we note that in the New York Department Report, Vol. I, p. 36, Superintendent Hasbrouck presents remarks on restricted *vs.* unlimited underwriting powers, which are worthy of careful study. At the 1913-14 sessions of the New York legislature,* bills were presented for the amendment of the Insurance Law, providing for the organization and admission to transact business in New York State of corporations empowered

*1913: Two bills, House Introductory No. 615; Final Print No. 2813.

1914: Two bills, Assembly No. 1386; Senate, No. 1002. (Courtesy of W. Barnes, and Wose and Coigne).

to make reinsurances in every field of insurance. The bill was regarded as out of harmony with the so-called "American system" of insurance, and it was felt that "its passage might perhaps be a forerunner of the adoption in this country of a new system for the regulation of insurance companies which had been vaguely referred to by advocates of the bill as the system obtaining in Europe." Essentially by "American system" was meant the practice of segregating insurance powers by lines or groups of lines.

Mr. Hasbrouck was not satisfied that the limitations on lines operated should be lifted. He did not feel that the operation by one corporation, either as a direct or re-insurer of an unlimited number of lines was wise. The fiduciary or trust funds of a life insurance company should not, in his opinion, be subjected to the conflagration hazards of fire insurance or to the indefinite liability incidental to casualty and miscellaneous insurance. The bill was defeated.

In general, the transaction of reinsurance business exclusively by native companies in the United States, and on a large scale, appears to have been a phenomenon of the last two decades. The earlier and largely unrecorded history of reinsurance in our country relates that treaties were made between direct writing companies or with foreign reinsurance companies admitted to do business in the States. In a few instances, such treaties were effected with companies not authorized to do business in the country. The active penetration of the business into the United States by Continental and English companies, and more recently the entrance of American fire insurance companies into countries outside the United States, seems to be in large measure responsible for the widespread use of treaty reinsurance.

The special characteristic of reinsurance business in the United States, over the past decade, has been the tendency to conduct such business in two general ways: (1) with native companies specializing in reinsurance; (2) with alien companies. Under the latter class, distinction must be made between the alien companies which (a) conduct reinsurance business exclusively in the United States and (b) those companies doing reinsurance business only in the United States and direct writing business only in their native countries.

The War eliminated, of course, the German companies in the United States for the time being. The Russian Revolution of

1917 abolished relations with the Russian companies. Prior to the War, reinsurance as a separately organized business was largely in the hands of German and Russian companies, particularly Russian companies. These Russian operators were later comers in the United States than the Germans. The Münchener Rückversicherung and the Cologne Rückversicherung both entered business in the United States in 1898; the Franconia and the South Germany in 1911; and the Minerva in 1912. The earliest firmly established Russian company was the Moscow Fire in 1900. Between 1900 and 1913, eight other Russian companies entered the United States for fire reinsurance. In 1917, they had a gross premium income of \$51,219,000, net written premiums of \$27,397,000 and earned premiums of \$28,462,000. None of these companies, except the Rossia, was operating in 1927. This company was reconstituted as a Connecticut corporation in 1915.

In 1927, there were a dozen United States native fire reinsurance companies and 15 alien companies writing reinsurance business, although officially licensed as United States branches.

The oldest company of the American group was formed in 1909, the second oldest in 1913. The oldest existing reinsurance specialist company in the United States is a Swedish organization (*Skandia*) which officially entered the country in 1900. Two other foreign companies, Swiss and Spanish, date from 1910 in respect to their officially authorized operations. Thus, of the fire offices doing reinsurance business exclusively before the War, three were foreign and two were native. The only development during the War was the official entry of a fourth foreign company, a Danish institution (Skandanavia, 1916). In 1918, two others were registered and three more in 1919.

The American companies became strongly active after the War. The Rossia (U. S.) was constituted out of the old American branch of the Rossia. It was the only existing survivor as a reinsurance company of a half-dozen Russian companies that were in active operation in the reinsurance business before the Russian Revolution. The principal innovation introduced by these foreign companies was that they made it possible for institutions to cede reinsurance in large amounts without the obligation of accepting any reinsurance in return favor.

