Article from:

Risks and Rewards

February 2009 – Issue 53

SOCIETY OF ACTUARIES Investment Section

Risks & Rewards

ISSUE 53 FEBRUARY 2009

TAKING STOCK: IS THE EFFICIENT MARKET HYPOTHESIS IN TROUBLE?

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Needless to say, the last calendar year had many financial events occur that made it quite interesting.

The volatility of the equity markets in 2008 was also remarkable and in many cases hard to understand. Sometimes in a single day equities would fluctuate in a range that would not even occur over a period of a couple weeks under prior market environments, and it would often move wildly without the occurrence of any major news. It was evident in many cases that the market was driven by emotion or fear, but at other times it seemed to be driven by other factors having nothing to do with erratic or emotional behavior. But was the market behaving inefficiently as appeared to be the case in 2008, or was there something truly rational going on, which for most people was hard to see?

There were a number of factors operating last year which we need to explore in order to understand some of the reasons why the markets in 2008 were so volatile, and perhaps even inefficient.

MARKET ISSUES: BIG MONEY AND MAJOR MONEY FLOWS

Unlike other financial eras, we likely now had many more and much bigger funds (particularly hedge funds) with a much larger market punch. How these funds can invest in certain areas without affecting market valuation would really require considerable skill. When those managing such funds decide to enter or exit a particular market, it could be like a herd of elephants trying to go through a subway tunnel crowded with commuters. They also may or could not move into or out of these positions patiently, so we can get very large and dramatic swings in a short period of time. These funds can now affect highly capitalized equity markets, not just smaller niche sectors.

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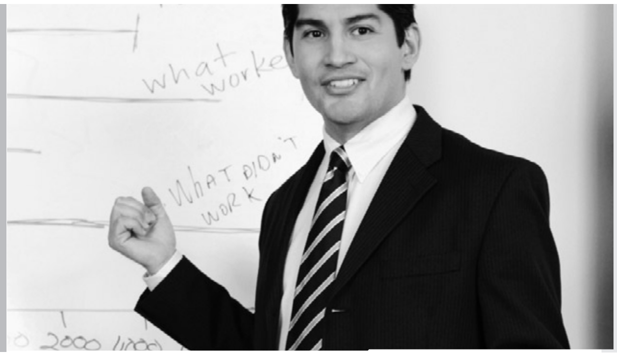

RELATIVELY SMALL MARKETS

Even though it can be claimed that commodities form one of the largest components of the world economy, this does not necessarily translate into large open interest numbers on commodity exchanges. Therefore certain vehicles of investment simply cannot absorb large investment flows. We see this problem even in certain emerging markets. It is not clear whether it should be appropriate to limit an investor from taking on too much of a position, since exiting a strategy or security creates a problem of significant magnitude in the opposite direction (in other words, we like the upside created when too much money enters a small market, but not when the opposite happens). When an emerging nation needs capital, it still might prefer the necessary evil of inflated market valuations in the near term in order to get that capital, and worry about any future decline only when it happens (hoping that it will never occur in any violent fashion).

CAPITALIZATION

One of the factors that has escaped most investors' attention (including my own) is the impact of market capitalization. Somehow many perceived the market capitalization of a firm to be somewhat resilient when the firm at the same time would sustain financial (earnings) losses. But as any particular company deteriorated in value in 2008 and thus needed to raise more capital, more dilution of shareholders would take place if new securities were issued, and the price of the stock would thereby decline further. It would become somewhat of a spiral. Also market events would get to the point that the company would now have to sell new stock (or issue fixed income investments) at a severe discount, since the financial environment for new security issuance became so negative. Ironically, even if the company's underlying asset portfolio was not so bad in quality or value (at least theoretically), the falling market capitalization of the company decreased the spread between its assets and liabilities, resulting in even less net capitalization (shareholder value) as a buffer to absorb losses. The company was now also an easier target to be pummeled down in market value, since it was now so much smaller. Market capitalization was not really contemplated by many as a major issue in an industry's survival, but most investors instead had primarily focused on revenue and earnings.

