EARNINGS ANNOUNCEMENT AND INFORMATION SPILLOVER: EVIDENCE FROM CROSS-LISTING

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DEDICATION

I dedicate this thesis to the memory of my parents, Abdul Gani and Monoara Begum. They have taught me how to overcome every challenge of life and execute to dreams. I also dedicate this thesis to my other family members. They are my inspiration. They supported me in every aspect throughout the journey.

ABSTRACT

This study explores the intra-country information spillover of earnings announcements by a cross-listed firm to its non-announcing peer firms from the same home country in the US market from 1993 to 2021. Using a standard event study methodology, this study shows that non-announcing peer firms' cumulative abnormal returns (CARs) show a statistically significant positive association with the CARs of announcing firms over a three-day event window around the earnings announcement. The magnitude of information spillover of earnings announcements on peer firms is more pronounced in the bear market than in the bullish market. The intensity of information spillover is stronger and positively related to the home country's financial reporting quality and the size of the announcing firms.

Keywords: Cross-listed firms, Earnings announcements, Information spillover, Intra-country information transfer

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LIST OF ABBRIBIATIONS

Acronyms	Full Forms
ADR	American Depositary Receipt
AR	Abnormal Return
CAPM	Capital Asset Pricing Model
CAR	Cumulative Anormal Return
CRSP	Center for Research in Security Prices
ESM	Event Study Methodology
FASB	Financial Accounting Standard Board
GAAP	Generally Accepted Accounting Principles
GDP	Gross Domestic Product
GNI	Gross National Income
IASB	International Accounting Standard Board
IFRS	International Financial Reporting Standards
MKT	Return on Market Portfolio
HML	High Minus Low
NBER	National Bureau of Economics Research
OECD	Organization for Economic Co-operative and Development
PCAOB	Public Company Accounting Oversight Board
WSJ	World Street Journal

CHAPTER 1: INTRODUCTION

The relationship between earnings announcements and stock price reaction is a long-studied area of research in asset pricing of the equity market. Ball and Brown (1968) and Beaver (1968) find a strong relationship between earnings announcements and security prices. The stock price is likely to increase (decrease) in reaction to positive (negative) earnings news. Over the years since the publication of Ball and Brown (1968) and Beaver (1968), many studies have investigated how equity holders of non-disclosing firms respond to changes in the stock price of announcing firms. Specifically, when the stock price of an announcing firm changes, equity holders of non-disclosing firms adjust their portfolios in response to these changes. These stock price changes reflect investors' updated expectations about the non-announcing firms' future cash flow. Foster (1981) and Clinch and Sinclair (1987) show a random variation in stock returns for firms that do and do not make earnings announcements on the release date. That is, there is an information spillover between announcing and non-announcing firms. Graham and King (1996) have evidence that earnings announcement of a particular firm has a ripple effect that spillover the share price of other firms. This effect arises as investor use earnings announcements of a particular firm as a signal to value the price of another firm in the same industry. This is known as intra-industry information transfer. Other studies (e.g., Pyo & Lustgarten, 1990; Freeman & Tse, 1992; Lang & Lundholm, 1996; Ramnath, 2002; Thomas & Zhang, 2008; Tookes, 2008; Kovacs, 2016; Baker et al., 2019) also confirm that spillover effect of the earnings or revenue announcement of a particular firm on the other firms' stock price. Although there has been a plethora of studies on how an earnings announcement of a particular firm (announcing firm) affects the stock price of another firm (non-announcing firm) in the same industry, there are still some critical questions yet to be answered.

First, the empirical evidence is sparse on whether the earnings announcements of a foreign firm listed in the US market affect the equity return of another firm cross-listed with the same country of origin. As the firms share the same market, macroeconomic fundamentals, and same systematic risk factors, it is expected that any changes in the earnings announcement of a particular firm (announcing firm) might affect the equity return of another firm (non-announcing) from the same country of origin.

Second, it is still unclear how the magnitude of earnings announcement spillover varies depending on firm-specific factors, including firm size and idiosyncratic risk, as well as country-level factors such as legal systems, market volatility, accounting standards, and the level of financial development.

Third, previous studies have mainly focused on the intra-industry spillover effect which occurs within the same industry. This study extends the literature by exploring the intra-country spillover effect, which occurs when earnings announcement information from one industry affects the stock returns of firms in another industry within the same country of origin. However, whether the intra-industry and intra-country spillover effects are independent and coexisting phenomena remains unclear; if they are, how can their magnitudes be quantitatively compared and contrasted?

This paper examines how earnings announcements affect information transfer among cross-listed firms in the US market. I have analyzed 42,501 earnings announcements from 1,275 cross-listed firms. I found that the announcing firms' cumulative abnormal returns (CARs) positively and significantly impact the CARs of non-announcing peer firms from the same home country. This effect is more robust in bear markets, indicating that earnings announcements offer valuable insights when market uncertainty is high (Choi, 2018). Positive announcements have a

more significant spillover effect than negative ones, consistent with Tookes (2008), who shows that peer firms tend to follow the same direction as the announcing firms move.

Moreover, I find that the spillover effect is more pronounced for larger announcing firms, supporting the idea that they act as bellwether firms and influence their industry peers (Barth and So, 2014). Additionally, I find that the spillover effect is stronger when the home country of the cross-listed firms has higher financial reporting quality. This phenomenon can be attributed to the higher responsiveness of investor values to information releases that possess more significant levels of trustworthiness. To test the robustness of my results, I also examine the change in implied volatility of peer firms around earnings announcements and find a positive change in implied volatility of announcing firms and its peers, further strengthening my findings. This study contributes to the existing body literature on information spillover among cross-listed firms around earnings announcements.

The remaining sections of the thesis are structured as follows: Chapter 2 discusses overview existing literature and evidence; Chapter 3 hypothesis development; Chapter 4 discusses the methodology and Chapter 5 show results and discussion, and finally Chapter 6 presents concluding remarks.

CHAPTER 2: LITERATURE REVIEW

2.1 Earnings Announcement and Spillover Effect on Equity Return

Over the years, researchers have shown that earning announcements by a particular firm (announcing firm) generate information signals to the investors in the equity market about the future prospective earnings/revenue of other firms (non-announcing) in the same industry. Any forecasts made by analysts on a firm's earnings or revenue are not only based on the firm's individual information but reflect the industry-wide trends in earnings or revenue (Piotroski & Roulstone, 2004; Kadan et al., 2012; Hui & Yeung, 2013). Investors in the market use this information as input to determine the share price of peer firms in the market. This is called an earnings announcement spillover effect on equity return in the same industry, i.e., intra-industry information transfer.

Foster (1981) was one of the first to study intra-industry information transfer of a sample of firms in 1970-78. The study reveals a clear and meaningful flow of information between firms from the same industry that announce earnings and those that do not. The information flow is more pronounced for firms with a substantial proportion of their revenue coming from a similar line of business. Similarly, using a sample of 51 firms from 1978-83, Baginski and Stephen (1987) examine whether forecasts of earnings/revenue by one firm (announcing firms) result in abnormal price change in other firms (non-announcing firms) of the same industry. They find an empirically strong link between the earnings announcement of announcing firms and the stock price of non-announcing firms in terms of both signs and magnitudes. The effect of the announcement is a chain of reaction, starting from the revision of production decisions by the non-announcing firm as a response to forecasting by the announcing firm to the revenue and earnings of non-announcing firms, which ultimately affects the stock price of non-announcing firms.

Using 1,418 quarterly earnings releases, Jerry et al. (1990) studied stock price reactions of firms announcing earnings and firms that do not and find a strong correlation between the stock price reaction to unexpected earnings information for firms that announce earnings and those that do not.

Ramnath (2002) studied the behavior of market participants in response to earnings reports of firms within the same industry. His study finds that the deviation of earnings forecast from the actual earnings of an announcing firm provides valuable information for predicting the earnings forecast deviation of non-announcing firms within the same industry. However, investors and analysts tend to underreact to this information, resulting in a strong association between early announcers' earnings news and subsequent announcers' stock price. Interestingly, there is also evidence of investors' overreaction to early announcers' earnings. Thomas and Zhang (2008) examine whether stock prices of non-announcing firms demonstrate appropriate responses to earnings reports of early-announcing peers. Their analysis of 132 quarters of data from 1973 to 2005 reveals an anomaly in the stock market related to the flow of information within an industry. Specifically, the stock market tends to overestimate the extent of information transfer from early-announcing firms to late-announcing firms in the same industry. However, this overestimation is corrected when late-announcing firms disclose their own earnings reports. These findings suggest that unexpected earnings information can have a significant impact on the stock prices of firms within the same industry, but the extent of this impact may be influenced by factors such as timing and the order of earnings announcements.

Earlier, this relationship was examined by Freeman and Tse (1992) using stock market participants' responses to adjust their earnings prediction in response to the announcement of other firms from the same industry. They consider that earnings co-movement is an essential factor in

case of information transfers generated by earnings announcements. On average, they find a positive information transfer, but this relationship's strength differs among the industry. The information transfer is higher in the same industry where there is strong earnings co-movement.

Graham and King (1996) have tried to unearth the information transfer by using publicly available information about the announcing firms. To gauge the information environment, they used the number of articles about the announcing firm in The Wall Street Journal (*WSJ*) and the correlation strength among firms in the industry as proxies. They find that security price responds intensely toward the earnings surprise, and it is inversely related to the firms' size. Interestingly, they also find that the more articles published about the firm before the announcement, the lower its effect on the firm's security price. Another study by Pyo and Lustgarten (1990) find that the strength of information transfer is contingent on the covariance between announcing and non-announcing firms and the variance of the announcing firms. The variance and covariance represent noise content in the forecast and competitive relation. It is widely acknowledged that the earnings forecasts of firms are a noisy indicator of the firm's future value. This future value comprises two parts: one is industry-wide, such as the demand for the industry's products and input costs, and the other is related to competition, such as the market for common products, scarce production inputs, and technology. Earing announcements could generate either of these two components or both. If the primary sources of uncertainty are about the industry-wide components, then the relationship between earnings announcements and the stock price of other firms is positive, and if it is about the competition, then the relationship is negative (Lang & Lundholm, 1996)

In contrast, another group of researchers investigates how a firm's competitiveness impacts its competitors' performance. It is believed that as the firms are operating in the same industry; so, they are supposed to be rivals in terms of input and output and competing in the same market to

capture the market share. Due to these facts, any earnings announcement by a competitor should affect the stock price of others. That is, a positive (negative) earnings announcement should negatively (positively) affect the stock price of a competitor. For example, Laux et al. (1998) have explained the stock price reaction to a rival's earnings announcement. They find that any announcement of earnings increases from a rival without strong market power or growth prospect compared to the announcer shows no effect, but earnings decrease shows a negative effect. On the other hand, rival with substantial market power and growth prospect shows positive reaction to the announcement of earnings increase and no reaction to earnings reduction. Similarly, Tookes (2008) finds that competitors' stock contains more information than its firm order flow and returns during the announcement period.

Similarly, a study by Baker et al. (2019) examined how the stock performance of firms is affected by the announcements of their competitors' earnings. They find that the timing and sequence of earnings announcements influence investor reactions to earnings news within the entire industry.

Investors in the market respond to information differently depending on their risk and return choice combination and their future perception of the firm's future earnings prospects. Sometimes investors overreact or underreact to the information available in the market. It takes time to correct these under and over-reaction to specific information. Researchers of the post-earnings announcement drift tried to find out how long it takes to rectify the price.

Hui and Yeung (2013) evident that the industry-wide earnings news generated by analysts is the primary driver of the post-forecast revision drift. On the other hand, Kovacs (2016) believes that earnings announcements are crucial in the post-earnings announcement drift, as investors tend to underreact to the industry-wide fundamentals. He finds that the post-earnings announcement

drift starts when the same industry earnings announcement confirms the initial earning news and when an industry experiences positive intra-industry information transfer. With the same tone, Soffer and Lys (1999) concentrated on the information content between two announcements. They show drift in two stages: the mispricing of information in earnings announcements and the correction of this mispricing. They find that half of the information from the preceding announcement was reflected in the earnings expectations of the subsequent announcement. In other words, it is possible to infer information about future earnings from the previous announcement. More recently, Fujitani et al. (2021) have studied the Japanese Market from 2001-2020 and find that the impact of peer disclosure is noticeable only in the year 2020 and not in the years between 2001 and 2019. Ultimately, the study presents robust proof of peer effects during the COVID-19 pandemic.

