Market Monitor

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Risk versus Uncertainty in the Middle East

The violence in the Middle East continued this past week. While most of the world embraces globalization and integration with the modern world economy, this region – except for oil countries and some of the smaller countries such as Dubai and Qatar – doesn't participate in the world economy. With the exception of Israel, the Middle East doesn't significantly affect world trade in goods and services other than energy.

Because of oil, the Middle East matters a great deal in the pricing of financial assets, especially when viewed through the lenses of risk and uncertainty. Our themes for today are these:

- How risk and uncertainty affect the pricing of financial assets
- The important distinction between risk and uncertainty

The Middle East's impact on financial markets comes from the manner in which its violent politics affect the price of oil, the global price of global investment risks and the discounted price of global financial assets generally. It is an example of risk and uncertainty.

In the financial world, **risk** refers to a measurable probability that some good or bad thing will happen. It means there may be an expected outcome, with other higher and lower possible returns associated with it. Each of these possible returns has a probability associated with it and the highest probability is associated with the expected, or mean, return. For example, risk may be associated with oil. In a relatively stable market, the short and long-term supply and demand for oil or the price of oil is debatable. But it is *possible* to estimate those answers in the absence of significant political or economic shocks to the system.

In contrast, **uncertainty** has to do with events for which it is impossible to get meaningful estimates of the chances that something will happen. In other words, we can't get an expected outcome with a distribution of other possible outcomes and probabilities because the answer will be unclear. An example of risk might be the expected price of oil in the absence of shocks. An example of uncertainty might be the impact on the price of oil given the probability of shocks. In recent weeks, this would include the probability that Israel were to invade Lebanon this year. We know that the price would probably not decline, but we can't put a probability on the chances of such a war.

Of course, risks are not invariant. New risk signals are transmitted into security prices in multiple ways. Consider that information needed for smooth market functioning, such as consumer confidence data, home sales information or quarterly earnings statements, is released on a regular schedule announced well in advance. In an increasingly integrated and connected world, information is released in real time and can quickly affect many markets. For example, academic researchers have found that different countries' stock markets increasingly move together during periods of market declines, as was demonstrated during the bear market which followed the collapse of the late 1990's bubble.

Unexpected events may affect national or global markets but it is hard to know how much. Unexpected events such as wars may cause investors to rethink their views regarding the appropriate price to pay for certain securities. They may also cause investors to rethink their views regarding the global price of portfolio risks. Shocks to markets caused by unexpected events may be large or small and may be transitory or permanent in their effects on prices.

In times of escalated international tensions – actual or possible political shocks -- a typical response by market participants is known as a “flight to quality” through a repricing of risk. This is when investors sell relatively riskier assets and buy assets that pay off in bad as well as good times, such as U.S. treasury bills and treasury bonds. In other words, the returns of these safer assets are more stable if less exciting. Naturally the flight to quality increases the price of the safer assets and depresses the price of the riskier assets.

We experienced flight to quality and repricing of risk in the second quarter of 2006 due to uncertainty in international markets. During the second quarter of this year every stock market in the 26 which make up the MSCI Emerging Markets Index experienced a decline. Emerging market equities are a good example of a relatively riskier asset, at least in comparison to U.S. treasuries. Because emerging market equities are likely to perform poorly during bad times – precisely the times when an investor would most like a good payoff – an investor requires a larger return premium to compensate for the extra risk associated with holding these securities. If we look at price histories of emerging market equities our intuition would be confirmed: they tend to perform much better than treasuries or even U.S. domestic equities during some time periods and much worse than treasuries and domestic equities during other time periods. Overall, emerging market equities tend to be much more volatile than treasuries.

The key point is that risk is associated with known properties of distributions. Risk can be quantified. Measures of risk may not necessarily be invariant over time, but they can be measured.

Uncertainty is different. Uncertainty does not have a distribution. There is no standard deviation for the effect of uncertainty on the price of a security.

So when you’re thinking about the Middle East and financial markets, keep in mind the distinction between risk and uncertainty.

Brett Hammond and Leo Kamp are available to comment on economic data. If you wish to speak with them, please contact Stephanie Cohen Glass, Media Relations, 212-916-4993 or email scohenglass@tiaa-cref.org.