LOW YIELDS AND LEVERAGE

As bond yields have decreased around the world in recent decades, it certainly put pressure on the investment industry to find new ways to provide higher investment returns. Understanding that investments do trend up over time and that a portfolio of investments should not go to zero, then why should an investor have $1 invested for each $1 of investment exposure? One should thus just borrow at a low rate and invest at a higher rate (leverage the portfolio), with the return increment (spread) adding to investment performance. It does make sense, assuming the investment does not go down far enough such that the leverage would wipe out the entire net value of the portfolio. But for most investors there was a breaking point that was never expected to be reached—where the losses become so large that it could lead to panic. Investors do worry when they see the real possibility that their investments can now reach zero, even though the market decline has not reached 100 percent.

POSITION CONCENTRATION

Unfortunately it appears that various funds had taken very large long or short positions in various commodities and even on the short side of equities. When restrictions were being placed by regulators or governments on position concentration in various commodities or on naked short-selling, there did appear to be a halt in certain market moves, even if at times it was only temporary. There were some studies of position holdings in various investments, and in some cases it was certainly found to be excessive (e.g., supposedly in at least one case there were more

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shorts in a stock than its entire market capitalization, in another case several banks sold the equivalent of over 20 percent of a commodity's annual level of production). There would be some incentive for a fund to buy or sell an equity or commodity with the hopes of selling or buying that investment back at a better price (especially as outside technical traders would base their decisions on price movements and get caught on the wrong side, and as buy and sell stops could be triggered unexpectedly). It is not clear how severe this problem was last year, but I would argue that this is definitely an issue. It hurts the ability of an average investor to be diversified and base investment decisions on fundamentals, when another investor could establish very large positions and thus control or influence the market direction for a period of time. In such instances, a small investor can be crushed even if the fundamentals were properly analyzed, since the investor would be swamped by trading volume and price movements in the counter direction. Of course that is part of the risk of investing, but not when the market may be prone to what some may consider short-term manipulation by a dominant player.

STRATEGIC AND FINANCIAL ISSUES: "SOMETIMES" BAD ACCOUNTING

Whether current accounting practices are inappropriate or inadequate is a debate for another forum. However, the accounting practices as applied to many companies could not withstand a serious stress test as occurred last year, as a number of mortgage and other assets started to fall dramatically in value, and did so quickly. Eventually it was getting to the point where balance sheets for any financial institution could not be trusted. Earnings, assets and liabilities were being seriously questioned. No one was sure as to how much of what had been reported in financial statements was real, and how much was not reported properly or not even shown. Accounting rules enabled certain investments and liabilities to stay off balance sheet, only now to raise uncertainty about the future viability of various companies. As we understand regarding a risk premium on any investment, this premium does in part reflect uncertainty, and this uncertainty now unfortunately took a big leap. One really needs to question whether the accounting treatment is still really doing its job when it allows a variety of items to be off balance sheet (when there are a lot of these items) and when it is anticipating all sorts of offsets to hold under periods of stress. Of course the evolution of derivatives and the trading of risk has become commonplace in the last 20 years, but it reflects a view that only a limited number of defaults are expected to take place, but not the scenario when the entire financial system is sustaining substantial pressure at the same time.

MARKET VALUATION

In part tied to the previous point, a company can grow in value as it marks-to-market, if its underlying asset pool grows in value. A rising tide raises all boats. But when the tide sinks as has occurred in 2008, then like a domino effect, all the companies tend to impact one another, and hence we even see a correlation between investments getting closer to one. Diversification no longer works very well. There was probably little concern in the final implementation that mark-to-market exaggerates a company's stress in troubled times, and boosts its fortunes in good times. The mark-to-market impact can make all companies much more volatile during economic and market extremes. This can also make companies more able to buy other companies in good times due to the larger market capitalization, and be forced to put on a fire sale when times are bad due to severely falling prices. Mark-to-market has the tendency to make all organizations more correlated to one another, even if indirectly. It makes more sense in times of stability.

