## CKTO BUSINESS







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## Markets are mostly a smooth ride - until the sudden plunge

The real money is won or lost during brief periods of high volatility, but predicting when the fault lines will move is no easy matter

arkets can be a little like the early days of air **⊥** travel – long periods of interminable boredom punctuated by periods of intense terror. At present we are heading for a deadly dull November - and then it's Christmas.

Markets do not just trend up, down and sideways, they regularly show non-linear types of behaviour. Some investors lean on physics or natural sciences to model how markets behave under different conditions - assuming that basic laws of nature are followed in both ecosystems.

Wave propagation deals with how far the impact of news might go when it hits the market. Soil mechanics can model what happens when that last grain of sand on a pile causes a collapse. Market overshoots might be modelled on the movements of a bungee jumper. At what point does the elastic snap? Why is it that irrational market trends can go on for a very long time, until everyone is bored or bust?

How we model that point of failure – so that we can get out in time - is one of the most enduring of market studies. I particularly like earthquake theory from the field of geology a former study of mine. The Chinese have sought to forecast earthquakes by studying the way that fish swim, birds flock, pigs squeal, dogs howl or chickens lay their eggs. There is no doubt that there is a lot of science in this methodology, but the problem is distinguishing between news and noise.

A crash is always presaged by indicators of stresses in the system, such as ever increasing highs in an illiquid market, high price-earnings ratios, excessive by 2013. However, if you had

borrowing and irrational mergers. All reveal a market that is excessively "risk on".

Often, a collapse is preceded by a slow decline as the market stresses are held for a while, just as an earthquake holds ground stresses before release.

Determining the fault lines is the task of market strategists who may identify them as higher interest rates, too much debt or too little growth. In the last few years, these factors have been finely balanced: no extremes, no earthquakes – much like the San Andreas Fault in a quiet patch.

In the last 190 years of equity investment, main market stocks were higher over the year for 70 per cent of the time. If you had invested US\$100,000 in the diversified S&P 500 Index in 1989, you would have had \$1,018,000 in your sweaty palm

missed out on the performance of just the best five days of the 8,800 or so days in the period, your profit would be 34 per cent lower. Missing the top 25 days of performance would have delivered you a massive 75 per cent less money.

It shows that you have to stay invested the whole time because market movements are nonlinear. The real money is made or lost along the fault lines. None of us knows when the quake is going to hit, and because markets generally go up, it pays to be in for the long term. It paid handsomely not to sell at the bottom of the crash in 2008, as every year except one has been strongly positive.

To see the impact that just a few big movements can have on the market, there is no better example this year than the S&P500 US market, which has so far flatlined – falling less than 4 per cent and rising 3 per cent.

The only exception was a precipitous fall of 11 per cent in August. If you had missed that week, you would have noticed no difference in trading patterns, but for the index being at around 1,950 instead of 2,100. The market had merely sunk 7 or 8 per cent in value across the board and then continued to trade with little volatility, as if nothing had happened. The stresses had been relieved by a movement in a fault line - for the moment.

Fault lines in markets can cause big market collapses. Unfortunately, the recovery is rarely as abrupt. Markets do not just move in lines or waves, and the big displacements come down fault lines that create big discontinuities in pricing. The eternal question is how to figure out the timing. Start paying more attention to the dogs, fish, pigs and chickens.

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