2.2 Earnings Announcement Spillover Effect on The Trading Volume

Investors in the market could perceive different information from a particular announcement, and due to this, there might be abnormal trading volume around a particular earnings announcement (Kim & Verrechia, 1991). Over the years, several studies have aimed to establish a connection between abnormal trading volume in companies that have made earnings announcements as well as those that have not, with the overall abnormal return of companies that made earnings announcements during the earnings announcement period.

Brushko et al. (2020) have examined the relationship between earnings announcements and trading volume. They studied 4597 firms from January 1994 to March 2013 and find that trading volume and earnings surprise of announcing firms within the industry can explain the stock price of a non-announcing firm. They also find that cumulative abnormal return is related to trading

volume and earnings surprise of the subsequent announcing firm in the window of +11 days to +20 days.

In addition to earnings announcements as prime information signals, Hanousek et al. (2017) have concentrated on the trading volume of a non-announcing firm to explain the abnormal return of announcing firms on the first and subsequent announcement. They find that abnormal trading activity does arise due to the first announcer earnings surprise and the history of earnings surprises of both peer firms.

Still, it is unclear how trading volume could be interpreted to evaluate the precision of aggregate information. Schneider (2009) has shown the effect of trading volume on an investor in evaluating price-sensitive information. He finds that there is a difference between volume information and information contends in the stock price.

2.3 Earnings Announcement and Spillover Effect on Volatility

The increase in risk could explain the abnormal return around the earnings announcement. Investors in the market observe total earnings, so they must infer about the aggregate cash flows. The spillover of the cash flow news of a particular firm result in a conditional covariance between a firm's cash flow and market-level cash flows, leading to an elevated risk premium for the announcing firm.

Savor and Wilson (2016) find that firms scheduled to report earnings earn a 9.9% abnormal return annually. They explain the return as a risk-based phenomenon, as investors use the announcement to adjust their expectations of non-announcing firms, but they cannot do so perfectly. Investors in the market need to correctly distinguish between a firm's typical components and a firm's specific components of an earnings announcement. That is why announcing firms are overloaded with forecasted market cash flow. This makes announcing firms exposed to aggregated

cash flow risk. In the same vein, Hann et al. (2019) have examined the intra-industry information transfer concerning the second moment of earnings announcements. To examine this question, they used 24232 earnings announcements of 3030 firms from 217 industries from 1996 to 2017. They reveal a positive correlation between the implied volatility of an initial announcing firms and their peer firms within the same industry. In the long-duration option, second-moment information transfer is more robust.

Later on, Bergsma and Tayal (2020) extended the idea across the countries. They studied six developed stock markets from October 2002 to December 2015 and find that earnings announcement affects the non-announcing firm more during high market volatility.

All the existing literature has examined how earnings announcement of a particular firm influences the equity return of other non-announcing firms within the industry by influencing the trading volume, volatility/risk. Considering everything in the empirical literature, I will examine how the earnings spillover transmits in the intra-country context in this study. After that, I will investigate how the intra-country earnings spillover interacts with intra-industry spillover (already in existing literature), which is more robust.

2.4 Accounting Standard and Information Spillover

Accounting standards are guidelines for financial reporting and record-keeping that firms are expected to follow. They are designed to provide a consistent, reliable, and transparent representation of a firm's financial health and performance. The importance of accounting standards lies in their crucial role in converting cash flows into earnings through accrual accounting. La Portra et al. (2000) find that the efficiency of the accrual system is enhanced by more robust shareholder protection, which is a hallmark of good corporate governance in a country. Quality of financial reporting is said to be improved if it is comparable across the

countries ((*FASB*), 1980, 2008; (*IASB*), 1989, 2008), and the adaptation of mandatory *IFRS* in 2005 is considered an increase in financial reporting quality of comparability across the countries and which improves the cross-border investment. The adaption of *IFRS* facilitates international comparability and exhibits an increase in financial reporting quality than the firms that use local *GAPP* (Barth et al., 2008, 2010). On the other hand, several studies find that non-US firms listing in the US market experience substantial positive stock price change. However, only some of them confirm how financial reporting standards influence this change.

In their study, DeFond et al. (2007) studied 53,197 earnings announcements across 26 countries and find that countries with more interim financial reporting tend to show a diminished transfer of information during earnings announcements. Francis et al. (2002) find that earnings announcements with greater discloser transmit more information in the US market. However, it is also assumed that the countries with greater financial disclosure transmit less information because firms disclose more publicly available information to the investors between the earnings announcement date. It is also evident by many researchers that, due to financial reporting standards, differences in costs of collection and processing financial information are high, and investors are reluctant to invest in foreign firms (Covrig et al., 2007; Chan et al., 2005; Bradshaw et al., 2004; Kang et al., 1997). Similarly, Morgan Stanly and Dean Witter (1998) find that most investors need help reconciling accounting differences of information arising from different financial reporting standards in cross-border investment. In addition, Bailey et al. (2006) have examined the cross-listed firm in the US market and find that once a firm cross-listed in the US market, any earnings announcement significantly increases the absolute return. The magnitude is more robust for a firm from developing countries compared to private placements or over-the-counter listings free from the stringent disclosure requirement.

CHAPTER 3: HYPOTHESIS DEVELOPMENT

3.1 Aggregated Market-Wide Characteristics

The stock price of a firms is induced by the earnings announcement of a firm as these announcements causes a response from the capital market. This phenomenon has been extensively investigated in previous literature (e.g., Ball & Brown, 1968; Beaver, 1968; Ball & Kothari, 1991). In addition, studies have demonstrated that the earnings announcements of a firm can also influence the stock prices of other firms in the same industry (e.g., Foster, 1981; Clinch & Sinclair, 1987).

While firms cross-listed in the US market are subject to US security regulations, their valuation is significantly affected by their home countries' economic conditions, legal institutions, political conditions, and government policy (e.g., LaPorta et al. 1998). If the earnings announcement of a cross-listed firm reveals additional information about the economic fundamentals of the firm's home country, investors may revise their expectations of the future cash flow of the cross-listed non-announcing firms from the same country. In that case, I expect the stock returns of the non-announcing firms to be positively associated with the news announced by the announcing cross-listed firms from the same country. I present my hypothesis as the following.

Hypothesis 1a. *An earnings announcement by a firm cross-listed in the US market from a particular country significantly influences the stock returns of other non-announcing peer firms from the same country of origin.*

Next, I investigate how the market conditions on the announcement date influence the degree of information spillover. Previous studies have shown that investors react more strongly to negative news than positive news (Rogers et al., 2009). Negative events can trigger fear and uncertainty among investors, leading to increased trading activity. During a downward market trend, investors are more cautious and risk-averse, and they demand more information before making investment decisions. Bergsma and Tayal (2020) find that the information spillover effects

of earnings announcements are stronger in the down market in the international context. I argue that investors of cross-listed firms might be more sensitive to the information revealed by their peer cross-listed firms as cross-listed face greater information asymmetry (Atilgan et al. 2021). Accordingly, I expect that downward market trends are associated with stronger and more significant information spillover from announcing cross-listed firms to other non-announcing firms present my hypothesis as the following,

Hypothesis 1b. *Among cross-listed firms, a negative market trend affects information transfer to a greater extent than a positive market trend.*

The relationship between market volatility and information spillover is significant in the context of earnings announcements. Previous studies have suggested that market volatility influences the magnitude and speed of information spillover in several ways. First, when market volatility is high (low), investors tend to react more (less) strongly to positive or negative earnings news from a leading announcer (Choi, 2018; Hann et al., 2019). Second, market volatility can affect the correlation between the stock prices of peer firms and the industry leader, indicating the extent of information transfer. Third, market volatility can determine how quickly information is incorporated into stock prices, resulting in greater or smaller price movements. Therefore, an earnings announcement by a leading firm can be seen as a valuable learning opportunity for investors about the prospects of its peer firms. In times of increased market volatility, investors face a scarcity of information and uncertainty about the future performance of firms. Hence, during high market uncertainty, investors are more likely to use an earnings announcement by a leading firm as a benchmark to infer the future performance of its peer firms from the same country (Choi, 2018; Hann et al., 2019). Based on these arguments, I formulate the following hypothesis:

Hypothesis 1c. *Among the cross-listed firms in the US market, the magnitude of information spillover between peer firms is positively related to past market volatility.*

Accounting reporting quality exhibits variations across countries, and it is widely acknowledged that the implementation of robust accounting reporting standards diminishes information asymmetry between firms and investors. Previous research has consistently demonstrated the positive economic benefits associated with enhanced information transparency (Welker, 1995; Healy & Wahlen, 1999). Market participants perceive that the earnings information released by the leading announcer offers insights not only into the specific firm but also the broader industry (Beaver, 1981; Foster, 1987). Consequently, investors rely on the first announcer's disclosure to assess their peer firms. Higher-quality financial reporting facilitates a deeper comprehension of a firm's financial performance and position, thereby empowering investors and analysts to make well-informed investment decisions. Conversely, when financial reporting quality is compromised, earnings announcements may contain inaccuracies, misstatements, noise, or even fraudulent information. Accordingly, I predict that the spillover effect is more pronounced if the cross-listed firm is domiciled in a country with higher financial reporting quality. I present the hypothesis as the following:

Hypothesis 1d. *Financial reporting quality of the home country positively affects the spillover of earnings announcements by a cross-listed firm in the US market.*

Another possible research question is how the economic condition of the home country affects the information spillover. Previous studies have suggested that developed markets are more efficient than emerging markets. Therefore, the information spillover effect may vary depending on the home country's economic development level. For example, investors and analysts may be more attentive to information from cross-listed firms in the US market if the home country has a higher level of economic development. Conversely, investors and analysts may need more access to information. They may be less interested in information from cross-listed firms in the US market if the home country has a lower level of economic development. Johnson (1999) reports that the

effect of earnings announcements on intra-industry information transfer is more remarkable in an expansionary economy than in a contractionary economic condition. However, Griffin et al. (2010) argue that information transfer's magnitude is unrelated to market development. To address this gap in the literature, I will subdivide the sample by Gross National Income (GNI) per capita and economic growth rate (GDP) and then examine the information spillover effect for both sub-samples.

Hypothesis 1e. *The level of financial development in the home country of a cross-listed firm in the US market positively affects the information spillover effect of an earnings announcement.*

3.2 Firm-Level Characteristics

The magnitude of information transfer may depend on the size of the firms that make announcements. Large firms may attract more attention from investors and analysts when they disclose earnings or information, which may result in a stronger spillover effect on other firms from the same country of origin. For instance, if a large firm is doing well, investors may infer that the macroeconomic condition of the country where the large firm operates is favorable and thus expect better performance from other firms from that country cross-listed in the market. Consistent with this logic, Atiase (1895) reports a positive correlation between the amount of information disclosed and the size of a firm. Based on these arguments, I formulate the following hypothesis:

Hypothesis 2a. *An earnings announcement of larger cross-listed firms in the US market generates stronger information transfer than smaller ones.*

The next step is to investigate how the information spillover effect varies depending on the nature of the earnings announcement. Using the sign of the unexpected earnings surprise I wanted to classify an earnings announcement as good news (positive earnings surprise) or bad news (negative earnings surprise). A positive earnings surprise of a firm can indicate a favorable economic condition in the country where the firm operates, opposite is true for negative news.

Positive news tends to reduce volatility during earnings announcements (Black 1976; Campbell & Hentschel 1992). Similarly, Rogers et al. (2009) find that positive news decreases implied volatility and negative news increases it. In addition, more recently Truong et al. (2012) also find that a positive earnings surprise leads to a more significant reduction in uncertainty than a negative earnings surprise, as the initial earnings announcement resolves uncertainty so, it is supposed to get more attention from the market participants.

