Accruals and Cash Flows Anomalies: Evidence from the New Zealand Stock Market

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ABSTRACT

This paper investigates the presence of accruals and cash flows anomalies in the NZ stock market NZ for the period of 1987 to 2003. There is insignificant evidence of accruals anomaly. We find, however, that the poor performance of the highest accruals firms contributes most to the positive hedge return. As earnings are positively associated with accruals, it seems that investors are misled by the high accruals in high earnings firms. Further test results based on discretionary accruals support this hypothesis. We also find strong evidence of cash flows anomaly during the sample period.

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1. Introduction

There is extensive evidence in the accounting and finance literatures that market participants fixate on reported income and do not distinguish the different effects of accruals and cash components of current earnings on future earnings; for examples, Hand (1990), Sloan (1996), Block (1999), Collins and Hribar (2000), Desai, Rajgopal, and Venkatachalam (2004). Accruals reverse in short period and therefore are less persistent than the cash component of earnings. As the market participants appear not taking this information into account, they underweight the persistence of cash flows and overweight the persistence of accruals components in current earnings. Accordingly, the market tends to overprice high accruals stocks and underprice low accruals stocks.

This market's fixation behaviour on earnings thus creates an opportunity to profit from an arbitrage investment strategy. Evidence on this stock mispricing is widely documented in the literature. A zero investment trading strategy taking a short position in the highest level of accruals-firms portfolio and a long position in the lowest level of accruals-firms portfolio generates positive and significant abnormal investment returns ((Sloan (1996), Houge and Loughran (2000), Desai et. al (2004), and Chan, Chan, Jegadeesh and Lakonishok (2005)). Assuming a strong negative correlation between accruals and cash components of earnings, this strategy can also be stated in terms of cash flows. The opposite trading positions in terms of the magnitude of cash flows produce positive abnormal returns (Sloan (1996)). Houge and Loughran (2000) show that both accruals and cash flow anomalies are robust to the Fama and French's (1992) three factor model either with value or equally weighted portfolio returns.

Accruals anomaly documented in the US, however, is not a global phenomenon (Pincus, Rajgopal, and Venkatachalam (2005)). Thus it is an open question if investors in New Zealand, where this study focus on, can profit from this anomaly. In addition, Kraft, Leone and Wasley (2005) show that prior studies reporting accruals and cash flows anomalies (Sloan (1996), Houge and Loughran (2000), Desai et. al (2004) and Chan et. al (2005)) suffer from several sample selection biases. The biases include current exchange selections, extreme firms' returns and subsequent year's accounting information. After removing the biases, the authors find that both accruals and cash flows anomalies disappear.

This research employs NZ data from 1987 to 2003 and applies a similar adjustment in the data suggested by Kraft et. al (2005). This paper finds that on average accruals are not associated with future returns. The empirical evidence also shows that the abnormal return from accruals anomaly comes mainly from the highest accruals firms. The excess return of the highest accruals firms is significantly negative while the adjusted return for the lowest accrual portfolio is negative but insignificant. The abnormal return based on the accruals strategy is not significant at 3%. Furthermore, investors seem to overestimate the accruals. As accruals are positively correlated with firms' earnings, the negative stock return of the highest accruals firms is evidence in support of the earnings management hypothesis.

Sorting firms based on the magnitude of cash flows, however, present a different picture. Cash flows are positively and significantly related to future returns. The average excess return of the low (high) cash flows firms is significantly negative (positive). The hedge strategy taking a long position in the highest cash flows and a short position in the lowest portfolio generates a significant positive abnormal return of 16%. Characteristic of cash flows sorted firms is different from that of based on accruals. Both extreme accrual portfolios consist of small firms while only the low cash flows firms consist of small firms.

The rest of the paper is organised as follows. In section 2 we formulate the hypotheses to be tested, the sample selection process and describe the research method. The results are reported in section 3. We conclude the paper in section 4.

2. Research Design

2.1. Hypothesis

The accruals anomaly is originated from the less persistence of accruals components of current earnings on future earnings. Therefore, the first hypothesis is:

> **H1**: The performance of current earnings that is mainly attributed to accruals is less persistent than when it is mainly attributed to cash flows component of earnings.