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DOING THE SAME THING

When a trend continues for a prolonged period of time, whether it be in a real estate, resources or a gold boom, eventually most investors and particularly investment funds, will start to do the same thing. The peer pressure becomes enormous. When a number of firms are making money using a certain strategy, it takes an incredible amount of stamina and foresight to do something different. Investments in real estate have been successful for over 10 years. We note, however, that Goldman Sachs was acclaimed last year for largely staying out of (and even shorting) the toxic investments that have plagued most other firms and banks. In many ways this is a feat that should be commended when it is done successfully, in doing something different from the rest. But how can so many buy the same product and have the same expectations? There is peer pressure to participate in the same activities within the financial industry and also in buying the same investment products. Investors often look to see what others are doing and feel that they are either missing out on an opportunity or are not keeping up with the latest innovations, if they are not involved (I recall at least one case, for example, where a board member wanted their organization to invest in hedge funds without knowing what they were, simply because others were doing it). There is also strength in numbers, because if you do what everyone else is doing and it fails, you can blame the entire industry and not yourself. But if you as an individual or a company do something different and then fail, then you alone become answerable for the bad outcome. Not too many have the fortitude or the psyche to be contrarian.

USING THE SAME APPROACHES

We have likely heard that many hedge funds do not want to provide transparency in terms of their trades and holdings, in order to safeguard their trade secrets. They want to keep their strategies and approaches proprietary. I have often wondered what these approaches could possibly be, since I rarely come across any form of investment or theory that proves to have promise, either in investment literature or offered by software vendors. When I had the opportunity to question investment managers on various techniques, I often found nothing to be particularly novel. It finally became apparent last year that many of these funds were actually using the same or similar models, software and techniques, and these were driving them to do the same or similar things. If these funds had been transparent on their activities, it would simply reveal to the public that nothing special was often going on, but rather they were all mostly thinking alike in chasing opportunities. So the extra fees being charged may not have been truly justified, but it was paying for a hope or a product design, not a special skill.

HEDGING THE SAME THING

Also in connection to the prior point, one of the problematic assumptions was that we can all invest and speculate in the same vehicle, since we can hedge it away to another party. Little consideration was given to the fact that others are also hedging the same investment nor were there reasons to care, since the markets were considered deep with sufficient capital supporting the opposite end of the transaction, which turned out not to be the case. This certainly raises concerns that we may need to monitor certain business or financial activities on a national or global basis going forward, as we may not be as diversified as we think, as the world moves increasingly toward higher globalization. Many firms were thinking in compartments without worrying or caring about their competition or counterparties. It was probably believed that market forces would correct any excesses somewhat painlessly and such an industry correction would not be so severe.

HEDGING WITH THE SAME COMPANY

Even though diversification has been a mantra and byword for decades, ironically financial institutions were hedging with only a few select institutions, since they were the only players in town. When we consider life insurance, we know that only a certain number of people should die each year (barring a cataclysmic event). There seemed to be a belief that only a certain number of mortgage defaults would take place and not all at the same time, just like we think in life insurance. There is an implicit assumption in all this—just like we all do not want to die or issue insurance to a terminally ill policyholder, likewise it was believed that we do not want to issue bad or poorly underwritten mortgages to everyone. We have little control over the former case, but in the latter, even though we could control it, we apparently did not. Securitization was a neat way to package liabilities for someone else to buy, and it was expected that somewhere along the way a buyer beware philosophy would take hold and proper due diligence would be exercised. Former Fed Chairman Alan Greenspan admitted that in his influence on past monetary policy, he thought there would be adequate incentives in place to discourage certain risky behavior from occurring, which apparently did not properly operate in practice.

FINANCIAL RECYCLING

One of the unsettling things that occurred in 2008 was the endless spiral down of investment performance. Companies with portfolios holding such bad investments (call them A companies) had their market values impacted by fears concerning further write-downs. But no one could really be sure of the magnitude of the write-downs, and market value declines were also spurred by the fear that many of these investments could still stay off balance sheet (so we would never know what they were or their size). But this entire mood generated by this fear of the unknown then impacted the entire stock market, which then also affected the market capitalizations of those most exposed to large sub-prime and related holdings, particularly the hedgers (call them B companies). This led to further deterioration of the B companies' market values as well. Then their market value woes filtered back to the A companies. The interconnectedness of companies was not really at the forefront of financial thinking, even though many understood this possibility in years past.