As macroeconomic factors often influence a firm's earnings, and a positive earnings surprise can imply economic growth and stability. This can increase investor confidence and demand for stocks from that country, which can also affect other firms from that country.

Therefore, a cross listed firm that trigger a reduction in uncertainty through its initial earnings announcement, I anticipate observing a stronger information spillover when the earnings announcement from the first announcing firms results in a more substantial clarification of uncertainty around its' earnings announcement. Based on these arguments, I formulate the following hypothesis:

Hypothesis 2b. *The spillover effects of positive earnings surprises on the stock prices of peer firms from the same country of origin will be stronger than those of negative earnings surprises for cross-listed firms in the US market.*

Next, I investigate how a firm's idiosyncratic volatility affects the amount of information spillover. The information spillover associated with an earnings announcement may be contingent upon the idiosyncratic volatility exhibited by the announcing firms. Specifically, higher levels of idiosyncratic volatility are believed to contribute to greater dissemination of information. This association can be attributed to the notion that elevated idiosyncratic volatility serves as a signal of novel and potentially valuable information about the firm. Such signals tend to capture the attention of investors and analysts, generating increased interest within the country as a whole.

Consequently, investors may seek additional information regarding other cross-listed firms with same origin to understand the overall risk and uncertainty associated with investing in that particular country. Bergsma and Tayal (2020) conducted a study reveal that, compared to firms with low idiosyncratic volatility, those with high idiosyncratic volatility transmit more information to their peers regarding future cash flows and returns in international markets. Therefore, based on this evidence, I developed my following hypothesis:

Hypothesis 2c: *The level of idiosyncratic volatility in earnings announcements of cross-listed firms in the US market significantly positively impacts the degree of information spillover to other cross-listed firms from the same country.*

Moreover, I want to investigate how the revenue announcement, together with the earnings announcement, influences the magnitude of the information spillover. Earnings announcements provide insight into a firm's profitability, and revenue announcements provide insight into its ability to generate sales and grow its business. Revenue also provides context for the earnings figures, as a firm's earnings may look strong but could be driven by cost-cutting measures rather than actual revenue growth. Therefore, investors and analysts often consider earnings and revenue announcements to comprehensively understand a firm's financial performance and prospects. I argued that the simultaneous announcement of revenue and earnings provides investors with a more complete and accurate assessment of the firm's financial performance, reducing uncertainty and increasing confidence in the firm's prospects. However, empirical evidence is inconclusive, as Han and Wild (1991) find that management revenue forecasts contain more information than earnings forecasts. When the earnings forecast is announced together with the revenue forecast, it becomes less informative than the earnings announcement alone. On the other hand, Ajinkya and Gift (1984) observe that when earnings forecasts convey insufficient information, management announces revenue forecasts to convince investors (i.e., Earnings and revenue announcements

together generate more information). Based on the inconclusive conjunction, my next hypothesis is:

Hypothesis 2d. *Among cross-listed firms of the same country of origin in the US market, information spillover is stronger when revenue and earnings are announced simultaneously than when earnings forecasts are announced alone.*

3.3 Intra Industry Vs. Intra Country Spillover

The influence of an earnings announcement extends not only to the stock price of the announcing firm but also to its industry peers, owing to shared market dynamics and macroeconomic factors that impact all firms within the industry (Ball & Brown, 1968; Beaver, 1968; Savor & Wilson, 2016). Meanwhile, a firm's valuation is significantly shaped by the economic conditions, legal institutions, political climate, and government policies of its home country (LaPorta et al., 1998). In the case of cross-listed firms, if an earnings announcement reveals additional information about the economic fundamentals of the firm's home country, this newfound information prompts investors to revise their expectations concerning the future cash flows of other non-announcing firms from the same country.

Given that an earnings announcement encompasses information about both the country and the industry, the spillover effect within an industry and the spillover effect within a country could operate simultaneously. Therefore, in light of these considerations, I propose my next hypothesis:

Hypothesis 3a. *The stock price of a cross-listed peer firm will respond significantly to a preceding earnings announcement by a firm from the same country and within the same industry.*

With the same logic. The spillover effect within a country could operate independently of the effect within an industry. My next hypothesis is:

Hypothesis 3b. *An earnings announcement by a cross-listed firm should still affect the stock price of another firm from the same country but a different industry.*

CHAPTER 4: METHODOLOGY

4.1 Event Study

I have used a standard event study methodology for assessing the effect of a particular earnings announcement. An event study is primarily used to determine if investors earn any abnormal or excess returns due to specific corporate events (e.g., earnings announcements, mergers, acquisitions, stock splits, or other economic events that may impact the stock price in the capital market). The focus of the event study is on the movements of stock prices to test if the revelation of a specific event impacts the random nature of stock prices.

To measure the effect of an earnings announcement by a cross listed firms on its peer firms from same country of origin I have calculated abnormal return by using market model. I am using the market model benchmark because it can reduce the variance of abnormal returns, which can lead to more powerful statistical tests. When the variance of the abnormal returns is smaller, it is easier to detect any significant differences between the returns of different securities or events. This can be important when trying to identify the cause of the abnormal performance of security around a specific event, as it can help to ensure that any conclusions drawn are based on statistically significant differences rather than random fluctuations in the data (Beaver, 1981; Strong, 1992).

4.1.1 Measuring Abnormal Returns

As mentioned earlier, I have used the market model to find the abnormal return. I want to use both single-index and multiple index models. As Market Model (MM) does not assume a specific method for determining equilibrium security prices. Instead, it posits that returns are determined by a systematic component (related to the market index) and an unsystematic

component (not related to the market index). The unsystematic component is intended to account for firm-specific events such as earnings announcements.

Following Strong (1992), I have calculated abnormal return as:

$$\hat{u}_{it} = R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt}) \quad \text{..... (1)}$$

I have also used a four-factor model, including the Fama and French (1993) risk factors augmented with the Carhart (1997) momentum factor.

$$AR_{i,t} \text{ or } u_{i,t} = R_{i,t} - (\hat{\alpha}_i + \hat{\beta}_{i,MKT} MKT_t + \hat{\beta}_{i,SMB} SMB_t + \hat{\beta}_{i,HML} HML_t + \hat{\beta}_{i,MOM} MOM_t) \ldots (2)$$

To measure the earnings announcement's total impact on the stock price of peer firms, this study sums up all the individual daily abnormal returns within the event period and calculates a cumulative abnormal return (CAR).

Although there is no set duration for an event window in terms of days, weeks, or months, it's important to maintain a relatively short timeframe (Delattre, 2007; McWilliams & Siegel, 1997). This helps prevent the influence of unrelated occurrences on the returns after the event. To keep CAR free from the influence of any other event the I choose to keep the event window within a short period. So, I construct a three-day [-1, +1] event window starting from one day(t_1) prior to the event and one day (t_2) after the event. So, this study has calculated the Cumulative Abnormal Return (CAR) by the following equation:

$$CAR_{i,t} = \sum_{t1}^{t2} \varepsilon_{i,t} \quad \text{..... (3)}$$

As stated above, this is a return event study. So, this paper uses earing announcements as an event of the study. As with the standard event study procedure, I also considering the event date (earing announcement date) as t_0.

4.2 Data

4.2.1 Data Sources

My sample consists of cross-listed companies in the United States from 1983-2021. The required data will come from a variety of sources. In particular, the earnings announcements information comes from IBES, the U.S. stock price, and trading volume information is retrieved from CRSP, and the COMPUSTAT provides the firm fundamentals. I have collected the international equity return and macroeconomic information from FactSet. Data about economic growth are collected from the OECD, and the implied volatility data are collected from OptionMetric's standardized dataset. I have collected data about accounting standard (Status of IFRS implementation by the home country of cross listed firms) from the data set of Song and Trimble (2022).

In order to control for factors that could affect the relationship being studied, five variables will be included at the firm level. These include the firm's market capitalization, the ratio of its book value to its market value, momentum, idiosyncratic volatility, and illiquidity. The market value (size) variable is calculated by multiplying the closing price per share by the number of shares outstanding in the previous month. The Book-to-market (B/M) ratio is calculated as Fama and French (1992) described. LRet is the stock return of the previous month. Momentum is calculated by summing up the monthly stock returns from 12 to 2 months prior. Idiosyncratic volatility (Ivol) is the measure of the volatility that is specific to a firm, which is calculated as the standard deviation of the residuals of the preceding 21 trading daily returns (at least 17 days) when they are regressed on the Fama-French three factors (Ang et al., 2006 and Fama & French, 1993). The measure for lack of liquidity (ILLIQ) is calculated by taking the natural logarithm of the average ratio of absolute daily return to daily dollar trading volume during the month preceding the announcement, as per Amihud (2002). All the data are winsorized at a 1% level.

4.2.2 Description of Data

Table 1 shows descriptive statistics for the variables employed in the analysis. The primary variable of interest in the cumulative abnormal return of announcing firms (*Ann_CAR*) and their peer firms (*Peer_CAR*) of the same country of origin is calculated using the market model around the first announcer's earnings announcement. I measured the cumulative abnormal return three days prior (t-1) and three days after (t+1) the earnings announcement. I find that the average three days cumulative abnormal return of announcing firms is -.005 with a standard deviation of 0.06, whereas for non- announcing peer firms, the average cumulative abnormal return is -.003, and the standard deviation is 0.087. Here it is noticeable that the spread between the higher and lower cumulative abnormal return is larger for peer firms than the announcing firms suggesting that information transfer is positive to peer firms due to earnings announcement. The announcing firms' mean score of standard unexpected earnings is -0.29, with a standard deviation 3.183. In the case of the control variable, the average (standard deviation) size of announcing firms and peer firms is 12.85 (2.33) and 13.43 (1.8), respectively, meaning that in my sample, both announcing and peer firms are almost the same size.

Table 2 presents the correlations among the variables employed in the study for analysis. The cumulative abnormal return of announcing firms *(Ann_CAR)* is positively and significantly correlated with the cumulative abnormal return of non-announcing peer firms from the same country of origin (*Peer_CAR)*. This provides an intuition of information spillover around the earnings announcement of the first announcer to its peer firm from the same country of origin. The standardized unexpected earnings *(Std_Unex_Earn)* is a momentum indicator, calculated by earnings surprise (reported EPS- expected EPS) divided by the standard deviation of earnings surprise. The correlation of *Std_Unex_Earn is* 0.003 with the cumulative abnormal return of non-

announcing peer firms *(Peer_CAR)*. Although this correlation coefficient is positive, it is close to zero, indicating a weak relationship. Nevertheless, the p-value of 0.000 suggests that this weak correlation is still statistically significant. Table 2 also shows that the correlation between Peer_CAR and control variables is statistically significant except for momentum and book-to-market value ratio.

Finally, this correlation matrix shows that none of the independent variables have strong correlations with the dependent variable *(Peer_CAR)*. However, most variables still show statistically significant relationships with the dependent variable, even if the correlations are weak.

CHAPTER 5: RESULTS AND DISCUSSION

5.1 Country-Level Information Transfer

5.1.1 Intra-Country Information Transfer

An earnings announcement of a firm is assumed to be an information signal for other firms from the same country. All the firms of a country are supposed to be influenced by that country's macroeconomic condition and the business cycle. When a particular firm announces its earnings, it is argued that investors can infer the business prospect of other firms from the same county. So, I expect to get a positive association between an announcing firm's cumulative abnormal return and its peer firms' cumulative abnormal return from the same country cross-listed in the US market. Following the same format as Grennan (2019) and Bergsma and Tayal (2020) I estimated the equation (4).

$$Peer\_CAR(-1,1)_{(-i)jt} = \alpha + \beta_1 Ann\_CAR(-1,1)_{ijt} + \beta_2 LRet_{(-i)jt'} + \beta_3 Momentum_{(-i)jt'} + \beta_4 ILLIQ_{(-i)jt'} + \beta_5 Ann\_Size_{(-i)jt'} + \beta_6 Peer\_Size_{(-i)jt'} + \beta_7 B/M_{(-i)jt'} + \varepsilon_{(-i)jt} \quad (4)$$

In this model, the dependent variable is $Peer\_CAR(-1,1)_{(-i)jt}$, represents a three-day cumulative abnormal return of a peer firm from the same country except for the announcing firm *i* itself. Here *j* represents the country of origin of the firm, and *t* stands for time. The variable of interest or main independent variable is $Ann\_CAR(-1,1)_{(-i)jt}$, it is a three-day (t-1 to t+1) cumulative abnormal return of each announcement of the announcing firm *i* of country *j*. All other characteristics of a firm are used as control variables and defined in appendix A. All the control variables are lagged by one period, represented by t'.