The performance of earnings contributed mainly by accruals is lower than when contributed by cash flows. When market participants fixate on earnings, they overvalue (undervalue) the accruals (cash) components of earnings. Accordingly, the mispricing of components in earnings affects future stocks returns. The second and third hypotheses are:

> **H2**: Future stock returns are negatively (positively) related to accruals (cash flows).

> **H3:** A trading strategy taking a long position in the portfolio of low accruals (high cash flows) firms and a short position in the portfolio of high accruals (low cash flows) firms generates a positive abnormal return.

2.2. Data

This study is conducted using all non financial firms listed on the New Zealand Stock Exchange with available data in the Datasream and SIRCA monthly stock price and the 2004 Datex financial company report files. The sample period is from 1987 to 2003. This results in a sample of 1,202 firm year observations with the required financial statements and share price data.

Prior studies on accruals anomaly suffer from sample selection biases (Kothari, Sabino and Zach (2005) and Kraft et. al (2005)). Kraft et. al (2005) show that accruals and cash flows anomalies documented in Sloan (1996) and Desai et. al (2004) are attributed to firms with buy and hold returns of more than 200%. After eliminating these outliers the authors find an inverted U-shape relation between accruals and stock returns. Both low and high accrual portfolios generate negative returns. They also report that the low cash flow portfolio experiences more negative return and the high cash flow portfolio return is reduced from 3.3% to 1.1%. Accordingly to avoid any data errors and the effects of outliers as reported above, stocks with annual buy and hold returns of more than ±100%, are deleted from the sample. The final sample is 1,127 firm-year observations.

2.3. Methodology

Earnings are measured as operating income after depreciation (before interest expense, taxes and special items). Accruals are calculated as the difference between earnings and operating cash flows. Computing accruals directly from statements of cash flows is a more precise measure of accruals (Desai et. al (2004)) and avoid measurement errors in estimating accruals using a balance sheet approach (Hribar and Collins (2002)). Prior to 1991, however, NZ firms had not adopted the cash flow format. Accordingly, to compute firms' accruals before 1991, this study applies a balance sheet approach in computing accruals as:

$$Accruals = (\Delta CA - \Delta Cash) - (\Delta CL - \Delta STD - \Delta TP) - Dep \quad (1)$$

ΔCA is the change in current assets. ΔCash is the change in cash or cash equivalent. ΔCL is the change in current liabilities. ΔSTD is the change in debt included in current liabilities. ΔTP is the change in tax payables, and Dep is the depreciation and amortization expense.

All the three variables (earnings, cash flows and accruals) are standardized by the average total assets:

$$Earnings = \frac{Income\ after\ depreciation}{Average\ Total\ Assets} \quad (2)$$

$$Cash\ flows = \frac{Income\ after\ depreciation - Accruals}{Average\ Total\ Assets} \quad (3)$$

$$Accruals = \frac{Accruals}{Average\ Total\ Assets} \quad (4)$$

Accruals anomaly arises from the different persistence of accruals and cash components of earnings. Accordingly, both components have different effects on future earnings. Following Sloan (1996) to examine the persistence of accruals and cash components of current earnings, the following model is estimated:

$$Earnings_{t+1} = \alpha_t + \beta_{1t} Cashflows + \beta_{2t} Accruals + \varepsilon_{t+1} \quad (5)$$

Further, stocks are grouped into five categories based on the magnitude of accruals and cash flows. Stock returns are computed as the buy and hold returns which are measured beginning from four months after the end of the firms' fiscal years. Prior studies find that although more than one year ahead abnormal stock returns are positive, these returns are

not different from zero. Furthermore, the inclusion of more than one year ahead stock returns will decrease the sample size of this study. Therefore, future stock return is examined only as a one year ahead stock return. These portfolios will be rebalanced every year. To generate the benchmark portfolio returns, five of equally weighted portfolio will be constructed based on the size or market value of the firms. The buy and hold return of these portfolios will be calculated within each group. Following similar studies on accruals anomaly, the abnormal stock return is defined as the difference between the stock return and the size matched portfolio return:

$$AR_{it} = R_{it} - R_{pt} \tag{7}$$

AR_{it} is the size adjusted returns of stock i, R_{it} is the raw return of the individual stock and R_{pt} is the size matched portfolio return.

