Investing and Financing Cash Flow Disclosure Requirements—Value Relevant?

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Abstract:

Purpose – This study examines the statement made by Australasian accounting bodies, AASB and ICANZ, in 2004, that cash flow information is useful in assessing and comparing the relative value of firms.

Design/methodology/approach – The paper examines a panel of 5236 firm year observations of Australian and New Zealand firm data between 1995 and 2005. The study first estimates the determinants of investment activities by firms in the region. It then estimates the value relevance of investing and financing activities as disclosed in the cash flow statement. The methodology accounts for firm conditioning factors that affect the investment and financing decisions.

Findings – The study shows that investing and financing activities have value relevant impacts and the information facilitates the analysis of firm quality.

Research limitations/implications – The results represent an endorsement for the accounting bodies' market reform efforts in the region. Findings in the study indicate that low value firms can use heightened investment or financing actions to signal they are worth re-rating upwards. Further research regarding the generalisability of US results to a small market setting like that of Australasia is warranted.

Originality/value – The study adds to the small body of literature examining the value relevance of investing and financing activities in the context of firm value. It is also the first study of its type to examine this aspect of Australasian accounting disclosure reform.

Keywords: Cash flow, accounting disclosure, securities market regulation, investment, financing, Q, Australasia.

Article Type: Research paper

Australasian Cash Flow Reporting Regimes—Value Relevant?

1. Introduction

At the end of the 1980s and beginning of the 1990s, a number of countries including the United States, Australia, New Zealand, and the United Kingdom, through their respective accounting bodies required reporting entities to provide information on cash flows as a part of the financial statement reporting process. This study is an examination of the effectiveness of these initiatives in two of these countries, Australia and New Zealand. Studies by Livnet and Zarowin (1990) and Garrod and Hadi (1998), amongst others, have established links between cash flow data and wealth effects in the U.S. and the U.K. respectively, but it is useful to document the impacts of the accounting reforms in Australia and New Zealand, as these countries, while being open economies, do not enjoy the depth and efficiencies that the U.S. and U.K. markets enjoy.

In 1991, the Australian Accounting Standards Board (AASB) issued AASB 1026 that required reporting entities to provide an annual statement of cash flows. In 1987, the Institute of Chartered Accountants of New Zealand (ICANZ) went down the same path.[1] By 2004 both accounting bodies required the classification of cash flows into 'operating, investing or financing activities'. The AASB stated at the time:

> *Cash flow information is useful in assessing the ability of the entity to generate cash and cash equivalents and enables users to develop models to assess and compare the present value of the future cash flows of different entities.*[2]

This study examines the statement, with a particular emphasis on the value relevance of cash flows for investing and financing. The study contributes to the literature by showing how the accounting reforms achieved their stated purpose, and by extending the small amount of research investigating the financial impacts of investing and financing cash flow disclosures in the end of year financial statements (as opposed to operating cash flows). The study shows cash flow information is financially relevant when it is considered within the context of relative firm value.

While the intention of the cash flow accounting requirements is to encourage more disclosure of value-relevant information to investors, notable scholars like Stigler and Benston claim it is difficult to conclude exactly how mandatory disclosure rules have benefitted securities markets. Other critics argue that the information required in accounting standards, such as in the cash flow statement, are of little value to investors.[3] These types of challenges can be addressed through empirically testing the value impacts of the cash flow accounting reforms. Ultimately, the value of the reforms is an empirical question.

In an empirical analysis this paper shows that the investing and financing cash flow information as provided for in the reforms can indeed be used to discern value relevant information for investors. In the study we distinguish between high Q firms and low Q firms based on methodologies used in Kerstein & Kim (1995) and Jones (2001). We find that in Australasia low Q firms generate significant positive abnormal returns in the reporting season upon the disclosure of above average *investing* expenditure. We link this result to a *signalling* hypothesis that low Q firms resolve asymmetries about their quality and cash flow capacity through their investing activities, and these activities are

revealed, at least in part, in the end of year cash flow reports. Alternately, high Q firms do not generate abnormal returns upon the release of information about investing activities in the year-end accounts. Presumably this is because the market is already well informed about the investing activities of these firms, and, investing activity by these firms is not as revealing as they find it easier to raise external finance, see Gilchrist and Himmelberg (1995). It is also shown that firms that engage in higher levels of external *financing* activity enjoy positive abnormal returns in the reporting season. This result can also be interpreted from a *signalling* hypothesis perspective where the ability to raise finance reveals the firms are capable of resolving financing constraints.

These findings are unlike the findings in North American studies, where if anything, the effects are reversed. As such, the findings add weight to the comment in Chan, Faff, and Ramsey (2005) that the generalisability of US results to a small market setting like that of Australia is questionable. Our results support the view that the firms in the region can resolve the costs of information asymmetry through their investing and financing actions. It therefore follows that the statement of cash flows provides valuable information about these activities.

Our results support the view that the accounting reforms, in the form of mandatory cash flow reporting, were both necessary and worthwhile. They were necessary to facilitate the continued development and integration of securities markets in the region, and they were worthwhile in that the cash flow information required can be used to provide value relevant insights into firms' quality and prospects.

Before moving to a discussion of the hypotheses, empirical model specification and data we briefly provide coverage of the background literature for the study in the next

section. In section 4 we provide a discussion and analysis of the results and in section 5 we conclude.