In Table 3, I presented the regression results of equation (4), in columns (1) and (2) I calculated the abnormal return based on the single-factor model. In the column (1) and (2) coefficient of *Ann-CAR(-1,1)* is 0.03784, *Std_Unexpected_Earn* is 0.00010 and both coefficient is

strongly significant at 1% level. Therefore, I observe a spillover effect on peer firms when a cross-listed firm releases an earnings announcement originating from the same country. To further validate my findings, I conducted a regression analysis using the abnormal return calculated based on Fama-French (1993) with Carhart (1997) momentum factor. The results, presented in columns (3) and (4), reaffirm a positive association between earnings announcements and information transfer, as indicated by the higher coefficients of *Ann_CAR(-1,1*) and *Std_Unexpected_Earn*, namely 0.04921 and 0.00011, respectively.

Hence, when a cross-listed firm in the US market discloses positive earnings, leading to a 2% increase in its stock price, I can assert that non-announcing peer firms from the same country of origin will respond with an approximate 7.5 basis points adjustment, based on the coefficient derived from column (1). These findings align with previous studies conducted by Baker et al. (2019) and Bergsma and Tayal (2020). Regarding control variables, I find a significant positive association with the size of announcing and peer firms, as well as illiquidity. Conversely, the coefficients for Log_return, momentum, and Book to Market value exhibit negative and insignificant signs, with the exception of Log-return, which is consistent with Bergsma and Jiang (2016).

Consequently, the results presented in Table 3 corroborate Hypothesis 1a, demonstrating that an earnings announcement from a cross-listed firm in the US market significantly impacts the stock returns of non-announcing peer firms from the same country of origin. My findings are further supported by the analysis of *Ann_CAR(-1,1)* and *Std_Unexpected_Earn* under both single-factor and Fama-French multifactor with momentum models.

5.1.2 Effects of Up-Market and Down-Market on Information Spillover

As discussed in Hypothesis 1b, the capital market condition on the earnings announcement date influences the magnitude of the information spillover. In the same vein as Bergsma and Tayal (2020), I also decided to subdivide the sample into upmarket (overall positive market return) and down-market (overall negative market return) depending on the status of the market on the event day (t=0). Here I want to reconfirm the results by the statistical difference between the coefficient of $Ann\_CAR(-1,1)$ in an up and down market by the difference in differences (DID).

Table 4 shows the results of two different market conditions. In column (1) for the up-market condition, the coefficient of *Ann_CAR(-1,1)* is 0.032, whereas, in the down-market column (2), the coefficient of *Ann_CAR(-1,1)* is 0.044. In both columns, the coefficients of *Ann_CAR(-1,1)* are strongly significant at 1% level. As I expected, investors are more sensitive to bad news than good, and here I also see that the coefficient of *Ann_CAR(-1,1)* is higher in the down market than up-market. My results are consistent with the Bergsma and Tayal (2020) findings for the international market. In addition, the difference between the coefficient of up-market and down-market is also strongly significant. So, the results of this subsection are consistent with Hypothesis 1b, that is, the ripple effect of earnings announcement of cross-listed firms US market is stronger for the non-announcing peer firm from same country of origin in the down market.

5.1.3 Past Market Volatility

To reconfirm the magnitudes of information spillover, now I investigate how past market volatility affects intra-country information spillover. Based on the past market volatility, I have subdivided the sample into high or low market volatility. In the same vein as Bergsma Tayal (2020) and Choi (2018), Market volatility (*MKTVOL*) is defined as the standard deviation of the daily market return calculated using a rolling window of 30 days. Here market return is collected from

Datastream. If the *MKTVOL* of the prior month is higher than the median *MKTVOL* of the respective country I classified, it is a higher *MKTVOL*, otherwise a lower *MKTVOL*.

Table 5 shows the effect of past market volatility on the information spillover of an earnings announcement. In column (1), the coefficient of Ann_CAR(-1,1) is 0.03653 under high MKTVOL conditions and in column (2), the coefficient for the same variable is 0.04112. Both coefficients are highly significant. The information spillover of earnings announcements appears to be stronger under low market volatility than under high market volatility, as indicated by the coefficient of Ann_CAR(-1,1). However, the difference between the high and low market volatility conditions, measured by difference in differences, is not statistically significant.

The results of Table 5 do not support the Hypothesis 1c. A possible explanation for this discrepancy is that the level of market volatility affects the investors' risk preferences and information processing. Under high market volatility, investors tend to exhibit a higher level of risk aversion and exercise greater cautions in making new investment decisions. Under low market volatility, investors tend to be more confident and more responsive to new information from an earnings announcement.

5.1.4 Financial Reporting Quality

It is well established that improved financial disclosure reduces the uncertainty of peer firms' return around the announcement by industry leaders. Improving financial reporting quality decreases the uncertainty surrounding a firm's future cash flows. With improved financial reporting quality, an investor can make better investment choices with low uncertainty, leading to a more straightforward valuation process (Kumar, 2009). Healy and Palepu (2001) find that improved financial reporting quality increases analysts' forecast accuracy, increases foreign institutional ownership, and reduces arbitrage opportunities. This idea aligns with the findings of

Francis et al. (2002), which indicate that in the US market, earnings announcements generate more information when it accompanied by a higher level of disclosure.

In 2005, the International Financial Reporting Standards (*IFRS*) were mandated as the global financial reporting standard. They were considered the most significant information shock in the history of financial reporting for thousands of firms worldwide. According to Deloitte (2010), firms stopped using their financial reporting standards across national boundaries and adopted *IFRS* instead. It is also found that *IFRS* is more investor-oriented as it mandates firms to disclose more information, such as discontinued operations, asset impairment, segment reporting, cash flow statements, and equity-statement. So, these increased disclosures allow investors to compare firms across the countries. It is also evident that the adaption of *IFRS* increases the analysts' forecasting capacity, foreign institutional investment, and liquidity; in addition to these, the positive economic consequences affect more firms of large sizes, improvement in financial reporting (Daske et al., 2008; Byard et al., 2011; DeFond et al., 2011; Tan et al., 2011).

As *IFRS* implemented in 2005. Consistent with prior evidence in the paper, I have subdivided the sample into countries with fully implemented IFRS (Strong Accounting Standard) and countries with modified *IFRS* or local accounting standards (Weak Accounting Standard) based on the data set of Song and Trimble (2022).

In Table 6, I presented the results of the status of the country of cross-listed firms' implementation of *IFRS*. Column (1) presents the results of fully implemented *IFRS*, and column (2) shows the results of countries with local accounting standards. The coefficient of *Ann_CAR(-1,1)* is 0.11100 and 0.03620 for the strong accounting quality and weak or local accounting standard countries, respectively. In both columns, the coefficients are strongly significant and consistent with Francis et al. (2002). The difference between the coefficient is 0.08213, which is

both economically and statistically significant. Implementing IFRS as a financial reporting standard in the home country of the announcing firm magnifies the information spillover almost twice.

Therefore, the findings are consistent with what was predicted in Hypothesis 1d that the financial reporting quality of the home country positively affects the information spillover of earnings announcements by a cross-listed firm in the US market.

5.1.5 Earnings Announcement Coming from a Developed Market or an Emerging Market

This section examines whether the information spillover effect of earnings varies according to the market's development status where the earnings announcements originate. It is commonly assumed that developed markets are more efficient than emerging markets. Following the approach of Griffin et al. (2010), I use the World Bank's classification system based on the 2005 GNI per capita to categorize countries. I define emerging markets as those with a GNI per capita lower than USD 13,205 and developed markets as those with a higher GNI per capita.

Table 7 compares the sample of higher GNI countries and lower GNI countries. Column (1) presents the results of higher GNI countries, where the coefficient of *Ann_CAR(-1,1)* is 0.03850 and highly significant. Column (2) shows the results of lower GNI countries, where the coefficient of *Ann_CAR(-1,1)* is 0.02273. The difference between the coefficients, based on the difference in differences, is 0.01622 and statistically significant. These findings align with the previous studies by Griffin et al. (2010) and Johson (1999). These findings support the hypothesis that earnings announcements from developed markets have a stronger influence on the magnitude of information spillover than earnings announcements from emerging markets. Therefore, Hypothesis 1e is confirmed.

5.1.6 Economic Growth and Intra-Country Information Transfer

In order to investigate the impact of earnings announcements on intra-country information spillover across varying economic conditions of the home country, the sample is divided into two groups based on the GDP growth rate of respective country. I define a period as an expansionary economic condition if the GDP growth rate is positive and a contractionary economic condition if the GDP growth rate is negative. Then, I test if the intra-country information transfer is more pronounced during the expansionary economic condition than during the contractionary economic condition.

Table 8 divides the dataset according to the sign of the GDP growth rate obtained from the OECD. Column (1) presents the results of the firms from countries with positive GDP growth, indicating an expansionary economic condition. The coefficient of *Ann_CAR(-1,1)* is 0.05410, and it is highly significant. Column (2) displays the results of the firms from countries with negative GDP growth, implying a contractionary economic condition. The coefficient of *Ann_CAR(-1,1)* is 0.03480, and it is also highly significant. The coefficient of *Ann_CAR(-1,1)* is 55% higher in the expansionary condition than in the contractionary condition. The difference in the coefficient of *Ann_CAR (-1,1)* between the two conditions is economically and statistically robust. The finding in this section is in line with Hypothesis 1e, and it corroborates the findings of Johnson (1999) and Andersen et al. (2005). Based on the results of this section, the hypothesis of more robust information transfer in the expansionary condition than in the contractionary condition is supported by the findings.

5.2 Firm Level Information Transfer

5.2.1 Firm Size

This section investigates whether announcing firms' size affects the information transfer's magnitude. The size of a firm is argued to affect the information spillover of earnings announcements because larger firms tend to have a more significant impact on the market as a whole. Larger firms often have a more diverse range of operations and a more significant number of stakeholders, leading to greater analyst coverage and investor attention. Additionally, larger firms should be more transparent in their financial reporting and have a higher level of corporate governance, which can facilitate more significant information transfer among firms. As a result, the size of the earning announcing firm is assumed to have a more significant impact on the market and may be more informative for other firms in the same industry or market. Here, in the same vein as Bergsma and Tayal (2020), I classify a company that releases earnings as a large firm if its market capitalization exceeds the median size of the sample firms from that country; otherwise, it is classified as a small firm.

Table 9 presents the results of the event study for large and small firms. Column (1) reports the coefficient of *Ann_CAR(-1,1)* for large firms, which is 0.05368 and highly significant at the 1% level. Column (2) reports the same coefficient for small firms, which is 0.02801 and statistically significant. The difference-in-differences regression shows that the difference between large and small firms is also highly significant.

These results strongly support Hypothesis 2a and are in line with Bergsma and Tayal (2020), who found that the information spillover effect is stronger for larger announcing firms. The magnitude of the difference between large and small firms is economically meaningful and statistically robust. Specifically, the coefficient of large firms is almost twice as large as that of the small firms.

5.2.2 Good News Versus Bad News (Positive Vs. Negative News)

This section investigates whether the information spillover differs depending on whether the announcing firm report a negative or positive earnings surprise. Among the initial announcements that resolve uncertainty, one can anticipate a higher level of information transfer when the first firm's earnings news significantly reduces uncertainty surrounding its announcement. Based on Hypothesis 2b, if an announcer reports a positive earnings surprise, it resolves more uncertainty than a negative earnings surprise. So, I expect a strong information spillover with a positive earing announcement.

