#### BUSINESS CYCLES AND PROFIT WARNINGS: OVER AND UNDER REACTION OF U.S. FIRMS, ACCORDING TO SIZE AND INDUSTRY 1995-2009

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by

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#### ABSTRACT

This study examines whether investors overreact to bad news during good times (economic expansion) and under react to bad news during bad times (economic examines the investors' downturns). The study overreactions and under reactions to bad news during business cycles. It is found that the immediate price reaction to a firms' profit warning (bad news) is much stronger during periods of economic expansion than during periods of economic contraction. Firms that issue bad news during good times are severely punished by investors as opposed to firms that release negative news during bad times. Furthermore, the size of the company and the sector in which it operates is a major factor in the reaction of these firms' price shares due to the issue of the profit warning.

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#### **CHAPTER I:**

#### INTRODUCTION

The force and magnitude of profit warnings of firms are areas under discussion in many academic papers (Brown, 1978; Watts, 1978, Randleman et al. 1982; Jackson and Madura, 2003, Church and Donker, 2009). Jackson and Madura (2003) establish in their research an average negative abnormal return (CAAR) of 22 per cent during the time period of five days before and five days after profit warnings have been made public. Few other researchers also reached the same results (Church and Donker, 1999). Different results for the magnitude of the decline in stock price depends on the point in time of the study, and the physical location where the study took place (Kothari and Warner, 2003; Ahern, 2009). It has been defined that 'profit warnings' are a type of bad news and as such they provide imperative 'market' information for investors which is used to create and facilitate government policy (Beaver, 1988) as well as to test market efficiency (Firth, 1979).

The rational expectation hypothesis has proved that the stock markets do react excessively to profit warnings ('bad news') in good (expansion) times and under react to bad news in bad (contraction) times (Veronesi,1999). Recent research in the context of U.S. firms has found that investors overreact during the upward phase of the

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business cycle and under react during the downward phase of the business cycle (Adjit and Donker, 2011). This study further contributes to the literature by examining the nature and the extent of overreaction and under reaction of stock prices to the profit warnings of firms' size wise as well as industry wise differences of profit warning firms in the U.S. for the period 1995-2009. This study is primarily focused on how the different phases of the business cycles (expansion/contraction) influence the stock prices of those firms.

The study is organized in the following order: Chapter II reviews the literature on the subject and presents the various hypotheses for empirical investigation. Chapter III discusses the data base and methodology of the study. Chapter IV presents the empirical results. Chapter V summarizes the conclusions of the study.

#### **CHAPTER II:**

#### **REVIEW OF THE LITRATURE**

Kane, Lee and Marcus (1984) established that in general there is substantial evidence that earnings information can affect firm value. Clare (2001) observed a general pattern of pre-warning negative abnormal returns using a sample profit warning in the UK in the late 1990's. Profit warnings are related to revisions in earnings guidance in between normal dissemination of financial information and most often contain an element of market surprise (Morse, 1981; Rendleman, Jones, and Latane, 1982; and Bartov, 1992). Unlike earning announcements, which have a predetermined and recurring release date, profit warnings are not announced in advance, and as such, the component of surprise is larger, resulting in the subsequent sharp negative abnormal return of the price of shares. This leads to:

# <u>H1</u>: Issuing a profit warning leads to a negative abnormal return of stock prices of the issuing firm.

A firm announces a profit warning if it has strong evidence that the market's perception about future earnings is unrealistic. Datta and Dhillon (1993) found that unexpected declines in firms' earnings bring forth a negative and considerable stock price response. They have determined that market valuation declines by about 2 per cent, on average, in reaction to unanticipated earning declines. They have found that firms that issue profit warnings experience negative valuation effects at the time of the announcements. When the information is coming directly from the firm that is being valued, it is valid. The only remaining argument for a lack of response to profit warnings would be that the market already knows the information. Information leaks may have occurred, prompting management's desire for revaluation of the firm. Some information about the firm's profit may have been leaked to the public such as insiders informing analysts or institutional investors.

Grossman and Hart (1980) illustrate that officers of firms have incentives to reveal all known information to obtain higher share prices since failure to do so would cause shareholders to assume the worst about the firm. Shareholders can rely on the information disclosed when there are contractual and legal obligations and penalties for non compliance as well as consequences for managerial reputation in the case of misreporting.

