



Actuarial Studies Seminar  
Macquarie University  
28 April 2010

Shauna Ferris  
Senior Lecturer, Department of Actuarial Studies, Macquarie University

### **Dysfunctional Insurance Systems**

Over the last twenty years, we have witnessed an explosion in financial innovation. New products have been developed to manage credit risks. Risks can be pooled together, so that the losses from any individual risk can be spread across the whole pool. Then the pool of risks can be sliced and diced into separate tranches, each with its own risk characteristics – so that each investor can decide just what combination of risks he is willing to bear. Derivatives can be used to make risk transfers even more flexible. And ultimately all these new products were traded in a global market, transferring risk back and forth among a wide range of investors.

Theoretically, these new products were supposed to make the world a better place – by transferring risks to those who can most afford to bear them.

When these new products were created, some regulators thought that regulation might be desirable. But those who traded in these products thought that regulation was unnecessary, and they successfully lobbied against any restrictions.

Of course, as it turns out, in many cases these risk transfer markets did not work very efficiently – with catastrophic consequences for the global economy.

These dysfunctional credit risk markets characteristics such as moral hazard, information asymmetry, opacity, information costs, agency risk, adverse selection spirals, and negative externalities.

All of these problems have been seen before in the more traditional insurance markets. In fact, these same problems have plagued insurance markets for hundreds of years.

In this paper we will develop a model of an inefficient market. Building a model of the market will, we hope, help us to understand the causes the problem, which is the first step towards identifying necessary reforms.

For the purposes of illustration we will look at marine insurance market in England in the 1860s – a market which was dominated by Lloyds. In this era, the insurance market was quite inefficient, and market failures created serious social problems, including an unacceptable increase in systemic risk.

Over many decades, market regulation evolved to produce an insurance market which provided the economic advantages of spreading risk, without such severe adverse consequences to society.