



Market Guidance on Montpelier Re

Geoff Considine, Ph.D.
April 7, 2006

I ran across two articles today for Montpelier Re Holdings (MRH) that got my attention. The first, on Briefing.com, noted that Deutsche Securities has initiated coverage of MRH. I also noted that Lehman Brothers and JP Morgan have initiated coverage on MRH in 2006. The second article was from *The Motley Fool* and discussed the enormous decline that MRH underwent in 2005 due to an active hurricane season—and largely due to Katrina:

<http://www.fool.com/news/commentary/2006/commentary06033002.htm>

The article is titled *A Broken Stock Full of Promises*. With a title like that, I had to take a look. The basic story is pretty straightforward. MRH has been public since late 2002 and was chugging along and generating reasonable appreciation up until the first quarter of 2005. From that time on, the stock plummeted from more than \$40 down to the \$17 or so where it currently trades. The Motley Fool article is all about the author's previous recommendation for this stock when it was trading at \$34. The author's basic position is the following:

“Being wrong is the most sobering aspect of investing. Even the best investors get dunked by unanticipated events...”

Certainly no one really knew that 2005 would be such an active hurricane season, but is this really a reasonable conclusion to draw from the enormous declines for MRH? An active hurricane season is the kind of thing that can hit a property and casualty firm hard, and Katrina was quite a shock. Cramer has been quoted, in support of the idea that this stock is oversold, as saying that "a once-in-a-hundred-years storm shouldn't happen twice in a hundred years." This discussion really bears on the level of risk and uncertainty associated with MRH's business. How risky are the business prospects for MRH? Were investors really **wrong** to get in?

Fortunately, the market as a whole registers its opinion of the risk associated with MRH in the form of volatility in the stock. So let's take a look at what the market as a whole thought of the risk associated with MRH prior to the hurricane season of 2005.

Quantext Portfolio Planner (QPP) is a Monte Carlo simulation model that calculates forward-looking volatility and expected returns for individual stocks (and for ETF's and mutual funds, for that matter). QPP takes in historical data over a specified historical period and runs a Monte Carlo simulation for both individual positions and for the total portfolio. We often test QPP in valuing options against market quotes for the options to make sure that our projections are consistent with the market pricing of risk. To test how risky the market might have thought MRH to be, we have taken all of the market history for MRH from when it went public (11/1/2002) until January 31, 2005, right before MRH started to sink so dramatically. **We have allowed QPP to generate an outlook using data available only up until Jan 31, 2005**, so this is the view that was available to an investor prior to its decline. This outlook uses trailing historical prices only. The trailing volatility in a stock (calculated from prices) is a measure of the uncertainty in a stock's

future prospects. The outlook generated by QPP represents a measure of the market's estimate of the risk associated with MRH at the end of January of 2005. MRH was trading at \$37.45 at the end of January of 2005 and would subsequently sink to \$19.30 by the end of January 2006, one year later. The really interesting question is the degree to which the historical volatility in MRH could be used to predict this level of loss in 2005.

Using QPP's projections (calculated with data available up until the end of January 2005), could we project the possibility of a decline down to \$19.30 in one year? The table below shows the projected one year percentiles for a gain or loss on one share of MRH purchased at \$37.45 at the end of January 2005:

Percentile	Portfolio Value	Gain / Loss	Return
1%	\$18	-\$19	-51%
5%	\$24	-\$13	-35%
10%	\$28	-\$9	-24%
15%	\$31	-\$6	-16%
20%	\$34	-\$4	-10%
25%	\$35	-\$2	-5%
30%	\$37	\$0	0%
35%	\$39	\$2	5%
40%	\$41	\$3	8%
45%	\$42	\$5	12%
50%	\$43	\$6	16%
55%	\$45	\$7	20%
60%	\$46	\$9	23%
65%	\$48	\$10	27%
70%	\$49	\$12	32%
75%	\$51	\$13	36%
80%	\$53	\$15	40%
85%	\$55	\$17	46%
90%	\$57	\$20	53%
95%	\$62	\$25	66%
99%	\$69	\$32	85%

One Year Projections for the Price of MRH from Jan 31, 2005

Note that the projection is quite bullish on MRH, predicting a median return of 16%. On the downside, however, the Monte Carlo projection suggests that there is a 5% chance that the price will drop to \$24 or below in a single year. The fact that the 1% percentile is a price of \$18 means that starting from the current input price (\$37.45), there is a 1% chance of a drop down to \$18 or below. The actual price observed for MRH one year after the projection was \$19.30, the closing price at the end of January 06. The decline in MRH that occurred was somewhere between the 1% and 5% percentiles—improbable but very possible. I will note in passing that the 1% and 5% percentiles are commonly used in professional risk management applications.

So what does this tell us? If you had looked at the volatility in MRH prior to the large declines in 2005, using historical volatility in the stock, you would have been able to estimate that the large drop in MRH was quite possible, albeit quite unlikely. ***The price history for the stock reflected the fact that the market knew that major declines were possible.*** The market, while not perfect, does a pretty good job of showing uncertainty and risk in a company's prospects via volatility in the stock price. The market appears to have been pretty smart in this case. What the market was telling you at the end of January of 2005 was simply that if something bad happened to this company (say a one-in-50 event), the market would sell it off down to these kinds of levels—and this is just what occurred.

What all of this means is that the analyst from ***The Motley Fool*** has reached the incorrect conclusion. Investors who got in at \$40 should have known that they were taking a calculated risk. If they were expecting a sure thing or simply thought that this level of decline was impossible, then they certainly got a shock—but this simply means that their due diligence in investing in this firm was bad. If the analyst at ***The Motley Fool*** feels that he (and other investors) were wrong (see the quote) because of the way that events unfolded, then he simply was not accounting for risk—so he may have been wrong because he believed the stock was sure thing. Investors bear risk to have the potential for higher returns. If you experience that risk in concrete terms via a price decline, this does not mean that you were wrong—just that you are holding the risk that you are being rewarded to bear. The market provided solid information on the risk level via historical volatility in this stock. The bottom line here is that this stock is not 'broken' because it got nailed by a series of events that drove the price down. The market was signaling that this level of volatility was quite possible.

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