3. Empirical Results

3.1. Accruals and cash flows anomalies

Results in Table 1 shows that both accruals and cash components of current earnings significantly explain future earnings. The coefficient of accruals (0.54) is though smaller than the coefficient of cash flows (0.95). An F test confirms that the accruals' coefficient is different than the coefficient of cash flows. This evidence supports the hypothesis that accruals are less persistent than cash flows in shaping future earnings.

[Insert Table 1 here]

Table 2 provides statistics of five portfolios of stocks sorted by the magnitude of accruals. Firms' earnings are positively related with accruals but cash flows are negatively correlated with accruals. The negative association between accruals and cash flows is mostly because cash flows are measured as the difference between earnings and

accruals. The average annual correlation between accruals and cash flows however, is weak, only -0.22. The magnitude of the correlation is much lower than that reported in prior studies which is typically more than -0.5.

Table 2 further shows that the average annual raw return from the lowest accrual portfolio is negative at -2.15%. The raw return for the highest accrual portfolio on the other hand is positive at 4.90%. The "U" shape pattern in the market value of the firms sorted by accruals shows that the two extreme portfolios consist of small stocks. The hedge portfolio strategy taking a long position in the lowest accrual portfolio and a short position in the highest portfolio then should eliminate the size-risk factor of the strategy.

[Insert Table 2 here]

The hedge strategy based on the magnitude of accruals generates positive returns in only 7 (41%) of 17 years during the sample period (see Figure 1). The highest positive return is 53.15% in 1991 and the lowest abnormal return is -16.15% in 1989. The average abnormal return during the sample period is positive but insignificant at 2.56% per year. The positive hedge return, however, is derived mainly from the negative return of the highest accrual portfolio. The abnormal return for the highest accrual portfolio is negatively significant at -4.13%, while the excess return of the lowest quintile portfolio is insignificant at -1.57%. This is consistent with Kraft et. al (2004) that after adjusting the outliers, the abnormal returns of both extreme portfolios are negative.

Furthermore as shown in Figure 2, the abnormal returns are weakly correlated with the order of the quintile portfolios. This evidence is consistent with prior studies that the abnormal return of the hedge strategy based on accruals are mainly due to the poor performance of the firms reporting the highest accruals.

[Insert Figure 1 here]

The significance of the highest accruals portfolios indicates that investors overvalue high accruals stocks. Table 2 shows that firms in the highest quintile portfolio are exhibiting the highest earnings. As the investors overvalue the highest accruals stocks, the poor return of the highest portfolio provides an indication that when high earnings are accompanied by high accruals, managers of these firms engage in income increasing accruals.

[Insert Figure 2 here]

To investigate the possibility of income increasing management, we sorted portfolios based on discretionary and non discretionary accruals. This study employs the modified Jones model (Dechow, Sloan and Sweeney (1995)) to partition the discretionary accruals from total accruals:

$$TA = \alpha_1\left(\frac{1}{A_{t-1}}\right) + \alpha_2\left(\frac{\Delta REV_t - \Delta REC_t}{A_{t-1}}\right) + \alpha_3\left(\frac{PPE_t}{A_{t-1}}\right) + \phi_t \quad \text{.....(8)}$$

TA is total accruals, A is total assets, ΔREV is the change in revenues, ΔREC is the change in account receivables and PPE is property plant and equipment. The nondiscretionary accruals are the fitted values and the discretionary accruals are the residuals of the model.

The results in Panel B and C of Table 2 support the manipulation hypothesis. The abnormal return pattern across quintile portfolios sorted by discretionary accruals is similar to that of quintile portfolios based on total accruals. When portfolios are sorted by nondiscretionary accruals, however, the pattern of portfolios' abnormal return is inconsistent with that of total accruals.

