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Has the Engineering insurer anything to offer to his client that the Fire insurer cannot offer more cheaply and more efficiently?

This is a question that potential insurance clients in industry and commerce - be they manufacturers or other operators of plant and equipment - have been asking themselves since the beginning of the industrial era.

Evidently, to date, they have generally answered this critical question in the affirmative: otherwise Engineering insurance would not have acquired the importance it has not only in many industrialized countries but also in threshold countries and even developing nations. This importance is reflected in IMIA statistics, which show real growth rates in Engineering insurance for the last 25 years.

But the question is still one that we Engineering insurers should keep asking ourselves critically. We do not want to become inflexible and set in our ways, loth to depart from traditional habits. Rather, we want to recognize changes in the needs of our clients and take the initiative in satisfying them. In a rapidly changing economic environment, Engineering insurers should not only be looking to maintain their proven function as risk carriers for demanding risk managers of firms, agents and brokers, but also to expanding this role even further.

With this objective in mind, our self-questioning should thus lead to an overall stocktaking of the situation in Engineering insurance and to ideas for its further development.

There are two main reasons for restricting our considerations to a comparison between Machinery insurance and classical Industrial Fire insurance:

- For some years now, as a consequence of client-oriented restructuring, direct insurers in individual markets have been offering commercial and industrial all-risks covers. These covers abandon the proven principles of coverage on a named-perils basis for classical Property business, particularly for Fire insurance of buildings and contents. In some cases, although currently much more seldom than often assumed, commercial and industrial all-risks covers may also include the risks traditionally covered by the annually renewable Engineering classes of business (Machinery and Electronic Equipment insurance) and sometimes CAR and EAR insurance as well.

- In a few countries, particularly the annually renewable Engineering insurances are written by the Property departments of composite insurers as a sideline to Fire insurance. At these composites, Machinery insurance leads a sort of "wallflower" existence, carrying no weight in management and sales considerations. The business is consequently disappointing as regards the development of its premium volume and frequently as regards claims experience as well. This phenomenon is to be found particularly in countries where, historically, specialist insurers provided Machinery insurance in connection with legally compulsory inspections on a virtual monopoly basis or where one composite insurer writing Engineering insurance on an intensive basis dominates the market with very large market shares.

Both developments - the offering of all-risks covers and the handling of Engineering insurances as a sideline to Fire business compel us to take a critical look at the quality of the Engineering classes of business, especially in relation to Fire insurance. They compel us to establish more clearly the particular strengths of these products in order to secure our clients' demand for them and safeguard the independence of Engineering insurance in an economic environment characterized by highly specialized, cost-intensive technology that is giving rise to increasingly expensive losses.

Fire insurance is often regarded - correctly - as the indispensable "Life insurance" needed by every business, a life insurance in the best sense of the word, since it ensures a firm's survival

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after a disastrous fire or explosion by providing substantial sums for rebuilding.

In contrast to this, Machinery insurance is regarded as "Health insurance", not necessary for every business, but highly recommendable for many firms to protect technically sophisticated and expensive capital goods.

Like most comparisons, these are not perfect; one should not take them too far, but they can help us to a certain extent in pinning down the essential differences between Engineering and Fire insurance.

First of all there is the claims incidence. As in Health insurance, claims incidence in Machinery insurance is very high. In Germany, for instance, the statistics of the German Association of Property Insurers for 1990 show a figure of 0.7 claims per policy per year, in contrast to only 0.1 in Industrial Fire (IF) and a mere 0.05 in Fire Business Interruption (FBI). A whole series of theoretical conclusions can be drawn from this. One is that Machinery insurance appears ideally suited to the application of so-called experience rating systems, which take more account of the experience of individual policies, whereas IF, like Life insurance, must rely more on generalized observations of collective statistics for calculating the right risk premium. It is pleasing to remark that the average annual premium of the 70,059 Machinery policies that existed in Germany in 1990 was, at DM 10,840, large enough for the handling of risks on an individual basis to make commercial sense. By comparison, the average premium in Fire is only DM 4,421, in FBI DM 4,825 (in MBI it is DM 18,351!). I have already indicated that things are the other way round as far as the average claims amount is concerned: in IF it is DM 31,272 (in FBI even DM 101,767) compared with DM 13,103 in Machinery insurance (DM 45,572 in MBI).

