



December 23, 2022

## Contact Information

Dr. Samih Antoine Azar

[samih.azar@haigazian.edu.lb](mailto:samih.azar@haigazian.edu.lb)

### *By Invitation:*

*Dr Azar is Professor of economics and finance at Haigazian University in Beirut, Lebanon. The views expressed in this are his and do not reflect the views of BLOIMVEST Bank.*

The BLOM and SOLIDERE stock prices are reported on the evening MTV news bulletin every working day. The market prices are highly popular, visible, transparent, and informative. In sum, the two stocks reflect business confidence not only in two fundamental sectors of the Lebanese economy, the banking sector and the real estate sector, but also they permeate and reflect the business confidence in the whole country. The purpose of the present note is to answer four essential questions that every investor may ask. Are the two stocks too risky? Are the two stocks fairly priced? Is the stock market in equilibrium? And should the two stocks be recommended for purchase? Every question will be answered in sequence. The sample studied consists of monthly data from December 2007 till June 2022. All estimates and calculations appearing below can be requested from the author on request.

Are the two stocks too risky? There are two ways to answer this question. First, a crude measure of risk is the standard deviation of returns. Assuming that monthly returns are independent of each other, the annualized standard deviation becomes equal to the monthly standard deviation multiplied by the square root of 12. This indicator is around an annual 30% for BLOM, and 29% for SOLIDERE. As a comparison, the same indicator is around 20% for the US S&P 500 stock market index return, which is a well-diversified portfolio, and is around 27% for the average stock in the US Dow Jones Industrial Average (DJIA), made out of thirty blue-chip stocks. Based on this yardstick the two Lebanese stocks have a risk commensurate with the 30 US Dow very profitable stocks, and, therefore, fare well, and thus one can say that they are not too risky -- quite to the contrary!.

A second method to assess riskiness is to find the degree of risk that investors accept to hold by purchasing these two stocks. This is measured by what professionals in the field call the Coefficient of Relative Risk Aversion (CRRA). An estimate of it is obtained by searching for the CRRA that equates exactly the expected utility of the risky asset to the expected utility of the risk-free return. The utility function is assumed to be iso-elastic, a functional form that produces a constant CRRA. This coefficient is exactly 1 for BLOM, and is between 1.2 and 1.8 for SOLIDERE, depending on whether end-of-period or average monthly data are utilized. A high CRRA is indicative of an asset that is perceived by

investors as having high riskiness. Log utility has a CRRA of +1. Acceptable and normal CRRAs are positive and either below 10 or more strictly below 5. Based on this method investors seem not to consider the two stocks as very risky. In other terms they have indeed below average risk.

Are the two stocks fairly priced? To answer this question one needs to compare actual return outcomes with theoretical, expected, or fundamental outcomes. One usual and common outcome indicator is the average risk premium of each stock. The average risk premium is calculated as the difference between the stock' s average return and the return of the average risk-free asset. The stock' s average return is the sum of the dividend yield to the capital gains yield. Assuming that the dividend yield is equal to the short run interest rate, which is a mild assumption, the analysis finds the following. For BLOM the actual premium is -2.22% (minus 2.22%!) for the sample period. The expected premium is based on the Arrow-Pratt coefficient of risk aversion, which is proportional to the CRRA and to the variance of returns. If the CRRA is  $\gamma$ , and the standard deviation is  $\sigma$ , then the theoretical risk premium  $\pi$  totals

$$\pi = 0.5 * \gamma * \sigma^2$$

This coefficient is around 4.3% for BLOM. This translates to the fact that while investors were expecting a positive and relative return of 4.3% they got quite the opposite a negative actual return. As a conclusion the BLOM stock is not fairly priced. If one applies the same argument to SOLIDERE the actual premium is close to 6.6% and the theoretical premium is 7.2%. Given the inherent uncertainty in measurement this shows that SOLIDERE was close to be fairly priced.

Are the stocks in equilibrium? The answer to this question depends on the answer to the previous one. If actual and theoretical premiums are equal this denotes an equilibrium in the financial market. If there are not, then there is disequilibrium, and markets are expected to adjust. Obviously the two were not equal for BLOM during the sample period, while the same cannot be said for SOLIDERE. Hence one can conclude that the BLOM stock ought to be reappraised, and is heavily out of equilibrium, while the SOLIDERE stock can be considered to be in equilibrium.

What is the recommendation to the investor? It seems that SOLIDERE is close to be well arbitrated. Therefore there are very small profitable opportunities left from trading on SOLIDERE. However, BLOM is a different story. It seems that the BLOM stock is badly undervalued, and hence there are probably significant and profitable opportunities from trading the BLOM stock. In the future the BLOM stock is expected to rebound and drive the actual premium close to the theoretical one. Thus today' s recommendation is to buy the BLOM stock, and hope and count for a reversal of events and trend.

**For your Queries:**

**BLOMINVEST BANK** s.a.l.

Research Department

Bab Idriss, Weygand Str.

POBOX 11-1540 Riad El Soloh

Beirut 1107 2080 Lebanon

***Disclaimer***

*This report is published for information purposes only. The information herein has been compiled from, or based upon sources we believe to be reliable, but we do not guarantee or accept responsibility for its completeness or accuracy. This document should not be construed as a solicitation to take part in any investment, or as constituting any representation or warranty on our part. The consequences of any action taken on the basis of information contained herein are solely the responsibility of the recipient.*