The Crystal Ball of Wall Street

Analyst Recommendations and the Future

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IT IS VERY HARD TO PREDICT THE FUTURE. Think about something you like to analyze for fun—such as following the local sports team. In Chicago there are two baseball teams, the White Sox and the Cubs. The two teams face off against each other in what is called the Crosstown Classic. Now no matter how die-hard a Cubs fan you are

or what your knowledge of the White Sox is—trying to predict which team will beat the point spread is incredibly difficult. No matter what you think you know about the Cubs, the information is likely reflected in the point spread.

Trying to beat the market is very similar—a stock may in fact be a good buy due to various fundamental reasons, but this information is likely already reflected in the stock's price. If you're trying to select a stock to outperform the market, find a stock for which new information is not currently reflected in the stock's price. Brokerage firms attempt to do this by hiring research analysts.

An investor's first introduction to the work of research analysts is often listening to and acting on a stock recommendation provided by a full-service broker. An investor will purchase a stock because the research analysts at the broker's firm have issued a recommendation to buy. Sometimes a recommended stock will go up, sometimes it will go down. Perhaps the broker will provide a string of prescient recommendations. More likely than not, though, acting on the broker's recommendation will not result in a windfall for the investor. The next logical question for the investor is whether this is because of the broker, the research analysts at the brokerage firm, or simply due to being a small-fry client to the brokerage firm. The answer to this question lies at the heart of the study of investment strategies based on analysts' recommendations.

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Meet the Analyst

Meet Matt, an analyst working at a Wall Street brokerage firm. Most likely he has graduated from a top-tier MBA program within the past decade or two. Since graduating from business school, Matt has been following the same group of 10 stocks in the enterprise software sector. Unlike an analyst who works for a mutual fund and who has to be moderately familiar with a large number of stocks, Matt is likely one of five or six people in the country who is an expert on the 10 enterprise software companies that he follows.

Matt spends his time researching the companies he follows, meeting with the senior-level management, analyzing the industry, and trying to predict which of the companies will be successful. He often talks directly with high-level investors regarding the prospects of the companies that he follows, and he writes extensive research reports on what's going on with them.

The research reports written by analysts like Matt usually contain an estimate of what a company is going to earn on a per-share basis over the next two fiscal years; an estimate of how fast the company is expected to grow its earnings over the next five years; a recommendation of whether an investor should buy, hold, or sell the stock; a target price indicating what the analyst feels the stock

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should trade at over the next year; and last, a detailed explanation illustrating how these results are derived. The report usually contains a spreadsheet that shows the financial estimates behind the earnings projection, and it can be anywhere from a few pages to a short treatise to a semiannual opus.

These research reports are then provided to investors by the brokerage firm in exchange for trading revenue. This means that retail and individual investors who execute trades through a brokerage firm usually can access the firm's proprietary equity research.

However, many retail investors do not spend the time and effort to actually read the report; instead they tend to focus on the recommendation of the report and blindly follow the advice. Unfortunately, this is far from the best way to use the research.

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Listen—But Only if Simon Says "Change"

The purpose of the recommendation is to boil down the fundamental research of the analyst into one actionable suggestion. Do you buy, hold, or sell a stock? Unfortunately, the answer is not always clear. Here's a hint if you want the CliffsNotes version: Focus on recent recommendation changes from analysts with good track records in small-cap stocks.

Analysts in the United States are collectively paid more than $7 billion each year to tell investors which stocks to buy and which to sell. At the most basic level, there has to be some value to the research analysts' work. If there was not any value in the work, it is unlikely that investment banks, which are usually focused on the bottom line, would continue to pay analysts so much. Research seems to back this up—the analyst recommendations are useful in certain ways.

