What Drives the Earnings Announcement Premium?

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This study investigates what drives the earnings announcement premium. Prior studies have offered various explanations of why announcing firms experience higher returns; however, the evidence is still mixed. I show that firms with a higher level of market-wide information experience higher returns during earnings announcements. Firms' earnings include a market-wide component and firm-specific component. The market-wide component is common across all firms and is related to systematic risk. The evidence is consistent with the theoretical model of Savor and Wilson (2011), who model investor learning about other firms and the economy from earnings announcements, which leads to a higher announcement risk for announcing firms. Consistent with the model, I find that the earnings announcement premium increases when investors are most uncertain about the economy.

INTRODUCTION

What drives the earnings announcement premium? Prior studies have found that firms experience higher returns during the earnings announcement period, both in the shorter windows (Beaver, 1968; Ball and Kothari, 1991; Cohen, Dey, Lys, and Sunder, 2007) and longer horizons (Frazzini and Lamont, 2007; Savor and Wilson, 2011; Barber, George, Lehavy and Trueman, 2013). This phenomenon is known as the earnings announcement premium. However, the underlying reason for this phenomenon is unclear. Frazzini and Lamont (2007) explain that limited investor attention leads to the earnings announcement premium, while Cohen et al. (2007) find that the limits to arbitrage are the underlying factor. More recently, Barber et al. (2013) find that information uncertainty about the earnings announcement, measured by abnormal idiosyncratic volatility, causes investors to demand higher expected returns.

Savor and Wilson (2011) present an alternative model in which earnings announcements contain market-wide information as well as firm-specific information. In the model, investors update their beliefs about other firms and the state of the economy from earnings announcements, but they do so imperfectly since they cannot separate out the market-wide component from the firm-specific news. The market-wide component is common across all firms. This presents a systematic risk to investors, for which they demand a risk premium.

This paper empirically tests the model of Savor and Wilson (2011) by cross-sectionally examining the earnings announcement premium across firms with varying levels of market-wide information, and across different levels of time-varying macroeconomic uncertainty in a time series. The empirical evidence supports the model's predictions: the market-wide component of the earnings announcement is positively related to earnings announcement returns. I find that firms with a higher level of market-wide information experience higher earnings announcement returns, both in the short term and in the longer window. Firms whose returns are highly correlated with the market return are considered to have a higher degree of

market-wide information (Frankel, Kothari, and Weber, 2006). On average, the cumulative abnormal return during the 3-day earnings announcement window is larger by 0.6% to 0.75%, and by 3% to 3.6% during a longer 30-day window period, when I compare the returns of firms in the highest quintile level of market-wide information to those of firms in the lowest quintile group.

The earnings announcement returns also increase during periods of high macroeconomic uncertainty. When investors are uncertain about the state of the economy, they require a higher risk premium to compensate for the market-information risk. Market return volatility (market uncertainty) and the VIX index are proxies for macroeconomic uncertainty. The earnings announcement abnormal return increases by 0.3% to 0.42% during a 3-day window, and by 0.2% to 1.1% during a 30-day window, when the degree of macroeconomic uncertainty increases from the lowest quintile level to the highest quintile level. The differences are all highly significant. These two main results indicate that the earnings announcement premium is related to systematic risk of the market-wide information contained in earnings news.

Moreover, I find that there is a significant interaction effect between cross-sectional market-wide information and macroeconomic uncertainty. Firms with a high level of market information risk experience the highest returns during high macroeconomic uncertainty periods.

This research adds to the literature on the persistent earnings announcement premium puzzle. I provide empirical evidence that learning about the market and the economy from earnings announcements leads to a higher risk premium that is priced during announcement periods. This is consistent with the model of Savor and Wilson (2011), where the market-wide component of earnings is related to systematic risk. However, this paper differs from Savor and Wilson (2011), as Savor and Wilson do not examine the earnings announcement premium in a cross-section of firms that varies across different levels of market-wide information, nor do they examine the time varying earnings announcement premium across different macroeconomic uncertainty levels.

The announcement uncertainty that stems from learning about the economy is also related to the prior disclosure risk explanation of the earnings announcement premium puzzle.[1] Investors require higher announcement returns when a valuation-relevant information announcement is expected and the associated disclosure risk is non-diversifiable. Prior studies have assumed that the information contained in earnings announcements is value relevant and non-diversifiable, but they have not been able to explain *why* an individual firm's earnings news is non-diversifiable. This paper provides evidence that the systematic market-wide component of earnings news is highly correlated with the degree of the earnings announcement premium.

