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# GLOBAL TRENDS IN THE WORLD AND EUROPEAN COMMERCIAL INSURANCE BUSINESS

The world and particularly the European business of commercial insurance have been going through a dramatic period in the recent years of current globalisation era. The conditions were so critical that they can easily be compared to the egregious neuralgic point. Given the capital endowment of insurance markets a great number of analysts have been arguing that insurance markets are the weakest constituents of still rather volatile financial markets. There are, however, facts that support such opinions: e.g. after September 11, 2001 stocks of European publicly traded insurance companies deteriorated in price by 51%, which is by 23 percentage points deeper slump than the decline of entire European stock market.

Problems of commercial insurance began to surface even before the September's terrorist attacks, which meant for the global insurance sector very serious effects. According to Standard & Poors rating agency the capital adequacy of the entire insurance industry shrank to a half between 1998 and 2002. It goes without saying that such situation has had sever consequences for the relationship between insurers and their clients.

Provided the insurance business has operated in a standard way for rather a long time period and in fact followed the development curve of the entire world economy, it would be interesting to find out what were the major and long-lasting causes that lead to the problems in commercial insurance business and subsequently to the problems of some insurance clients. Apart from the technical and technological nature of economy development (that on the other hand became more vulnerable) accompanied by sharply increasing volume of wealth (insured wealth) in Western economies the following reasons were the major causes of the insurance business trouble:

- Burst of price bubble in capital markets, namely dot.com businesses, in the second half of 1990s; the previous state enabled insurers to gain high profits from

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operations in financial (namely capital) markets, which opened up possibilities to fight competition through reduced premiums, so called cash flow underwriting – premiums were pushed down to their limits which was done at simultaneous relaxing of insurance terms of trade that lead to growing moral hazard and negative choice. Adverse effects of the controversial strategy has manifested already on the turn of the century in profit and loss accounts of insurance businesses in form of red numbers.

- Dramatic increase of damage claim volumes from non-life insurance resulting from large natural disasters, occurring practically simultaneously with severely deteriorating performance of capital markets.
- Significant changes in the nature of risks that have been until recently easily accepted for insurance, the risks brought about a new character of uncertainty.

Whereas with the former two factors despite their various intensity the commercial insurance business has been historically able to cope with through built-in stabilizers of performance reserves and re-insurance, the later factor has faced the commercial insurance with problems, which are to a certain extend new and in some cases very awkwardly resoluble on commercial basis.

The most serious event of the kind was no doubt the terrorist attack on September 11, 2002 in the United States. Apart from severe financial aspect of the tragedy the insurers got puzzled by the fact, that the risk was practically unidentifiable in advance. Before September 11, the likelihood The World Trade Centre towers would collapse was nil point nil. Risk management analysis did not expect attacks to be carried out with civil airplanes, therefore the potential risk could not be a priori included in the list of risks in the first stage of risk management procedures. At the same time the effects of the attacks on human lives can hardly be expressed in words, and the mounting damage to assets has badly shaken the world commercial insurance business, which had been already weakened by traditional factors.

An uneasy result of the events from the viewpoint of answering clients' insurance was the attempt of the insurance businesses to eliminate rise of insurance averages caused by terrorist attacks, by the means of excluding such events from insurance cover owing to the fact that such events are not suitable to be covered on commercially based insurance (due to their extent). New trends in definition of the term terrorism risk have catalysed search for new alternative modes of risk transfer because client being well aware of the intensity of such kind of risk, increased their demand for insurance cover of the risks that were in the recent past easily insurable by negligible extra charge. As an example of possible, and to a certain extent alternative solution to the problem is current practice in the United States – should there be a nuclear, biological or chemical terrorist attack in the territory of the United States by 2005 the government shall compensate for damage above USD 12.5 billion, commercial insurers in return do not exclude terrorism from insurance cover. Given the opinion of security experts claiming that in case such a terrorist attach

will take place the damage would climb up to USD 250 billion, it is more than generous alternative for commercial insurers. The conditions will hold even after 2005 only if they are approved by the Congress of the United States.