Table 10 presents the results for firms categorized into two groups: those with positive earnings announcements (Good news) in column (1) and those with negative earnings announcements (Bad news) in column (2). In the case of positive earnings announcements, the coefficient of *Ann_CAR(-1,1)* is calculated as 0.04180, while for negative earnings announcements, it is 0.03613. The difference between these coefficients, determined through the difference-in-differences test, amounts to 0.00807, which is highly significant.

The findings in Table 10 support Hypothesis 2b and align with the findings of Truong et al. (2012), indicating that positive earnings surprises reduce uncertainty surrounding the earnings announcement. Consequently, positive earnings announcements are associated with a 16% higher level of information transfer compared to negative earnings announcements. In summary, the results highlight that the presence of positive earnings news leads to a stronger information transfer compared to negative earnings news, further supporting the notion that positive earnings announcements convey more valuable information.

5.2.3 Idiosyncratic Volatility

One of the current topics of interest in finance and economics is how earnings announcement information spillover relates to idiosyncratic volatility, which reflects the extent of information diffusion among firms. Baker and Wurgler (2007) find that firm-specific risk affects the size of the information spillover. Following the prior studies, I have measured idiosyncratic volatility by the standard deviation of the residuals found after estimating Fama-French (1993) three-factor model using daily excess returns over previous month (Ang et al., 2009). Here the market is represented by the respective country's Datastream total market index. Based on the prior month's level of volatility, an announcer is classified as high or low-idiosyncratic volatility groups. A firm belongs to the high idiosyncratic volatility group if its idiosyncratic volatility in the preceding month exceeds the median idiosyncratic volatility of the sample; otherwise, it falls into the low idiosyncratic volatility group.

Table 11 presents the results of the information spillover effect for announcing firms with high and low idiosyncratic volatility. Column (1) reports the coefficient of *Ann_CAR(-1,1)* for high idiosyncratic volatility firms, which is 0.03667 and statistically significant. Column (2) reports the coefficient of *Ann_CAR(-1,1)* for low idiosyncratic volatility firms, which is 0.03483 and also statistically significant. These results indicate that the information spillover effect is stronger for announcing firms with higher idiosyncratic volatility. The difference-in-differences estimate of the coefficient difference is 0.00277, yet unfortunately not statistically significant. Therefore, I cannot reject Hypothesis 2c and I confirm the findings of Baker and Wurgler (2007) that the level of idiosyncratic volatility has a positive influence on the information spillover effect of an earnings announcement.

5.2.4 Earnings and Revenue Announcement Vs. Earnings Announcement Alone

Several empirical studies have shown that revenue announcements have a more substantial information transfer effect than earnings announcements (Han & Wild, 1991). Moreover, managers tend to announce revenue when they think more than earnings announcements are needed to persuade investors (Ajinka & Gift, 1984). This is because investors can obtain a more comprehensive view of the firm's future performance when managers announce both earnings and revenue. Therefore, the information transfer effect will be more pronounced when an announcing firm reports both earnings and revenue. To test this hypothesis, I divide the sample into two groups: (1) firms that announce earnings only and (2) firms that announce both earnings and revenue and run the baseline regression (Equation 4).

As shown in Table 13, Column (1) reports the results of firms that announce earnings and revenue simultaneously. The primary independent variable *Ann_CAR* coefficient is 0.03730 and highly significant at the 1% level. In contrast, Column (2) displays the results of firms that announce earnings only. The coefficient of *Ann_CAR* is 0.03583 and is also highly significant. The individual coefficients of *Ann_CAR* indicate that the information transfer effect is more robust when a firm announces both earnings and revenue than when it announces earnings alone. However, the difference-in-differences estimator of the coefficient difference is not statistically significant. Neverthess, the sign of the difference in differences estimator is still consistent with the Hypothesis 2d that announcing revenue and earnings together provides more informative signals to peer firms than announcing earnings alone.

5.3 Intra-Industry Vs. Intra-Country Information Spillover

5.3.1 Intra-Industry Information Spillover

Building on the results from previous sections, this section investigates further the intra-country information spillover, and examines whether it coexists or interacts with the intra-industry

spillover. Previous studies by Grennan (2019) and Bergsma & Tayal (2020) have explored how dividend policies and earnings announcements affect the returns of peer firms in the same industry. Following a similar approach, this paper employs the following model to measure the information spillover among peer firms within the same industry,

$$Peer\_CAR(-1,1)_{(-i)jt} = \alpha + \beta_1 Ann\_CAR(-1,1)_{(-i)jt} + \beta_2 LRet_{(-1)jt'} + \beta_3 Momentum_{(-1)jt'} + \beta_4 ILLIQ_{(-1)jt'} + \beta_5 Ann_{Size_{(-i)jt'}} + \beta_6 peer\_Size_{(-i)jt'} + \beta_7 B/M_{(-i)jt'} + \varepsilon_{(-1)jt} \ldots\ldots\ldots\ldots (5)$$

Here, the dependent variable $Peer\_CAR(-1,1)_{(-i)jt}$ is a three-day cumulative abnormal return of the peer firm from the same industry and country except for the announcing firm i, and the primary independent variable is $Ann\_CAR(-1,1)_{(-i)jt}$, which is also a three-day cumulative abnormal return of each announcement of the announcing firm i of industry j. The abnormal return is calculated with the market model, and the market is defined as the Datastream total market index. All the control variables are lagged by one period and defined in Appendix A.

Column (1) of Table 13, calculated using equation (5), presents the results pertaining to intra-industry information transfer. The coefficient of *Ann_CAR(-1,1)* is determined to be 0.17841, demonstrating a highly significant statistical relationship. In other words, a 1% stock reaction following an earnings announcement by a cross-listed firm in the US market leads to a corresponding increase of 0.179% in the stock return of its peer firms from the same industry. This finding aligns with Hypothesis 3a and is consistent with the findings of Grennan (2019) and Bergsma & Tayal (2020), which emphasize the substantial information spillover effect of a firm's earnings announcement on its industry peers.

5.3.2 Intra-Country and Different Industry Spillover Effects

This section builds on the previous analysis of intra-*industry* information spillover by contrasting it with intra-*country* information spillover. To do so, I investigate how the earnings announcement of a firm affects another firm from the same country but a different industry,

$$Peer\_CAR(-1,1)_{(-i)kt} = \alpha + \beta_1 Ann\_CAR(-1,1)_{(-i)jt} + \beta_2 LRet_{(-1)jt'} + \beta_3 Momentum_{(-1)jt'} + \beta_4 ILLIQ_{(-1)jt'} + \beta_5 Ann\_Size_{(-i)jt'} + \beta_6 Peer\_Size_{(-i)jt'} + \beta_7 B/M_{(-i)jt'} + \varepsilon_{(-1)jt} \quad (6)$$

In this equation (6), the dependent variable $Peer\_CAR(-1,1)_{(-i)kt}$ is a firm's three-day cumulative abnormal return from the announcing firm's country but different industry. For example, if a Canadian firm in the Oil and Gas industry announces earnings, what about a firm's stock return from the retail industry? Here k is the industry classification different from announcing the firm's industry classification j. The primary independent variable ($Ann\_CAR(-1,1)_{(-i)jt}$) is a three-day cumulative abnormal return of each announcement of firm i of industry j. By following a standard event study methodology, this paper wants to regress $Peer\_CAR(-1,1)_{(-i)kt}$ on $Ann\_CAR(-1,1)_{(-i)jt}$ and control five firm-specific variables. All the control variables used are lagged for one period.

The second column of Table 13 shows the results of equation (6), which measures the impact of an earnings announcement on other firms in the same country but different industries, as explained above. The *Ann_CAR(-1,1)* coefficient is 0.02103 and highly significant statistically. This coefficient represents the pure intra-country spillover effect, isolated from the intra-industry effect. By comparing the coefficients in columns (1) and (2), I can infer that the intra-industry information transfer is 7.5 times stronger than the intra-country information transfer. However, the intra-country information transfer is still significant. The third column of Table 13 displays the difference between the coefficients calculated by difference in difference, which is 0.15698 and

strongly significant. This suggests that both the intra-industry and intra-country effects can coexist simultaneously, with the intra-industry effect being stronger than its intra-country counterpart.

5.4 Robustness Check

5.4.1 Earnings Announcement and Implied Volatility Spillover

Implied volatility reflects the market's anticipation of a firm's stock return variability. Pattel and Wolfson (1979, 1981) proposed a model outlining the anticipated future volatility surrounding the earnings announcements; they observed that implied volatility rises before earnings announcements, peaks shortly before the announcements, then drops sharply after the announcements. Isakov and Perigno (2001) as well as Troung et al. (2012) confirmed similar patterns regarding earnings announcements, and they also extended the previous literature by investigating the information content for both the firms making the announcement and their non-announcing peer firms. That is, if the decline in implied volatility of announcing firms after earnings announcements represent the release of information content, then the implied volatility of non-announcing peers would also experience a similar drop.

In my analysis, I use implied volatility derived from the exchange-traded option prices. As option prices are based on ex-ante information, it is expected to incorporate the investors' expectations regarding future stock return volatility. I have collected implied volatility of options from OptionMetric's standardized dataset of options. OptionMetric calculates implied volatility using the option of various maturities and strike prices. For calculating implied volatility, I adopt the methodologies of prior researchers (e.g., Rogers et al., 2009; Billings et al., 2015; Gallo, 2017; Hann et al., 2019).

To measure the information transfer, I use changes in implied volatility *(ΔIV)* as a measure of the volatility around the initial announcer's earnings announcement. Implied volatility is a

theoretically sound proxy of uncertainty, suitable for short-term analysis, and its changes with uncertainty are clear (Hann et al., 2019).

It is already mentioned *ΔIV* is used here to examine the information transfer surrounding the initial announcer's earnings announcement. As of Hann et al. (2019), I have calculated *ΔIV* as the logarithmic difference between a firm's implied volatility (*IV)*, three days prior to and three days subsequent to the first announcer's earnings releases, denoted as $In\left(\frac{IV_{EA+3}}{IV_{EA-3}}\right)$.

The following regression equation will be used to check the information transfer around the first announcer's earnings announcement based on implied volatility.

$$\Delta IV\_Peers_{j,k,t} = \beta_0 + \beta_1 \Delta IV\_A_{k,t} + \beta_2 X_{j,k,t} + \delta_k + \lambda_t + \varepsilon_{j,t} \quad \text{(7)}$$

$$\Delta IV\_A \text{ or } \Delta IV_{Peers} = In\left(\frac{IV_{EA+3}}{IV_{EA-3}}\right) \quad \text{(8)}$$

Here the primary variable of interest is $\Delta IV\_A_{k,t}$ is measured as the ratio between three days prior and after the earnings announcement. The dependent variable $\Delta IV\_Peers_{j,k,t}$ is also calculated following the same procedure for peer firm j in the k country. $X_{j,k,t}$ controls various firms' characteristics (as defined earlier). δ_k is used for country-fixed effects and $\lambda_t$is used for year-fixed effects. To account the unobserved country characteristics and changes in the market performance over the sample, I included these two variables respectively. If the primary announcer's earnings announcement contains valuable information about its peer firm, the coefficient of β_1 is expected to be positive.

Table14, depicts that the coefficient of ΔIV_Ann is 0.04397, indicating a positive and statistically significant relationship. This implies that when the initial announcer releases their earnings, it transmits information about country uncertainty to their fellow country peers who have cross-listed in the US market. My findings are consistent with the expectation and previous

findings. These results are also consistent with Hann et al. (2019), and Troung et al. (2012) that implied volatility is positively associated with earnings announcement and information transfer.