The concern with individual risk circumstances - which is both possible and necessary in Machinery insurance - and the applica-

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tion of experience rating as opposed to statistical observations à la mortality table indicate very well the fundamentally different characteristics of Machinery and Fire insurance. In the first case one needs an engineer, in the second an actuary. Of course, this is greatly simplified: the Fire insurer also uses engineers, and the Machinery insurer looks at statistics, but this (exaggerated) simplification does make some things clear. Thus, granting discounts for good claims experience fundamentally conflicts with the character of Fire insurance; conversely, serious adverse selection ensues if the Machinery insurer "stubbornly" applies tariff rates and does not take account of individual risk circumstances and loss experience.

This situation is even more pronounced in BI cover. In MBI, risk assessment and rating (particularly in Europe) is so detailed and geared to the specific case that in negative terms it is referred to as an occult science and in positive terms as a complete risk management study. A Swiss cedant once said that in the MBI analysis of the various loss sequence and loss minimization scenarios he drew more on his general-staff training in the Swiss army than on his training in insurance.

Conversely, in FBI in some countries insurers are still employing such a generalized approach that the premium is calculated using a simple factor from the Fire premium. In the event of a loss, however, things tend to become more case-specific in FBI as well - hardly surprising with an average claims amount of over DM 100,000! Experienced loss adjusters are employed to establish the size of the indemnifiable loss. In MBI, on the other hand, it is frequently not only a case of establishing the indemnifiable financial loss but also - initially - of minimizing losses, shortening downtimes, procuring replacement parts and seeing what provisional repairs can be done - in short, emergency engineering service to systematically master the situation that has arisen.

This provides us with a good lead-in to the basic question of why a client buys Machinery insurance or, to put it another way, of

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what Machinery insurance has to offer.

Machinery insurance sometimes used to be mockingly referred to as "luxury cover" and it is true that only in special cases can it claim to offer protection against catastrophe losses which threaten a firm's existence. Such special cases would be when the business only has one, or a few, very expensive machines that are used for earning its entire revenue. Thus in the case of the operator of a mobile crane, a chipboard press or a few numerically controlled, highly specialized machine tools such as those used by a supplier of parts for the motor industry, Machinery insurance can draw on the convincing argument that it provides catastrophe cover, like Fire insurance. (The same applies to Electronic Equipment insurance for a large computer centre). In all other cases the reasons for buying Machinery insurance must lie elsewhere.

Both types of annually renewable Engineering insurance are particularly successful in two completely different segments of the market: on the one hand with locally based small to medium-sized firms; on the other with target risks such as steam power stations, paper-mills and opencast mining operations, with individual pieces of machinery that cost hundreds of millions of Deutschmarks.

Machinery and Electronic Equipment insurance have a longstanding, loyal and stable clientele of small family businesses, in trade annd craft, medium-sized commercial undertakings of all kinds, cooperatives, municipal utilities and medium-sized industrial firms. This Engineering business has produced satisfactory results and has grown over decades in step with economic development. The contact with these clients is naturally established by sole and multiple agents and by small, regionally operating brokers. But the longstanding nature of the association is achieved by intensive client-support from technical experts employed by the insurers. In particular, this support has the chance to prove its value after the occurrence of loss events,

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whose frequency, as already mentioned, is about 7 to 10 times as high as in Fire insurance.

Such expert support, based on knowledge which is continually updated as a result of experience with similar losses at other firms, may be provided not only by an allround regional engineer but, if necessary, also by specialists in the line of business concerned, and is the most valuable service rendered by the insurers to these small and medium-sized clients. One of the most important tasks is determining causes of losses independent of the manufacturers of the machinery concerned and consequently giving specific recommendations for loss prevention. The policyholder thus receives from his insurer the services of a specialist which he cannot provide himself for reasons of cost, a specialist who knows the strengths and weaknesses of various makes of machine and advises his client objectively - in the understanding that this in the interests of both parties.