2. Background Literature

The question as to what firm level information should be required in a well set up mandatory disclosure regime is an important one. Black (2001) shows that the quality of a country's securities market disclosure environment is linked to economic growth outcomes. He argues that weak securities regimes are characterised by firms being forced to rely on internal financing and/or bank financing to fund their investment programmes. Alternately, strong securities regimes make as a priority the containment of information asymmetry between informed and uninformed investors. Kim (1993) and Pirrong (2002) show how investors at an information disadvantage lose money on average when they trade with those who have an information advantage. Pirrong argues that mandatory disclosure works by forcing firms to reveal information and thereby reducing the potential losses of uninformed traders.

The empirical research on the value relevance of investment and financing disclosures is small and some of the results are ambiguous. McConnell and Muscarella (1985) conduct an event study of the event day value impacts of US based firm's investment announcements and show, on average, the announcement day value effects are positive. Livnet and Zarowin (1990) examine the information content of the end-of-year investing, financing and operational cash flows information in US based firms as required under the American Financial Accounting Standard (FAS) 95. They show that investing cash flows have no association with twelve month cumulative abnormal returns

(CARs), but financing cash flows have a positive association with CARs. Garrod and Hadi (1998) conducted a similar study on firms listed on the London Stock Exchange and their results indicate a negative relation exists between investing cash flows and abnormal returns (AR), and financing flows had no association with abnormal returns. These mixed results are resolved in Kerstein & Kim (1995) who show that the valuation effect following capital investment expenditure is heavily related to individual company factors, and as such, failure to allow for these factors would lead to weak capital expenditure response coefficients with measurements of abnormal returns. They posit that firms with only average investment opportunity sets available to them should have muted responses to the supply of investment information. Firms with poor investment opportunity sets, or firms facing significant agency costs, might conceivably find there are detrimental reactions to their investment disclosures. For an account of these possibilities, see the size maximization hypothesis (Malaesta, 1983) and overinvestment hypothesis (Jensen, 1986).

Jones (2001) addresses this issue in an empirical examination of the value impacts of investing cash flows activities in the context of information on the firm's investment opportunity set, or Tobin's Q. Jones found that the value impact of investing cash flow information is positive for high Q firms, and negative for low Q firms. These results are consistent with a Kerstein & Kim (1995) investment opportunity set hypothesis. Jones' study is based on US firms.

In research on the impacts of financing flows, Gilchrist and Himmelberg (1995) show how US firms' investment activity tends to be tied to operational cash flows, but show this effect does not apply to firms that had open access to capital markets. Constraining investment expenditure to operational cash flows is, of course, contrary to

Modigliani and Miller's (1958) proposition that a firm's investment decisions and financing decisions are independent. Eckbo (1986) and Spiess and Affleck-Graves (1999) show that firms that raise external finance in the form of debt or convertible debt issues generally have negative CAR reactions to these announcements.

3. Hypotheses, Model Specification and Data

3.a. Hypothesis Development

In line with the accounting bodies regulatory rationale, we are interested in examining the value relevance of Australasian firms' investment and financing cash flow information. The Australasian accounting bodies, like their peers in other localities, sought to encourage fuller, more meaningful, disclosures of value-relevant information to investors. The challenge in this research is to evaluate whether the adoption of these particular mandatory disclosure rules have benefitted securities markets. This essentially involves showing, in this case, that investing and financing cash flow disclosures have abnormal stock market return (AR) impacts.[1] However, this task is complicated by several factors, including being able to isolate the incremental impacts of the cash flow disclosures when other important financial information is being released in the same event period, particularly earnings information. Another important consideration is the definition of the event window during which the information is expected to have its returns impact. There is some difficulty in identifying when the cash flow information is first revealed. The end-of-year financial reporting process is somewhat 'continuous' and there may be a number of disclosures from firms in the reporting season, and a number of

[1] But even if there are no discernable value impacts the information may still have 'value' to investors for other reasons, such as for transparency motives, or solvency motives.

these could contain information about financing or investing cash flows. For this reason, cash flow relevance researchers such as Jones (2001) and Livnet and Zarowin (1990) prescribe very wide event windows of 12 months to examine their hypotheses.

A further design factor to recognise in event studies such as this is that the relative 'quality' of the firm can influence the way the market reacts to news announcements. Following Kerstein and Kim (1995) and Jones (2001) it is argued that low value, low quality/value firms may experience quite different market reactions to investing or financing activity news than high quality/value firms. Kerstein and Kim argue that low quality/value firms send an adverse signal when they engage in investment activity, in an effect linked to the 'free cash flow' problem. On the other hand, in Malone and Ou (2008) argue that the low value/quality distinction is important for another reason. Here it is argued that smaller firms may have low value because they suffer from an asymmetric information discount, perhaps because they have been overlooked by investors and analysts. In this case, news on investment or financing activities may help to resolve this discount by *signalling* positive information about the firm, and the firm's values may rise. Malone and Ou show that low Q firms in Australia that engage in mergers and acquisitions earn superior abnormal returns upon news of their actions.

On the basis of these observations, the hypothesis we propose is:

H_1: Abnormal returns are a function of the level of investing and financing activities, once consideration is made for the firm's earnings, relative value, and the event window is wide enough to capture the effects of the announcements .

