1. There are 3 types of market events that can help us understand markets. We introduce Risk events and show how they are different and more ‘complex’ than the other types of market events
2. Political ie risk events are the #1 driver of returns in the 20th century – Shown with case studies:
   1. Russia/Ukraine crisis
      1. Stocks
         1. Ukrainian public companies
         2. Russian companies that do business with Ukraine
         3. US companies that do business with 1
      2. Commodities
         1. Natural Gas (South stream Pipeline)
         2. Oil
         3. Find Ukrainian commodities
      3. Currency
         1. Ruble
         2. Hryvnia
   2. Syrian Civil war
   3. Other Arab spring uprisings
   4. OPEC oil prices
3. These events can be captured quantitatively (the rock)
4. Complex adaptive system approach to modeling all markets simultaneously (the pond)
5. We can then tell the effect of events (Describing the ripples in the pond)

Understanding and Predicting

As long as financial markets exist, people will try to understand their inner-workings; the motivation rests on the belief that such an understanding gives the investor an ability to predict the future value of assets, thereby decreasing exposure to risk while increasing return on investment. Relative to one who does not possess this market insight, the informed investor maintains a healthy competitive advantage. This “competitive clairvoyance” is so significant that those who do not have it risk being shut out by those who do; in effect, there is always a need for richer market understanding and more precise insight into the future.

In our collective human history we have devised many different models of understanding the complicated interactions that come from a collective of sub-rational agents maximizing their benefit. The most fundamental of such models is the supply-demand model. However the field of economics has produced many such useful and explanatory models like the Solow-Swan model of economic growth or the Cobb-Douglas model of production but they all fail in one respect: they all axiomatically posit rationality.

We will first set up some terminology then we will describe a new model for understanding Markets of all kind that do not assume rationality. Instead of drawing from the legacy of economics, we will use a developing field of physics called Complex Systems.

Market Factors

There are three main market drivers that come in the form of events: Economic, Sentiment, and Risk.

1. *Economic*: These are events stemming from ‘output’ (a function of labor and capital) of goods and services. Can also be thought of as changes in the
   1. Corporate actions
   2. GDP
   3. Earnings releases
2. *Sentiment*: How the market reacts to ‘output’ events or in other words general prevailing attitude of investors as to anticipated price development in a market
   1. Mutual Fund flows
   2. Put/call ratios
   3. Twitter reactions
   4. Fear/Greed Index
3. *Risk*: events more than 1 degree away from ‘output’
   1. ‘Political’ Events
   2. Actions or statements by geo-political actors and entities
   3. Accounting changes
   4. Natural disasters

Risk Events and Their Importance