The rest of the paper is organized as follows. Section 2 presents the hypotheses development. Section 3 lays out the research design and describes sample data and variables. Section 4 details the empirical results, including the univariate analysis and the multivariate tests on the relationship between market-wide information and the earnings announcement premium. Section 5 discusses the time varying earnings announcement premium across different levels of macroeconomic uncertainty. Section 6 concludes.

HYPOTHESES DEVELOPMENT

Earnings announcements contain information about current and future cash flows, not only for the announcing firm, but also about those of other firms as well as the economy in general.[2] However, investors cannot completely separate out the common component from the firm-specific component of earnings news, since they can observe only total earnings. Savor and Wilson (2011) show that this signal extraction problem leads to higher risk for the announcing firm and therefore to a higher risk premium. If we follow their reasoning, we can conclude that firms with a larger common component of earnings news have higher systematic risk, since the correlation between the firm's earnings news and aggregate earnings news is higher. Thus the first prediction is that the earnings announcement premium increases with the level of market-wide information of firms.

Barber et al. (2013) argue that uncertainty over information being released causes higher expected announcement returns. Choi (2013) finds that investors learn more about the economy from earnings announcements made in high macroeconomic uncertainty periods. As a result, the correlation between the

announcing firm return and the market return increases significantly. This leads to a higher systematic risk for the announcing firm, since the factor loading with the market increases during announcement periods. Intuitively, then, we can predict that the earnings announcement premium varies across different levels of uncertainty, specifically macroeconomic uncertainty. When investors are more uncertain about the economy, the announcement risk increases, and investors demand a higher risk premium. Therefore, the second prediction is that the earnings announcement premium increases with the level of macroeconomic uncertainty.

METHODOLOGY

Research Design

The earnings announcement premium is measured by the cumulative abnormal returns (firm return minus equally weighted market return) during a short-term 3-day announcement window [-1, +1] and a longer 30-day announcement window. Short-term earnings announcement event windows capture the immediate effect of new information on returns and minimize the effect of other exogenous factors related to the changing economic and market environment. On the other hand, prior studies find that the earnings announcement premium exists beyond the short window around earnings announcements, so I include longer window announcement returns in the analysis as well.

I include a variable, *MKTCORREL*, that measures the level of market-wide information in a firm's returns, and therefore cash flows, as measured by the R-squared of the market model as in Frankel et al. (2006). The market-wide information proxy, *MKTCORREL*, is the correlation between the firm return and market return calculated as the R-squared from firm *i*'s market model regression in year *t*. I then estimate a regression of the form

$$CAR_{it} = a_0 + a_1 MKTCORREL_{it} + a_2 SIZE_{it} + a_3 M/B_{it} + \varepsilon_{it}. \quad (1)$$

In equation (1), CAR_{it} is the cumulative excess return on firm *i* (firm return minus the equally weighted market return), the measure of the earnings announcement premium. I include the variables *SIZE* and *M/B* (market-to-book) to control for risk differences not already reflected in the excess return (Fama and French, 1992, 1993). Firm size is the log of market value of equity, and the market-to-book value is the market value of the firm's equity at the end of the fiscal quarter plus the difference between the book value of the firm's assets and the book value of the firm's equity at the end of the quarter, divided by the book value of the firm's assets at the end of the quarter (Fich and Shivdasani, 2006).

The first prediction is that the coefficient of the level of market-wide information proxy, *MKTCORREL*, is positive. The second prediction is that the earnings announcement premium depends on the level of macroeconomic uncertainty. I use market return volatility (market uncertainty) and the VIX index as proxies for macroeconomic uncertainty. Then I create two- indicator variables for high and low macroeconomic uncertainty periods. I sort monthly market return volatility, as measured by the standard deviation of daily market returns during the month, and the VIX index into quintiles. A dummy variable for high macroeconomic uncertainty, *HIGH*, is set equal to one if the earnings announcement is made during the highest uncertainty quintile and zero otherwise. The dummy variable for low macroeconomic uncertainty, *LOW*, is set equal to one if the announcement is made during the lowest uncertainty quintile and zero otherwise. These variables appear in the following equation, which I use to compare the earnings announcement premium across high and low uncertainty periods.

$$CAR_{it} = b_0 + b_1 HIGH_{it} + b_2 LOW_{it} + b_3 SIZE_{it} + b_4 M/B_{it} + \varepsilon_{it.} \quad (2)$$

My second hypothesis is that the earnings announcement premium in *HIGH* states is larger than that in *LOW* states. Therefore, I predict that $b1 > b2$ in equation (2).