3.b. Empirical Model Specification

In the specification of the value relevance hypothesis a two step analysis is employed. The first stage requires the estimation of firm level risk adjusted average abnormal returns (AARs) during an event window that is wide enough to capture any end-of-year the reporting on cash flows. We note that since 2003 Australian firms (ASX) must report to the stock exchange within two months of balance date; the window had been 75 days before 2003. In New Zealand the reporting deadline on the NZX is 60 days from balance date. This means all firms report their end of year financial reports within a three month period immediately following the balance date of the i^{th} firm, denoted *BalanceDate(1,3)* in this study.[2] On this basis, a market model specification for each firm is estimated on monthly returns data:

$$R_{i,t} = \alpha_i + \beta_i(R_{m,t}) + c_i BalanceDate(1,3)_{i,t} + e_{i,t} \qquad (1)$$

where $R_{i,t}$ is the monthly return on the ith stock in month t; α_i and β_i are the market model intercept and slope estimates on the ith stock, and $R_{m,t}$ is the monthly return on the Datastream market capital index for the country. *BalanceDate(1,3)* is an indicator with a value of 1 during the reporting season months, as described above. For instance, for a firm with a 30th June balance date, the months of July, August, and September are the 'reporting season' months and these form the event window over which average abnormal returns are measured; the other 9 months of the year represent the estimation window and capture the market model parameters, alpha and beta, for each firm. The

[2] We also examine other event periods, such as 12 month windows, for diagnostic purposes.

assumption within the design is that the reporting season months are when the market first has access to the investment and financing information. This assumption is often not realistic for a number of reasons, particularly in continuous disclosure regimes. Australia has had a continuous disclosure regime since 1994[3] and New Zealand since 2002[4]. In these regimes material capital investment or financing announcements are required to be made as the actions occur, and therefore they could be made outside the time of annual results presentations. Additionally, measuring a response during the annual report release period introduces the possibility that other disclosed information will be partially responsible for the measured impacts upon returns. For this reason we account for other conditioning variables that may impact on returns in the reporting window, most notably reported earnings (and/or operating cash flows). A further point to make about the three month window allocated to the event period is that such windows are increasingly common in event study design. The calendar time portfolio method (CTPM) uses a time bucket approach where event windows are commonly from one to five years long, see Mitchell and Stafford (2000) and Boehme and Sorescu (2002).

The next step in the testing design takes the firm-wise reporting season average abnormal returns (AAR) from equation (1) and estimates the impacts of the test and conditioning variables on these. The following equation is used to make this assessment.

$$AAR_{i,t} = a + bQDummy(low\ or\ high)*Investment_{i,t} + cQDummy(low\ or\ high)*Financing_{i,t} + dCash\_dummy_{i,t+} fSize\_dummy_{i,t+} gUpProfit\_Dummy_{i,t+} hPrior\_returns\_dummy_{i,t+} iLeverage\_dummy_{i,t+} jLongtermdebt\_dummy_{i,t+} kSIC\_dummy_{i,t+} lCountry\_dummy_{i,t+} e_{i,t} \quad (2)$$

[3] http://www.asx.com.au/about/pdf/Continuousdisclosure-TheAustExperience.pdf.

[4] Dunstan, Keitha L., Gallery, Gerry Thomas and Truong , Thu Phuong,Public Regulatory Reform and Management Earnings Forecasts in a Low Private Litigation Environment(July 21, 2009). Available at SSRN: http://ssrn.com/abstract=1436733

Where *Investment* is investing cash flow scaled by beginning-year book assets; *Financing* is net cash flow from financing activities scaled by beginning-year book value of assets (this number is expressed as a positive when finance has been raised); %ChangeProfit is the percentage change in reported after tax profit scaled by beginning-year book assets compared to the previous year; Cash is year-beginning stock of cash and marketable securities scaled by beginning-year book assets. *Size* is the natural log of beginning year total assets has a value greater than the median for the variable. Prior Returns are calculated as the holding period return for the firm's shares over the period, Balance Date (-6,0) where the number is referenced to the month of the end-of-year balance date. Leverage is year-beginning total long-term debt plus current liabilities scaled by beginning-year book assets. *SIC* is a dummy set to 1 if the firm is active in the resource sector; *Country* is a dummy set to 1 if the firm is from New Zealand. We also examine the key relationships in a univariate analysis, in doing this we define *Q* is market value of equity plus book value of debt scaled by the beginning-of-year book assets;

We define a firm as high Q if its Q ratio is greater than 1. The choice of 1 is based on the rationale that if investors are prepared to pay more than a dollar for a dollars worth of net assets they must believe the firm has better than average growth (or investment) prospects. The expected signs on the Q and profitability measures are positive.