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There are a few firms worldwide that track analyst recommendations and their performance in the marketplace. One such company is my firm, Zacks Investment Research. In fact, we were the first firm in the country to

begin tracking analyst recommendations; as a result, our database of recommendations has the longest history of any company, dating back to the early 1980s.
Research shows that:

1. Changes in analysts' recommendations can be used profitably. The key here is whether an analyst has provided new information to the marketplace by changing his view on a stock.
2. Transaction costs can dramatically reduce the return of recommendation-based strategies.
3. Changes in analysts' recommendations work better with smaller companies (that is, smaller capitalization stocks).
4. You can make more money by using recommendation changes in combination with other criteria.
5. Some analysts tend to have a greater effect on stock prices than others. One way to determine which analyst to follow is to track the analyst's historical accuracy in making stock recommendations.

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After roughly two decades of research it looks like analysts' recommendations can be used profitably if the focus is on changes in recommendations as opposed to the level of the recommendation. It is more important if an analyst has recently changed his recommendation than

if the analyst has been indicating a stock is a strong buy for the previous six months.

Tale of the Tape

One of the simplest investment strategies is to create portfolios based upon what analysts are recommending. That is, you buy the stocks the analyst tells you to buy and sell the stocks the analyst tells you to sell. The basic idea here is that the analyst's recommendation has some predictive ability—that is, those stocks an analyst recommends as a buy should outperform, while those stocks an analyst recommends as a sell should underperform.

Let's say that every calendar quarter you sort all the stocks for which analysts have issued recommendations for into two groups. The first group consists of the top 10 percent of stocks for which analysts are the most positive, and the second group consists of the bottom 10 percent of stocks for which analysts are the most negative. You buy and hold each portfolio for a quarter, and then you create the portfolios again next quarter with new data. From 1990 through 2010, the basket of stocks for which analysts were the most positive outperformed the basket of stocks for which analysts were the least positive in 14 of the 21 years. The strategy of going long stocks recommended by analysts and shorting the stocks analysts indicated you should avoid worked from 1990 to 1997, but then the strategy fell apart.

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Let's repeat the experiment from before. This time, instead of sorting the stocks based on the level of recommendations, sort the stocks into 10 groups based on the changes in recommendations that occurred over the past month before the end of the quarter.

The good portfolio consists of the top 10 percent of stocks receiving the strongest magnitude of recommendation upgrades over the past month, and the bad portfolio consists of the bottom 10 percent of stocks that are receiving the largest magnitude of recommendation downgrades. In this case, examining the same time period as before, from 1990 through 2010, the basket of stocks consisting of those stocks receiving strong recommendation upgrades outperformed the basket receiving substantial recommendation downgrades in 19 of the past 21 years.

Results become even stronger when the creation of the portfolios is closer to the time of the recommendation changes. Studies have shown that excess returns increase substantially when the rebalance frequency—the period in which you are creating the basket of stocks based on changes in recommendations—is shifted from monthly to weekly, and it increases again when the rebalance frequency is shifted to daily. However, the data show that the returns from recommendation-based strategies are very volatile over time and are highly dependent on transaction costs.

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Effectively, with recommendation-based strategies it's a crapshoot whether any given year will be profitable for the strategy. This means that statistically over time the strategy of focusing on changes in analysts' recommendations should generate market-beating returns, but any given year could result in positive excess returns or negative excess returns relative to a simple buy-and-hold strategy. Because of this volatility, it is necessary when employing recommendation-based strategies to try to implement the strategy through a full market cycle measured in years, not months.

Paying the Tolls

The other issue with recommendation-based strategies concerns transaction costs. Transaction costs can be broken down into four major categories:

1. Commissions
2. Bid/ask spreads
3. Price impact
4. Liquidity costs

First and foremost are the actual commissions that an investor has to pay for transacting in stocks. If you buy a share of stock through a discount online brokerage firm, your account will be charged a flat commission. For

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example, you are charged $9.99 for executing a trade through any one of a dozen online brokerage firms.

Institutional investors are charged commissions, but they are often quoted as a certain number of cents per share traded. Institutional commissions are also constantly moving lower; currently it is not unheard of for an institutional investor to pay a fraction of a penny per share in commission costs.