Ajinkya and Gift (1984) and King et al. (1990) determined that managers desire, in general, to align investors' expectations with the forthcoming financial results, in order to avoid large stock price fluctuations, and to protect analysts from embarrassment. Nevertheless, there is a legal liability and thus a strong incentive for managers to warn investors of a large earning surprise. No warning in such cases may be construed as failure to correct or update the earlier

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statement and provide proper disclosure. Bremer and Sweeney (1991) documented that large stock price reactions are often followed by abnormal price reversals in the following days. Therefore, if there is a large negative response to a profit warning, some investors may sense the overreaction and will attempt to capitalize on the discrepancy and thereby forcing a stock price reversal a situation that will prevent arbitrage.

<u>H2:</u> The magnitude of profit warning impact (positive or negative) varies according to the phase of the business cycle (expansion or contraction).

During the economic expansion periods, investors will become highly confident that the market is in good state. Under such circumstances, further good news has little impact on investors' expectations. Such positive news only confirms the current state of the economy. However, bad news causes market prices to fall, since bad news lowers the perception of investors that the market is in a good state. The uncertainty about the state of the economy causes asymmetry in the responses to bad news. Bad news during good times will cause further uncertainty and will negatively influence market prices. Conrad et al. (2002) suggest that there are systematic shifts in the investors' sentiment that are common across stocks: specifically, during good times, investor confidence rises and investors extrapolate good news for firms. Although there are many studies on the impact of profit warnings as well as other events on share prices, there are very limited studies on the impact of profit warnings on its peers (nonannouncing firms) in the industry and across borders, and whether such impacts are also symmetrical across business cycles.

Jackson and Madura (2007) find that the market response to profit warnings is significantly less negative since the inception of Regulation Fair Disclosure (RFD), implemented by the Security Exchange Commission (SEC) on October 23, 2000. Barberis et al. (1998) argue that after a series of announcements of good news, investors become overly optimistic that future news announcements will also be good and hence overreact, sending the stock price to excessively high levels. During times of bad news managers might try to conceal bad news: Libby and Tan (1999) argue that investors penalize firms for not warning them, lose confidence in management that does not communicate, and firms that do not communicate news in a timely way could be exposed to legal action. The magnitude of the sharp drop in stock price after a profit warning can be attributed to many factors such as the business cycle during the time at which the profit warning was released (Veronesi, 1999). This leads to:

<u>H3:</u> The impact of profit warnings on stock price will be greater during periods of economic expansion since negative news is mostly unexpected during those times.

Managers are presented with a disclosure dilemma; should they warn investors of the impending surprise prior to the earnings announcement or should they keep silent. Skinner (2004) established that the likelihood of issuing a warning increases with the size of the earning surprise (expectation gap). The larger the impending earning surprise, the more quantitative and earning related is the warning. Therefore, it appears that the form and the content of the warning are chosen by managers to match the seriousness of the expectation gap. It is also found that the combined reaction to the warning and the subsequent earnings announcement is significantly more negative for firms that warned investors than for non warning firms. With that being said, it cannot be ruled out that there is a possibility that the observed relatively large negative reaction to warnings is also due to investors reading into the warnings more than the managers intended. Collett (2004) found that management may withhold profit warnings

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where they desire to conceal increased default risk from creditors and where directors hold share interests in the firm. H4: Different industries have different reactions to profit warnings.

O'Brian and Hodges (1991) found that high technology firms appear to be exposed to a larger than average risk of shareholder lawsuits, particularly at the early stages of operations, resulting from larger price fluctuations and potential losses to investors. Ataise et al. (2006) find that litigation risk magnifies the warning effect for bad news firms; the warning effect is more negative for high-litigation-risk firms than for low-litigation-risk firms. Also, the aggressive accounting techniques sometimes used by those firms may contribute to litigation exposure. Therefore, high technology firms for example, may be motivated to disclose more than firms in other industries to fend off investors and litigation.