We then employ an interaction variable approach to account for the effects of relative firm value. This involves measuring the joint interaction of firm Q and investing activity, and firm Q and financing activity. For clarity we model both a low Q equation and a high Q equation.

$$AAR_t = a + bQDummy(low\ or\ high)*Investment_t + cQDummy(low\ or\ high)*Financing_t + dCashStockdummy_t + fSizedummy_t + gUpProfitDummy_t + hPriordummy_t + iLeveragedummy_t + jLongtermdebtDummy_t + kSIC_t + lCountry_t + e_t \quad (3)$$

Definitions are provided in equation (1) but are modified into indicator variable form. The indicator variable approach has two advantages; it assists in the interpretation of AARs; and it overcomes the affect of 'freak' ratios on the regression output, such as when the denominator in a ratio approaches zero. *HighQdummy* takes a value of 1 when Q is greater than 1; *LowQdummy* takes a value of 1 when Q is less than or equal to 1; *UpProfitdummy* takes a value of 1 when %ChangeProfit has a value greater than the median for the variable over all observations; *CashStockdummy* takes a value of 1 when Cash Stock has a value greater than the median for the variable over all the observations; *Priordummy* takes a value of 1 when Prior Returns has a value greater than the median for the variable; *Leveragedummy* takes a value of 1 when Leverage has a value greater than the median for the variable. *LongtermdebtDummy* is a dummy taking a value of 1 when long term debt has been raised during the year. We note that the design in this event study follows quite closely the methodology in Jones (2001) and Livnet and Zarowin (1990) who examine the value relevance of US based firms' cash flow disclosures by measuring cumulative abnormal returns (CAR) over 12 months indexed to the balance date +3 month.[5]

3.c. Data

A database of firm financial details for firms listed on the Australian and New Zealand stock exchanges, ASX and NZX, over the eleven year interval 1995 through 2005 is developed. This information is retrieved from three databases, namely

Datastream, Investment Research Group (IRG) Datex and SIRCA. The data collected contains the firms' operating cash flows, investing cash flows, financing cash flows, Q-ratios, cash stock, leverage, and dividends. Monthly issue and dividend adjusted stock and market index prices were obtained from Datastream. Investing cash flows are defined as those generated in the acquisition and disposal of long-term assets and other investments; and, financing cash flows are those generated when the firm changes its level of contributed equity or borrowings.

Observations that do not fit within the following boundaries are removed: $0.0 \leq Q_t \leq 20.0$; $-1.0 \leq \text{Investment}_t \leq 1.0$; $0.0 \leq \text{Leverage} \leq 1.5$ where the variables are scaled by beginning-year book value of total assets. The boundary conditions are used to avoid the effects of irregular data such as from firms that experience ongoing losses, unusual mergers, or other significant events. The final data set consists of an unbalanced panel consisting of 5236 firm-year observations over 11 years, from 1995 to 2005, made up from 1112 companies, of which 140 are from New Zealand and 972 are from Australia. The maximum sample size in any one year is 888 in 2004, and the minimum is 204 in 1996. This span of coverage compares well with other studies of a similar nature (e.g. Farshadfar, Ng and Brimble, 2008, 13 years; Riddiough and Wu, 2008, 14 years; Jones, 2001, 8 years).

Outliers: We eliminate every observation which contains at least one component that is more than four standard deviations away from its cross-sectional mean. On average, 9.5% of the sample firms are deleted in any particular year due to component outliers. Wilson (1986), using the same ~iefinition of outliers, reports that more than 7% of the firm-years in

his samp'~e are deleted due to outliers, although he uses fewer components than we do. The results of this study are insensitive to the deletion of outliers. Livnet and Zarowin

4. Results

4.a. Descriptive results

Table I Panel A shows the value weighted descriptive statistics for the sample. It shows that Australasian firms have high relative rates of investment activity, cash flows from operations, dividend payment rates, and lower rates of financing cash flows compared to the reported results in United States (US) studies, such as Riddiough and Wu (2008). Australasian firms investment activities were made at an average rate of 14.6% of beginning-of-year total book assets per annum. This compares with a rate of 10.9% in similarly measured US firms over the period 1990-2003 reported in Riddiough and Wu. Australasian firms also generated relatively high rates of operational cash flows, at a rate of 16.4% of beginning-of-year total book assets compared to the 7.9% reported in Riddiough and Wu. Australasian firms also have higher dividend payout ratios, at 3.3% of beginning-year total assets compared to 1.7% in US firms. Another contrast is the rate of financing cash flows. In this study financing flows have an average value of -1.9% of beginning-year total assets; the comparable ratio in Riddiough and Wu (2008) is 2.7%. Australian firms, however, hold about the same proportion of cash stocks as their US counterparts, with 6.3% of total assets being held in cash and deposits compared with 6.2% in the US. Table I Panel B presents the equally weighted firm-year results for the sample in aggregate.

The results generally highlight the region's uniqueness. Australia and New Zealand both typically run balance of payments current account deficits which has the effect of raising the risk premium and interest rates in the region. The primary industry and utility based nature of the firms in the region also provide a point of contrast to samples out of the US or UK. Figures 1 and 2 graphically illustrate some of the key features of the data. In Figure 2 it is notable that the rate of investment activity is relatively constant compared to the rate of operational cash flows. It is also notable that the use of net financing inflows is quite rare, with only two years where a net inflow of financing occurred. The figure also illustrates that financing tends to be used to fund investment when operational cash flows are lower.

