

March 2, 2007

Article 1.

Category: Stock return dispersion
Title: Return Dispersion and Expected Returns
Author: Xiaoquan Jiang
Source: 2006 CRSP Forum paper
Link: http://www.crsp.chicagosb.edu/forum/papers/financial_risk/Return%20Dispersion%20and%20Asset%20Pricing.pdf

Summary:

This paper finds that stock return dispersion (RD) (the cross-section variance of stock returns at a given time) can forecast stock returns, better than market volatility and idiosyncratic volatility.

Stocks with high sensitivity to stock market dispersion outperform stocks with lower sensitivity.

High RD tends to be associated with recessions, and it leads other indicators such as term spread and credit spread.

AlphaLetters comments:

1. Why important

In our view, this paper is unique in that it does not just look at time-series property (time dimension) of stock returns, but also study the second dimension, i.e., their cross-section. This has been a less-studied area, and may lead to improved quant factors.

Another paper that covers such cross-section spread is “Investor Overreaction, Cross-Sectional Dispersion of Firm Valuations, and Expected Stock Returns” (http://mailer.fsu.edu/~djiang/jiang_dispersion.pdf), where it is shown that high value spread (dispersion) usually leads to low market return.

2. Data

1962-2004 US stock data are from CRSP

3. Discussions

The conclusion that “stocks with high sensitivity to stock market dispersion outperform” certainly sounds reasonable. But why this is the case and what additional information is captured in RD? Our guess is that because RD has information about cross-section returns differences, it is additive to other time-dimension measures (e.g. beta, volatility) in measuring investors risk tolerance.

The relationship between idiosyncratic volatility (IV) and RD is intriguing. IV in essence measures how a stock’s return deviates from a (usually flawed) forecast return, where RD measures how a stock’s return deviates from market returns. We reviewed a somewhat puzzling paper, “High Idiosyncratic Volatility and Low Returns: International and Further U.S. Evidence”

(<http://www.gsb.columbia.edu/faculty/aang/papers/ivol.pdf>), where it claims “Higher IV, lower future returns”. We have never been convinced, and recent studies did show that this conclusion is flawed since it does not rightly adjust for momentum.

Article 2.

Category: Analyst estimate revision clusters, company information announcements
Title: Analyst Estimate Revision Clusters and Corporate Events
Author: Mark Bagnoli, Stanley Levine, Susan Watts

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Source: SSRN working paper

Link: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=555701

Summary:

This study groups corporate information events (CIEs) into two subsets:

Type 1: CIEs that focus on financial statement information (e.g. earnings announcement, earnings guidance). They are CIEs that occurred either close to earning announcement dates, or CIEs related to forward-looking earning that occur at distinctly different times.

Type 2: CIEs that offer strategic or “soft” information (e.g. Merger and acquisition, joint venture)

It is shown that type 1 CIEs triggers greater analyst revisions, and subsequently stock prices adjust more quickly to such revisions.

In a related paper by the same authors, “Trading Strategies Based on Analyst Estimate Revision Clusters and Associated Corporate Information Events” (abstract only, <http://www.ijournals.com/JOI/DEFAULT.ASP?Page=2&ISS=21470&SID=616842>), they study the price impact of different type of CIEs :

	<i>Type 1: Earnings/guidance announcements</i>	<i>Type 2: other announcements (e.g., M&A, strategic alliance)</i>
<i>Long positions</i>	<i>significant excess returns</i>	<i>No excess returns</i>
<i>Short positions</i>	<i>small but significant excess returns</i>	<i>No excess returns</i>

AlphaLetters comments:

1. Why important

Analysts revision lost part of its predicting power recent years in US, although it still works in many other parts of the world. We hope that by identifying alpha-generating revisions, the categorization proposed in this paper can help refine the analyst revision strategy.

On a related note, we also think this is an illustration of generating alpha by using a less used database (CIEs)

2. Data

1998/12 - 2003/02 82,000 analysts revision clusters data are from First Call analysts’ earnings estimate revisions, corporate events are from First Call (Historical, Company Issued Guidance, and Events databases); CCBN (Street Events database); and Multex (Significant Developments databases)

3. Discussions

In US, most earning based strategies are no longer working well after the booming of hedge funds. It is said that there may be alpha hours after the announcements, but not days or weeks. This said, effectiveness of this new categorization remains to be tested.

We think this strategy may be improved if one can do refine the way CIEs are grouped. In this study ~25% of clusters are un-matched, partially due to the fact that the authors didn’t use a commercial database that covers broader news sources (such as news related to company being placed on S&P credit watch)

Article 3.

Category: Tax income surprise, earning (book income) surprise, momentum

Title: Tax income momentum
Author: Jacob Thomas, Frank Zhang
Source: Yale working paper
Link: <http://www.som.yale.edu/Faculty/jkt7/papers/taxmomentum.pdf>

Summary:

This paper first defines tax income surprise (we think a better term may be “tax income momentum”)

Tax income surprise =
(tax income per share in quarter q - tax income per share in quarter q-4) / asset per share in quarter q-4

The study documents a “tax income surprise” effect: *a higher tax income surprise leads to higher future quarterly returns. The annual hedged profit between extreme deciles is ~10%.*

This effect is similar to, but separate from, the well-studied “(book) earning surprise” and momentum effect, and is robust when controlled for other anomalies (e.g. size, book-to-market, accruals).