Evidence on Table 3 confirms that on average accruals have a weak association with the abnormal returns. Accruals are insignificantly correlated with the stock returns. Current

earnings are significantly and positively associated with the stocks' abnormal returns. This significant correlation derives from cash flows which are significantly and positively related to the stocks' abnormal returns. Robustness tests using Fama Mac-Beth regressions in Table 4 are consistent with these results.

[Insert Table 3 here]

[Insert Table 4 here]

Sloan (1996) expresses that when the correlation between accruals and cash flows is strongly negative then the opposite trading positions in terms of cash flows, that is, a long position in high cash flows stocks and a short position in low cash flows firms should yield similar abnormal returns. However, most of prior studies on accruals anomaly do not replicate the accruals strategy in terms of cash flows. This study finds that the average annual correlation between accruals and cash flows is weak at -0.22 and that the accruals are insignificantly related to the abnormal returns. Therefore, a trading strategy based on cash flows should produces different and more significant abnormal returns.

[Insert Table 5 here]

Table 5 presents summary statistics of firms sorted by the magnitude of their cash flows. Earnings are positively (negatively) correlated with cash flows (accruals). Firms in the lowest (highest) cash flow portfolio exhibit the lowest (highest) performance in future returns. The characteristic of portfolios based on cash flows is different from that based on accruals. The lowest cash flows-portfolio consists of small stocks while the highest cash flows-portfolio consists of big stocks. This evidence shows that when the correlation between accruals and cash flows is weak, a hedge strategy based on accruals is not the same as a strategy taking the opposite position based on cash flows.

[Insert Figure 3 here]

The hedge strategy returns are positive in 14 (82%) of 17 years during the sample period (Figure 3). The highest return is 44.38% in 2000 and the lowest return is -10.24% in 1987 which may be attributed to the Black Monday. The average abnormal return in the lowest cash flows-portfolio is negative and significant at -9% and the return for the highest cash-portfolio is positive and significant at 6%. The average return of the hedge strategy is significant at around 16%. Furthermore, the relation between the magnitudes of cash flows and the abnormal returns is more stable. Abnormal returns increase monotonically according to the order of the quintile portfolios (Figure 4). This cash flows anomaly is also documented in Houge and Loughran (2000) and Desai et. al (2004).

Evidence in Table 5 shows that accruals anomaly is not the glamour stock phenomenon in disguise as suggested by Desai et. al (2004) and Beaver (2002). The pattern of book to market characteristics of stocks across the quintile portfolios is similar to that when sorted based on accruals.

[Insert Figure 4 here]

3.2. Robustness test

Positive hedge strategy returns in almost all of the sample period for cash flow portfolios in Figure 3 suggest that investors seem to underweight the persistence of cash component of current earnings. It is, however, possible that unidentified risk factors explain the abnormal hedge returns of cash flow portfolios.

Fama and French (1992 and 1993) report that beta, size and book to market ratio explain most of the cross sectional variation in portfolio returns. The authors argue that their model captures the cross sectional returns attributed to systematic, size and book to market ratio risk factors. The Fama and French three factor model is:

$$r_{pt} - r_{ft} = \alpha_0 + \beta_1(r_{mt} - r_{ft}) + \beta_2 SMB + \beta_3 HML + \varepsilon_{pt} \quad (9)$$

R_{pt} is stock return of portfolio p in month t. R_{ft} is risk free rate in month t. R_{mt} is market return in month t. SMB is size factor (small minus big) in month t. HML is book to market (high minus low) factor in month t. The intercept, α_0, measures average monthly abnormal return of the portfolio in year t+1. To get the annualized abnormal return, α_0 is multiplied by 12.

The significant abnormal returns of the high and low cash flow portfolio may be attributed to these three risk factors. To test this hypothesis, we construct equally weighted monthly time series cash flow portfolios beginning from July in year t and held until June year t+1. The 1-month bank bill rate is employed as the risk free rate. We then run the three factor model for each quintile of cash flow portfolio. As the market index, the NZSE All, is available only from 1990, the sample period for this test is from 1990 to 2003.

Table 6 shows the results of the three factor model for cash flows-based portfolios. Similar to previous results, the abnormal returns of cash flows portfolios 2 to 4 are not significant. Beta, size and book to market ratio significantly explain the cross sectional variation of these portfolio returns.