Regulated firms such as banks and utility firms provide a large amount of operating information to regulators and thereby indirectly to the general public. This type of information is often more detailed and more timely than the quarterly financial reports. As such it is expected that regulated firms have less information asymmetry with investors than other firms and engage in a higher level of discretionary disclosure. Kasznik and Lev (1995) found that the mean earning surprise of the firms with good news is 2.9 per cent of the stock price, while the mean surprise of the bad news firms is negative 7.4 per cent. The median surprises are smaller than the means, indicating the existence of large positive and negative earnings surprises in their sample.

Krinsky and Lee (1996) investigated the behavior of the components of the bid-ask spread around earning announcements and found that adverse selection costs increase significantly in the time before and after the earnings announcement periods, which they considered as evidence of increased information asymmetry. Easterwood and Nutt (1999) found that analysts under react to negative earning information to the extent that when the analysts under react to a profit warning, there is an additional decline in the firms' valuation subsequent to the profit warnings.

Gennotte and Trueman (1996) examined the intraday timing of corporate announcements, concluding that the impact of a disclosure is expected to be stronger if it occurs during trading hours rather than after the market closes. Church and Donker (2009) report that firms with multiple successive profit warnings show less negative market return if they disclose more detailed information, thereby reducing the information asymmetry between shareholders and management. Jackson and Madura (2007) find that the new regulations on fair disclosure by the SEC in 2000 have effectively reduced the leakage of material information to favor financial analysts and their clients. Recent scandals where managers explicitly withhold negative news from investors have shown the necessity of more stringent financial regulations such as Sarbanes-Oxley (SOX) and RFD. <u>H5:</u> Larger firms have smaller drops in stock prices compared with smaller firms.

Lang and Lundholm (1993) found that firm size is associated with the frequency and quality of the corporate disclosure. Therefore, due to economies of scale large firms disclose more than small ones. Moreover, large firms are more exposed to litigation for having "deeper pockets" than small ones, and thus may disclose more to avoid litigation or at least to minimize it. Furthermore, Kearns and Whitley (2002) concluded that profit warnings are associated with a consistent decline in shares price which is larger in companies also experiencing negative earnings surprises but not issuing profit warnings. Management, as a result, will only choose to issue a warning in the most dire of circumstances. The extent of leverage increases and dividends fall to greater extent in profit warning –issuing firms than in those that experience a drop in profits without issuing advance warnings.

Jackson and Madura (2003) found that firms with large assets are especially prone to information leakage despite the surprise element within the profit warning. This is seen in the larger drop in their stock prices compared with smaller firms in the time of the preprofit warnings. They have found that there is little research about profit warning, perhaps because warnings were seldom issued until the late 1990's. Moreover, the signal conveyed in a profit warning is

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usually uncertain because the market may have anticipated the information from another source and it was disseminated about the firm, the industry, or the general economy. Their analysis revealed that this effect is more than seven times the typical market response to negative earnings announcement in other similar studies. They have found that when they combine the results of a four day period, share prices of firms that issued profit warnings declined by an average of 17.1 per cent over a six-day period ending on the date on which the warning was announced in the Wall Street Journal.

The findings of Collett (2004) suggest that for smaller firms, there is an overreaction in the market unexpected information. Bulkley and Herrierias (2005) observed the same negative abnormal return after profit warnings, and further differentiated the results into those that only warn of lower than expected profits and those that add a revised forecast in addition. In their study, negative market performance was greater where the content of the profit warning was more vague and imprecise. Kasznik and Lev (1995) and Helbok and Walker (2003) both found that the firm's management is more likely to issue a warning when the financial problems are of permanent and persistent nature. If there is a onetime drop in the firm's earnings, then management is much more likely to forego a warning and save the news as well as the surprise until the actual earnings announcement.

#### **CHAPTER III:**

#### DATABASE AND METHODOLOGY

This chapter discusses the database and methodology used in the study. Section 3.1 discusses the database and Section 3.2 deals with the methodology.

#### 3.1. Collection of Profit Warnings

The profit warnings for the study were collected for the 1995 to 2009 period through the Wall Street Journal and other chief daily newspapers. Since profit warnings can go by several different names in the latest media, several different search terms were used, such as "profit warning", "earning adjustments", and "earning warnings."An adjustment was made to the date that the profit warning was released; before or after "the closing bell" to distinguish between profit warnings released prior the opening of the trading hours in the stock market and those released after trading hours.