This type of long-term cooperation between policyholders and insurers is naturally engendered most where, as in the UK and North America, legally required inspections for certain technical facilities (lifts, pressure vessels, steam generators, etc.) are carried out in connection with Boiler and Machinery insurance. But such longstanding proven cooperation also exists in other countries without these legal requirements. In Germany and Austria, semigovernmental inspections or tests are carried out by technical inspection agencies; but chipboard presses, for example, are only insured for breakdown and business interruption in conjunction with regular inspections by the Machinery insurer.

If the Machinery insurer can prove his worth in the event of a loss - through prompt, transparent claims settlement, help in expediting repairs, and practical suggestions regarding future loss prevention - this service can also provide a bridge for consolidating and expanding the relationship with the client beyond Machinery insurance, in other classes of business as well. This is particularly true if these other classes cannot provide the special type of client-contact that exists in Machinery insurance because of their lower loss incidence.

The profits recorded by Machinery insurance over many years ultimately confirm that, as a result of this frequent contact, the insurer's knowledge of the individual risk - from the technology used, its maintainance and condition to the expectations of the policyholder - is much better than in classes of business where computer-written standard letters are the chief form of communication.

These facts also explain the hesitation of policyholders and successful insurers in Machinery business about pressing for rapid and substantial increases in deductibles. When small and mediumsized claims are paid, this not only gives the recipient the successful feeling of getting something back from his insurer once in a while. The occasion also provides useful information: for example, information on experience with comparable heavy construction equipment, a tip about the latest overload prevention measures for tower cranes, the address of an inexpensive and reliable repair firm for rewinding a long-serving electric motor. If the insurer's specialist who advises the client on these technical matters also possesses insurance skills, a newly acquired machine will not only be admired but also included in the insurance policy with the correct sum insured.

And, if there is a Business Interruption policy, there are also recurrent opportunities to talk about the commercial side of the risk as well as the technical side. These opportunities require a specialist in the line of business concerned if the insurer really wants to be what he so often promises in modern PR campaigns: an understanding <u>partner</u> for his client. Only someone with a specialist knowledge of brewing technology and the current economic situation of the brewing industry can properly attend to the MBI insurance of a medium-sized brewery and furnish it with added value. Moreover, he can do this in such an expert manner that he will not be easily ousted from his position as trusted

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risk advisor by a competitor who offers a specific insurance product a few percent cheaper.

The proof of the value of the insurer's services after the relatively frequent loss events, the joint efforts to get production going again within the time excess if possible, consolidate and strengthen this relationship of trust.

If a firm does not want this direct service from a practically experienced, specialist engineer - in regular inspection visits and after the occurrence of loss events - it should probably not buy any Machinery insurance and perhaps should not even be offered a policy either.

In the current debate about assessing the consequences of modern technology and the ecological effects of industrial production, the word "sustainability" is frequently used. The demand is for sustainability everywhere: only those processes should be permitted which are "sustainable" in this form for a long period, can be kept going without risk and are transparent. This naturally rules out the destruction or overexploitation of natural resources and points in the direction of recycling.

In our context one could - in modern parlance - say: only within the framework of the partnership just described are Machinery and MBI insurance "sustainable", are they acceptable for the insurer and an interesting proposition for the insured.

Naturally a Fire insurer can try to sell Machinery insurance to a small or medium-sized business with its Fire cover, more cheaply than the specialist Engineering insurer.

He can do so more cheaply, it is argued, because he does not provide any engineering support service for the client's machinery. However, at the latest when a loss event occurs (and, as previously stressed, this happens much more frequently than in Fire insurance), the lack of familiarity with the risk becomes

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painfully obvious, for both parties.

On the other hand, if time and expense is invested in providing engineering services - to the benefit of both the insured and the insurer - then high Machinery premiums, high premium rates on the sums insured of the machines covered, just cannot be dispensed with. The allocation of premium to insured object in this approach is absolutely clear. Indeed, it is systematically wrong to apply low premium rates to high sums insured, including buildings, supplies, etc., and if this is done, transparency suffers as a result. Particularly the "solid" owners of small and mediumsized businesses - the ideal candidates for insurance - often do not appreciate such unclear arrangements.

