

P-C stocks can improve p e ratios.(property-casualty insurance industry, price earnings)(Financial & Investment Review)

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Timothy Freestone and William Lui

[citation details](#)

Ever wonder why property-casualty stocks sell at a lower price/earnings ratio than industrials?

In fact, the discount is significant. On average, p-c stocks trade at about one-third less of an earnings multiple than do industrial stocks.

We recently asked a number of insurance equity analysts if they could explain this disparity. Their responses ranged from the p-c industry's "esoteric accounting principles" to a general lack of understanding by investors of how the industry operates.

Both of these observations have validity, but did little to satisfy our curiosity of just how investors would decide to discount a p-c stock using such spongy criteria--what yardstick would they use?

Little did we realize when we began our investigation that the revelation of this yardstick would show not only how and why investors discount p-c stocks, but also provide a tool to p-c company management that will significantly improve their financial performance and market value.

Our query to the analysts had been sparked by an observation we made while attempting to measure the performance of p-c stocks. This observation took us by surprise because financial theory specifically predicts that the phenomenon we were observing will not happen in an efficient market.

But it was happening and it was destroying the performance of p-c stocks relative to that of industrials. So investors were either being irrational or we had uncovered a significant market inefficiency as it relates to p-c stocks.

The phenomenon we were observing was the market's assessment of a penalty against p-c companies for their residual risk.

All firms have residual risk. The drivers of residual risk are the unexpected events that occur to companies because of their unique characteristics--events such as management (good and bad), location, perils, lawsuits and contingent liabilities. The point to remember is that residual risks are not correlated to one another, and, as such,

their cumulative effect can be completely diversified away according to capital-market theory.

As such, the market is not supposed to penalize a company for this type of risk. The market is only supposed to penalize stocks for their market related (that is, non-diversifiable) risk. In other words, if a risk is not completely diversifiable, the market must provide a return for that part of the risk that is not diversifiable.

The upward sloping capital market line which expresses the relationship between risk and return in the financial markets is evidence of this assertion.

Market risk is measured by a firm's "beta" and is derived from common sources of risk in the market to which all companies are exposed: interest rates, inflation, the money supply and certain basic commodity groups. Beta--the measure of how responsive the return of a specific stock is to the return of the market--measures a company's market risk. Most companies have a beta of between 0.5 and 2.0, with the average of the market being 1.0.

A stock with a beta of 1.0 should experience a change in value in proportion to the return of the market. On the other hand, if a stock has a beta of 2.0, we would expect it to directionally experience (either positive or negative) a return twice the market's experience.

Investors will then discount the value of a stock by a combination of the risk-free interest rate, plus beta times the market's risk premium: Required Return equals risk-free rate, plus beta, times (market return minus risk-free rate), plus residual risk, times residual risk premium.

So if beta were equal to one, and the risk premium of the market were six percent, and the risk-free interest rate was 4 percent, the required rate would be 10 percent. Market price of the stock is then calculated thus: Market price equals expected income divided by (required return minus growth).

From this relationship, the observer can see that the required return is a key driver in the pricing of stocks.

However, I've left out one point. The residual risk is never equal to zero. But as earlier expressed, market theory states that residual risk does not impact the price of stocks since its effects can be completely diversified away.

For this reason, the equity value of industrial companies is not typically penalized for this source of risk volatility. In other words, the residual risk premium is always zero. And indeed, our tests demonstrated that there was, essentially, no risk penalty being imposed on industrial stocks for this type of risk.

But when we regressed the stocks of p-c companies, we obtained a pronounced negative relationship between residual risk and the price/earnings ratio, signifying that the market was penalizing p-c stocks for residual risk. (The advocates of beta will be unhappy to learn that beta--market risk--had almost no impact in determining the value of p-c stocks.)

Even more interesting, we found a negative relationship between residual risk and growth among mature (over \$500 million in assets) p-c insurers. This test was conducted both against growth of market value and growth of net worth.

A similar test conducted against industrials revealed that the market did not penalize an industrial's growth for residual risk. This means that, on average, the more residual risk an insurance company has, the more unlikely it will be able to experience meaningful growth.

Before we could decide what these results meant, we had to identify the drivers of residual risk in p-c companies. Our analysis has identified the main offenders.

Generally, residual risk in the insurance industry ranges from the uncertainty of claim durations, to loss shocks, to line of business covariances, to the uncertainties of tort legislation and Superfund.

Using decomposition analysis, we are breaking down the p-c industry residual risk into eight broad classes of risk, complete with coefficients that predict the market penalty for each type of exposure. The range of market penalty between p-c insurers for each one of these factors is enormous. This type of analysis is very useful in diagnosing the sources of residual risk in p-c companies.

So now we understood the mechanism that discounts p-c companies relative to industrials: the price/earnings ratio of p-c insurers is lower than that of industry because the market assesses a premium against the p-c industry for residual risk where it does not assess a similar premium against other industries.

But this explanation did not tell us why the market assesses a premium against p-c companies for residual risk. Since a p-c company's residual risk is not correlated to the market, there is no justifiable reason for investors to discount their value by anything other than market-related volatility unless, for some reason, they hold a disproportionate amount of p-c stock.

Portfolio managers will typically limit the amount of stock they hold in one industry to limit their exposure to market risk. The principle that residual risk is diversifiable remains true even within specific industry groups.

However, it turns out that p-c companies have an additional source of residual risk, called "common factor" residual risk--that portion of residual risk that is prevalent within one industry and is not diversifiable, like other forms of residual risk, within that industry.

Common factor residual risk is actually made up of the primary categories previously listed: claim duration, loss shock, tort uncertainties, etc. Most p-c companies are exposed to these same factors, and will--to a significant degree--have reinsured each other on many of the same risks. This results in many companies having a common experience. But since these exposures have little relationship to the market return, they should be completely diversifiable by investors who maintain diversified portfolios.

So we still did not have an understanding of why the market was assessing a penalty against p-c companies for residual risk, but we were beginning to get a strong inference when we made one more observation about the p-c industry.

P-c companies are extremely volatile. The p-c industry has been at least three times more volatile than the Fortune 500 over the past 15 years. Volatility always invites market specialists and insiders who attempt to profit from having specialized knowledge of when to buy, when to sell and when to hold. Couple the p-c industry's volatility with its highly specialized financial reporting and you have a recipe for an industry to be largely owned by an insider group, or so we conjecture.

This group would not be able to diversify away the common factor residual risk because it holds concentrations of p-c stock. As such, it would discount p-c stock by total volatility rather than by market-related volatility, and this has the effect of depressing the p-c industry's price/earnings ratio relative to that of the Fortune 500.

Subsequent talks with p-c industry equity analysts confirmed that p-c stocks do tend to be held in large blocks by specialty investors.

The implications of these findings can be significant for investors who would typically use classical market theory for pricing p-c stocks, or for p-c companies that use market theory in their cost-of-capital analysis, valuation of reinsurance and capital budget process.

Our analysis revealed that the use of classical market theory to estimate the market return of p-c companies can be off by as much as a staggering one-third.

Another significant implication is that a p-c company cannot hope to increase its price/earnings ratio or its market/book ratio without first diagnosing the significant contributors of its residual risk, and then managing them effectively.

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