#### 3.2. Methodology

To test if the abnormal returns differ based on the point during the business cycle where they occur; the sample of profit warnings was divided into a group for each year in the study. Moreover, the sample was separated into those warnings that happened during economic contraction and those that happened during economic expansion. Based on the National Bureau of Economic Research (NBER, 2010) a recession is a significant decline in activity spread across the economy, lasting more than a few months, visible in industrial production, employment, real income, and wholesale-retail trade. Expansion is the normal state of the economy. NBER has defined: Expansion 1991 (4) - 2001 (3); Recession 2001 (4) - 2001 (11); Expansion 2001 (12) - 2007 (12); Recession 2008 (1) - 2009 (6). Thus, in the study there are two upward phases, and two downward phases.

(Days before	Cumulative Average Abnormal Return (CAAR)			
and after)	(%)			
Event window	Market model	Market adjusted mode -12.62***		
(-1,+1)	-12.67***			
(-3,+3)	-13.95***	-13.80***		
(-10,+10)	-16.12***	-15.91*** -17.31***		
(-30,+30)	-17.93***			
(-30,-1)	-7.36***	-6.92***		
(+1,+30)	-0.65	-0.44		

## Table 1: Cumulative Average abnormal Return (CAARs) for profit warning issuing firms in economic expansions (N=805)

- \*\*\* Indicates significance at the 0.001 level.
- \*\* Indicates significance at the 0.01 level.
- \* Indicates significance at the 0.05 level.

Table 2: CAARs for profit warning issuing firms in recession periods (N=258)

Event window	Market model	Market adjusted model		
(-1,+1)	-9.72***	-10.02***		
(-3,+3)	-10.49***	-10.66***		
(-10,+10)	-11.44***	-11.30***		
(-30,+30)	-15.00***	-14.38***		
(-30,-1)	-7.23***	-8.36***		
(+1,+30)	0.44	2.44*		

Note: Same has in Table 1.

An event study methodology was used to analyze the effect of profit warning on stock prices (Brown and Warner, 1980, 1985; Campbell et al., 1997; MacKinlay, 1997; Mills et al., 1996 and Mishra et al., 2007). The daily stock price data pre and post profit warning date was collected from Datastream database for most, but not all, profit warnings. The collection of stock price data was automated through use of EventStream software, and the abnormal returns were calculated through Eventus software (Cowan, 2009). The abnormal returns for the profit warnings from each firm were calculated using both the market model and the market adjusted model (equation 3 and 4), based on a value-weighted total-market index from Datastream. An event window of 30 days before and 30 days after the day of the profit warning was used for this event study. The pre-estimation period for the event study was 240 days prior to the event date, equivalent to approximately one year of trading. The case for event studies has been made by Brown and Warner (1985), and this technique is widely used in the empirical investigations (Kothari and Warner, 2005).

Based on the framework of Brown and Warner (1980) and Campbell, Lo and MacKinlay (1997), let t=0 represent the time period t relative to the profit warning event and actual return (Rit) is:

$$Rit = Kit + Eit$$
(1)

Where Kit is the "normal" (i.e., expected or predicted return of a particular model) and Eit is the component of the return which is abnormal or unexpected. Thus the abnormal return (AR) is the difference between the observed return and the predicted return:

$$Eit = Rit - Kit$$
 (2)

In the econometric investigation, a model of normal returns (i.e., expected returns unconditional on the event but conditional on other information) needs to be specified. For this purpose the market model (MM) and market adjusted model (MAM) were used and are given in equation (3) and (4) Market Model:

$$AR_{i,t} = R_{i,t} - \left(\widehat{\alpha} + \widehat{\beta}_{1}R_{m,t}\right)$$
(3)

Market-Adjusted Model:

$$ARj,t = Ri,t - Rm,t \tag{4}$$

Where Rm, t is the market return for day t. Although, calculations for both market and market adjusted models were done, the empirical analysis is mainly based on market model. We found no significant difference between the market model and the market adjusted model in our empirical results.

