Analysis

Error-laden machine

Investment and the crisis An inbuilt inability to allow adequately for disaster was compounded by a herd mentality to cause the market collapse, writes **John Plender** – who offers some homespun lessons

As stock markets everywhere continue their slide, global equities have in effect now shed all of the gains they had notched up between the Asian economic crisis of 1997-98 and the onset of the credit crisis in 2007.

But that seemingly remorseless retreat – which apart from anything else has pushed pension funds seriously into deficit – is only one part of a litany of investor woe. Consider also these other aspects of what is happening in the investment world:

First, along with the equity market collapse, the fall in value of complex structured credit products increasingly puts a question mark over many insurance companies' solvency.

Second, the population of hedge funds is expected to shrink by more than half, as shaky business models are torpedoed by the bad market conditions.

Third, in private equity, industry experts reckon that most of the $85bn (£60bn, €67bn) to $100bn invested in transactions since 2005 has been wiped out. According to a Boston Consulting Group paper, potential losses from defaults on leveraged buy-out debt could reach $300bn in a market with $1,000bn of debt outstanding.

Fourth, a move by institutions into alternative asset categories this decade failed to deliver the expected benefits of diversification, as prices for many assets have plunged simultaneously.

The message of all this misery is summed up by Michael Lewitt of Harch Capital Management, a fund manager who was quick to identify the risks in the credit bubble. "Virtually every strategy institutional investors followed, or were advised to follow by their consultants or funds of funds", he says, "turned out to be a complete disaster". Even if that verdict errs on the sweeping side, it is clear that mainstream investment strategies failed to deliver. Why – and what needs to change to prevent a repetition?

A good diagnostic starting point is the phenomenon that academics call

$300bn

Potential losses on $1,000bn of debt from leveraged buy-outs

"disaster myopia" – the tendency to underestimate the probability of disastrous outcomes, especially for low-frequency events last experienced in the distant past. The risk of falling victim to this syndrome was particularly acute in the recent period of unusual economic stability known as the "great moderation". Investors were confronted by falling yields against a background of declining volatility in markets. Many concluded that a new era of low risk and high returns had dawned. Their response was to search for yield in riskier areas of the market and then try to enhance returns through leverage, or borrowings.

Equally popular were trading strategies such as carry trades, which involved borrowing at low interest rates and investing at higher rates, especially via the currency markets. Favourite trades included borrowing in Japanese yen to invest in Australia or New Zealand, and borrowing in Swiss francs to invest in Icelandic assets.

This was dangerous because the interest rate spread could be wiped out in short order by volatile currency movements. Yet because volatility remained low for so long, disaster myopia prevailed. Carry traders were lulled into a false sense of security, while more sceptical competitors joined in for fear of underperforming.

In due course, markets turned and myopic traders were burned – confirming the wisdom of Warren Buffett, the sage of Omaha, who declared that "nothing sedates rationality like large doses of effortless money". Yet even this most admired of investors admitted at the weekend to having lost billions of dollars after failing to anticipate the fall in energy prices.

The sedative was exacerbated in the bubble, according to a recent paper by Andrew Haldane, director for financial stability at the Bank of England, by badly flawed risk models. "With hindsight, the stress-tests required by the authorities over the past few years were too heavily influenced by behaviour during the golden decade" of 1998-2007, he says. So many risk management models were pre-programmed to induce disaster myopia. The input into the models was based on highly unusual macroeconomic circumstances that differed materially from longer-term historical experience. Risk was thus mispriced on a dramatic scale because of model-enhanced myopia.

Among hedge funds, disaster myopia is more cynically entrenched by a poor alignment of interests between managers and their investors. Hedge fund fee structures rarely allow investors to claw back fees if years of profits are wiped out by a single year's giant loss. Research by Harry Kat, professor of risk management at the Cass Business School in London, confirms just what this would lead one to suspect. Many hedge fund managers take on "tail" risks in derivatives markets, which produce a positive return most of the time as compensation for a very rare negative return. In effect, the funds have been writing catastrophe insurance. Then the catastrophe happened. Arbitrage strategies that took market liquidity for granted also foundered.

Equally unfortunate has been a botched approach to portfolio diversification. This powerful tool allows investors to achieve higher rewards for a given degree of risk, or the same reward for a lower level of risk. Yet in alternative asset categories it has failed to do that, despite the use of sophisticated mathematical modelling of correlations between asset classes. Hedge funds, private equities and commodities have underperformed in unison.

John Kay, a fellow Financial Times columnist, points out in *The Long And The Short Of It*, a new book on investment, that the endowments of Harvard and Yale did well in hedge funds and private equity in the 1990s. But asset classifications can change their meaning. As the sector grew, hedge funds became less a bet on an individual's skills, more a conventional run-of-the-mill fund.