Figure 1 and 2 Here

Table I Here

4.b. Determinants of investing activities

Table II presents the results of univariate and multivariate specifications of the investment function in relation to the Q ratio and the profitability of the firm. The results in Panel A show that the Q ratio is an important discriminator in terms of the rate of investment and to the rate of change in firm profitability. High Q firms are shown in Panel A to invest at a rate of 14.4% of beginning-of-year assets compared to a rate of 10.5% in low Q firms. High Q firms also have superior annual profit growth rates of

8.7% compared with 5.3% in low Q firms. The differences are highly significant in both cases. Panel B reinforces this view where it is shown in a multivariate setting that both Q and the rate of change in firm profitability both have significant positive relationships with the rate of investing activity. Panel B also shows that other factors have a positive impact on relative investing activity, these are the size of the firm and by being in the resource sector. Alternately, investment activity is negatively associated with prior period share market returns, and if the firm was from New Zealand. The beginning of year balance in cash stock and the beginning of year leverage ratio had no determinable impact on investment activity. The results of the partial equation analysis, in Model 1a, show the effects continue to hold, albeit at a lower level of adjusted R-squared. Overall, the results support hypothesis one, that *investing activity is a function of the quality of the firm's investment opportunities and their access to internally generated cash flows.* The results are consistent with the literature and show that investment activities tend to be made by firms that are bigger, have better investment opportunities, and are more profitable. The prior period returns result suggests firms tend to engage in investment activity in a counter-cyclical manner to the stock market. The overall conclusion from the analysis of the investment function in Australasia is that the cash flow statement yields considerable insight into the investing behaviour, and quality, of firms in the region.

Table II Here

4.c. The value relevance of investing and financing activities

Table III presents the results of univariate and multivariate specifications of the value impacts (AAR) of investment and financing cash flow information in the context of firm relative value, or Q. The results in Panel A show that the average abnormal returns in the reporting season are significantly linked to the firms' Q ratios, investment levels, and level of financing activity. Low Q firms are shown in Panel A to earn AARs in the reporting season at a rate of 12.3% compared to a rate of 8.9% in high Q firms. The difference is significant. Firms that report higher than the median level of investment activity experience a 10.1% AAR in the reporting season compared with 9.7% for those with more modest investment expenditure. The difference in this case is not significant in a univariate analysis. Firms that report higher than the median level of financing activity experience an 11.2% AAR in the reporting season compared with 8.5% for those with more modest finance activity. This difference is significant at the 10% level.

Panel B reinforces and strengthens these findings in a multivariate setting. It is shown that low Q firms that engage in higher than median *investment* activity experience a 22.5% AAR in the reporting season; see the interaction variable LowQ * Investment (model 2). This result is highly significant. On the other hand, high Q firms that engage in higher than median investment activity experience a significant -3.6% AAR in the reporting season window; see HighQ * Investment (model 1).

A somewhat similar story occurs in regard to financing activities. Low Q firms that engage in higher than median *financing* activity experience a significant 3.9% AAR in the reporting season; see the interaction variable LowQ * Financing (model 2). While, high Q firms that engage in higher than median financing activity experience just a 0.3% significant AAR in the reporting season window; see HighQ * Financing (model 1).

An interesting point here is that when we model the AAR regression in a non-interaction variable form, where investment cash flow activities and financing actions are modeled as separate variables, neither of the variables have any direct net value impacts. See model 3 which shows this result.

Table III Here

The table also shows that higher profitability and the issuance of debt have positive relevant value impacts. As expected, improving profitability is linked to positive abnormal stock returns. The positive link between the issuance of long term debt and abnormal stock returns is another indication that financing information is value relevant. The standard response to debt issuance is that it has a slightly negative returns effect, see Eckbo (1986), so the positive result in Australasia suggests that firms signal their creditworthiness and capacity to expand through raising finance. The negative relationship between size and abnormal returns in the reporting season is probably to do with the lower risk associated with larger firms and an indication that the market is already well informed about larger firms prospects before the reporting season. The negative relationship between prior returns and abnormal returns is an illustration of the reversion to mean effect. The coefficient on the country variable suggests that New Zealand stocks did not perform as well as Australian stocks over 1995-2005.

It is important to recognise the importance of the interaction term in our analysis. To illustrate this we provide the results from an estimation equation where the interaction term is not modelled, but investment and financing flows are measured separately, but in aggregate. The specific equation is: $AAR_t = a + bQDummy_t + cInvestDummy_t + dFinancingDummy_t + eCashStockdummy_t + fSizedummy_t + gUpProfitDummy_t +$

$hPriordummy_t + iLeveragedummy_t + jLongtermdebtDummy_t + kSIC_t + lCountry_t + e_t$. The results reported in Table III Panel C show the investing and financing variables have no statistical correlation relationship with abnormal returns when measured in aggregate. The Q ratio is negatively related to abnormal returns when it is measured in aggregate. The adjusted R-square of this model, at 1.3%, is also inferior to the model 2 that has interaction term equations. In model 2 the adjusted R-square is 2.1%. These results highlight the importance of sensibly disaggregating the data. We see in this study of Australasian securities markets examples of low value firms being integrated and upgraded by the market as a result of their adventurous investment and financing activities. The actions appear to be resolving some form of information asymmetry about the firms.

5. Conclusion

This study empirically examines the claims made by Australasian accounting bodies, AASB and ICANZ, in 2004 that cash flow information, as provided for in the mandated statement of cash flows, is useful for assessing the relative value of firms. In a study specifically targeted at the value relevance of Australasian firms' investment and financing cash flow activities the results clearly support the claim that the information is a valuable source of information for investors attempting to interpret share market value prospects. The results represent an endorsement for the region's accounting body's securities market reform efforts.