However, commissions can be seen as only the tip in an iceberg of costs and frictions involved in stock transactions. Much more pernicious is a whole slew of costs such as the bid/ask spreads, price impact, and liquidity costs that represent a much larger portion of transaction costs. When the full iceberg of transaction costs is considered—not just the commission tip sticking out of the water—it is clear that trading strategies based on recommendations should seek to minimize the turnover or frequency of transactions.

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For instance, a recent study of a recommendation-based trading strategy, where an investor would simply buy those companies with the best recommendations, shows an annualized abnormal return of 9.4 percent. However, after accounting for transaction costs, the excess annual return falls to –3.1 percent.

Studies of recommendation data that try to incorporate transaction costs are quite controversial, simply because there is no accepted means of estimating transaction costs.

The estimate of transaction costs tends to decrease over time as information technology improves. The transaction costs incurred for buying stocks in 1982 were higher than those incurred in 2002, which in turn were higher than in 2010. Additionally, investment strategies that focus on the level of analyst recommendations tend to be relatively unpredictable in the returns they generate. It is not uncommon to see results swing dramatically from year to year with no change in the criteria used for portfolio creation. Thus the risk-adjusted return of pure recommendation-based strategies tends to be lower than that for other investment anomalies.

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Smaller Is Better

Practically all studies of recommendation-based investment strategies indicate that the excess return of the strategies remains concentrated in small firms. A firm's size refers to its market capitalization or the aggregate value of its equity. Small firms are usually, but not always, followed by fewer analysts.

The reason small-cap stocks respond better to recommendation changes could be that the market is less efficient for smaller firms and the amount of information is more limited. Another possibility is that the higher transaction costs for smaller firms prevent large institutional traders from trading in the small-cap stocks and eliminating the

excess returns due to the recommendation changes. This does not appear to be unique for recommendation-based trading strategies—most anomalies seem to work better in smaller-cap stocks. The key is whether the excess returns continue to persist after adjusting for the transaction costs.

Combo Attacks

For even better returns, we can try combining information by using analyst recommendations with other fundamental data. For instance, a recent study showed that if you buy stocks with positive recommendations, the excess returns generated are higher when you also combine the additional factors of high price momentum, attractive valuation multiples, and high earnings quality. Additionally, by incorporating other fundamental criteria, it is possible to reduce the overall turnover of recommendation-based strategies. If a stock's valuation multiple is attractive, the valuation multiple tends to remain attractive for at least several quarters. Recommendation changes tend to be more fleeting. A stock cannot continue to receive substantial recommendation upgrades quarter after quarter, because after one or two quarters analysts are unanimously recommending the stock as a buy with no room for upgrades.

Interestingly enough, it appears that recommendation optimism tends to increase with both price and earnings

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momentum. That is, those companies whose prices have been going up and who have been strongly growing their earnings are more likely to be highly recommended by analysts. If analysts were focused only upon valuation, one would expect the opposite to be the case. Another indication that price momentum may lead to analyst recommendation upgrades is that more favorable recommendations are often associated with less favorable valuation metrics.

This means that momentum stocks and stocks that tend to be expensive are more likely to be highly recommended by analysts. For this reason, some of the results attributed to analyst recommendation studies may be the result of a price momentum anomaly. However, many of the studies address this issue by using a model of expected returns that incorporates price momentum. Buying pure price momentum is not a bad strategy, but it requires high turnover and short holding periods. This leads me to believe that recommendation-based strategies should almost always incorporate a fundamental valuation factor as well—otherwise an investor could very likely be simply buying in-vogue momentum stocks.

It also appears that following large stock price increases, analysts are just as likely to either upgrade or downgrade their recommendation; however, following large stock price decreases, analysts are much more likely to downgrade a stock.

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Investors tend to be risk-averse when dealing with gains, but willing to take on more risk when facing losses. This behavioral bias makes retail investors willing to bear more risk when dealing with losses. As a result, retail investors tend to underreact when there is a major downward move in a stock. Effectively they become averse to realizing losses and instead chose to increase risk by keeping their position open.