The reinsurance business generally in the United States during

recent years has been said to be good. Results were affected, of course, by the Florida hurricanes. There has been no material reduction in rates reported. For some years companies relied upon investment revenue and conjunctural profit in the lack of underwriting profit. Now that investment conditions are hardening, ways and means of improving underwriting conditions will have to be found to assure a working profit. There is not a large margin for saving in management costs; it is in risk conditions that the largest opportunity for improvement lies.

Reinsurance carriers in the United States exhibited the following results* for 1927 and 1928:

Founded	Company	Net Premiums Written	
		1928	1927*
	Fire reinsurance companies: total 13 companies.....	\$33,918,775	\$35,316,580
1926	American Reserve.....	2,498,726	2,104,807
1913	Eagle Fire.....	2,537,930	3,523,139
1920	Fire Reassurance Company..	2,934,664	2,976,854
1926	Guardian Fire.....	2,952,699	2,529,452
1925	Hamburg American.....	1,418,730	1,503,962
1909	International.....	4,706,647	4,927,245
1920	Inter-Ocean Reinsurance....	1,662,517	1,401,598
1923	Lincoln Fire.....	2,056,594	2,076,548
1920	New England Fire.....	289,171	237,333
1925	North Star.....	2,446,355	1,843,612
1925	Pilot Reinsurance†.....	1,165,781	1,513,638
1919	Rossia of America.....	7,774,016	10,611,706
1927	Reinsurance Company of America.....	1,474,945	66,636
	Casualty companies: total five companies.....	16,052,371	15,664,996
1917	American Reinsurance Com- pany.....	1,351,702	986,088
1911	European General Reinsur- ance Company.....	6,988,705	7,432,166
1926	Excess Insurance Company of America.....	1,111,107	146,683
1912	First Reinsurance Company of Hartford.....	1,151,311	1,177,638
1921	General Reinsurance Cor- poration.....	5,449,346	5,922,421
	14—Foreign companies*—total..	\$	29,630,402

The "foreign" companies included were: Baltica (Copenhagen, 1919); Christiania General (Oslo, 1918); Jupiter General (Bombay, 1924); Kyodo Fire (Japan, 1926); Metropolitan National (Cuba, 1920); New India General (Bombay, 1921); Prudentia† (Zurich, 1918); Prudential (Great Britain, 1922); Reinsurance Salamandra (Copenhagen, 1919); Skandia (Stockholm, 1900); Skandania (Copenhagen, 1916); Swiss Reinsurance Company (Zurich, 1910); Union and Phoenix Espagnol (Spain, 1910); World Auxiliary (London, 1920). The year mentioned is the year the company was admitted to the United States.

**The Review*, London, November 16, 1928; and *Spectator Year Books*, N. Y., 1929. †Affiliate of Swiss Re. ‡Affiliate of Muenchener Re. §Not available.

DATES OF ESTABLISHMENT OF REINSURANCE COMPANIES,
1850 TO 1925

Country	1850-1859	1860-1869	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1925	Total
Germany.....	3	2	4	3	2	2	6	12	34
Switzerland....	..	2	1	..	..	..	3	1	7
Austria.....	..	3	..	2	..	1	1	..	7
France.....	..	..	..	1	2	3	6	4	16
Sweden.....	..	..	1	1	2	2	5	..	11
Denmark.....	..	..	..	1	2	..	17	..	20
Norway.....	..	..	..	..	..	..	9	..	9
Holland.....	..	..	..	1	2	..	..	3	6
Belgium.....	1	..	..	1	..	1	2	1	6
Italy.....	..	..	..	..	..	..	3	5	8
England.....	..	..	..	..	..	5	10	1	16
United States..	1	10	5	16
Total.....	4	7	6	10	10	15	72	32	156

Source: *Rendtorff-Golding*, p. 91; *Thorin*, p. 26.