The key discriminator in the study's design is the recognition that investment and financing information is useful in the context of relative firm value. It is shown that firms that have low relative valuations, but are able to engage in relatively high levels of

investing or financing activity earn abnormal and positive stock returns during the financial statement reporting season. On the other hand, firms that already enjoy high relative values tend to receive negative average abnormal reactions to information on heightened investment activity. This type of response in Australasian data has been documented previously in studies, such as in Malone and Ou (2008) where low value firms that engage in mergers and acquisitions are well received by the share market upon news of the actions. The result is unexpected in the sense that an effect illustrated in North American studies, the *overinvestment hypothesis,* proposes that low value firms have a tendency to overinvest and thereby destroy firm value. The evidence that this effect is reversed in Australasia suggests that low value firms in this region may suffer from low value not because they are low in quality, but because they are simply being overlooked by the market. That is, the market is segmented. This reinforces Chan, Faff, and Ramsey's (2005) comment that the generalisability of US results to a small market setting like that of Australia is questionable. So in conclusion, the required disclosures on firms' financing and investing activities not only have value relevance to investors, but the information is crucial in sustaining investor confidence in the integrity and credibility of the securities market in the region. Finally, further research regarding the generalisability of US results to a small market setting like that of Australasia is warranted.

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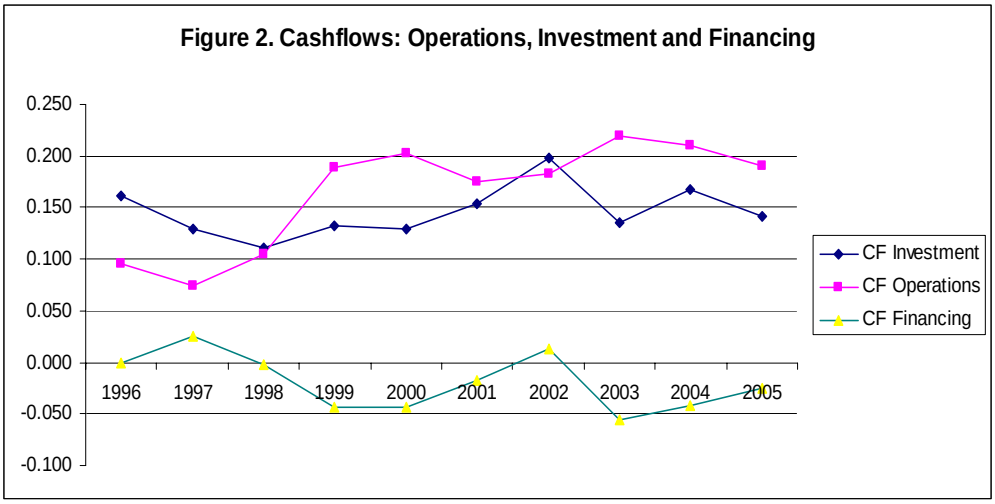

TYPE	mean	median	std	t	
intercept	0.006	-0.001	0.276	1.63	
mktret	0.621	0.477	6.306	7.89	***
event	0.018	0.015	0.349	4.22	***
AH0	1.904	0.007	122.383	1.25	
AH1	0.139	0.003	0.491	22.75	***
GH1	0.256	0.095	0.321	63.90	***
het_vm_ret	-13.473	-0.011	65.984	-16.36	***
het_event	-0.090	-0.004	3.580	-2.00	**
N	6418				

Analysis Variable : ret									
Mean	Median	Minimum	1st Pctl	99th Pctl	Maximum	Std Dev	Skewness	Kurtosis	N
0.015508	0.000000	-0.996368	-0.394246	0.707199	5.678788	0.206593	4.965196	76.257891	88711

Regression eq 1 output

Variable	Mean	Median	Minimum	1st Pctl	99th Pctl	Maximum	Std Dev	Skewness	Kurtosis	N	t Value
Intercept	0.0006	0.0000	-0.3733	-0.1469	0.1968	0.6790	0.0624	1.2048	10.2871	6418	0.71
mktret	0.6244	0.5035	-11.6175	-2.8275	4.6915	18.3739	1.3380	0.8537	12.6213	6418	37.39
event	0.0265	0.0163	-0.9010	-0.2939	0.4895	1.8294	0.1399	2.0016	18.2621	6418	15.17

highq	N Obs	Variable	Label	Mean	Median	Minimum	1st Pctl	99th Pctl	Maximum	Std Dev	Skewness	Kurtosis
0	2640	Intercept	Intercept	0.0050	0.0023	-0.3630	-0.1333	0.2109	0.6790	0.0637	1.3278	10.1968
		event		0.0908	0.0623	-2.7030	-0.9249	1.4686	3.3253	0.3982	0.9856	9.2984
1	2643	Intercept	Intercept	-0.0056	-0.0036	-0.3733	-0.1602	0.1826	0.6748	0.0644	1.1398	10.9878
		event		0.0916	0.0541	-2.3209	-0.8444	1.5037	4.9079	0.4322	2.3594	19.9690

highq	N Obs	Variable	Label	N	t Value
0	2640	Intercept	Intercept	2640	4.00
		event		2640	11.71
1	2643	Intercept	Intercept	2643	-4.46
		event		2643	10.90

Table I.