Basically, investors look to add risk with losses, so they are more likely to continue to hold a stock if it is below their purchase price. In order to correct this bias it may help to listen to stock analysts. Effectively, by selling on a recommendation downgrade following a large negative price movement it may help an investor combat the behavioral bias that would lead him to continue to hold the stock.

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The Good, the Bad, and the Ugly

Some very recent research also indicates that those analysts who historically have a good track record for making recommendations tend to issue better performing recommendations. One trading strategy found that an investor who follows the recommendations of analysts in the top 10 percent with respect to performance in the previous quarter would tend to generate excess returns. It appears that the best analysts tend to persist for two

quarters following the rankings of such analysts. This could be due either to underlying price momentum in the securities or perhaps to the informational advantages afforded to certain analysts.

Further research indicates that stock recommendations by analysts who attended the same university as members of the board of directors of corporations they are following tend to be more accurate. However, this study analyzed a period prior to the passage of Regulation Fair Disclosure (Reg FD). This regulation requires publicly traded companies to divulge market-moving information to everyone at the same time. This is usually accomplished through press releases. It effectively limited the selective disclosure of information to privileged analysts, and in effect it helped level the playing field. As a result of Reg FD, all analysts must receive the same information at the same time.

So who exactly is using analyst recommendations in making investment decisions? It is clear that both individual and institutional investors react to the actual recommendation announcements. Further parsing of the data has shown that individuals trade more on recommendation upgrades, and institutional investors tend to focus more on recommendation downgrades. This makes sense, since generally a recommendation upgrade can be used as fodder for a brokerage firm's sales force to induce more

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people to buy a certain security, while a recommendation downgrade is of interest only to those investors who already hold the given stock.

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As a result of this distinction between who trades on recommendation upgrades and downgrades, it seems that recommendation downgrades are more informative, since the more sophisticated investor bases trades on them. The reason behind this result is simple: Institutions tend to be more sophisticated than individuals. As a result, an individual should mimic the trading behavior of institutions and pay more attention to recommendation downgrades than recommendation upgrades. Basically, individuals should pay more attention when an analyst downgrades rather than upgrades a stock.

Several studies show an increase in institutional trading volume around the time recommendations are publicly released. This suggests that recommendation changes are important to institutional investors. The net takeaway?

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Recommendations do move markets, institutions trade on changes in recommendations, and downgrades are more important than upgrades.

Furthermore, trading on analyst recommendations is a global opportunity. Examining the effectiveness of using recommendation data in seven large markets shows that recommendation changes are most profitable in the United States and Japan. Positive results are also found in France and Canada as well. Other markets in which recommendation changes tend to provide some value are India, Brazil, and Australia. Almost all the international studies seem to verify what the U.S. domestic studies show: Namely, changes in recommendation data are far more important than recommendation levels.

Making It Part of Your Process

So how can we use recommendation data in an investment process? Consider the following facts:

1. Changes in recommendations are far more important than the level of recommendations.
2. Recommendation downgrades are more important than recommendation upgrades.
3. Investment strategies using recommendation changes are more effective among small-cap stocks.

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4. Recommendation changes should be combined with fundamental data in order to reduce transaction costs and generate better returns.

These facts combined with the results of the transaction-cost tests indicate that although excess returns can be generated from following changes in recommendations, the strategy should be used in conjunction with other methodologies. While focusing on recommendation changes seems to be an effective investment anomaly, it is plagued by higher turnover, which, if an investor is not careful, could eat deeply into the returns. As we shall see in later chapters, there are other more effective strategies that can be implemented. It is useful to use recommendations with additional strategies in order to lower the turnover.

For instance, a simple test within the 3,000 largest cap stocks demonstrates the power of using recommendation changes in an investment strategy in combination with a valuation metric. If we rebalance quarterly and we combine recommendation changes and valuation metrics, we find excess returns can be generated with relatively reasonable degrees of turnover.

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