

**Property-Casualty Risk-Based Capital Working Group
National Association of Insurance Commissioners**

**Hearing on
the Proposed Formula for
RISK-BASED CAPITAL
of Property-Casualty Insurance Companies**

**Statement of
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Excerpt
Pages 14 – 20 (without footnotes)
*Full text of the statement is at www.stewarteconomics.com/Publications.htm
under “Risk Based Capital (1993)”*

At the level of public policy, the insolvency problem which has not been adequately addressed is widespread insolvency caused by losses running right across the entire insurance industry or across a substantial segment of it. The insurance concept of a catastrophe should be broadened beyond physical events to include any occurrence which causes financial loss across the industry and which can neither be reduced by ordinary care nor diversified within the insurance business by ordinary methods, and we will call it "systematic catastrophe". So broadened, the concept of a systematic catastrophe would include:

- a. property catastrophes in the classic sense, such as hurricanes and earthquakes, with a greater chance than ever of their striking areas of high concentration of insured values;
 - b. liability changes, driven by broad shifts in applicable law, science or expectations, as happened with asbestos, pollution, pharmaceuticals and some other products;
 - c. adverse economic conditions, such as inflation (affecting loss reserves) or depression (affecting premiums and claims);
 - d. unplanned, industry-wide shortfalls in revenue, such as from widespread state rate suppression or federal price controls;
 - e. calls on off-statement financial guarantees, as happened with bank deposit guarantees in the Depression and could happen now with derivatives or guaranteed contracts of many kinds;
 - f. collapse of investment markets, such as happened recently with real estate and junk bonds;
 - g. widespread default on trade receivables, as with reinsurance recoverable and agents' balances if a major reinsurer or broker failed;
- and

- h. socio-economic changes which fundamentally alter the nature of the risk or of the insurance mechanism, such as nationalization of health insurance.

We can see from the list that systematic catastrophes are big, sweeping and beyond useful forecasts. We can also see that they do happen in real life.

A company's exposure to systematic catastrophe can be several hundred times its capital, so the RBC formula is essentially irrelevant to that kind of problem. More broadly, regulation on the paradigm of competitive failure gives little information or guidance for a business threatened more by systematic catastrophe.

We can see the new paradigm emerging in the insolvencies of the mid-1970s, as general inflation hit loss reserves, and in the insolvencies of the mid-1980s due to bad reinsurance. It has become clearer in the insolvencies of the early 1990s, caused by natural disasters striking huge concentrations of insured property.

In recent years, where the potential for systematic catastrophe has been identified in a specific exposure, it has been addressed, as with riot damage in the 1960s and swine flu vaccine liability in the 1970s, but the more general exposures to even greater systematic catastrophe have not been so addressed and seem to have mounted to unprecedented levels.

Although for many years the tools and priorities of regulation have been directed to the insolvency paradigm of competitive and regulatory failure, if we look even further back we see that insurance regulation dealt well with systematic catastrophe when it had to. Today new tools exist to do so again.

For the next several years, the big payoff from thinking about solvency regulation is likely to be in the area of systematic catastrophe – where a number of insurers can be strong and successful one day and gone the next. That is where the insurance mechanism fails today, more than with the individual company eliminated by competition.

We need to do a lot of work on our attitudes. Much work can then be done on our tools. But attitudes come first, for we perceive the utility of solvency tools only as they serve the paradigm of insolvency. For example, the statutory financial statements, which deal in broad aggregates and their trends over time, do not really try to measure exposure to systematic catastrophe, and nearly all regulation is based on those statements.

How to deal with the risk of systematic catastrophe is the aspect of insurance company solvency regulation most in need of intelligent consideration by the business, its regulators and its advisory professions, and promising areas to examine would include:

- a. how to reflect and quantify such risk in the annual statement and other reports, and how great the exposure of the insurance industry is;
- b. whether (and, if so, how) capital is a meaningful concept for testing safety in relation to systematic catastrophe, both for the industry and for individual companies;
- c. how management and regulators might limit a company's exposure to systematic catastrophe without impairing its ability to function;
- d. whether limiting in advance a company's exposure to systematic catastrophe might both obviate limiting conduct at the point of claim and make the direct exposure amenable to dispersion through wider reinsurance markets and through non-insurance markets such as those for trading securities or commodities;
- e. whether catastrophe reserves and rate loadings, addressed to the problem of systematic risk, are feasible and, if so, whether they should be encouraged by regulatory and tax rules; and

- f. whether the insurance industry's aggregate exposure to systematic catastrophe needs to grow as fast as, or faster than, the growth of the total insurance business or whether, instead, it can be limited or even caused to decline.

The point here is that, for a very long time, we have not thought much about systematic catastrophe from the perspective of solvency regulation. We have thought much more about individual company insolvencies due to the inability to make it in the increasingly competitive marketplace. That is entirely appropriate, because competition at the consumer level was a novel feature of many insurance markets at the end of the second world war, and Congress was pressing us to get out of the way of competition and to adjust regulation to cope with its undesirable side-effects like individual company failure. State regulation has done all that rather well, which is why there is not much more to be gained through further refinements like RBC.

Now more progress is possible by re-addressing the new manifestations of that old problem – the financial conflagration sweeping through books of business and consuming companies not one small straggler at a time but in quantity and in all sizes. It is a kind of exposure that cannot be diversified in conventional ways and can impair the working of the insurance system and not just of individual firms. It does not seem to be well addressed by the ways insurance regulators now detect trouble and protect the public.

Systematic catastrophe has not been a focus of management attention either, not the way it once was, and it has probably been mounting fast. One reason it builds up is that if a company will take on exposure to systematic catastrophe without tracking, restricting or even worrying about it, then that company will attract a lot and will even get paid a little for doing so.

If you share my concern about and interest in the topic and would accept a specific suggestion about where to look first, I would suggest looking at the information you collect. Look at the annual statement. It is full of broad financial aggregates and

broad classes and general trends. That remains true no matter how far you stretch the data out or how finely you carve it up or how assiduously you mine it. The statement is, in short, a fine and sophisticated instrument for collecting and analyzing information of the particularity possible a few decades ago. The data in the annual statement and other reports is all insurance data, and it all tacitly assumes steady relationships between premiums and exposures and between time and money. The data speaks accurately of an isolated business in another era.

To say look at the information you collect is not, of course, to say just get more of it. The information problem is qualitative and goes to the purpose of the data and to the paradigm of failure the data fills out. It is true that the gathering and management of information is becoming much more accurate and inexpensive.

That will be helpful, but it is not the point. The need is to rethink where the insolvency threat of the future will come from and then to reason out what you need to know, and what managements need to know, to stay on top of it. Then the information revolution will help, but public priorities will be in command. That is how you will do most to identify, measure and perhaps control exposure to systematic catastrophe, more than was either possible or relevant only a few years ago. That is the area in which the expenditure of effort and resources is likely to pay off best in reducing insolvencies of a socially damaging kind.

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