Especially if risk managment philosophy spreads further among the sector of small and medium-sized commercial and industrial clients, we see good future opportunities for Machinery insurance as specialized cover in this market segment. In many countries the same applies to Electronic Equipment insurance.

Let us now look at a second traditionally very significant market segment for Machinery insurance: commercially operated power supply installations, from hydroelectric power stations, gas compression stations, conventional steam and gas-turbine power stations to the largest nuclear power plants.

In this market segment it is becoming increasingly difficult for the insurance industry to work at a profit. This applies especially to Machinery insurance. It applies to a lesser extent to Fire insurance, since most of these risks are generally well protected against fire and constitute desirable Fire business as far their loss experience is concerned.

The temptation has thus been very great for Fire insurers to convert these large policies, with Fire sums insured of many billions of Deutschmarks, to all-risks covers including Machinery in order to secure business for themselves. Despite hefty loadings

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on the Fire rates, such conversions have mostly brought the insurers substantial losses and many headaches; typical examples are the power companies in Israel, Belgium and the UK.

Where the value of machinery represents 80 % of the Fire sum insured and Machinery losses average more than ten times the amount of Fire losses in the long term, even a loading of 100 % on the Fire rate cannot cover the Machinery risk.

But if the Machinery risk is rated separately and appropriately, the combined all-risks premium reaches a level that is really no longer attractive for very large clients. In addition, there is a growing number of cases in which the risk managers of such clients prefer to obtain services for a fee from independent experts, services that are separate from insurance cover and whose costs are clear. According to a McKinsey survey in the USA, 70 % of risk managers wish for "unbundled" services from insurance companies, i.e. specialized services such as risk-specific loss prevention, loss assessment and loss settlement. Access to the experts' own loss experience records and loss statistics is valued particularly highly. This trend has reportedly already made substantial progress in the USA. Competition forces the insurer to reduce costs. He thus gradually loses the expertise for this market segment and ultimately degenerates into a cheap provider of financial services, who like a bank provides money when needed, but without any obligation for it to be repaid.

Here neither Fire nor Machinery insurers, and to an even lesser extent client-oriented all-risks insurers, will have a long-term chance of achieving positive results with their services if the requisite insurance premium for the still interesting coverage of very large losses is not implemented in the market with all the necessary saftey loadings and a substantial risk loading.

For Machinery insurance, we may sum up as follows:

The risk-specific expert personal service in dealing with claims

and providing on-the-spot loss prevention advice at the insured company will continue to ensure stable client relationships in the sector of small and medium-sized commercial and industrial risks. On the other hand, the absorption of Machinery and Electronic insurance in a more standardized, purely commercially functioning all-risks insurance will reduce such service and consequently lead to even more price competition among insurers. In connection with the other pitfalls of these new types of coverage, such as insurance cover for hitherto uninsured and hence unknown risks, this will lead to the unsatisfactory results situation in all-risks insurance already familiar from several insurance markets.

In the market segment "heavy industry and power supply" the service provided by the Machinery and Fire insurers becomes insignificant for the client in comparison with the cost advantages achievable from the competition, since for a fee he can purchase the service from "independent" experts more cheaply in his opinion and without any obligation or long-term commitment, although he usually has to do without the extensive loss know-how which only insurers can provide.

If one turns again to the question which forms the title of this paper: "Has the Engineering insurer anything to offer to his client that the Fire insurer cannot offer more cheaply and more efficiently?", one can give the following resumé: for the client who is seeking the necessary technical expertise for his machinery - a risk management partner - the Machinery insurer has something unique and all his own to offer, something which a Fire insurer cannot offer. If a client does not want this, the Fire insurer can naturally sell him "cheap" Machinery coverage within an all-risks policy (whose results, however, will provide the Fire insurer with no joy).

Whether there will continue to be lasting demand for the specialized classes Machinery, MBI and Electronic Equipment insurance in future is not least dependent on the quality of the accompanying service, the importance of which I have repeatedly stressed. It is clear that the continual and disproportionate rise in personnel costs compared with the price of machinery constitutes a big problem in this connection.

Many aspects of what has been said above apply analogously to CAR and EAR insurance.

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