#### **CHAPTER IV:**

#### **EMPIRICAL RESULTS**

This chapter presents the empirical results and is arranged as follows: Section 4.1 presents descriptive statistics, Section 4.2 presents estimates of CAARs according to phases of business cycles, Section 4.3 presents estimates of CAARs according to industry and Section 4.4 presents estimates of CAARs according to firm size.

4.1 Descriptive statistics





The empirical results reveal an immediate decline of 11.9 per cent one day before and one day after the issue of the profit warning followed by further decline of the average return of up to 17.2 per cent overall in the event window of 30 days before and 30 days after the release of the profit warning. This data is significant across all firms in the sample across business cycles as well as with respect to the size of the firms. As such, the results support and validate the hypothesis that issuing a profit warning leads to a negative abnormal return for the shares of the issuing firm.

To test if abnormal returns differ from year to year in the business cycle where they occur, the sample was divided to profit warnings for each year in our study. Figure 2 presents the number of profit warnings during the period 1995-2009. As it is evident from figure 2, the numbers of profit warnings were highest during 2001. Since 2002 the number has been a moderated, reflecting new regulation (SOX). Then the abnormal returns were calculated with the market model and market adjusted model for each year and are plotted in Figure 3.



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Figure 2: U.S. profit warnings and trends in S&P 500 Index (yearend close) - 1995-2009



Figure 3: CAARs of Profit Warning Firms in U.S.-1995-2009

#### 4.2 Estimates of CAARs according to phases of business cycles.

During economic expansion periods, investors will become more confident that the market is in a good condition. On the other hand, when bad news is released it causes market prices to fall, since bad news lowers the perception of investors that the market is in a good state. Furthermore, as uncertainty in the real state of the economy grows, investors who are risk-averse require a higher return. The overall uncertainty about the condition of the economy results in asymmetry in the response for bad news.

Donieda			Event \	Window		
Periods -	-1+1	-3+3	-5+5	-10+10	-20+20	-30+30
1995(1)- 2001(2)	-0.1518	-0.1679	-0.1769	-0.1927	-0.1925	-0.1999
2001(3)- 2001(11)	-0.1014	-0.1126	-0.1175	-0.1259	-0.1463	-0.1890
2002(12)-2007(12)	-0.1013	-0.1106	-0.1191	-0.1292	-0.1430	-0.1586
2008(1)- 2009(6)	-0.0805	-0.0770	-0.0696	-0.0737	-0.0513	-0.0133

 
 Table 3: CAARs of Profit Warnings According to Business Cycles-1995-2009

The empirical results based on equation 3 in chapter III presented in the table above. The average CAARs during the event window (-1, +1) shows that the negative abnormal returns were relatively higher during the economic expansion periods (negative 15.2 per cent and 10.1 per cent respectively ) compared with the average CAARs during economic contraction periods (10.1 per cent and 8.0 per cent respectively). These results generally support hypothesis 2 thus making it valid as the magnitude of profit warnings vary according to the phase of the business cycle.

Moreover, it validates the results of hypothesis 3 by proving significantly that the impact on stock price is greater during periods of economic expansion in view of the fact that negative news is mostly unexpected during those times.

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Figure 4: CAARs of U.S. Firms According to Business Cycles

Xu (2008) suggests that the negative market reactions to warning firms are a demonstration of the investors' over reaction. The fact that good (bad) news is followed by positive (negative) returns is referred to as the post earnings announcement drift. Conrad et al. (2002) suggest that there are systematic shifts in investor sentiment that are common across stocks; specifically, during good times, investor confidence rises and investors extrapolate the good news for firms. He finds support for the hypothesis that stock prices respond most strongly to bad news in good times. In particular, the stock price response to negative earnings surprises is increasing as the market level rises. On the other hand, firms providing specific information that the extrapolation of good news is not applicable to them are severely punished. During bad times, the opposite reaction happens. Veronesi (2002) shows that international markets tend to be more correlated when the countries are in a recessionary state simultaneously. Good news during bad times are more likely to be interpreted as a switch back to high state compared to bad news during good times which is interpreted as a switch to a low state.

