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Taking Stock: No Pain No Gain, or What They Did Not Tell You about Goldilocks

by Nino Boezio

If you haven't heard it already, it's time that someone finally told you the complete story about *Goldilocks and the Three Bear Markets.*

Goldilocks is a soup connoisseur and loves to try various soups. The amount and variety of soups (equities) Goldilocks (today's equity investors) eats depends on how the temperature (the economy) of the soup is—too hot, too cold, or just right. The soups overall were not much to her liking in the early 1990s because the temperature was "too cold" (recession), "too hot" in 1994 (economic overheating), but "just right" in the last few years (hence the name Goldilocks economy).

While is search for soups, Goldilocks happened to enter into the lair of the bears (overvaluation) but was not too concerned about where she arrived. She had never seen bears before and only heard rumors of past rampages in foregone times. She was told that bears these days are kept away in zoos (the new era), and if one ever were to escape, the zookeepers (Alan Greenspan, the Fed, the Bundesbank, the International Monetary Fund etc.) would quickly go after the bear and put it back into captivity. Hence there was nothing to fear. She did not know that there were still bears running free.

The bears were not at home (lost all credibility) when Goldilocks finally showed up. Goldilocks, having tried the various soups, liked the ones that in her opinion were not too hot or too cold, and gorged herself. Needless to say, all that eating made her sleepy and she did not hear the rumblings outside (Asia, Russia, South America), sounds made by the returning bears. She went to sleep.

Since Goldilocks had never seen live bears, she did not know what to fear. When Goldilocks later awoke and saw the first bear, she did not pay any attention to it. She was still hungry and thus went back to eating soup, for now some of the hot ones cooled off (a buying opportunity), not realizing that the circumstances had now changed (Phase I of a bear market—*denial*). When the second bear appears (Phase II of a bear market—*realization*), she may realize that eating more soup in the presence of the bears will put her in danger and her trepidation may result in her hunger being replaced by hesitation and concern. She will stop eating and the hot soups (equities) will get even cooler (cheaper). When the third bear appears (Phase III of a bear market— *capitulation*), she may finally acknowledge her plight and run for cover (and will even start vomiting what she has already eaten), and all the soups will become freezingly cold. In this latter phase, she should probably realize that if the bears have not already done her harm, then they probably will not do so and she should probably heat up the soups and start eating once again. However, by then she probably has run out and missed out on the soupfest (Phase I of a bull market) that could ultimately ensue if she had only stuck around longer. Or perhaps the bears' stove is broken (a depression) and she will not get a chance to eat more soup for a very long time.

> *"The downfall of the Soviet Union in 1989 leading to only one superpower, peace in the Middle East, positive demographics, and global capitalism may have lulled Joe and Lucy Public into believing that nothing can go wrong."*

No Pain, No Gain: Understanding Goldilocks

Humanity has been searching for the Holy Grail for thousands of years—in modern-day terminology this is called the "free lunch" (or should we call it the "free soup").

There has always been a quest by the average person to find the ultimate happiness in personal life, the perfect balance between recreation and work (for some that would mean no work), and for sufficient wealth so that one may guide his own destiny. For the latter, wealth generation became the equivalent to investing as much as one could in the stock market.

The stock market, as it became in the 1920s (Japan in the 1980s), was increasingly seen as the "no pain always gain" approach to increase one's financial health. It would grant a person ultimate financial independence ("deliverance from serfdom") and allow one to retire early to a life of luxury. The downfall of the Soviet Union in 1989 leading to only one superpower, peace in the Middle East, positive demographics, and global capitalism may have lulled Joe and Lucy Public into believing that nothing can go wrong. Initially it was a good bet, until too many began to believe it and drove valuations skyward all over the world.

No one in the world community wants to suffer pain, even though their behavior may at times create pain for others and ultimately themselves. When the pain comes, there is often a mad scramble to find a "cure" rather than to accept the hurt, learn from it, take the lumps, and move on. The cure in the economic world has become known as the International Monetary Fund, a strong U.S. economy which potentially can suck up the excess supply of goods, the actions of this or that politician or leader, emerging Western Europe, or sometimes just simply the use of money from one group to pay for the misgivings or "irrational exuberance" of another group. As was pointed out in my article "It's Different This Time" in the March 1998 issue of *Risks and Rewards,* traditional solutions may not work this time, and the problems are substantially different than they initially appear on the surface. It is now said that about 50% of the global economy is in or on the verge of entering a recession because of falling world demand from the international financial crisis.

