## How Not To Invest. How To Deal With Complexity

Diversification hides a multitude of sins. The idea of diversification is to ensure that no single investment or risk factor causes a catastrophic and irrecoverable loss. Too little diversification and you become vulnerable to being taken out by a single factor or event.

Too much and you lose control and understanding of your portfolio. If you cannot recall all the line items in your portfolio and the rationale for each position then likely you are over-diversified. Over-diversification can introduce all sorts of unforeseen risks as well since the behaviour of a large collection of instruments can result in complex interdependencies which were not envisaged before.

Complexity is a double edged sword that is super sharp, has serrated edges and often has no scabbard. In a complicated world the ability to deal with complexity and the willingness to assume complex risks can and does pay handsomely. However, taking on complex risks with poor or no understanding of them almost always results in you paying handsomely. Complexity for complexity's sake is irrational. Arbitrage and other trades offering asymmetric risk reward characteristics require complex analysis and complex trade construction. However, complex trade construction does not imply attractive risk reward characteristics. In fact, when offered complexity prior to the risk reward proposition, the beneficiary of the complexity is likely your counterparty and not you.

So, an investment product that involves you getting this payoff unless that happens, until this date whereupon you get that, until this other thing happens unless something else happens first in which case you get the worst of the following, until the product is called, is a nice little distraction which should be analysed in the context of 'what do I think will happen and how do I think the markets will unfold' and 'given my view of the world, what is the right trade expression.' Also, it is amusing and illuminating to ask, 'well if someone took the opposite side

of this trade, what are they trying to achieve?'

Even apparently simple products like, 'we will pay you so much per day as long as something stays within a certain range, otherwise we pay you nothing, and we may call the deal at par at anytime after such and such a date' are made up of more basic things like a floating rate note, a swap, receivers, payers, caps or floors, and all sorts of wonderful financial novelty items like that.

If your financial advisor is recommending these cool products, don't just buy them, ask them what these products are made up of, and what the components are, how each component is priced, how it is all put together, and priced, and who are the counterparties for each leg, how is the counterparty risk managed, how is collateral managed. If any of the answers is 'I don't know' then the appropriate response is to let the great and glaring opportunity pass. Damage is multiple times more difficult to undo than it is to do.

Oh, don't forget to ask your discretionary portfolio manager the same questions before you give them the discretion to buy these products. Nothing is good or bad, its just how you use them.