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FURTHER INQUIRIES

The following questions in reinsurance theory and practice could be examined comparatively and historically in future papers before this Society:

1. Can the fixed-share treaty idea be applied to the investment practices of small and medium-sized insurance companies, especially in the mortgage loan field? (See: *Post Magazine and Insurance Monitor*, London, August 17, 1929, p. 1622);
2. What has been and what is the place of reinsurance in international private law?
3. Liquidation and assumption history and practices in handling alien reinsurance business at and after the outbreak of the Great War (United States Alien Property Custodian; Insurance Departments of the States);
4. 'Second insurance' practices in 'gift insurance' (Newspaper-subscription and customers' gift accident and life insurance);
5. The principle *uberrimae fidei* in reinsurance: its practical aspects;
6. Revision of statute law on reinsurance: definitions; separation of reinsurance, assumption, substitution and liquidation procedure; rein-

surance premium and loss reserves in theory and practice; admission of foreign and alien companies; 7. Business, estate and 'jumbo' life insurance in relation to life reinsurance practice and loss experience; 8. A manual of accounts for multifield property and personal reinsurance; 9. The 'fleet', running-mate or 'konzern' idea,—in direct and reinsurance: administration, law, underwriting; 10. Thorough-going examination of reinsurance as possible backbone of tornado, hail, pest, drought, crop or crop damage, 'price' or 'bargain' insurance (as in Walford); business (cycle) risk, and depreciation insurance* (*Sachlebensversicherung*; *Sachleistungsversicherung*, *Sachwerterhaltungsversicherung*, of Hans Heymann); credit, flood and water damage insurance.

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SUPPLEMENT

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IV. GLOSSARY

In the preceding text no attempt was made to define terms as they arose in the discussion. The following glossary may be of service.

Automatic treaty plan:

(1) Where reinsurer's interest in each risk proceeds automatically from the terms of the treaty, *Synonym:* Fixed treaty plan; obligatory treaty plan. (Greene). (2) "A treaty is a contract between an insurer and reinsurer under which the one binds itself to cede and the other binds itself to accept, a certain fixed share of all risks of a nature defined in the contract. The first distinguishing feature of the treaty is its obligatory nature; each party to the contract is equally bound. The second feature of the treaty is that liability of the reinsurer commences simultaneously with that of the ceding company." (C. E. Golding).

Automatic treaty plan (in life reinsurance):

Where the direct-writing company retains its full maximum retention, and under the agreement is obliged to cede to the reinsurer its excess insurance up to a stated amount, generally 100 per cent. of its retention, and where the reinsurer is bound to accept the same. Reinsurance in excess of the amount automatically ceded may be submitted on a facultative agreement to the first reinsurer or to some other insurer with whom the direct-writing company has reinsurance relations. *Synonym:* Obligatory treaty; fixed treaty. *Note:* The word "excess" as here used means "surplus" (q. v.) (M. W. Torrey).

Bordereau:

A form or schedule upon which risks to be reinsured are listed by the ceding company. They are generally filed with the reinsurance company by the 20th of the ensuing month; where accounts are large, bordereaux are often transmitted weekly. The form includes enough data to identify the risk. The bordereau is a legacy from the facultative or open treaty stages of reinsurance. The development of fixed treaty reinsurance may eliminate the bordereau. *See:* *Carnet.* (Greene).

Bulk reinsurance:

Presumably the transfer of many contracts from one insurer to another. (See annotation, Section 22, N. Y. Insurance Law, Baldwin's edition, 1928, p. 59).

Carnet:

The book in which risks offered were entered; the signature of the agent of the reinsurance company denoted acceptance of the risk. (Walford on French reinsurance practice in his "Insurance Cyclopaedia").

Cede:

To transfer the whole or part of a risk from the first or primitive insurer to a reinsurer or to reinsurers; or, from a reinsurer to a retrocessionaire (*retrocede*). In the latter case, the second or subsequent cessions are *retrocessions*.

Co-insurance (as between company and policyholder):

(1) Exists where the person who insures his property for less than its entire value, and where he is understood to be his own insurer for the difference which exists between the true value of the property and the amount of the insurance. In event of a partial loss, when the loss is not greater than the insurance, the amount paid is in ratio of the total amount of the insurance to the full value of the property. (*Corpus Juris*, Vol. II, p. 957). (2) To be distinguished from "coinsurance" as between companies, a term which may broadly include reinsurance practice itself. (Kisch).

Co-insurance (as between insurers generally):

(1) "In a *general* sense, coinsurance exists when several insurers take part by agreement in carrying the same risk. It is *not* coinsurance when a person insures the same interest through separate contracts with insurers who have no contractual relation with each other in the particular case. This latter is *multiple* or *concurrent* insurance when the total amount insured does not exceed the insurance value (*q. v.*) of the interest. It is 'double insurance' when in 'multiple insurance' *the sum insured exceeds the insurance value.*"

(a) *External coinsurance*: "In a *special* sense, coinsurance *obligates through one contract* several insurers *directly* to one insured, but does *not* obligate the insurers to each other. This is *external* or true coinsurance."