5.4.2 Information Transfer: Macroeconomic Uncertainty

Based on the evidence, the earnings announcement resolves uncertainty. Now I want to reinvestigate how a country's macroeconomic status influences the volatility's magnitude. Investors find it more challenging to forecast a firm's future performance in times of high macroeconomic uncertainty (Pandit et al., 2011). Consistent with the exact conjecture, Hann et al. (2019) evident a positive and significant association between implied volatility of announcing firms and their industry peers' particularly during period of high macroeconomic uncertainty. I have estimated the following model to test this prediction following Hann et al. (2019).

$$\Delta IV\_Peers_{j,k,t} = \beta_0 + \beta_1 \Delta IV\_A_{k,t} + \beta_2 \Delta IV\_A_{k,t} * UNCERTAIN_t + \beta_3 UNCERTAIN_t + \delta_k + \lambda_t + \varepsilon_{j,t} \quad \ldots\ldots (9)$$

Here, $UNCERTAIN_t$ represents the level of macroeconomic uncertainty during the first announcer announcement. It is measured in two ways (1) a dummy variable that represents recessions based on the expansions and contractions of the NBER's business cycle and (2) the anxious index, which measure the likelihood of a real GDP decline as determined by the professional forecasters. Here I expect β_2 to be positive.

Using the model (9) the Table 15, I present results based on the business cycle as a measure of uncertainty and anxiety as an uncertainty index. Column (1) depicts the results of changes in implied volatility of peer firms in relation to the uncertainty associated with earnings announcement, as measured by the NBER's Business Cycle indicator (economic expansion and contraction). Where the coefficient of ΔIV_Ann is positive and significant. Similarly, column (2) depicts the results of changes in implied volatility of peer firms surrounding the earnings announcement calculated based on the anxious index. Here, the coefficient of ΔIV_Ann is also

positive and significant. The coefficients of interaction terms in both columns *(ΔIV_Ann *$UNCERTAIN_{BUS\_CYL,}$* and ΔIV_Ann *$UNCERTAIN_{ANX}$*)* are also positive. The results presented in the table align with my expectation, indicating that there is a positive relationship between the implied volatility of the announcing firm and that of its peers. This association is notably more pronounced during economic recessions and periods characterized by heightened market anxiety. These findings suggest that the disclosure of earnings announcements by peers becomes especially significant in times of increased economic uncertainty.

CHAPTER 6: CONCLUSION

The earnings announcement generates information about a firm's cash flows and the financial prospects of its peers' firms, which share the same background, either through a common country of origin or operating in the same industry. It is already evident in the US market that there is a substantial information spillover between an announcing and its peer firms from the same industry, known as intra-industry information spillover. However, there have been limited studies on the country-level information spillover among cross-listed firms. This study adds to the existing literature by investigating the impact of earnings announcers' stock returns on the average stock returns of non-announcing peer firms from the same country of origin.

Using a dataset of cross-listed firms in the US market, this study presents compelling evidence of intra-country information spillover among cross-listed announcing firms and stock returns of their peer firms originating from the same country. My finding indicates that intra-country information transfer is significantly stronger during a down market condition. As investors seek more information to make decisions during a downturn, this result indicates that they learn more from an earnings announcement in such market conditions. Similar to the findings on the economic status of the home country of cross-listed firms, the accounting reporting quality

(whether IFRS is implemented or not) of the home country of the announcing firms also has a strongly positive and significant influence. Additionally, my finding shows that the extent of information transfer is robust when the earnings announcement originates from developed countries and occurs during expansionary economic conditions. Furthermore, intra-country information spillover is particularly pronounced when the announcing firm is large in size.

To enhance the robustness of my findings, I examined how peer firms' implied volatility responds to an earnings announcement. The results reveal a synchronized movement between the implied volatility of peer firms and that of the announcing firms during an earnings announcement. Additionally, I investigated how macroeconomic uncertainty influences the co-movement in implied volatility and found a positive and substantial effect, particularly during periods of high macroeconomic uncertainty. Taken together, these findings indicate that an earnings announcement made by a cross-listed firm in the US market conveys significant information about its peer cross-listed firms originating from the same country.

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APPENDIX-A

$Ann\_CAR_{(-1,+1)}$	The three-day cumulative abnormal return of the announcing firm, calculated using the market model.
$Peer\_CAR_{(-1,+1)}$	The three-day cumulative abnormal return of the peer firm with same country of origin, calculated using market model.
$Unex\_Earn$	The deviation of actual earnings from the consensus average analyst forecast for the industry leader, expressed as a proportion of the price.
Illiquidity	The measure of illiquidity known as ILLIQ is Amihud's (2002) metric based on the previous month's data.
LRet	The return of previous month on a monthly basis.
Momentum	Momentum refers to the accumulated gain from the period between t - 12 and t - 2, expressed as a compounded return.
Ann_Size	Size is defined as the logarithm in base e (natural logarithm) of a company's market capitalization of announcing firms.
Peer_Size	Size is defined as the logarithm in base e (natural logarithm) of a company's market capitalization of peer firms with same country of origin.
Book/Market	The ratio of book value to market value of a firm's common equity is known as B/M, where book value refers to the value of equity listed on the balance sheet and market value refers to the current market price of the equity.

Appendix-B

Table-1: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Ann_CAR	1827996	-.005	.06	-.198	.164
Std_Unex_Earn	1470596	-.29	3.183	-11.566	13.435
Peer_CAR	1827996	-.003	.087	-.248	.315
Illiquidity	1827996	.062	.893	0	65.818
Log_return	1827623	.023	.239	-.909	4.514
Momentum	1824423	.14	.756	-.978	26.143
Peer_Size	1827578	12.851	2.334	3.135	19.314
Ann_Size	1827918	13.43	1.847	5.546	19.293
Book/Market	1790156	2.731	12.756	-943.351	490

Table-2: Pairwise Correlations Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Peer_CAR	1.000								
(2) Ann_CAR	0.027	1.000							
	(0.000)								
(3) Std_Unex_Earn	0.003	-0.166	1.000						
	(0.000)	(0.000)							
(4) Illiquidity	0.002	-0.008	0.037	1.000					
	(0.007)	(0.000)	(0.000)						
(5) Log_return	-0.005	-0.047	-0.027	-0.031	1.000				
	(0.000)	(0.000)	(0.000)	(0.000)					
(6) Momentum	0.001	0.025	-0.076	-0.040	0.005	1.000			
	(0.234)	(0.000)	(0.000)	(0.000)	(0.000)				
(7) Peer_Size	0.043	-0.004	0.002	-0.019	0.006	0.010	1.000		
	(0.000)	(0.000)	(0.030)	(0.000)	(0.000)	(0.000)			
(8) Ann_Size	0.007	0.045	-0.108	-0.126	0.041	0.135	0.131	1.000	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)		
(9) Book/Market	0.000	0.013	-0.026	-0.008	0.033	0.063	-0.011	0.027	1.000
	(0.941)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	

Table-3

*The table contains findings about the information transfer of earning announcements by cross-listed firms to their peers from the same country of origin. The dependent variable being examined is Peer_CAR(-1,1), it represents the cumulative abnormal return over three days for non-announcing peer firms from the same country of origin. Market model is used to calculate abnormal returns (Single factor model and Fama and French (1993) with Carhart (1997) momentum factor). The primary independent variable of interest is Ann_CAR(-1,1), it represents the cumulative abnormal return over three days event window by announcing firms. A standard event study methodology is employed to assess the average response of peer firms to earnings announcers' returns. Specifically, a regression analysis is conducted for each day with an earnings announcement, regressing Peer_CAR(-1,1) on Ann_CAR(-1,1) along with six control variables. Columns (1) and (2) present abnormal returns calculated using the single-factor model, while columns (3) and (4) show results for abnormal returns calculated using Fama-French (1993) model. All the regressions are estimated using equation (4) and including country-level fixed effects. The definition of control variables is presented in Appendix A and all of them are lagged by one period. Both the variable Peer_CAR(-1,1) and Ann_CAR(-1,1) are measured in decimal form. The standard error values are reported and enclosed in parentheses. The level of statistical significance at 10%, 5% and 1% are indicated using *, **, and *** respectively. The study covers a sample period ranging from 1993 to 2021.*

Country Level Information

	(1)	(2)	(3)	(4)
	Single Factor		Fama-French	
VARIABLES	Peer_CAR	Peer_CAR	Peer_CAR	Peer_CAR
Ann_CAR	0.03784***		0.04921***	
	(0.00325)		(0.00187)	
Std_Unexpected_Earn		0.00010***		0.00011***
		(0.00001)		(0.00001)
Log_Return	-0.00130***	-0.00117***	-0.00298***	-0.00315***
	(0.00015)	(0.00011)	(0.00019)	(0.00015)
Momentum	-0.00003	0.00007	-0.00007	0.00006
	(0.00022)	(0.00011)	(0.00026)	(0.00012)
Illiquidity	0.00029***	0.00111***	0.00032***	0.00121***
	(0.00004)	(0.00039)	(0.00004)	(0.00033)
Ann_Size	0.00026***	0.00027***	0.00027***	0.00029***
	(0.00004)	(0.00003)	(0.00004)	(0.00003)
Peer_Size	0.00051***	0.00050***	0.00055***	0.00055***
	(0.00012)	(0.00011)	(0.00013)	(0.00012)
Book/Market	-0.00000	0.00001	-0.00000***	-0.00000***
	(0.00001)	(0.00001)	(0.00000)	(0.00000)
Constant	-0.01317***	-0.01329***	-0.01415***	-0.01441***
	(0.00192)	(0.00174)	(0.00195)	(0.00178)
Country Level FE	YES	YES	YES	YES
Country Level SE Cluster	YES	YES	YES	YES

Table-4

*The table divided the sample based on market condition (up or down) on the announcement date. A market condition is defined as upmarket, when the market return on the announcement date (t= 0) is positive; otherwise, categorized as a down-market. The response variable is Peer_CAR(-1,1), it represents the cumulative abnormal return over three days for non-announcing peer firms from the same country of origin. Market model is used to calculate abnormal return. The primary explanatory variable of interest is Ann_CAR(-1,1), which represents the cumulative abnormal return over three days for each earnings announcer in the same country of origin. A standard event study methodology is employed to assess the average response of peer firms to earnings announcers' returns. Specifically, a regression analysis is conducted for each day with an earnings announcement, regressing Peer_CAR(-1,1) on Ann_CAR(-1,1) along with six control variables. Column (1) presents results for earnings announcers on the upmarket, while column (2) shows results for earnings announcements on the downmarket. Both columns (1) and (2) are estimated, including country-fixed effects in the estimation. The results of difference in differences are presented in column (3). All control variables are lagged by one period and defined in Appendix A. Both the variable Peer_CAR(-1,1) and Ann_CAR(-1,1) are measured in decimal form. All the regressions are estimated with equation (4). The standard error values are reported and enclosed in parentheses. The level of statistical significance at 10%, 5% and 1% are indicated using *, **, and *** respectively. The study covers a sample period ranging from 1993 to 2021.*

	Up Market Vs. Down Market		
	(1)	(2)	(3)
VARIABLES	Up Market	Down Market	Diff
Ann_CAR	0.03203***	0.04374***	-0.01458***
	(0.00519)	(0.00553)	(0.00216)
Log_return	-0.00196*	-0.00083	
	(0.00111)	(0.00135)	
Momentum	-0.00031	0.00023	
	(0.00031)	(0.00035)	
Illiquidity	0.00035***	0.00029**	
	(0.00011)	(0.00012)	
Ann_Size	0.00027**	0.00018	
	(0.00013)	(0.00014)	
Peer_Size	0.00035***	0.00065***	
	(0.00005)	(0.00006)	
Book/Market	0.00001	-0.00000	
	(0.00001)	(0.00001)	
Constant	-0.01009***	-0.01500***	
	(0.00175)	(0.00198)	
Firm Level SE Cluster	YES	YES	