However the abnormal returns of the two extreme cash flow portfolios are still robust after controlling for these risk factors. The monthly average abnormal return of low (high) cash flow portfolio is negative (positive) and significant at -0.99% (0.83%) or -11.85% (9.94%) annually. Buying high and selling low cash flow portfolio strategy during the sample period yields a significant average monthly abnormal return of 1.82% or 21.79% annually.

4. Summary

This study finds that the quality of current earnings is associated with the magnitude of cash and accruals components of earnings. Accruals are less persistent than cash component of earnings.

On average accruals are not related to future returns. However, firms with the highest accruals in their reported earnings experience significant negative stock returns. This significant negative excess return of the highest accrual portfolio explains most of the positive hedge abnormal return using the accruals based strategy. This indicates that the market overvalues the quality of high earnings and seems to be 'fooled' by the low persistence of high accruals in those earnings. Accordingly the accruals anomaly reported in the literature reflects managers' manipulation of earnings. Further test results based on discretionary accruals support this hypothesis.

Consistent with prior studies, this paper also finds that the magnitude of cash flows is positively and significantly associated with future sock returns. The abnormal return of the lowest cash flow portfolio is negative and significant, while the excess return of the highest cash flow portfolio is significantly positive. A trading strategy based on the amount of cash flows generates positive returns in 14 of the 17 years period.

This study also finds that contradictory to what prior studies (Desai et. al (2004) and Beaver (2002)0 suggest, accruals anomaly is not the glamour stock phenomenon in disguise. The pattern of book to market characteristics of stocks across the quintile portfolios is similar to that when sorted based on accruals.

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FIGURE 1

Abnormal returns of the trading strategy based on accruals by calendar year

Abnormal returns are firms' size adjusted returns. The strategy's abnormal returns are based on going long on the lowest accrual portfolio and short on the highest accrual portfolio. Accruals are the difference between earnings and cash flows. All variables are deflated by average total assets. Sample consists of 1,127 firm years observations from 1987 to 2003.

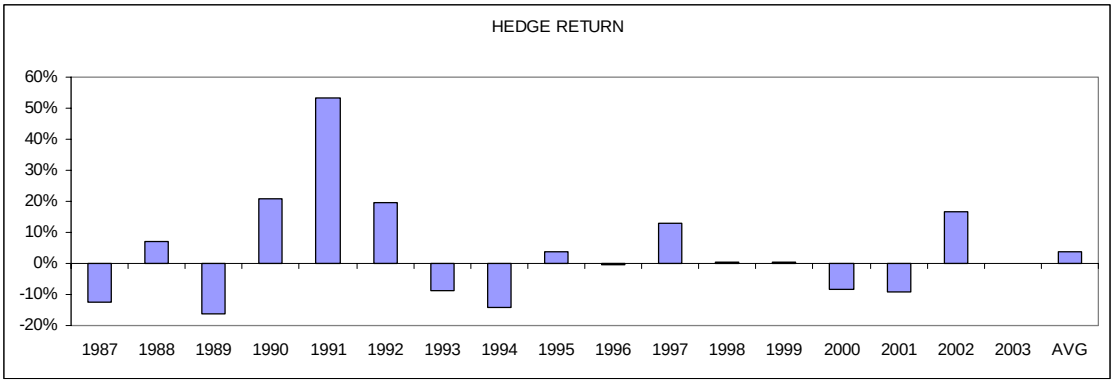

FIGURE 2

Abnormal returns of equally weighted accrual portfolios

Accrual portfolios are constructed by sorting all NZSX firms into five groups based on the magnitude of firm accruals. The abnormal returns are firms' size adjusted returns. Accruals are the difference between earnings and cash flows. All variables are deflated by average total assets. Sample consists of 1,127 firm years observations from 1987 to 2003.