(b) *Internal coinsurance*: "Where one insurer obligates himself to one insured, and then splits the risk among several insurers obligated only *to the first insurer*, that is *internal* coinsurance, *or the essence of reinsurance.*" (Kisch).

Co-insurance (in life reinsurance):

(2) "Where the reinsuring company exactly duplicates the coverage of the insuring company. The reinsuring company is paid a pro rata share of the premium received by the direct writing company, the reinsuring company paying first year and renewal commissions to the ceder at the rate paid by the direct writer to its own agent. Reinsurer also allows surrender values and dividends at the rate of the insuring company." (M. W. Torrey).

(3) "Where the reinsurer receives a part of the original contract from the original insurer." (Laird and Cathles).

"Company fund:"

A "paper" device whereby within a given company underwriting departments "cede" to the fund certain amounts of "reinsurance." The insurance corporation actually sustains all losses charged to the fund. (Greene.)

Concurrent insurance:

See: Coinsurance (as between insurers generally).

Cover:

See: "Reinsurance Cover" for distinction between "treaty" and "cover." (Gardner).

Determinate reinsurance. See: Treaty types.

Direct insurer:

Insurer obligated directly to policyholder or insured. *Synonyms:* Original insurer; first insurer; primitive insurer; primary insurer; direct writing carrier; original writer; ceding company; ceder.

Double insurance:

(1) Double insurance is where the insured procures two or more insurances of the same interest in the same property and for the same risk. If the persons insured or the risks, interests, or property are different, it is not a case of double insurance. (*Corpus Juris*, Vol. XXXVIII, p. 1159); (2) Reinsurance is to be distinguished from double insurance by the circumstance that the former is an insurance of a risk under an original policy, while the latter is a second insurance of the identical interest or subject matter covered by the first insurance. (*Hone v. Mutual Safety Insurance Company*, 2 N. Y. 240); (3) Double insurance is where an interest on the same risk is insured with several insurers and *the total sum insured exceeds the insurance value* (q. v.). (Moldenhauer, in Manes' *Versicherungswörterbuch*, 2nd edn., p. 1046). *See also:* "Reinsurance—general definitions" and Kisch's definition under "Coinsurance (as between insurers generally)."

Excess cover:

A type of reinsurance *cover* where the reinsuring company usually fixes its amount retained and the reinsurer takes an agreed amount of the excess over the retention. (Term applies in *marine insurance*, Great Britain, to *special risks. See: Reinsurance cover.*) (Gardner).

"Excess of loss" treaties in fire insurance (Great Britain):

These treaties apply chiefly to conflagration losses of fire insurance business and cover the whole business of a company, or a complete section of the business, at home, general foreign, or United States. Used particularly in well known conflagration or catastrophe areas. (Golding).

Excess quota share treaties: (marine reinsurance Great Britain)

Under an "excess" quota share treaty, the reinsurer participates only in the amount which exceeds the direct writer's retention. The direct writer under some excess quota share treaties participates by retaining a share of his own excess, in addition to the first retention. (Gardner).

NOTE: Gardner uses the word "excess" in his definitions in the sense in which we use the word "surplus."

Excess reinsurance (United States):

(1) Where reinsurer is not involved in any loss except to the extent to which it is in excess of a stated amount. Sometimes confused with "surplus" reinsurance. "Excess," in casualty insurance, relates to the amount of the *loss*, not to the total *amount* of the policy. Feasible only for kinds of insurance where losses equalling or approximating the face of the policy are rare. (Greene).

(2) An arrangement whereby the ceding company retains the whole amount of any given *loss* up to an agreed figure, and reinsures the *excess* beyond this amount up to a fixed amount. Devised by Mr. Cuthbert Heath, of Lloyds, between 1880 and 1890. (Rendtorff—Golding).

Excess treaties (marine insurance, Great Britain):

Where reinsurers participate only in amounts which exceed the retention of the direct writing companies. Where the direct writer's retention is not exceeded on any one risk, the reinsurers do not participate, there being no "excess." In practice, "excess" treaties are the most complicated and the most expensive to work. *See: Reinsurance cover.* (Gardner).