Table-5

*This table divides the dataset based on the level of market volatility in the prior month (whether it was high or low). Market volatility is denoted as MKTVOL, and defined as the standard deviation daily market return, using the Datastream total market return index (Choi, 2018). Data are categorized as "High MKTVOL" if the MKTVOL in the prior month is above the country specific median MKTVOL, while observations are labeled as "Low MKTVOL" if the MKTVOL is below or equal to the median for that country. The dependent variable being examined is Peer_CAR(-1,1), it represents the cumulative abnormal return over three days for non-announcing peer firms from the same country of origin. The Market model is employed to estimate abnormal returns. The primary independent variable of interest is Ann_CAR(-1,1), it represents the cumulative abnormal return over three days for each earnings announcer in the same country of origin. A standard event study methodology is employed to assess the average response of peer firms to earnings announcers' returns. Specifically, a regression analysis is conducted for each day with an earnings announcement, regressing Peer_CAR(-1,1) on Ann_CAR(-1,1) along with six control variables. Column (1) presents results calculated for high market volatility, while column (2) shows results of low market volatility. The results of difference in differences are presented in column (3). All control variables are lagged by one period and defined in Appendix A. Both the variable Peer_CAR(-1,1) and Ann_CAR(-1,1) are measured in decimal form. All the regressions are estimated with equation (4). The standard error values are reported and enclosed in parentheses. The level of statistical significance at 10%, 5% and 1% are shown using *, **, and *** respectively. The study covers a sample period ranging from 1993 to 2021.*

	Market Volatility		
	(1)	(2)	(3)
VARIABLES	High Market Volatility	Low Market Volatility	Diff
Ann_CAR	0.03653***	0.04112***	-0.00094
	(0.00511)	(0.00534)	(0.00230)
Log_return	-0.00094	-0.00186	
	(0.00111)	(0.00139)	
Momentum	0.00022	-0.00067*	
	(0.00033)	(0.00035)	
Illiquidity	0.00035***	0.00026*	
	(0.00008)	(0.00014)	
Ann_Size	0.00032**	0.00002	
	(0.00014)	(0.00012)	
Peer_Size	0.00034***	0.00066***	
	(0.00005)	(0.00005)	
Book/Market	-0.00000	0.00000	
	(0.00001)	(0.00001)	
Constant	-0.01266***	-0.01034***	
	(0.00179)	(0.00172)	
Firm Level SE Cluster	YES	YES	

Table-6

*The table split the sample based on whether a country implemented full IFRS. A country is treated as IFRS implemented if that country has fully implemented IFSR without modification; otherwise treated as a local accounting standard. The dependent variable being examined is Peer_CAR(-1,1), it represents the cumulative abnormal return over three days for non-announcing peer firms from the same country of origin. The Market model is applied to determine abnormal returns. The primary independent variable of interest is Ann_CAR(-1,1), it represents the cumulative abnormal return over three days for each earnings announcer in the same country of origin. A standard event study methodology is employed to assess the average response of peer firms to earnings announcers' returns. Specifically, a regression analysis is conducted for each day with an earnings announcement, regressing Peer_CAR(-1,1) on Ann_CAR(-1,1) along with six control variables. Column (1) presents the results of firms that originated in a country that fully implemented IFRS, while column (2) shows the results of firms that originated in a country with any modified version of IFRS or any local accounting standard. The results of difference in differences are presented in column (3). All control variables are lagged by one period and defined in Appendix A. Both the variable Peer_CAR(-1,1) and Ann_CAR(-1,1) are measured in decimal form. All the regressions are estimated with equation (4). The standard error values are reported and enclosed in parentheses. The level of statistical significance at 10%, 5% and 1% are indicated using *, **, and *** respectively. The study covers a sample period ranging from 1993 to 2021.*

	IFRS Status		
	(1)	(2)	(3)
VARIABLES	IFRS Implemented	Local Accounting Standard	Diff
Ann_CAR	0.11100***	0.03620***	0.08213***
	(0.02237)	(0.00433)	(0.00702)
Log_return	-0.00700	-0.00115	
	(0.00643)	(0.00092)	
Momentum	0.00033	-0.00002	
	(0.00199)	(0.00024)	
Illiquidity	-0.14120	0.00029***	
	(0.10456)	(0.00006)	
Ann_Size	0.00009	0.00024**	
	(0.00077)	(0.00010)	
Peer_Size	0.00066***	0.00050***	
	(0.00020)	(0.00004)	
Book/Market	-0.00015**	0.00000	
	(0.00006)	(0.00001)	
Constant	-0.01425	-0.01280***	
	(0.01173)	(0.00136)	
Firm Level SE Cluster	YES	YES	

Table-7

*The table split the sample based on whether a firm's country of origin is in expansion (High GNI) or contraction (Low GNI) in the year of announcement. Expansion or contraction is determined based on GNI as reported by the OECD. The sample is classified each year as an Expansion if the GNI growth rate is positive; otherwise classified as contraction. The dependent variable being examined is Peer_CAR(-1,1), it represents the cumulative abnormal return over three days for non-announcing peer firms from the same country of origin. The Market model is employed to determine abnormal returns. The primary independent variable of interest is Ann_CAR(-1,1), it represents the cumulative abnormal return over three days for each earnings announcer in the same country of origin. A standard event study methodology is employed to assess the average response of peer firms to earnings announcers' returns. Specifically, a regression analysis is conducted for each day with an earnings announcement, regressing Peer_CAR(-1,1) on Ann_CAR(-1,1) along with six control variables. Column (1) presents the results of firms that originated in a country that is in an expansionary condition, while column (2) shows the results of firms that originated in a country that is in a contractionary condition. The results of difference in differences are presented in column (3). All control variables are lagged by one period and defined in Appendix A. Both the variable Peer_CAR(-1,1) and Ann_CAR(-1,1) are measured in decimal form. All the regressions are estimated with equation (4). The standard error values are reported and enclosed in parentheses. The level of statistical significance at 10%, 5% and 1% are indicated using *, **, and *** respectively. The study covers a sample period ranging from 1993 to 2021.*

	Economic Condition (GNI)		
	(1)	(2)	(3)
VARIABLES	Higher GNI	Lower GNI	Diff
Ann_CAR	0.03850***	0.02273	0.01622*
	(0.00450)	(0.01701)	(0.00959)
Log_return	-0.00137	-0.00094	
	(0.00092)	(0.00309)	
Momentum	-0.00005	0.00128	
	(0.00024)	(0.00090)	
Illiquidity	0.00029***	-0.00171	
	(0.00006)	(0.00344)	
Ann_Size	0.00026**	0.00013	
	(0.00010)	(0.00025)	
Peer_Size	0.00053***	-0.00009	
	(0.00004)	(0.00018)	
Book/Market	0.00000	-0.00013	
	(0.00001)	(0.00013)	
Constant	-0.01340***	-0.00281	
	(0.00145)	(0.00413)	
Firm Level SE Cluster	YES	YES	

Table-8

*The table split the sample based on whether a firm's country of origin is in expansion (High GDP growth) or contraction (Low GDP growth) in the year announcement. By using GDP growth rate reported by OECD Expansion and contraction is defined. The sample is classified each year as an Expansion if the GDP growth rate is positive, otherwise classified as contraction. The dependent variable being examined is Peer_CAR(-1,1), it represents the cumulative abnormal return over three days for non-announcing peer firms from the same country of origin. The Market model is employed to compute abnormal returns. The primary independent variable of interest is Ann_CAR(-1,1), which represents the cumulative abnormal return over three days for each earnings announcer in the same country of origin. A standard event study methodology is employed to assess the average response of peer firms to earnings announcers' returns. Specifically, a regression analysis is conducted for each day with an earnings announcement, regressing Peer_CAR(-1,1) on Ann_CAR(-1,1) along with six control variables. Column (1) presents the results of firms that originated in a country that is in an expansionary condition, while column (2) shows the results of firms that originated in a country that is in a contractionary condition. The results of difference in differences are presented in column (3). All control variables are lagged by one period and defined in Appendix A. Both the variable Peer_CAR(-1,1) and Ann_CAR(-1,1) are measured in decimal form. All the regressions are estimated with equation (4). The standard error values are reported and enclosed in parentheses. The level of statistical significance at 10%, 5% and 1% are shown using *, **, and *** respectively. The study covers a sample period ranging from 1993 to 2021.*

	Economic Growth (GDP)		
	(1)	(2)	(3)
VARIABLES	High GDP Growth	Low GDP Growth	Diff
Ann_CAR	0.05410***	0.03480***	0.01871***
	(0.00634)	(0.00499)	(0.00291)
Log_return	-0.00155	-0.00134	
	(0.00180)	(0.00098)	
Momentum	-0.00064	0.00035	
	(0.00052)	(0.00024)	
Illiquidity	0.00118	0.00027***	
	(0.00118)	(0.00006)	
Ann_Size	-0.00005	0.00030***	
	(0.00019)	(0.00011)	
Peer_Size	0.00016*	0.00055***	
	(0.00009)	(0.00004)	
Book/Market	-0.00003	0.00000	
	(0.00003)	(0.00001)	
Constant	-0.00466*	-0.01409***	
	(0.00253)	(0.00151)	
Firm Level SE Cluster	YES	YES	

Table-9

*The table contains the dataset divided into two groups based on the size of the earnings announcer: large firms and small firms. Here earnings announcers are categorized as either large or small firms based on their size compared to the median size of firms from the same country. The dependent variable being examined is Peer_CAR(-1,1), it represents the cumulative abnormal return over three days for non-announcing peer firms originating from the same country. The Market model is employed to estimate abnormal returns. The primary independent variable of interest is Ann_CAR(-1,1), it represents the cumulative abnormal return over three days window for every announcing firm originating from the same country. A standard event study methodology is employed to assess the average response of peer firms to earnings announcers' returns. Specifically, a regression analysis is conducted for each day with an earnings announcement, regressing Peer_CAR(-1,1) on Ann_CAR(-1,1) along with six control variables. Column (1) presents results for earnings announcers classified as large firms, while column (2) shows results for those classified as small firms. The results of difference in differences are presented in column (3). All control variables are lagged by one period and defined in Appendix A. Both the variable Peer_CAR(-1,1) and Ann_CAR(-1,1) are measured in decimal form. All the regressions are estimated with equation (4). The standard error values are reported and enclosed in parentheses. The level of statistical significance at 10%, 5% and 1% are indicated using *, **, and *** respectively. The study covers a sample period ranging from 1993 to 2021.*

	Firm Size		
	(1)	(2)	(3)
VARIABLES	Large Firm	Small Firm	Diff
Ann_CAR	0.05368***	0.02801***	0.02514***
	(0.00914)	(0.00409)	(0.00225)
Log_return	-0.00160	-0.00093	
	(0.00198)	(0.00095)	
Momentum	-0.00025	0.00009	
	(0.00040)	(0.00026)	
Illiquidity	-0.00054	0.00033***	
	(0.00270)	(0.00006)	
Ann_Size	0.00007	0.00046*	
	(0.00023)	(0.00027)	
Peer_Size	0.00051***	0.00057***	
	(0.00006)	(0.00006)	
Book/Market	-0.00001	0.00001	
	(0.00001)	(0.00001)	
Constant	-0.01009***	-0.01646***	
	(0.00374)	(0.00348)	
Country Level Fixed Effect	YES	YES	
Firm Level SE Cluster	YES	YES	

Table-10

*The table contains the dataset divided into two groups based on the positive and negative earnings surprise: positive earnings surprise is classified as Good news, and Negative earnings surprise is classified as Bad news. The dependent variable being examined is Peer_CAR(-1,1), it represents the cumulative abnormal return over three days for non-announcing peer firms originating from the same country. The Market model is employed to compute abnormal returns. The primary independent variable of interest is Ann_CAR(-1,1), which represents the cumulative abnormal return over three days for each earnings announcer in the same country of origin. A standard event study methodology is employed to assess the average response of peer firms to earnings announcers' returns. Specifically, a regression analysis is conducted for each day with an earnings announcement, regressing Peer_CAR(-1,1) on Ann_CAR(-1,1) along with six control variables. Column (1) presents results for earnings announcers with positive earnings surprise (Good News), while column (2) shows results for earnings announcers with negative earnings surprise. The results of difference in differences are presented in column (3). All control variables are lagged by one period and defined in Appendix A. Both the variable Peer_CAR(-1,1) and Ann_CAR(-1,1) are measured in decimal form. All the regressions are estimated with equation (4). The standard error values are reported and enclosed in parentheses. The level of statistical significance at 10%, 5% and 1% are indicated using *, **, and *** respectively. The study covers a sample period ranging from 1993 to 2021.*