The most serious change in the nature of traditionally insured risk in Central European insurance market seems to be risk of floods. In the recent time meteorologists announced a permanent change in distribution of rainfalls globally, namely in the Central Europe and resulting shift in the time series of flood statistics. Two last flood waves that hit European territories in a five-year period (is it going to continue?) having caused damage of tens of billions of EUR, call for rapid development of systematic solution to disastrous flood-caused damage. Instead of present ad hoc accepted system including financing to the accounts of subjects afflicted in floods by the government and commercial insurers, there would be required as a response to new conditions to develop a systematic approach to alternative risk transfers, most probably similar to the US solution of multi-layer terrorism insurance cover (e.g. up to a certain limit damage would be compensated by commercial insurers, above the limit special funding will be applied (mainly from special reserves created by commercial insurance businesses for this purpose), and in the last stage funding will be provided from a state fund for financing of catastrophes). This approach to coverage of natural disasters has been successfully used in many developed countries that have the bad luck of being periodically visited by natural disasters. However, there two concerns: firstly, tax effects of such systems shall be assessed, and secondly, since Central European countries are new members of the European Union they shall be very cautious with any kind of private sector financing in order to prevent being accused of illegal state support of private industries.

Despite the other alternative of answering clients' needs in terms of floods insurance taking form of inclusion of the risk into a group of compulsory insurance (and achieving through this higher diversification) seems to commercial insurers as very much market non-conforming, it however appears, given the present inability to predict frequency and location of floods, as one of the temporarily usable method of protection endangered clients from the new character of the risk.

Another classic example of an earthshaking change in the nature of risk and resulting possibility of its financial mitigation through commercial insurance is the outbreak of SARS and bird flu diseases that paralysed travelling and tourism for a part of 2003, significantly complicated the travel insurance produce and despite a temporary victory the danger is still out there.

Generally continuing comfortless state in the commercial insurance sector with adverse (significantly in some cases) effects on the clients can be viewed as being caused by a) simultaneous occurrence of extreme volatility in the financial markets and natural disasters, and b) demonstration of new character of risks. The following key dilemma has been deepening: on one hand insurers are afraid of new negative events that could not be included in their predictions and that would normally be

covered by insurance, and on the other hand clients are aware of the new threats and intensify demand for insurance cover (financial protection against those risks) at reasonable premiums.

In this complex situation of reformulating of insurance terms of trades and calculation of insurance premiums prudent insurers and re-insurers who respect the limits of commercial insurance for coverage of unpredictable risks follow the path of utmost prudence in contracting of new insurance and re-insurance policies in the field of non-life insurance. The emphasis is put namely of character (quality) of insured risks not as much as on quantity, the weight of insurance engineering grows, and regardless of competition pressures the influence on clients in terms of prevention – all this, however, increases cost of insurance.

It is thus logical that even in business finance insurance companies exercise maximum effort to reduce own costs and optimise management of assets and liabilities. Assets liability management techniques grow in terms of importance, insurance businesses attempt to deliver maximum performance even with short-lived assets.

On the other hand clients seek in reasonably priced insurance products financial protection against possible occurrence of negative and unpredictable events. Given the recent past world development a great deal of people have increased their risk aversion, which has now a growing trend mainly owing to: geopolitical tension between democratic and fundamentalist civilisations, wars against terror in Afghanistan, Iraq, instability in Chechnya and other regions, anti-globalisation unrest, accounting scandals, computer piracy, and so on. Reaction of insurers in form rising insurance premiums, selection of underwritten risks, and tightening up of insurance terms of trade forces the clients to search for alternative (and cheaper) forms of risk coverage.

In spite of the fact that the key burden of trouble-making changes of nature of risk lies on non-life insurers, certain problems are now faced also by life insuring companies, namely owing to extreme slumps of capital markets. In Germany, where in order to consolidate insurance and re-insurance business the government agreed on tax allowances totalling up to EUR 10 billions in 2003, life insurance Company Mannheimer Lebensversicherung finally went bankrupt as a result of slumps in stock markets. In the UK, some insurers, e.g., Equatable Life and Standard Life, where the insurance policies allow for, reduce insurance amounts and rise manipulation fees for pay-offs in the middle of insurance period (source: *Symsite Research*). The situation in the United States is slightly better because insurance companies in their investment strategies (except trade in credit derivatives) as well as regulators have learnt a lesson from the crisis in 1980s when over 80 insurance businesses went belly up.

Contrary to non-life insurance business the life insurance is more simple and reliable in terms of calculation models, nevertheless, there are certain threats, too. With regard to the long-term nature of insurance (it can last tens of years) when an

error in calculation or a incorrect assumption may eventually lead to inability to fulfil insurer's liability to clients, under present conditions of volatile and turbulent economic environment the state regulation seems inevitable and absolutely necessary, namely in the filed of investment policies of insurers that operate with life insurance reserves in financial markets.

At the present, when the state of low profitability in financial markets returns has been on for longer than expected, a climate of uncertainty and restlessness about correctness of applied calculation formulas in pricing models of life insurance products has been prevailing.