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#### 4.3 Estimates of CAARs according to industry

For the purpose of this study the total sample was divided into two classifications: one group included all the firms that are Manufacturing and Services firms (Non ICT) and the other group included all the companies that are Information, Technology and Communication (ICT). In order to provide a sufficient sample the Non ICT sample for the base firms included 624 different CAARs and the ICT base firms included 438 different CAARs. The average CAARs were calculated for the different event windows. The results were significantly different for each year with an average of negative 5.4 per cent for the Manufacturing and Services firms and with a negative 8.1 per cent for the ICT firms. There is a strong positive correlation between the different industry classifications, this validates hypothesis 4 by presenting that the Manufacturing and Services firms have less impact on the price share when issuing a profit warning. On the other hand, ICT firms are exposed to more risk and are more volatile, and as such reflect an additional 3 per cent in the drop of their price shares when reporting a profit warning.

Furthermore, an analysis of Peer firms was conducted to find correlation between the Base firms and the Peer firms that did not report profit warnings. The results were significant with negative 6.7 per cent for the Non ICT firms (n=509) and negative 13.8 per cent for the ICT firms (n=656). The results reflect a strong positive correlation between the Base and the Peer firms for both ICT and Non ICT firms. This further validates Hypothesis 4. Below are 2 Tables: Table 4 presented the Average CAARS of ICT and Non ICT U.S Firms and Table 5 presents the Average CAARs of Peers ICT and Non ICT U.S Firms:

Event Window	Non ICT	ICT
Event window	N=656	N=438
-30-30	-0.0006	-0.0043
-29-29	-0.0026	-0.0029
-28 -28	-0.0011	-0.0032
-30-1	-0.0547	-0.1012
-20-1	-0.0432	-0.0781
-10-1	-0.0355	-0.0532
-5-1	-0.0262	-0.0373
-1+1	-0.1043	-0.1412
-3+3	-0.1170	-0.1513
-5+5	-0.1210	-0.1629
-10+10	-0.1286	-0.1804
-20+20	-0.1266	-0.2022
-30+30	-0.1357	-0.2251
+1+5	-0.0140	-0.0101
+1+10	-0.0121	-0.0117
+1+20	-0.0025	-0.0086
+1+30	-0.0001	-0.0084
Total Average	-0.0545	-0.0813

Table 4: Average CAARs of ICT and Non ICT U.S. Firms

Average CAARs (Non ICT)	(n=509)	
Manufacturing and Services	Average CAARs	
Peers Firms	-0.0672	
Average CAARs	(n=656)	
ICT PEERS	Average CAARs	
	-0.1383	

Table 5: Average CAARs of Peers ICT & Non ICT U.S. Firms

The results validating hypothesis 4 are clearly presented in the figure 5 below. The average CAARs for ICT firms is much larger than the average CAARs for Non ICT firms. As predicted, since ICT firms are exposed to more risk on average than that of Non ICT firms larger price fluctuations are expected and therefore a higher potential risk of losses for investors exists. That should encourage high tech firms to disclose more information so as to insure a higher transparency of information. This, together with information flow, will help to reduce the asymmetry in the market.



Figure 5: Average CAARs of ICT &Non ICT U.S Firms

#### 4.4 Estimates of CAARs according to firm size

In order to classify the different firms' sizes, the firms were divided according to their total assets. 351 firms were classified as small firms with total asset of up to \$1.13B, another 350 firms were classified as medium firms with total assets from \$1.13B to \$8.8B. The last 360 firms were classified as large firms with total assets from \$8.88B to \$143B. The total average debt for each classification as been tabulated as well as the average CAARs and the firms' leverages.

Table 6: Classification of Firms According to Size (in millions)

Sample Size	Average CAARs	Leverage	Size ( Total Assets)		Total Debt	
N=351 (Small)	-0.1023	49.81%	\$	1,131.9	\$	563.8
N=350 (Medium)	-0.0557	56.49%	\$	8,870.2	\$	5,011.0
N=360 (Large)	-0.0417	66.15%	\$	143,367.4	\$	94,838.2

Note: Small refers to firms with total assets less than \$1.13 billion; Medium refers to firms with total assets over \$1.13 billion and \$8.8 billion. Large refer to firms with total assets over \$8.8 billion and up to \$143 billion.