Good News Vs. Bad News			
	(1)	(2)	(3)
VARIABLES	Good News	Bad News	Diff
Ann_CAR	0.04180***	0.03613***	0.00807***
	(0.00591)	(0.00770)	(0.00225)
Log_return	0.00025	0.00022	
	(0.00153)	(0.00149)	
Momentum	-0.00021	0.00104**	
	(0.00035)	(0.00046)	
Illiquidity	0.00236*	0.00164	
	(0.00120)	(0.00133)	
Ann_Size	0.00012	0.00041**	
	(0.00018)	(0.00018)	
Peer_Size	0.00063***	0.00066***	
	(0.00006)	(0.00006)	
Book/Market	-0.00000	0.00002	
	(0.00001)	(0.00002)	
Constant	-0.01351***	-0.01628***	
	(0.00262)	(0.00261)	
Country Level Fixed Effect	YES	YES	
Firm Level SE Cluster	YES	YES	

Table-11

*The table categorizes the dataset by the level of idiosyncratic volatility of announcing firms' one earlier than announcement. Idiosyncratic volatility (Ivol) is measured as the standards deviation of the residual found by regressing the preceding month's daily returns on the market's returns (Ang et al., 2009). The market is represented by the respective country's Datastream total market index. A firm is categorized as high Ivol when its preceding month's Ivol is greater the median Ivol of the sample firm with same origin; otherwise, categorized as low Ivol. The dependent variable being examined is Peer_CAR(-1,1), it represents the cumulative abnormal return over three days for non-announcing peer firms from the same country of origin. The Market model is employed to compute abnormal returns. The primary independent variable of interest is Ann_CAR(-1,1), it represents the cumulative abnormal return over three days for each earnings announcer in the same country of origin. A standard event study methodology is employed to assess the average response of peer firms to earnings announcers' returns. Specifically, a regression analysis is conducted for each day with an earnings announcement, regressing Peer_CAR(-1,1) on Ann_CAR(-1,1) along with six control variables. Column (1) presents results for earnings announcers if they show high Ivol, while column (2) shows results for earnings announcers when they show low Ivol. The results of difference in differences are presented in column (3). All control variables are lagged by one period and defined in Appendix A. Both the variable Peer_CAR(-1,1) and Ann_CAR(-1,1) are measured in decimal form. All the regressions are estimated with equation (4). The standard error values are reported and enclosed in parentheses. The level of statistical significance at 10%, 5% and 1% are indicated using *, **, and *** respectively. The study covers a sample period ranging from 1993 to 2021.*

	Idiosyncratic Volatility		
	(1)	(2)	(3)
VARIABLES	High_idio_volatiltiy	Low_idio_volatiltiy	Diff
Ann_CAR	0.03667***	0.03483***	0.00277
	(0.00508)	(0.00637)	(0.00276)
Log_return	-0.00121	-0.00009	
	(0.00102)	(0.00194)	
Momentum	-0.00007	-0.00042	
	(0.00026)	(0.00093)	
Illiquidity	0.00028***	0.00026	
	(0.00006)	(0.00060)	
Ann_size	0.00038**	-0.00004	
	(0.00017)	(0.00016)	
Peer_size	0.00061***	0.00036***	
	(0.00006)	(0.00005)	
Book/Market	-0.00001	0.00001	
	(0.00001)	(0.00001)	
Constant	-0.01612***	-0.00658***	
	(0.00224)	(0.00247)	
Country Level Fixed Effect	YES	YES	
Firm Level SE Cluster	YES	YES	

Table-12

*The table contains the dataset divided into two groups based on whether earnings announcing firms announce earnings only or announce earnings and revenue together. The dependent variable being examined is Peer_CAR(-1,1), it represents the cumulative abnormal return over three days for non-announcing peer firms from the same origin. The Market model is employed to determine abnormal returns. The primary independent variable of interest is Ann_CAR(-1,1), it represents the cumulative abnormal return over three days for each earnings announcer in the same country of origin. A standard event study methodology is employed to assess the average response of peer firms to earnings announcers' returns. Specifically, a regression analysis is conducted for each day with an earnings announcement, regressing Peer_CAR(-1,1) on Ann_CAR(-1,1) along with six control variables. Column (1) presents results for earnings announcers when a firm announces both earnings and revenue together, while column (2) shows results for earnings announcers who announce earnings only. Here I run the baseline of regression (16); both regression (1) and (2) are estimated, including country-fixed effects in the estimation. The results of difference in differences are presented in column (3). All control variables are lagged by one period and defined in Appendix A. Both the variable Peer_CAR(-1,1) and Ann_CAR(-1,1) are measured in decimal form. All the regressions are estimated with equation (4). The standard error values are reported and enclosed in parentheses. The level of statistical significance at 10%, 5% and 1% are indicated using *, **, and *** respectively. The study covers a sample period ranging from 1993 to 2021.*

Earnings and Revenue Announcement Vs. Earnings Announcements Alone

	(1)	(2)	(3)
VARIABLES	Earnings_revenue together	Earnings_alone	Diff
Ann_CAR	0.03730***	0.03583***	0.00025
	(0.00512)	(0.00572)	(0.00249)
Log_return	-0.00083	-0.00092	
	(0.00114)	(0.00113)	
Momentum	-0.00010	0.00041	
	(0.00028)	(0.00047)	
Illiquidity	0.00032***	0.00023	
	(0.00006)	(0.00021)	
Ann_Size	0.00028**	-0.00008	
	(0.00013)	(0.00016)	
Peer_Size	0.00060***	0.00014*	
	(0.00005)	(0.00008)	
Book/Market	0.00001	-0.00004*	
	(0.00001)	(0.00002)	
Constant	-0.01435***	-0.00490**	
	(0.00200)	(0.00223)	
Country Level Fixed Effect	YES	YES	
Firm Level SE Cluster	YES	YES	

Table-13

*The table contains the dataset divided into two groups based on whether earnings announcing firms belong to the home country of origin and same industry. If firms belong to the same country of origin and same industry, then it is treated as Intra-industry; otherwise, as intra-country. The dependent variable being examined is Peer_CAR(-1,1), it represents the cumulative abnormal return over three days for non-announcing peer firms from the same country of origin. The Market model is employed to estimate abnormal returns. The primary independent variable of interest is Ann_CAR(-1,1), it represents the cumulative abnormal return over three days for each earnings announcer in the same country of origin. A standard event study methodology is employed to assess the average response of peer firms to earnings announcers' returns. Specifically, a regression analysis is conducted for each day with an earnings announcement, regressing Peer_CAR(-1,1) on Ann_CAR(-1,1) along with six control variables. Column (1) presents results for earnings announcers of the same industry, while column (2) shows results for earnings announcers of intra-country. Here the first regression (Column 1) is run with equation 5, and the second regression (column 2) is run with equation 6. Both regressions (1) and (2) are estimated, including country-fixed effects in the estimation. The results of difference in differences are presented in column (3). All control variables are lagged by one period and defined in Appendix A. Both the variable Peer_CAR(-1,1) and Ann_CAR(-1,1) are measured in decimal form. The standard error values are reported and enclosed in parentheses. The level of statistical significance at 10%, 5% and 1% are indicated using *, **, and *** respectively. The study covers a sample period ranging from 1993 to 2021.*

Intra-Industry Vs. Intra-Country

	(1)	(2)	(3)
VARIABLES	Intra-industry	Intra-country	Diff
Ann_CAR	0.17841***	0.02103***	0.15698***
	(0.01883)	(0.00358)	(0.00344)
Log_return	0.00358	0.00033	
	(0.00224)	(0.00072)	
Momentum	0.00062	-0.00034	
	(0.00060)	(0.00021)	
Illiquidity	0.00010	-0.00017	
	(0.00023)	(0.00012)	
Ann_Size	0.00010	0.00011	
	(0.00033)	(0.00010)	
Peer_Size	0.00161***	0.00133***	
	(0.00016)	(0.00005)	
Book/Market	0.00001	0.00000	
	(0.00002)	(0.00001)	
Constant	-0.02487***	-0.02174***	
	(0.00403)	(0.00158)	
Country Level Fixed Effect	YES	YES	
Firm Level SE Cluster	YES	YES	

Table-14

*The table contains information about the Changes in implied volatility of peer firms from the same country of origin around the earnings announcement of a firm. The dependent variable being examined is Changes_IV_Peers, which represents the changes in implied volatility over three days for non-announcing peer firms from the same country of origin. The primary independent variable of interest is Changes_IV_Ann, which represents the changes in implied volatility over three days for each earnings announcer in the same country of origin. A standard event study methodology is employed to assess the average response of peer firms to earnings announcers' returns. Specifically, a regression analysis is conducted for each day with an earnings announcement, regressing Changes_IV_Peers on Changes_IV_Ann along with six control variables. The regression is estimated, including country-fixed effects and year-fixed effects. Description of the control variables are given in Appendix A and all are lagged by one period. The regression is estimated with equation (7) and ΔIV_Ann and ΔIV_Peers are calculated by equation (8). The robust standard error values are reported and enclosed in parentheses. The level of statistical significance at 10%, 5% and 1% are indicated using *, **, and *** respectively. The study covers a sample period ranging from 1993 to 2021.*

Earnings Announcement and Implied Volatility Spillover

VARIABLES	ΔIV_Peers
ΔIV_Ann	0.04397***
	(0.00310)
Illiquidity	-0.03616***
	(0.01208)
Log_Return	-0.00053
	(0.00167)
Momentum	0.00160***
	(0.00015)
Book/Market	0.00000***
	(0.00000)
Ann_Size	-0.00009
	(0.00016)
Peer_Size	0.00012
	(0.00013)
Constant	-0.00638**
	(0.00308)
Country Level FE	YES
Year Level FE	YES
Country Level SE Cluster	YES

Table-15

*The table contains information about the changes in implied volatility of peer firms from the same country of origin around the earnings announcement of a firm. The dependent variable being examined is ΔIV_Peers, which represents the changes in implied volatility over three days for non-announcing peer firms from the same country of origin. The primary independent variable of interest is ΔIV_Ann and, ΔIV_Ann *$UNCERTAIN_{BUS\_CYL}$, and ΔIV_Ann *$UNCERTAIN_{ANX}$, which represents the changes in implied volatility over three days for each earnings announcer in the same country of origin. A standard event study methodology is employed to assess the average response of peer firms to earnings announcers' returns. Specifically, for each day with an earnings announcement, a regression analysis is conducted using equation (9), regressing ΔIV_Peers on ΔIV_Ann and, ΔIV_Ann *UNCERTAIN, and UNCERTAIN, along with six control variables. The regression is estimated, including country-fixed effects and year-fixed effects. Description of the control variables are given in Appendix A and all are lagged by one period. The robust standard error values are reported and enclosed in parentheses. The level of statistical significance at 10%, 5% and 1% are indicated using *, **, and *** respectively. The study covers a sample period ranging from 1993 to 2021.*

Macroeconomic Uncertainty		
	(1)	(2)
VARIABLES	ΔIV_Peers	ΔIV_Peers
ΔIV_Ann	0.04122***	0.03549***
	(0.00301)	(0.00440)
$\Delta IV_{Ann} * UNCERTAIN_{BUSS\_CYL}$	0.03010***	
	(0.00982)	
$UNCERTAIN_{BUSS\_CYL}$	0.00686***	
	(0.00146)	
$\Delta IV_{Ann} * UNCERTAIN_{ANX}$		0.00062
		(0.00039)
$UNCERTAIN_{ANX}$		-0.00013***
		(0.00003)
Illiquidity	-0.02810*	-0.02908*
	(0.01562)	(0.01502)
Log_Return	-0.00137	-0.00077
	(0.00196)	(0.00205)
Momentum	0.00172***	0.00129***
	(0.00017)	(0.00013)
Book/Market	0.00000***	0.00000***
	(0.00000)	(0.00000)
Ann_Size	-0.00005	-0.00006
	(0.00017)	(0.00016)
Peer_Size	0.00015	0.00014
	(0.00014)	(0.00014)
Constant	-0.00839**	-0.00509
	(0.00339)	(0.00365)
Country Level FE	YES	YES
Year Level FE	YES	YES
Country Level SE Cluster	YES	YES