Panel A: Key Financial Ratios over the interval 1996 – 2005 (Value weighted)

Year	Freq	Q	Cash stock	Investment	Operations	Financing
1996	204	1.366	0.063	0.161	0.096	0.000
1997	240	1.281	0.060	0.129	0.075	0.025
1998	257	1.186	0.057	0.111	0.105	-0.003
1999	280	1.561	0.066	0.133	0.188	-0.044
2000	350	1.530	0.063	0.129	0.202	-0.043
2001	485	1.443	0.051	0.154	0.176	-0.018
2002	806	1.423	0.060	0.198	0.182	0.013
2003	878	1.384	0.063	0.135	0.220	-0.055
2004	888	1.496	0.068	0.168	0.210	-0.042
2005	859	1.593	0.078	0.141	0.191	-0.026
Average		1.426	0.063	0.146	0.164	-0.019

Panel B: Descriptive Statistics of Key Variables (Equal weighted)

Variable	N	Min	Max	Mean	Median
Investment	5236	-0.190	0.530	0.134	0.092
Q	5236	0.069	19.40	1.874	1.32
Operations	5236	-0.710	0.400	-0.004	0.049
Cash Stock	5236	0.000	1.000	0.173	0.073
Leverage	5236	0.000	1.5	0.250	0.040
Financing	5236	0.001	0.713	0.159	0.012
Operating cash flow $m	5236	-2366	15415	103.3	3
Investment cash flow $m	5236	-2705	14144	87	4
Financing cash flow $m	5236	-8634	5871	-13	0.3
Assets Total $m	5236	0.1	54388	624	48
Reported Profit $m	5236	-2418	7506	29	1

Notes: variable definitions: *Q* is market value of equity plus book value of debt scaled by the beginning-of-year book assets; *Cash Stock* is year-beginning stock of cash and marketable securities scaled by beginning-year book assets; *Investment* is investing cash flow scaled by beginning-year book assets; *Operations* is cash flow from operations scaled by beginning-year book assets; *Financing* is cash flow from financing scaled by beginning-year book assets. *Leverage* is year-beginning total long-term debt plus current liabilities scaled by beginning-year book assets.

Table II. Determinants of Investment Expenditure

Panel A: Results from univariate tests of the relationship between the firms' Q and investment cash flows and profitabilty growth

Dependent Variable	*Investment*	*%ChangeProfit*
Low Q	0.105 ***	0.053 ***
High Q	0.144 ***	0.087 ***
Difference	***0.039 ******	***0.034 ******

***, **, * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

Panel B: Results from an OLS test of the relationship between investment cash flows and measures of the firms' Q ratio, profitability growth, and other control variables.

Variable	*Model 1*	*Model 1a*
Intercept	0.055 ***	0.118 ***
Q	0.015 ***	0.009 ***
%ChangeProfit	0.006 ***	0.006 ***
Cash Stock	-0.014	
Log Size	0.009 ***	
Prior Returns	-0.027 ***	
Leverage	0.010	
SIC	0.066 ***	
Country	-0.072 ***	
N	5236	5236
Adj-R^2	0.058	0.005

***, **, * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

Notes: variable definitions: *Q* is market value of equity plus book value of debt scaled by the beginning-of-year book assets; *%ChangeProfit* is reported $profit_t$ minus reported $profit_{t-1}$ scaled by the beginning-of-year book assets. *Cash Stock* is year-beginning stock of cash and marketable securities scaled by beginning-year book assets; *Log Size* is the natural log of beginning year total assets; *Prior returns* are holding period returns for the firm's shares over the six month period leading up to the balance date. *Leverage* is year-beginning total long-term debt plus current liabilities scaled by beginning-year book assets. *SIC* is equal to 1 if the firm is active in the resource sector; *Country* is equal to 1 if the firm is from New Zealand.

Model 1: $Investment_t = a + bQ_t + cChange\ in\ Profitability_t + dCashStock_t + fLogSize_t + gPriorReturns_t + gLeveragedummy_t + hSICdummy_t + iCountrydummy_t + e_t$;

Model 1a: $Investment_t = a + b\ Q_t + cChange\ in\ Profitability_t + e_t$.

Table III. Abnormal Returns Analysis of Investing and Financing Cash Flows

Panel A: Results from univariate tests of the relationship between the Average Abnormal Returns in the reporting season and Q, Investing, and Financing indicators

Dependent Variable	*AAR(1,3)*
Low Q	0.123 ***
High Q	0.089 ***
Difference	***0.034 ** ***
Low Investment activity	0.097 ***
High Investment activity	0.101 ***
Difference	***0.004***
Low Financing activity	0.085 ***
High Financing activity	0.112 ***
Difference	***0.027 ****

***, **, * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

Panel B: Results from an OLS test of the relationship between AARs and measures of the firms' Q ratios, investing activity, financing activity, and other control variables.