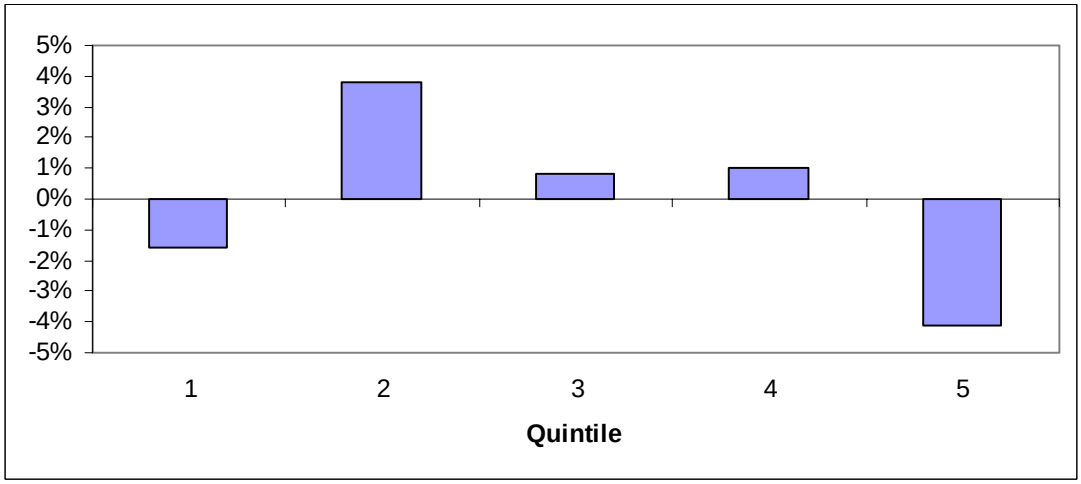

FIGURE 3

Abnormal returns of the trading strategy based on cash flows by calendar year

Abnormal returns are firms' size adjusted returns. The strategy's abnormal returns are based on going long on the highest cash flow portfolio and short on the lowest cash flow portfolio. Cash flows are the operating cash flows obtained from the statements of cash flows. Sample consists of 1,127 firm years observations from 1987 to 2003.

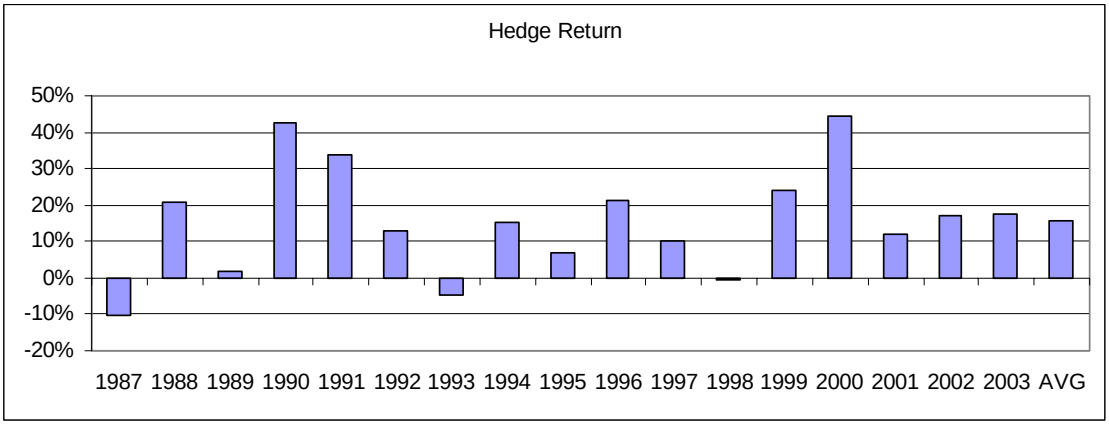

FIGURE 4

Abnormal returns of equally weighted cash flow portfolios

Cash flow portfolios are constructed by sorting all NZSX firms into five groups based on the magnitude of firm cash flows. The abnormal returns are firms' size adjusted returns. Sample consists of 1,127 firm years observations from 1987 to 2003.