As can be clearly seen from the above table, the larger the firm in terms of total assets on average the larger the debt it carries and the risk element is just as high. Furthermore, smaller firms on average have less than 50 per cent leverage while larger firms have over 66 per cent leverage. On the other hand, the average CAARs is smaller for the larger firm than the average CAARs for the smaller ones. Larger firms are usually more exposed to regulations and corporate disclosure. They are also exposed to more litigation and therefore are more transparent. As a result, the larger the firm the smaller the CAARs



**Figure 6: Firm Size Leverage and CAARs** 

The average CAARs for a small size firmis negative 10.2 per cent whereas the average CAARs for a large firm is negative 4.1 per cent. These results validate the hypothesis by providing evidence that on average, larger size firms have smaller drop in stock prices. According to the findings of Jackson and Madura (2003), large asset firms are prone to information leakage more than the small or the medium firms. As such, the information is disseminated to the market and the surprise affect is smaller.

#### **CHAPTER V:**

#### CONCLUSIONS

We find that profit warnings lead to a sharp and immediate decline in stock market returns, with cumulative average abnormal returns for our sample of negative 13.95 per cent for the (-3,+3) event window, and negative 17.22 per cent for the (-30,+30) event window (both using the market model). These findings are very similar for both the market model and the market adjusted model and consistent with other studies in the field (Jackson and Madura, 2003; Bulkley and Herrerias, 2005). This study examines whether investors overreact to bad news during good times and under-react to bad news during economic downturns. We examine the investor's overreaction and under-reaction to bad news during business cycles. We find that the immediate price reaction to a firm's profit warning (bad news) is much stronger during periods of economic expansion than during periods of economic contraction. Firms that issue bad news during good times are severely punished by investors relatively to firms that release negative news during bad times.

Different firms have different reactions to profit warning based on the sector within which they operate. The size of the firm is a measurement to consider when predicting the behavior of a share price

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for a firm, as well as the other not reporting peers, which are positively correlated.

The study of the stock market's reaction to profit warnings is as much as a study of psychology as finance. Libby and Tan (1999) experimentally determined that the sequential processing of profit warning followed by the actual negative earnings announcement leads analysts to issue much lower future earning guidance, compared with disappointing earnings announcements on their own. They also examined the analyst's reactions to forecasts of adverse earnings in an attempt to reconcile negative forecasts revisions with apparently conflicting evidence that suggests there are more positive responses to firms that issue warnings. They found that analysts revise future earnings projections to incorporate earnings warnings. These findings imply that the warnings provide valuable information that was not already processed by the analysts. Managers, due to a range of incentives, including career concerns, will choose to withhold bad news up to a certain point and alternatively reveal good news to investors as soon as possible. As a result, the magnitude of the negative stock price reaction to bad news disclosures is greater than that of the positive reaction to good news. The tendency to withhold bad news stems from a standard agency problem where no alignment exists between managerial disclosure and shareholder preferences. The managers possess superior private information relative to the

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investment community. Managerial commitment to quickly disclose private information can reduce information asymmetry and potentially lower the firms' cost of capital (Diamond and Verrecchia, 1991). Many reasons create different incentives to release good news versus bad news to investors. For example, litigation can motivate managers to quickly reveal bad news (Kasznik and Lev [1995], Skinner [1994, 1997]. They may also wish to increase their value of their options and stocks. This in general contributes to the magnitude of market reactions and expectations to the lack of information in the stock market. Holding bad news has an effect on the true value of the firm and prevents investors from making an informed decision about investing in the firm. Overall, it adds to the inefficiency of the market.

The decision to issue a profit warning ultimately rests with the individual firm's officers, who know about profit warnings and related announcements that negatively influence the share prices of the firm in the short term. Diamond and Verrecchia (1991) and Boston (1997) have found that a greater degree of disclosure generally decreases the cost of equity capital and this therefore, increases the firm profitability.

The study also examined the industry wise differences in CAARs. The study found that the average CAARs of ICT firms is much larger than the average CAARs on Non-ICT firms. This can be explained in terms of grater market risk of ICT firms compared with Non-ICT firms. As regards to the relationship between the size of the firm and CAARs, the study found that smaller firms have larger average CAARs compared with medium and larger firms. Larger firms are usually more exposed to regulations and corporate disclosure. They are also exposed to more litigation and therefore are more transparent. As a result, the larger the firms are the smaller the CAARs.

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