At the same time, private equity firms, bloated on credit, turned into a highly borrowed play on the stock market. Returns became increasingly correlated with other investments. The endowments, along with other investors who accepted consultants' conventional wisdom on alternative assets, have suffered in consequence. Prof Kay's message is that diversification is a matter of judgment, not statistics, and that a model will tell you only what you have already told the model. It can never replace an understanding of market psychology and the factors that make for successful business.

The fact that some strategies are more profitable if others do not adopt them is illustrated in *When Markets Collide*, by Mohamed El-Erian of Pimco, the bond fund manager. He tells the tale of Harvard Management Company's investment in timber. This produced attractive risk-adjusted returns, which in due course were boosted by a herd-like migration of other investors into timber. Goodhart's Law, named after the economist Charles Goodhart, then applied: recognisable statistical relationships change as economic agents' behaviour adapts. So the expected benefits were eroded. The resulting closer correlation of timber to other asset classes is, Mr El-Erian concludes, an inevitable outcome in a competitive financial industry.

A more fundamental point is simply that diversification cannot work well in a credit bubble because virtually all asset categories are driven up by leverage. Then when the bubble bursts, deleveraging affects asset categories indiscriminately. Equally fundamental is that fund managers tend to move in herds because that reduces the risk of their losing client mandates. Minimising business risk takes priority over the interests of beneficiaries.

Many of these investment failures, including an excessive reliance on rating agencies (see above left), have a common feature in their unquestioning acceptance of models or methodologies. This "black box" approach to investing has been encouraged by the increasing complexity and opacity of a financial world where many assets have migrated to a shadow banking system that spawned structured products such as collateralised debt obligations, or to less regulated hedge funds.

As in private equity, many investors failed to grasp the penal nature of hedge fund charges. Prof Kay illustrates this by reference to the 20 per cent average compound rate of return earned by Mr Buffett at Berkshire Hathaway. If the normal hedge fund charges of an annual 2 per cent of funds under management and 20 per cent of profits had been applied to the resulting $62bn, no less than $57bn would have been absorbed in fees.

If big mistakes have been made in investment strategy, it does not follow that the remedy should be more regulation. The problems of disaster myopia, poor modelling, mismanaged diversification and excessive reliance on rating agencies stem more from failures of judgment by consultants, investment committees and pension fund trustees than systemic flaws.

So despite the complexity of today's markets, the lessons in all this are oddly homespun. Mathematical models should not be relied on without a proper understanding of the economic conditions and behaviour that fed them. It is foolish to put blind faith in credit rating agencies. Do not invest in what you cannot understand. Shun arbitrage strategies that assume permanent access to liquidity. Avoid investment vehicles that inflict swingeing charges in exchange for what in most cases will amount to market performance or worse. Recognise that leverage with due care. Recognise that the conventional wisdom of the consulting fraternity is not conducive to contrarian behaviour, one of the keys to successful investing. Above all, beware what Charles Mackay, the 19th-century historian, called the madness of crowds.

Number crunched: mathematical models may have grown more sophisticated since Fritz Lang's 1927 'Metropolis' but are still not to be relied on
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Credit rating agencies

'Highly paid professionals let a third party do the work'

Many of the biggest losses incurred by investors after the bursting of the credit bubble were in structured products such as collateralised debt obligations. This was a failure of due diligence, since investors left it to the credit rating agencies to assess the quality of underlying assets such as subprime mortgages.

According to Christopher Whalen, managing director of Institutional Risk Analytics, an advisory firm, "one of the dirty little secrets of Wall Street is that fund managers for years have been compelled and content to utilise ratings by the big three agencies to make asset allocation decisions.

"Simply put", he adds, "these highly paid professionals let a third party do the hard work and failed to validate the fact that the work was done."

The investors' mistake was compounded by a failure to recognise a subtle shift in the nature of the credit rating agencies' role in turning mortgage loans into complex securitised products. The agencies have long been paid by the companies that they rate, prompting questions about the independence of their judgments. But with instruments such as CDOs, they also advised banks on how to structure the product to enhance its rating and saleability.

Critics say this "mission creep" resulted in a more intense potential conflict of interest than with conventional credit – much as the big auditors' move into consulting gave rise to acute conflicts of interest before the collapse of Enron. For some investors, such as pension funds and charities, the rating agencies' writ is law because legislation, trust deeds and other governing instruments often stipulate that investments must carry certain ratings.

This seemingly prudent requirement inflicts underperformance on investors, since it condemns them to buy high and sell low. For smaller investors who lack the resources to do their own due diligence on complex products, there is no alternative to relying on rating agencies short of shunning the investments they rate.

Gains gone
FTSE World index (in $ terms)

Source: Thomson Datastream

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