It is sad to see a person's hopes dashed or rattled as a result of any

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Review of Financial Journals
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Summer 1998. The authors, Moshe Arye Milevsky, and Steven E. Posner, demonstrate a technique that approximates the sum of the lognormals by an inverted gamma distribution. The results show that the use of the inverted gamma produces very reasonable valuations for Asian and basket options.

Actuaries interested in learning more about low-discrepancy sequences as a method of reducing the number of simulations needed to accurately price financial instruments might find value in "Low-Discrepancy Sequences: Monte Carlo Simulation of Option Prices" by Silvio Galanti and Alan Jung in the Fall 1997 *Journal of Derivatives*. The authors explain the concept of low-discrepancy sequences and describe some of the popular algorithms in the context of valuing stock options, as well as potential problems with the technique.

Portfolio Management

An interesting view of fixed-income portfolio risk and value-added return is found in "Bond Managers Need to Take More Risk" by Ronald N. Kahn in the Spring 1998 *Journal of Portfolio Management*. Optimal value added is described as a function of a manager's ratio of active return-to-risk as well as an investor's risk tolerance. The article considers different types of fixed-income strategies and seeks to improve the odds of success by taking more of "the right kind of risk." The article discusses how some market calls, such as interest rate bets, are difficult to apply successfully on a frequent basis.

Interesting Web Pages

In this section, we thought we might try highlighting a web page oriented toward risk management. A site that would be of interest to actuaries interested in financial risk management is the Contingency Analysis web site at www.contingencyanalysis.com. The site is an excellent source for information and papers on risk analysis and has a helpful glossary of terms, a list of publications on risk management and links to other web pages on risk management.

J.P. Morgan, purveyors of the RiskMetrics®, CreditMetrics® and related software products have published reference material on its value-at-risk models on its web page at www.jpmorgan.com. RiskMetrics® is a portfolio value-at-risk model while CreditMetrics® is a credit-risk based VAR model for bond portfolios. J.P. Morgan started an on line magazine, the *CreditMetrics® Monitor*, which can be downloaded from www.jpmorgan.com/RiskManagement/CreditMetrics/CreditMetrics.htm. It includes an article on credit derivatives, a bank loan recovery study, and an article entitled "Uses and Abuses of Bond Default Rates" by Stephen Kealhofer, Sherry Kwok and Wenlong Weng, that analyzes the statistical properties of default rates based on discrete bond rating categories (AAA, AA, and so on) and compares them to a continuous scale developed by the authors' company.

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financial downturn as in one's personal portfolio. It takes guts to follow the philosophy of investing for the long-term when prices keep falling. Fundamentalists contend that securities' prices are becoming "quite attractive" while market technicians warn that stock markets (despite short-term blips) are headed much lower, and the bear market will last until at least the middle of 1999. Either way, we must remember that the art of investing is as much psychological as it is a financial decision. And there is no free lunch.

It takes pain to do the research, there will always be mistakes, and it involves patience. But there is also is no guarantee that certain results will always be achieved, even over the long-term. That is why many are stimulated by working in the investment industry or studying the financial markets. It is a puzzle that has too many pieces, one never knows if all the pieces are on the table, and even so, one may only find only a few that fit together.

The End Of Globalization?

It is peculiar that the 1920s was characterized by inflating stock markets, deflation, and globalization. When financial markets collapsed, globalization was replaced by protectionism and nationalism. Deflation was already being seen in our economic cycle in 1996 (a year before the Asian crisis) as commodity prices started a downtrend. And despite strong U.S. growth, inflation measures continued to remain low, which bewildered officials at the Federal Reserve. Perhaps like the 1920s, we were already in a situation before the problems surfaced in Asia, where gains from production were outstripping increases in demand. When deflation occurs, corporate earnings and profits become squeezed, leading to less investment and expansion down the road.

Americans are probably willing to tolerate greater imports as long as the U.S. economy remains strong. But when the U.S. economy slows, we could be hearing calls for import "restrictions" and protection for U.S. workers from foreign competition and trade, as we may recall occurred in the late 1980s. If history repeats itself, then we will all be in for a very rough ride. And we may find that capitalism, which has been fought for by Western powers so vehemently since World War II, will not be the economic strategy of choice for many important countries of the world because they have now tried it and, for them, it does not work.

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