"External" coinsurance:

True "coinsurance" as between insurers. *See: Kisch's definition of coinsurance.*

Facultative:

Conveys the meaning "Permissive" as opposed to "Obligatory." In use at least as early as 1820. (Golding).

Facultative reinsurance agreements (in life reinsurance):

The insuring company is not obligated to submit its excess insurance to the reinsurer, but may or may not submit it; and the reinsurer is free to accept or reject the same. Amounts in excess of those automatically ceded may be reinsured facultatively with the first reinsurer or with another insurer with whom direct writing company has reinsurance relations. (M. W. Torrey).

First insurer:

Synonym, direct insurer (q. v.).

Fraud or mistake in reinsurance:

A contract of reinsurance may be invalidated by fraud or mistake, the same as a contract of original insurance. Fraudulent misrepresentation or concealment by the direct insurer as to the nature of the risk will void the contract, notwithstanding the liability of the direct insurer to the original policyholder.

Gross premium system (in life reinsurance):

See: Post Magazine and Ins. Monitor, June 8, 1929, for discussion of merits of risk and office premium systems.

Guarantee (as synonym for "reinsurance") (Great Britain):

In the regulations of the Fire Offices Committee, 1871, Great Britain, the word "guarantee" was used as a synonym for "reinsurance." (Rendtorff-Golding).

Indeterminate reinsurance. See: Treaty types.

Insurable interest:

The reinsurer must have an insurable interest. Although an insurer has no property in the subject matter of the insurance, but has only an interest in its preservation, yet this interest is sufficient to support a contract of reinsurance. In retrocession the same principle applies. (*Corpus Juris*, Vol. XXXIII, p. 48). *See also:* 6 Edw. 7, c. 41, § 9 and *Sun Ins. Office v. Merz*, 64 N. J. L. 301.

Insurance value (Germany):

"Insurance value" is the value defined in the insurance contract: it may be (a) market value at issue of the policy; (b) at the time of loss; (c) replacement value; (d) or some declared subjective or sentimental value. Meaning depends upon the nature of the insured object, the purpose of the insurance, etc. (Moldenhauer, in *Manes' Versicherungslexikon*, 2nd edn., p. 1046).

"Internal" coinsurance:

Synonym: Reinsurance. (See Kisch's definition of *coinsurance*).

Legality of reinsurance contract:

It is not a wager contract. But if such contracts of reinsurance are perverted to improper purposes, then it is within the province of the legislature to interfere and prescribe the cases in which reinsurance shall not be permitted. (*Corpus Juris*, Vol. XXXIII, p. 47). The power to reinsure risks or the risks of other companies is sometimes restricted by statute or by charter.

Liability of reinsurer:

(1) In general, a reinsurer is liable to the same extent as the original insurer for all losses and perils which he has assumed, unless the contract specifically contains special provisions limiting the risks covered.

(2) The reinsurer is not liable to the reinsured for a loss under an original policy, if the original insurer is not liable to the original policyholder. The ordinary contract of reinsurance operates solely between the original insurer and the reinsurer, and creates no privity between the reinsurer and the person originally insured.

(3) "I am not aware of any way in which an original insurer can get at a reinsurer; his rights are only against the original insurer." (Mr. Justice Scrutton in *Law Guarantee Trust and Liverpool Mortgage Company case*, 1914).

Multiple insurance: See: Coinsurance (as between insurers generally).

Open treaty plan in casualty insurance (U. S.):

Where the company has comprehensive and permanent reinsurance arrangements or treaties with one or more other companies (direct carriers and/or reinsurance companies) outlining a definite procedure for "ceding" reinsurance. Ceding company has freedom as to what risks to reinsure and to what extent; the discretion allowed the direct carrier is the salient characteristic of the open treaty and is almost invariably very material. (Greene).

Optional plan:

Synonym: Facultative plan (q. v.).

Original insurer:

Synonym: Direct insurer.

Percentage cover:

Where the reinsuring company retains a percentage of the amount written and the reinsurers participate in the cover beyond this percentage to be distinguished from a fixed amount retained. (In marine insurance, Great Britain, on special risks only. *See: Reinsurance cover*). (Gardner).