AlphaLetters comments:

1. Why important

It seems to us that stock prices are driven more by book income than tax income. This said, tax income remains a less studied topic, and it may play an important role since it is less subjective to management manipulation and will eventually impact book income.

2. Data

1977 - 2005 US stock data are from quarterly Compustat/CRSP databases .

3. Discussions

What might be the reason of the predicting power of tax income surprises? As we know, the difference between tax income and book income results from difference in revenue recognition, depreciation methods, etc. A manager may be able to boost book income through, say, changing depreciation method, but they have limited room when it comes to manipulate tax income. If this is the case, then there should be correlation between this strategy and accruals.

By way of regression on residuals, the paper finds through regression that “tax income has information that will be reflected in the book income reported next quarter, and information that is not reflected in next quarter’s book income and yet is relevant for stock returns.”

In essence, tax income is estimated as :

$$\begin{aligned} \text{tax income} &= \text{book income} + \text{taxes paid/due} * (1-t) / t \\ &= \text{book income} + (\text{tax expense} - \text{deferred tax expense}) * (1-t) / t \end{aligned}$$

where t is the top statutory corporate federal tax rate in that year.

Article 4.

Category: Financial Constraints, R&D investments
Title: Financial Constraints, R&D Investment, and Stock Returns: Theory and Evidence
Author: Dongmei Li
Source: Wharton School working paper
Link: <http://assets.wharton.upenn.edu/~lid2/constraints.pdf>

Summary:

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For firms with high R&D investments, high financial constraints predicts high stock returns, the risk-adjusted profit ranges from 8% - 14% annually depending on the measure of constraints

Here the financial constraints (KZ index) is measured based on five ratios: debt to total capital, dividends to capital, cash holdings to capital, cash flow to capital, and Tobin's Q.

For highly constrained firms, high R&D predicts higher stock returns, the risk-adjusted annual hedged profit is 5%

These findings reconcile with the puzzling finding that there seem to be no relationship between financial constraints and stock returns

AlphaLetters comments:

1. Why important

New products, which arguably are mainly powered by R&D, is a major drive force of stocks prices for companies in certain sectors (IT and other science-oriented industries, e.g., biotechnology, pharmaceuticals). This paper is based on a very strong economic rationale, and by showing the impact of conditioning R&D on financial constraints, it may help quant managers with an interest in those specific industries.

2. Data

1975 – 2004 US stock data are from COMPUSTAT/CRSP.

3. Discussions

For more constrained companies, a higher R&D investment reflects a higher risk as well as the higher confidence of company's management. We think the same logic should be applicable not only on R&D, but also capital expenditure in general. So it would be an interesting extension to study the interactions of capital expenditure, financial constraints and stock returns.

Article 5.

Category: Stock return correlation with market return, R2, momentum

Title: R2 and Price Inefficiency

Author: Kewei Hou, Lin Peng, Wei Xiong

Source: Princeton working paper

Link: <http://www.princeton.edu/~wxiong/papers/R2.pdf>

Summary:

This paper documents that stocks with lower R2 shows much stronger momentum.

R2 is the statistic of the weekly return regression:

Stock return = $a_0 + a_1 * \text{market return} + a_2 * \text{industry return} + \text{error term}$

A high R2 indicates that a higher proportion of stock return can be explained by market and industry return.

Stocks with lower R2 also shows stronger long-run price reversals

The authors claim that the reason for the finding may be that R2 could be related to price inefficiency, lower R2 means that stocks are held more by individual investors and thus its price show lower efficiency

AlphaLetters comments:

1. Why important

This paper can help people determine whether this R2 is a new factor, or a combination of other known factors.

2. Data

1963 - 2002 US stock data are from CRSP/COMPUSTAT database.

3. Discussions

In essence, a high R2 suggests a high statistical significance to the beta coefficient, and it indicates that a stock's return is driven less by idiosyncratic risk, but more by market and industry risks.

What new information is there in R2? What could be the economic story behind the finding? It is found in previous study that stocks with lower R2 are smaller, less covered by analysts, and have lower institutional ownership. Does this mean that lower R2 is merely a fancy term for "low quality" stocks whose prices tend to be more impacted by its own information? Of course momentum works better here, every strategy tends to work better in this segment. We do not know the answer to these questions, but before we find an economically sensible explanation, we suspect that this R2 may be another case of data mining.

Worth mentioning (Other interesting papers)

Article 6.

Category: Analyst recommendations, peer firms
Title: Stock recommendation spillovers
Author: Roger K. Loh
Source: Ohio State University seminar paper
Link: http://www.cob.ohio-state.edu/fin/dice/seminars/RecSpillovers_20Sep06.pdf

Summary:

Favorable changes of analysts' stock recommendation leads to peer stocks' lower next -month returns. A strategy that sell peer firms in upgraded industries and buy peer firms in downgraded industries generates a risk-adjusted return of ~10%+ annually.

Article 7.

Category: Sharpe Ratio
Title: Beware the Sharpe Ratio
Author: Steve Christie
Source: SSRN working paper
Link: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=954631

Summary:

This short paper finds that the distribution of Sharpe ratio has a much higher variability than its components (mean return and returns standard deviation). This is due to that Sharpe ratios is based on the assumption that return distributions are normal; and, (2) they are not comparable when calculated for different investment periods.

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