Dependent Variable	*AAR(1,3)*			*AAR(1,3)*	
	Model 1			Model 2	
Intercept	0.115	***	Intercept	0.102	***
High Q * Investment	-0.036	*	Low Q * Investment	0.225	***
High Q * Financing	0.003	**	Low Q * Financing	0.039	*
Cash Stock Dummy	-0.003		Cash Stock Dummy	0.000	
Size Dummy	-0.074	***	Size Dummy	-0.078	***
Up Profit Dummy	0.062	***	Up Profit Dummy	0.063	***
Prior Dummy	-0.033	**	Prior Dummy	-0.025	*
Leverage Dummy	-0.005		Leverage Dummy	-0.006	
LT Debt Dummy	0.036	**	LT Debt Dummy	0.037	**
SIC Sector Dummy	-0.009		SIC Sector Dummy	-0.014	
Country	-0.071	***	Country	-0.061	***
N	5236			5236	
Adj-R^2	0.013			0.021	

***, **, * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

Notes: *HighQdummy* takes a value of 1 when Q is greater than 1; *LowQdummy* takes a value of 1 when Q is less than or equal to 1; *UpProfitdummy* takes a value of 1 when %ChangeProfit has a value greater than the median for the variable over all observations; *CashStockdummy* takes a value of 1 when Cash Stock has a value greater than the median for the variable over all the observations; *Priordummy* takes a value of 1 when Prior

Returns has a value greater than the median for the variable; *Leveragedummy* takes a value of 1 when Leverage has a value greater than the median for the variable. *LongtermdebtDummy* is a dummy taking a value of 1 when long term debt has been raised during the year. *SIC* is equal to 1 if the firm is active in the resource sector; *Country* is equal to 1 if the firm is from New Zealand.

Model 1or2: $AAR_t = a + bQDummy(low\ or\ high)*Investment_t + cQDummy(low\ or\ high)*Financing_t + dCashStockdummy_t + fSizedummy_t + gUpProfitDummy_t + hPriordummy_t + iLeveragedummy_t + jLongtermdebtDummy_t + kSIC_t + lCountry_t + e_t$

Panel C: Results from an OLS test of the relationship between AARs and measures of Q ratios, investing activity, financing activity, and other control variables when there is no use of an interaction term.

Dependent Variable	*AAR(1,3)* Model 3	
Intercept	0.138	***
High Q Dummy	-0.040	**
Investing Dummy	-0.008	
Financing Dummy	0.007	
Cash Stock Dummy	0.001	
Size Dummy	-0.073	***
Up Profit Dummy	0.062	***
Prior Dummy	-0.027	*
Leverage Dummy	-0.007	
LT Debt Dummy	0.038	**
SIC Sector Dummy	-0.014	
Country	-0.069	***
N	5236	
Adj-R^2	0.013	

Model3: $AAR_t = a + bQDummy_t + cInvestDummy_t + dFinancingDummy_t + eCashStockdummy_t + fSizedummy_t + gUpProfitDummy_t + hPriordummy_t + iLeveragedummy_t + jLongtermdebtDummy_t + kSIC_t + lCountry_t + e_t$

[1] In New Zealand, in October 1987, the NZSA issued SSAP 10 Statement of Cash Flows, and subsequently ICANZ issued Financial Reporting Standard 10 (FRS 10) Statement of Cash Flows, in 1992, and then later NZIAS 7 Cash Flow Statements, in November 2004. In Australia, in December 1991, the AASB issued AASB 1026 Statement of Cash Flows, followed by AASB 107 in 2004.

[2] AASB 107 - 2004, p. 11. Jones et al. (1995) expresses the same view that cash flow statements helps users assess the quality of earnings.

[3] Critics claim the cash flow statement is pointless and the information could be dissected from the skilful interpretation of the existing financial statement information anyway. John Stanhope, Telstra's CFO, makes the point that some accounting rules are pointless—in this case fair value rules (Leon Gettler 'Fair value' rule should be scrapped: Telstra'. FairfaxDigital, accessed June 30, 2008, http://business.smh.com.au/fair-value-rule-should-be-scrapped-telstra-20080627-2y2s.html,). Burton, Lonie and Power (1999) also make this case when they discuss rational expectations theory in the context of reported cash flow information.

[4] Regarding the question of using the dependent variable in eq(1) as an independent variable in eq(3)—so long as long there is some independence between it and its former estimators the treatment is acceptable. I have run a Pearson correlation test to examine this and can report that a number of the relationships are significant, but none have coefficients over 0.13.

In the specification of hypothesis one, the value relevance hypothesis, we follow the empirical design in … and test the relationship between firms .. activities (CFI) and proxies for their investment opportunity sets and their level of operational cash flows. The focus in our case is that the data is from Australian and New Zealand firms. With regard to measuring firms investment opportunity sets we use a derivative of Tobin's Q; and with regard to operational cash flows we employ an earnings measure, this is based on the Financial Accounting Standards Board (FASB) assertion that earnings rather than cash flows provide a better indication of an enterprise's present and continuing ability to generate favourable cash flows.[4] Following Riddiough and Wu we also recognise the investment decision may be conditioned by several other variables, namely, stored

liquidity (cash stock), firm size, prior returns, leverage, and SIC industry code. We also model country influences to account for differences between Australia and New Zealand. The following equation is estimated:

(1)

A reduced form is also estimated to establish partial results:

[5] We initially emulated Jones (2001) 12 month event window but found the results were clearer with a 3 month event window. We also believe the 3 month event window is more intuitively appealing in that this period represents the reporting season for firms.