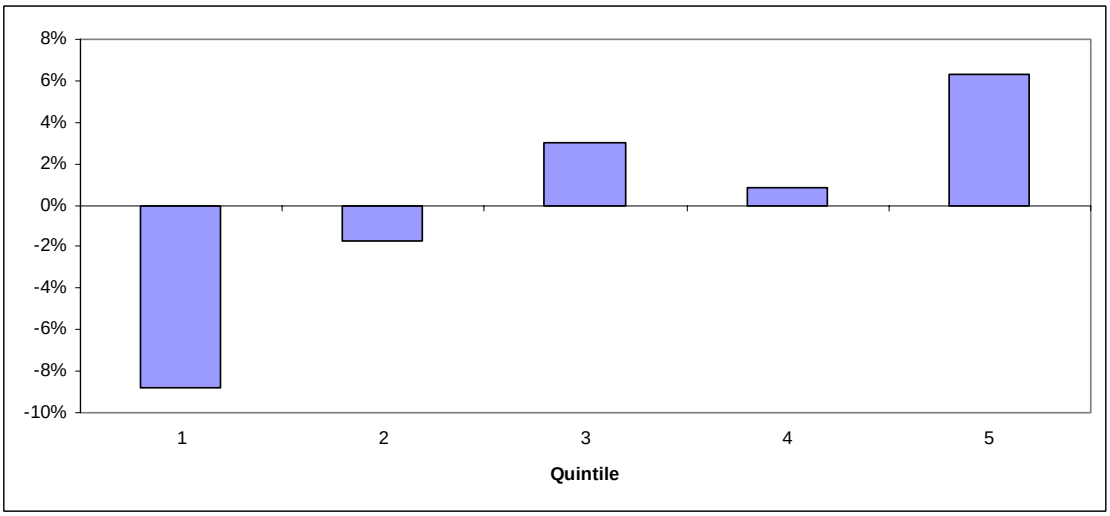

TABLE 1

The Persistence of Accruals and Cash Components of Earnings

The dependent variable is a one year ahead earnings, the explanatory variables are cash flows and accruals. Earnings are measured as operating incomes after depreciation. Cash Flows are operating cash flows. Accruals are the difference between earnings and cash flows. All variables are deflated by average total assets. Sample consists of 1,127 firm years observations from 1987 to 2003. t statistics are in pharentheses.

α	β_1	β_2
-0.01	0.95	0.54
(-1.78)	(20.26)***	(13.23)***
F-statistic	47.71***	

*** significant at 1%

TABLE 2
Average of Firm Variables Sorted by Accruals

Earnings are measured as operating incomes after depreciation. Cash Flows are operating cash flows. Accruals are the difference between earnings and cash flows. All variables are deflated by average total assets. Size is market value of firms' equity and B/M is Book equity/Market value of firms' equity. Book equity is total asset minus total liabilities. Return is defined as the buy and hold return calculated from 4 months after the end of the firms' fiscal years. Sample consists of 1,127 firm years observations from 1987 to 2003. t statistics are in pharentheses.

Panel A. Sorted by Total Accruals

Portfolio	Lowest	2	3	4	Highest
Earnings	-0.10	0.06	0.08	0.11	0.14
Cash Flows	0.12	0.10	0.08	0.07	-0.02
Accrual	-0.22	-0.04	0.01	0.04	0.17
Size	85.16	206.12	183.38	183.32	112.99
B/M	1.14	1.28	1.45	1.13	0.99
Raw Return	-2.15%	5.21%	2.82%	3.25%	4.90%
AR	-1.57%	3.77%	0.85%	1.03%	-4.13%
	(-0.63)	(1.71)	(0.44)	(0.53)	(-1.90)**
Hedge Return	2.56%				
	(0.55)				

Panel B. Sorted by Discretionary Accruals

Raw Return	-0.11%	6.31%	1.39%	0.17%	-3.67%
AR	0.91%	4.36%	-0.39%	-1.00%	-3.85%
	(0.37)	(2.01)	(-0.19)	(-0.54)	(-1.73)*
Hedge Return	4.76%				
	(1.01)				

Panel C. Sorted by Non Discretionary Accruals

Raw Return	-2.09%	3.26%	1.92%	-0.81%	2.45%
AR	-2.69%	2.29%	-0.15%	-1.75%	2.22%
	(-1.06)	(1.14)	(-0.07)	(-0.82)	(1.09)
Hedge Return	-4.91%				
	(-1.07)				

TABLE 3
The Association between Returns and The Components of Earnings

The dependent variable is one year future returns, the explanatory variables are earnings, cash flows, accruals. Earnings are measured as operating incomes after depreciation. Cash Flows are operating cash flows. Accruals are the difference between earnings and cash flows. All variables are deflated by average total assets. Sample consists of 1,127 firm years observations from 1987 to 2003. t statistics are in pharentheses.