Life insurance representing an important alternative for financing of life after retirement has been experiencing global boom at the present period of crisis of intergeneration pay-as-you-earn financed pension systems. Under the current impression of low returns on insurance reserves the insurance companies and regulators have been recently dealing with the question of possible disproportion between yield promised to the client and the real return on investment. An insurer that deliberately offers to clients higher insurance technical interest rate, i.e. promises unreal yield, which enable it to charge less as premium, can easily get into severe financial distress and can even face prosecution for dishonest trading.

Set a correct guaranteed yield in calculation of life insurance premiums, e.g., for a 20-year old client means the insurance mathematician must secure that after the client reaches the age, e.g., after 40-year period, the client receives the agreed insurance compensation from funds that the client paid in in form of premiums during the insured period (after deducting for administration expense of the insurance company), and from profits the insurance business generated from financial markets. In fact, actual yields earned by the insurer must exceed (or at least equal) the guaranteed yield for the entire period of insurance.

In this context it must be emphasised that possible over-regulation from the government regulators, e.g., normative setting of insurance technical interest rates, would not be in compliance with the strategy of indirect supervision adopted in the EU, the focus of this mode of regulation is overall financial health in the commercial insurance industry.

Another classic example of bona fide regulation (over-regulation) from the EU (which eventually gives the impression of insurance technical incompetence and principal misunderstanding of basic paradigms of insurance science) is current and rather contentious problem of premium calculation in life insurance products for male and female. Let us have a closer look at the matter (that have been recently controversially discussed also in the new member states to the EU) and let us start with the historic context of the issue.

With capitalism as the new social order a problem emerged as to securing those members of the society that lose their only source of income, which is their ability to work. Institution that shall take care of such cases has historically been social in-

surance, including health insurance. From its very nature the insurance is organised on the principle of solidarity of those who work with those who cannot. The system could not operate in another manner since it shall provide benefits to those who are not able to contribute to their generation. Some cases of loss of ability to work, caused namely by aging (presumption of disability from a certain age of a man) has been approached alternatively by a super-structural tool – life insurance incl. commercial pension insurance. Life insurance, however, is organised in a complete different way than the social one. Social insurance has been historically linked to the state and its income and expenditure are integrated in the system of public finance, most frequently into state budgets. Life insurance is on offer as a financial product by commercial insurance companies operating on the basis of economic principle of balance between incomes and expenditures; the key price parameter is therefore the risk of insured persons.

Commercial insurance faces a random generator that determines volume and occurrence of damage, calculation models applied in insurance business thus use very subtle exact methods that attempt to anticipate qualitative effects of insured contingencies. In order to improve success in estimates of the correct insurance premiums the set of the insured is divided into smaller, more homogenous groups. Thus, the insurance mathematicians first select the variables that are likely to influence frequencies and volume of insured accidents, and second they define tariff classes and subsets.

Traditional variables in life insurance are the age of insured and insurance technical interest rate. Premium calculations are based on so called mortality (or life) tables, which contain quantitative description of population mortality order. Probabilities of reaching of a certain age or death for age categories are backed with long-term time series, are very stable and almost do not change in time (or if so only very steadily, for example following the trend of prolongation of human lives).

Mortality tables evidence a commonly known fact that women are likely to live longer than men. This fact has been reflected in calculation models of insurance companies that are used to derive tariff premiums, which more accurately reflect the risk of the insured of a certain sex. The effects of the above in commercial pension insurance are as follows: women either pay the same premium as men but receive lower lifelong pensions, or receive the same pension as men but are such case they are required to pay more in premiums. It seems logical that the basic division into tariff groups is division by sex.

This approach however has brought the insurance business into contraposition with the EU intentions, where in relevant administrative bodies the legislation process to secure equal rights for men and women has been only few steps from being completed (including the idea to establish special European institute for equal rights for men and women). One of the proposal of the initiative that have come out as the most controversial is the implementation of equal rights principle to approach

to goods and services including insurance, which has been included in this scheme. Article 4 of the proposed directive in fact forbids adoption of differentiated calculation approach to the sexes. The European Commission in support of its proposal argues that the dominant aspect of life expectancy is not sex but principally the style of life, which offers a wide range of factors and variables to be used in calculation models and that has demonstrably larger effect of mortality, e.g., smoking, alcoholism, type of work, socio-economic factors, ethnical origin, diet, etc.