ANOMALIES: CONTAGION

Probably one of the biggest surprises for everyone is the extent that this crisis has spread to other countries, market sectors and even currencies. Also past correlation studies have been somewhat of an anomaly, as there is no true way to diversify in such an environment. We certainly need to revisit this subject of correlation as it simply has been used too liberally to promote diversification, which does not exist in all market environments. We should see many interesting papers come out in the years to come, addressing this matter of contagion. Previous stock market crashes also exhibited this high correlation phenomenon, even though they seemed to be generated more by a behavioral phenomena rather than a rational one.

ONCE IN A LIFETIME EVENT

We may need to reassess how to deal with these once in a lifetime events. These seem to occur more than once in a lifetime as well. The sometimes bad accounting referenced above is an important case in point. Current accounting practices could be appropriate in many cases, but not all. We probably cannot establish accounting practices that are solid in a bad environment for they could become just too conservative in normal periods (a lack of flexibility or over-conservatism can stifle economic activity). The focus on mark-to-market may have had a good principle behind it by suggesting we look at changing market environments, and perhaps as we have in other industries, including insurance, consider setting aside an appropriate reserve amount to account for those adverse contingencies that may at times arise.

STRESS TESTING OR TESTING YOUR STRESS

Stress testing a financial environment is much different than living through it. How to deal with a financial crisis is still not completely understood other than to ride it out, or to bail out. Meanwhile it is always easy to become complacent after a number of years of good times. Behavioral finance has made a number of useful observations regarding human behavior in a number of environments, but it is still unclear as to how to incorporate it into financial thinking, such that booms and busts do not arise or do not cause so much damage when they happen.

LIQUIDITY

One of the areas that certainly now is an issue when considering the efficient market hypothesis or capital market theory, is the ability to enter or exit a market, or buy or sell as many units

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> "WE WILL CERTAINLY NOW ENTER A DEBATE OVER THE NEXT SEVERAL YEARS AS TO WHETHER THE FINANCIAL MARKETS CAN POLICE THEMSELVES."

as desired, without affecting market value. Due to the rather stable market conditions of the past several years, many investors and particularly funds, wound together an intricate web involving a wide array of investments and specialty strategies, hedges, shorts, longs, and adding to it all, a layer of leverage. But then when cash positions were getting strained and even redemptions were taking place, positions had to be unwound. Ironically some of this unwinding did not even make sense, but they were required anyway in order to raise cash and answer margin calls. This, in part, led to incredible strength in the U.S. dollar, when earlier in the year it was getting beaten down on currency exchanges. Liquidity is still something that is not well understood, but we probably have seen more of its impact than at most other times in history, and its importance in financial markets. There will be quite a number of lessons learned about liquidity in this financial crisis, as we see attempts to increase liquidity by the central banks to have limited impact for prolonged periods.

GOVERNMENT INTERVENTION

We will certainly now enter a debate over the next several years as to whether the financial markets can police themselves. The response right now is "no," even though some will prefer to blame bad central bank policy or government factors which have fostered and encouraged wrong behavior. Some may try to blame bad incentive programs for chief financial executives, where they were encouraged to seek their own profit motives in deference to that of their organization, somehow thinking that the two should still intertwine or intersect at a certain point.

The United States in particular has been considered an advocate of the free market and the invisible hand, but now the merits of this philosophy are unclear. Also, as governments have taken a large stake in various financial institutions, it will be interesting to see how government philosophy will now play a role in investment markets, as they work through the financial institutions they now own, by being major shareholders.

SUMMARY

We can probably say that markets are efficient, but this is only true under limited conditions. We have a long way to go before we can ensure markets are stable under all circumstances. This financial crisis will pass, but we should expect another one in the future (probably a long time from now—perhaps we should expect one every 20 years or so). Our investment markets are designed to entertain supply and demand, but this in part also depends on money flows, central bank and fiscal activity (government spending), economic expectations, limited wars, and investment fads and investment product innovation. Also, it may make some of us feel uncomfortable to reflect emotion and behavior into our investment decisions, but unfortunately it is not something that will go away. In all cases there are winners and losers and market imperfections will continue to exist. Some of the points expressed above perhaps cannot be solved without sacrificing a smoothly functioning financial system that works under most environments. Maybe the pain of going through some market dislocations every several decades could be a small price to pay for the benefits we receive under the much longer periods of financial stability.

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