Intercept	Earnings	Accruals	Cash Flows
-0.01	0.14		
(-0.80)	(3.88)***		
0.00		0.04	
0.03)		(0.84)	
-0.01			0.22
(-1.40)			(4.52)***
-0.01		0.04	0.22
(-1.37)		(0.86)	(4.52)***

TABLE 4

Fama-MacBeth Regressions: Size-Adjusted Returns and The Components of Earnings

The dependent variable is one year future abnormal returns, the explanatory variables cash flows and accruals. Cash Flows are operating cash flows. Accruals are the difference between earnings and cash flows. All variables are deflated by average total assets. Sample consists of 1,127 firm years observations from 1987 to 2003. t statistics are in pharentheses.

Accruals	Cash Flows
0.01	
(0.17)	
	0.31
	(5.18)***

Table 5

Average of Firm Variables Sorted by Cash Flows

Earnings are measured as operating incomes after depreciation. Cash Flows are operating cash flows. Accruals are the difference between earnings and cash flows. All variables are deflated by average total assets. Size is market value of firms' equity and B/M is Book equity/Market value of firms' equity. Book equity is total asset minus total liabilities. Return is defined as the buy and hold return calculated from 4 months after the end of the firms' fiscal years. Sample consists of 1,127 firm years observations from 1987 to 2003. t statistics are in pharentheses.

Portfolio	Lowest	2	3	4	Highest
Earnings	-0.12	0.05	0.08	0.11	0.17
CF	-0.15	0.03	0.08	0.12	0.24
Accrual	0.03	0.02	0.01	-0.01	-0.07
Size	48.72	142.74	195.91	235.35	147.25
B/M	1.26	1.50	1.42	0.98	0.83
Raw Return	-11.62%	-1.84%	5.76%	3.18%	8.60%
AR	-8.82%	-1.70%	3.01%	0.86%	6.35%
	(-3.77)***	(-0.71)	(1.60)	(0.45)	(2.99)**
Hedge Return (5-1)	15.84%				
	(3.55)***				

Table 6

Monthly Time Series Regressions of Buy and Hold Returns of Equally Weighted Cash Flows Portfolios on Market Risk, Size and Book to Market Ratio

Stocks are ranked based on the magnitude of operating cash flows scaled by average total assets. Equally weighted cash flows portfolios are formed on July of year t until June of year t+1. The sample period is from 1990 to 2003. A Fama and French 3 factor model is conducted for each quintile portfolio. R_{pt} is stock return of portfolio p in month t. R_{ft} is 1-month bank bill rate. R_{mt} is the market (NZSX All) return in month t. SMB is size factor (small minus big) in month t. HML is book to market (high minus low) factor in month t. t statistics are in pharentheses.

$$r_{pt} - r_{ft} = \alpha_0 + \beta_1(r_{mt} - r_{ft}) + \beta_2 SMB + \beta_3 HML + \varepsilon_{pt}$$

Portfolio	α_0	β_1	β_2	β_3
Low	-0.01	0.98	0.31	0.13
	(-2.24)	(9.84)	(3.70)	(1.24)
2	0.00	0.79	-0.06	0.11
	(-0.26)	(13.98)	(-1.28)	(1.97)
3	0.00	0.99	-0.16	0.14
	(1.59)	(16.59)	(-3.21)	(2.25)
4	0.00	0.87	-0.17	0.14
	(1.67)	(17.64)	(-4.23)	(2.70)
High	0.01	0.89	-0.12	0.04
	(3.48)	(16.66)	(-2.64)	(0.76)
Hedge (High – Low)	0.02	-0.09	-0.42	-0.08
	(3.52)	(-0.73)	(-4.38)	(-0.71)