Pool:

(1) An agreement or arrangement entered into by several insurers whereunder each insurer assumes a stated share, both of premiums and of losses, with respect to a certain portfolio (q. v.) (2) An association of insurers determined by contract and occupying the same relative position as a reinsurance company. (Greene).

Portfolio:

That which is to be specifically included in the scope of operations of a reinsurance "pool" (q. v.).

Primitive insurer:

Synonym: direct insurer.

Quota share cover: (marine insurance, Great Britain):

Where the reinsurers participate in each and every risk attaching to the cover, whether large or small. (Marine insurance practice, Great Britain, and applies to *special risks* only. *See: Reinsurance cover*). (Gardner).

Quota share treaty (marine reinsurance, Great Britain):

Where there is a fixed participation by reinsurers in each and every risk accepted by the underwriting company the participation is usually expressed as a percentage of all business written by the company in domestic territory. (Gardner).

Reinsurance "cover" (in marine insurance, Great Britain):

Reinsurance cover is an arrangement between two or more companies, whereby the reinsuring company agrees to cede and the underwriting company, or companies, agree to accept a certain percentage of *specified*

risks. A *reinsurance treaty* is an agreement or contract between the ceding company and its reinsurers, whereby, on the one side, the company binds itself to cede, and on the other side the reinsurers bind themselves to accept a certain percentage of *all* business covered by the treaty. (See also: *Reinsurance treaties*).

There are three kinds of reinsurance cover: (a) the excess cover; (b) the percentage cover; and (c) quota share cover. There are three kinds of reinsurance treaties; (a) quota share treaties; (b) excess treaties; and (c) excess quota share treaties. (Gardner, p. 15).

Reinsurance—general definitions:

(1) "Reinsurance is a contract whereby one party, called the 'reinsurer', in consideration of a premium paid to him, agrees to indemnify the other against the risk assumed by the latter, by a policy in favor of a third party." (*Phillips: Treatise on the Law of Insurance*. p. 374. Boston. Little, Brown & Company, 1853); (2) "Although reinsurance, in a certain sense, may be an insurance of the subject matter of the direct writing company's policies, a contract of reinsurance is really one of indemnity against the risk incurred by the direct writer in the original insurance. The contract is totally distinct from the original insurance and is independent of it." (*Corpus Juris* Vol. XXXIII, p. 45); (3) "Reinsurance is a contract whereby the original insurer procures from another underwriter a total or partial indemnity for loss or damage to the property which he has insured, and from one or more of the perils he has insured against." (*Delver v. Barnes*, 1 Taunt. 48, 127); (4) "The term reinsurance may mean a contract between two reinsurers, by which the one assumes the risks of the other and becomes *substituted* to its contracts, so that on the assent of the original insured the liability of the original insurer ceases and the liability of the so-called reinsurer is substituted." (*People v. Amer. Cent. Ins. Co.*, 179 Mich. 371, and *Sun Ins. Office v. Merz*, 64 N. J. L. 301); (5) "*Reinsurance is an insurance effected by an insurer against a risk he has previously assumed; an insurance by the first insurer of the whole or some part of his interest in the risk created by his contract of insurance; a new insurance effected by a new policy on the same risk that was before insured. . . .*" (*Delver v. Barnes*, 1 Taunt. 48); (6) Reinsurance is a term sometimes applied to a *new policy substituted* for a policy previously issued by another company on the same risk, and which the latter company refuses to renew. (*Gifford v. Queen Insurance Co.*, 12 N. B. 432); (7) "Reinsurance in this State is a valid contract as well in cases of fire as marine policies. The risk assumed by the first assurers gives them such an insurable interest as renders the reinsurance a valid contract." (*New York Bowery Fire Ins. Co. v. New York Fire Ins. Co.*, July, 1837); (8) Note Kisch's definition of "*Coinsurance.*" (9) See: Oxford Dictionary definition, "Reinsurance is a *second* insurance. . . ."

Reinsurance clause:

The typical reinsurance clause in British practice follows: "Being a reinsurance of (*so much*) of the. . . . Insurance Company's policy

number for £ and subject to the terms and conditions thereof and to settlement thereunder in case of loss, it being hereby warranted that the above-named company shall, during the entire currency of this reinsurance, retain for its own account at its agency a sum not less than on the identical property thereby reinsured." (Remington).

