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Investment Risk in an Age of Deflation

First, the caveat: yours truly is too young (fortunately) to have seen any prior age of deflation. That said, this letter tries to put into words the impact of this crisis on a large, multi-year effort aimed at building a free cash flow valuation model. When we began the effort in 1998, it was over irritation at obscenely high stock prices during the dot com boom. Now, we are fast approaching a point where equity prices will seem obscenely low. Prices were high in the late nineties because the yield curve was quite steep, and from the point of view of the market, the Fed was giving money away. The yield on the 10-year Treasury still implied inflationary expectations, so a low Fed Funds rate produced cheap credit which led to increases in asset valuations through tightening risk premiums.

Inflation, however, is not the natural order of things in a technological world. Repeat: Inflation is unnatural in a society driven by science. Technology leads to efficiency which leads to lower prices i.e. deflation driven by supply, *and this is a good*. Inflation over the past 50 years was an outcome of demand driven by a massive Cold War combined with the expansion of the Great Society. When both finally ended in the late nineties, the Fed fought the outcome. It was an institutional instinct, partly because Japan, while experiencing deflation, suffered from low growth. That instinct, despite 200 geniuses in the room, has nothing to do with cause and effect. The Japanese are sacrificing efficiency for social security and political payoffs. The US had no such problem. It is a highly liquid society in every sense. So why 1% Fed Funds? Another part of the explanation is that the only experience the Fed has with deflation was demand driven during the Depression (the US has experienced supply driven deflation before, but the Fed did not exist at the time.)

One per cent money led to a temporary reversal based on artificially high demand for consumption driven by leverage. The outcome does not need comment. In an environment of deflation, nominal risk free interest rates fluctuate around real rates. Since this is the US, thanks to open markets we are importing our deflation through our supply chain. This makes equity valuation as perilous as in the nineties. Back then, the bond market was behind the curve, and assuming something was 'fully valued' was dangerous because cheap money created optionality, and the value of the option often exceeded that of the cash flows. AMZN was a bookseller, but it could be so much more - a seller also of electronics, office supplies, and toys. Its value, realized over time, lay in that option. For Pets.Com, the option expired out of the money. Now, the bond market has caught on and the 10-year yield has shifted down and the optionality is gone. Technology now leads to deflationary shocks, and this is great for the consumer, but a difficult time for the investor or employee in the sector facing that shock. Leverage is lethal, because if revenues decline the fixed debt service erases equity. Bankruptcy risk is high and distress often implies that no turnaround is likely - innovation will create more capacity next year.

The same free money is now an indicator of central banking's response to distress in credit markets, and a bond market rally is no longer reason for stocks to celebrate a lower discount

rate. It is more likely to reflect a flight to safety until the volatility of various sectors of the economy can be re-measured, a task that can take years. If we resist, as Japan did, it can take decades. Central banks find quantitative easing tempting, but they will merely re-ignite bubbles in hard commodities not susceptible to technology. In the meantime, if one uses cheap money to bottom fish, one might discover value without liquidity. All revenue is suspect, but small or static firms are at greatest risk. So the market will search for either size or yield – the ability of a firm to survive through cost cuts and pay its debt service and then defend the stock through dividends or buybacks. Large firms by definition have redundancy built into their operations, which can be eliminated to offset distress. Any sector requiring long periods of public financing e.g. biotech, will suffer. Private equity as we knew it is gone. The business of leveraging a mature firm is no longer feasible when that firm potentially has no terminal value. Growth without cash flow will be suspect, and business plans will be exact opposite of the nineties – focused on cash flow growth at the expense of revenue growth. If one is buying an illiquid asset, one should assume the literal meaning of the French word mortgage – a bond unto death, and plan for it to be in one's estate.

In this environment, relying upon recent experience, and by recent I mean anything since the early eighties, in making investments would be hazardous. All rules of thumb in determining value acquired over an entire career can be suspect, because all underlying assumptions of growth and liquidity are now gone. Most current portfolios need triage, else they will face a long period of underperformance from legacy positions. A clear understanding of size risk, business volatility and cyclical, market power and leverage, which drive growth expectations on one hand and the discount rate at which cash flows are priced on the other, is required to be able to evaluate investments. Holding cash, because investment analysis takes 5x the time it used to, is nothing to be ashamed of.

Rational Investing's Cash Flow Engine has undergone a massive upgrade this fall to absorb the impact of this environment. The unusual credit spreads, and the new environment of Treasury rates and their impact on revenue expectations and equity discount rates now permeate through our valuation model. Upcoming maturities of debt impact the model's assumptions about future funding costs; short term debt was always assumed to require forced conversion to long term over a period of time, but now there is the additional penalty of a very steep credit curve, where longer maturities require far higher interest rates than shorter ones, if the market buys the paper at all. Margin projections are no longer positively impacted by growth i.e. economies of scale, implicit in growth oriented business plans, are not assumed unless evidence is in place. We also always assumed higher maintenance CapEx rates than anyone else, and that assumption is playing out at this point, whereby money spent to improve technology merely keeps a firm stable rather than generating growth. Last but not least, our valuation delivery cycle has been made **daily** instead of bi-weekly. The results of this effort will help navigate this market an order of magnitude better than any legacy tools.