But the existing approach differentiating tariffs for men and women has been derived from objective reality following from statistically and historically proven different lifespan of men and women. Therefore, it must be naturally reflected in calculation formulae, should we want to follow equivalence principles, which are used for calculation of premium tariffs for the insured.

The logic behind this approach clearly shows that different premiums for men and women are demonstrably not the question of sex discrimination, which is the underlying idea of the proposed directive, and which we consider as absolutely correct. In this case, however, the difference between men and women corresponds with different risk of each of the sexes, and thus, the basic principle of fairness (that has been the key driver of the directive) is fully maintained. Breach of the principle of fairness would be only such approach to sexes in insurance that would not be grounded on insurance technical parameters.

The European Commission reasoning of their attitude towards other alternatives of risk selection has already their irreplaceable roles in calculation of modern insurance products, insurance tariffs are further divided into risky groups: e.g., smokers are insured at surcharges to the general tariff, and some effects of problem life style can lead to ineligibility for insurance of the subject (e.g., AIDS).

Let us illustrate the problem by means of an example: insurance companies use as one of their calculation methods so-called cluster analysis, which fundamental principle lies in determination of variables that are used to distinguish between risks and formation of so-called homogenous tariff groups. Calculation through application of cluster analysis resolves two ambivalent trends: in order to determine the premium tariffs most precisely it is required the tariff groups are as big as possible, on the other hand should there be the risks distinguished by their differentiated nature the tariff groups (or subsets) are then required to be as small as possible. The cluster analysis uses approaches from arsenal of multi-variable statistic analysis used for analysis and concentration of information included in multi-variable statistical data. The technique of cluster analysis represents procedure for classification of objects or fundamental classes whereas each of the objects or classes is characterised by preset variables into clusters (tariff groups). Thus it is very obvious that ignoring of one of the most significant classification features would result in calculation nonsense, and the other aspects suggested by the European Commission, which are potent to affect quality of lifestyle, if they are identified, are backed with available

and transformable data, etc., represent other criteria for classification of the set of insured into tariff groups and subsets with corresponding consequences for tariff levels. From this point of view it is necessary to assess also the European Commission „argument" that the insurers' practice of using sex as the determining factor in assessment of risks is based more on ease of application, than on factual value, which would be a clue to life expectancy. Deriving „discrimination" consequences from „effortless administrative detectability" of one of the fundamental calculation parameters is an oversimplified and misleading perspective, completely ignoring the philosophy of the risk management science and its first stage of identifying risks.

No surprise that Committee of European Assurors (CEA) has demanded based on resolutions passed in majority of national membership (insurance associations) Article Four to be left out of the directive arguing that they cannot agree to the reasons that lead to its preparation.

Consistent valuation of life risk by insurance companies according to insurance technical principles and the principle of equivalence does not evoke any negative response from clients of insurance companies. On the contrary, the proposed principle would surely evoke displeasure since it would lead to increase in premium. Insurance companies would have to defend themselves against a phenomenon known as anti-selection of risks, i.e. against increasing proportion of insurance taken out by gender groups with until recently higher premiums. This could lead the clients to contract insurance in countries where insurance technical principles are not restricted, and where as a result the premium is cheaper, which would mean outflow of clients from European insurance market.

A politically not negligible aspect of the matter is the fact that the proposed very controversial directive represents the proper argument for euro-sceptics that warned against the risk of over-regulation of national economics after joining the EU. The proposal resembles restriction of free market, private business and contractual freedom. In addition, the proposal seems to infect commercial insurance with the above-discussed principles of social security insurance (with the underlying principle of solidarity, whereas the principles of commercial insurance are completely different, their operation is tied up with economic principle of equivalence between incomes and expenditures, and thus, determination of tariffs based on risk and not income).

Summarising the impacts of new trends in risk and protection against them in form of insurance onto the client, there must be concluded that despite increases in premiums and more strict insurance terms of trade, the situation in the present insurance is not so dramatic. Both insurers and their clients now believe that on the whole, despite many above-mentioned negative events that badly hit the industry, the insurance sector is relatively in good shape.

Negative effects, however, continue to play their roles in the world and European insurance businesses, namely in form of prudent tariff policies of insurers and care-

ful selection of insurable risks. On the whole, the world and European insurance industry can be deemed as stable, relatively secure and with perspective of further development. As the insurance market seems to reach and overpass the famed break even point, insurers must however dwell on presently applied principles of prudence and pay utmost attention to correct calculation of premiums, which requires very good ability to identify risks, or effort to anticipate new risks; all these will in effect bring about many benefits for both insurance businesses and their clients.