Reinsurance reserve:

Synonym: Net present value of life insurance policies; unearned premium reserve (sometimes) in fire and casualty insurance. Not generic to "reinsurance" practice as commonly understood.

Reinsurance treaties (marine reinsurance, Great Britain):

A *reinsurance treaty* is an agreement or contract between the ceding company and its reinsurers whereby on the one side the company binds itself to cede and on the other side the reinsurers bind themselves to accept a certain percentage of the business covered by the treaty. There are three kinds of reinsurance treaties: (a) *quota share treaties*; (b) *excess treaties*; and (c) *excess quota share treaties*. The *treaty*, as thus understood, has these characteristics as against the reinsurance *cover*: (1) generally the whole of the direct business attached to the treaty; under a "cover" only certain specified risks, or a certain class of business, are covered; (2) a treaty generally comprises the whole business written in the course of twelve months, whereas "cover" may run for three months or it may be indefinite. *See also: Reinsurance Cover*, (Gardner) and *Treaty types*.

Retrocession; retrocedent; retrocessionaire:

Reinsurance effected in turn by a reinsurer is called *retrocession*; the second ceder is the *retrocedent*; the second reinsurer is the *retrocessionaire*. (Herrmannsdorfer).

Risk assumed in reinsurance:

The risk is determined by the contract of reinsurance. It cannot be *assumed* that the risk covered by the reinsurance is the same as that covered by the original policy (*Corpus Juris*, Vol. XXXIII, p. 52).

Risk premium system (in life reinsurance):

(1) The risk premium system provides only for the cover of the annually decreasing sum at risk, *i. e.*, the difference between the sum insured and the reserve at the end of each policy year, on the amount reinsured. (Torrey). *Synonym:* yearly renewable term system.

Share reinsurance:

Where reinsurer assumes a *stated* proportion of the *entire* risk; this applies to premium, loss, and to salvage or other recoveries. (Greene).

Shock loss:

A loss which may occur infrequently but which may also be a loss of considerable magnitude. *Synonym:* Catastrophe loss; calamity loss. (Michelbacher, *et al*).

Subrogation in reinsurance:

Reinsurers upon payment of a loss acquire the same rights by subrogation as are acquired in similar cases where the original insurer pays a loss.

Substitution:

See definitions 4 and 6 under "Reinsurance—general definitions," also Walford, Insurance Cyclopedia, article "Amalgamations."

Surplus:

Amount over and above the amount which direct writer wishes to keep; amount ceded by direct writer, or amount ceded by reinsurer to retrocessionaire. Sometimes confused with "excess." (Welson, Dictionary of Accident Insurance). See: Treaty types.

Surplus reinsurance (U. S.):

"Surplus reinsurance" is merely "share" reinsurance (*q. v.*) wherein the extent of reinsurance depends on the size of the policy. *Example:* Amount directly written \$50,000; company retains \$10,000; reinsures *half* of the amount between \$10,000 and \$25,000; and reinsures all of the amount in excess of \$25,000. Amount by which policy exceeds \$10,000 up to \$25,000 is "first surplus;" amount by which policy exceeds \$25,000 would be "second surplus." (Greene).

Treaty types in reinsurance (Herrmannsdorfer³⁴—Thorin⁷²—nomenclature)

The following classification of treaty types is given by Herrmannsdorfer and Thorin.

A. *Reinsurance of Amounts Directly Insured*

(Where the face amount of the primitive risk is divided).

1. *Special or determinate reinsurance* (*German:* "Einzelrückversicherung"; *French:* "Reassurance special ou déterminé").
(Division of the face amount of *one* policy).
2. *General or indeterminate reinsurance* (*German:* "Generalrückversicherung"; *French:* "Reassurance generale ou indetermine").

(Division of a fixed amount or fixed proportion of *all* primitive contracts written by direct insurer).

- (a) *Quota reinsurance* (*German:* "Quoten-vertrag"; *French:* "Reassurance quote part").
(Division of all primitive risks on percentage basis)
- (b) *Surplus reinsurance* (*German:* "Exzedentenvertrag"; *French:* "Reassurance excedent").
(Cession of amount written above the amount the company is permitted to retain).
- (c) *Quota—surplus reinsurance* (*German:* "Quoten-exzedentenvertrag"; *French:* "Reassurance quote part et excedent").
(Combination of (a) and (b)).