In dialogue: Thomas Gehrig and Ernst Eberlein

RESEARCHING THE CRISIS

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INTERNAL SENIOR FELLOWS
INTERDISCIPLINARY
RESEARCH GROUPS

Two years ago, the collapse of the financial markets shook the world to such a degree that a general feeling of unease still persists today. Is it not possible that a similar crash could happen again at any time, perhaps with even graver consequences than those felt in autumn 2008? In the wake of those turbulent events, financial mathematician Ernst Eberlein and economic scientist Thomas Gehrig submitted an application to FRIAS for their project entitled "Information, Liquidität und Vertrauen in unvollständigen Märkten", and pursued research on this complex topic as Internal Senior Fellows until October of last year.

Ernst Eberlein and Thomas Gehrig became acquainted while developing the Master of Finance degree course introduced at the University of Freiburg in October 2003, well before the Bologna Process came into effect. The two teaching colleagues became research partners, who were primarily concerned with determining acceptable prices for stocks and shares. "Since the crisis showed how inefficient markets become if important preconditions are no longer met, we began to formulate a project relating to incomplete markets in the financial sector," recalls Ernst Eberlein.

Whilst the simple, elegant model of complete or perfect markets had become standard for many purposes, such as for examining complex correlations in price fixing, in economic reality this type of market does not exist. Even in normal times, real markets are seriously incomplete, and are all the more so in times of crisis. Despite this, it was not until the crisis hit that literature on incomplete markets managed to gain public acceptance.

The money market, the research field of Ernst Eberlein and Thomas Gehrig, is likewise an extremely incomplete market which is not easy to investigate, even for scientists. "The interbank market is colossal. In fact it is a matter of course that banks should lend one another money," explains Thomas Gehrig. However, this presupposes that the financial institutions have mutual trust, something that was suddenly destroyed in the crisis. "This was", as the economic scientist explains, "a direct consequence of the lack in transparency and of the ignorance about the strategic behaviour of other market participants, regulators and quasi-state protagonists." "On top of this there was misinformation," declares Ernst Eberlein. In the US, certain real estate stocks came with the highest seals of approval even though they were by no means secure financial investments, as the Lehman Brothers collapse demonstrated in such frighteningly clear fashion.

"The crisis led us to ask the question: how can financial markets be made more secure?" explains Ernst Eberlein. It quickly became apparent that many banks possessed too little capital to be able to bring the market fluctuations under control during that period. It also became clear that statutory regulations were sorely lacking on this point. "We therefore occupied ourselves with determining how risks should be properly assessed and how appropriate capital resources can be guaranteed," recounts Ernst Eberlein. Together with Dilip Madan from the Department of Finance at the Robert H. Smith School of Business of the University of Maryland, who collaborated on the interdisciplinary research project as an Affiliated Fellow, Ernst Eberlein published two extensive academic papers during his FRIAS Fellowship on how capital regulations may be shaped in future. Such regulations should be used to adapt reserves to reflect the actual risk that a bank takes. The researchers are in favour of creating financial buffers, or "Own Default Operating Reserves (ODOR)". Here, as soon as the price of a bank product falls below its original purchase price, the financial institution deposits the difference in an ODOR account.

The two researchers today still find it questionable that, prior to the crisis, banks were giving credit to individuals who would not normally have been eligible for loans. "The financial institutions no longer performed their original function," judges Thomas Gehrig. This dubious behaviour was encouraged by the fact that, primarily US, banks had begun to securitise loans on a massive scale, in other words to resell credit – even unsecured credit – as securities. As the researchers, together with Rune Stenbacka, Affiliated Fellow of the Helsinki Center for Economic Research, were able to demonstrate, the institutions thus undermined their right to exist as "delegated monitors". This foolishness was also aided and abetted by the aforementioned high approval seals awarded to many of these junk bonds. This reveals an additional problem: to date it is still not possible to safeguard against risks, which are part and parcel of financial market activity, using the private assets of the managers themselves, not even in part. "Managers always receive bonus payments directly in the first year when they have collected in money. How well they invest the money is, however, not taken into account in the bonuses," explains Thomas Gehrig. Together with Hans Gersbach, Affiliated Fellow of ETH Zürich, he investigated the extent to which the extremely short-term nature of the remuneration system is a consequence of competition for managerial talent, and therefore a form of market failure. In doing so, both researchers pursued the issue of whether this short-term characteristic is encouraged by the passivity of supervisory boards and how incentives for (more) active supervisory boards can be created. Fundamental problems of misinformation are also revealed here, as the true dedication and real motivation of managers and supervisory boards towards the owners, the equity holders, are not immediately apparent.

In October, Ernst Eberlein and Thomas Gehrig presented their results, gathered over the ten-month fellowships together with Hans Gersbach, Dilip Madan and Rune Stenbacka, at the international conference "Information, Liquidity and Trust in Incomplete Financial Markets". For three days, the FRIAS Fellows discussed with colleagues from Germany and abroad, as well as experts from the German Bundesbank, which measures could be suitable for avoiding comparable financial market crises in future. All the experts deemed it to be crucial that new capital regulations be laid down. "The process of understanding is at an end, it is now for politicians to take up the ideas that we researchers have developed," insists Thomas Gehrig, and Ernst Eberlein adds: "Of course we won't know until later if the changes being proposed now will be successful. Nevertheless we have to act. Ultimately the crisis has made incredibly plain just how vitally important the financial markets are for the global economy."