Sample and Variable Description

The sample period of 1980 to 2012 yields 215,128 quarterly earnings announcements. The earnings announcement dates come from the Institutional Brokers Estimate System (I/B/E/S) annual update U.S. Summary History datasets. These earnings data are subsequently matched with returns data from the Center for Research in Security Prices (CRSP). Data on stock returns are from the daily and monthly stock files of the Center for Research in Security Prices (CRSP). The accounting data are from the merged CRSP/Compustat database, through fiscal year 2012. I calculate market value of equity using the Compustat annual data. I use all available firms included in the I/B/E/S, Compustat and CRSP datasets. I calculate market return volatility by the standard deviation of value-weighted daily market returns a month prior to the earnings announcement month. The VIX index is from the Chicago Board of Exchange website.

To minimize the effect of market frictions (Ball, Kothari and Shanken, 1995), I delete observations with a prior fiscal quarter ending price of less than $5.00. Following prior research that shows stock returns are close to zero for firms with negative earnings (Hayn, 1995; Lipe, Bryant, and Widener, 1998), I delete observations with negative actual earnings.

EMPIRICAL RESULTS

Descriptive statistics

Table 1 describes the sample descriptive statistics for the main variables, such as the earnings announcement returns, market-wide information proxy, and firm characteristic variables including cash flow volatility. The average 3-day cumulative abnormal return during the earnings announcement period is 0.3%, while the 30-day cumulative abnormal return is negative, -0.05%. There is a significant amount of dispersion in the earnings announcement premium across firms, as the standard deviation of the cumulative abnormal returns is 7.5% and 14.7%, respectively, for 3-day and 30-day returns.

TABLE 1
SUMMARY STATISTICS

Table 1 presents summary statistics for the key variables analyzed in the paper. The sample includes 215,128 quarterly earnings announcements from 1980-2012 for which we have return data available. *CAR3* is the cumulative abnormal return (firm's return minus the CRSP equal-weighted return on the same day) around the 3-day earnings announcement window. CAR30 is the cumulative abnormal return around the 30-day earnings announcement window. Firm size (*SIZE*) is calculated as the log of market capitalization of the prior fiscal year. Market-to-book ratio (*M/B*) is calculated as the market value of the firm's equity at the end of the prior fiscal quarter plus the difference between the book value of the firm's assets and the book value of the firm's equity at the prior fiscal quarter, divided by the book value of the firm's assets at the prior fiscal quarter. Market-wide information proxy, (*MKTCORRELATION*), is the R-squared from regressing the market return on a firm's return of the prior year. Cash flow volatility (*CASHFLOWVOL*) is the standard deviation of cash flow from operations in the past 5 years (with a minimum of 3 years), where cash flow from operating activity is earnings before extraordinary items minus total accruals, scaled by average total assets.

	N	Mean	Std Dev	Median	Min	10%	25%	75%	90%	Max
CAR3 (%)	220782	0.303	7.500	0.133	-117.511	-6.995	-2.832	3.436	8.035	162.321
CAR30 (%)	220777	-0.049	14.649	-0.086	-227.181	-15.941	-40.069	7.419	15.912	228.553
SIZE	224182	6.548	1.715	6.429	0.637	4.411	5.298	7.643	8.830	13.312
M/B	222531	1.986	3.123	1.413	0.356	1.002	1.092	2.130	3.394	454.937
MKTCORREL	206789	0.175	0.173	0.116	0.000	0.007	0.033	0.272	0.442	1.000
CASHFLOWVOL	146768	0.113	0.114	0.082	0.000	0.031	0.049	0.137	0.225	5.897

TABLE 2
DIFFERENCES BETWEEN HIGH AND LOW MACROECONOMIC UNCERTAINTY

The averages of the key variables are compared between high and low macroeconomic uncertainty periods. Market uncertainty is measured by the standard deviation of the daily market returns during the month. Monthly market uncertainty is sorted into quintiles. *HIGH* is a dummy variable, which equals one if the month is within the highest quintile market uncertainty group and zero otherwise. *LOW* is a dummy variable, which equals one if the month is within the lowest quintile market uncertainty group, zero otherwise. An additional uncertainty proxy is measured by the VIX. *HIGHVIX* is a dummy variable, which equals one if the month is within the highest quintile VIX group and zero otherwise. *LOWVIX* is a dummy variable, which equals one if the month is within the lowest quintile VIX group, zero otherwise. *CAR3* is the cumulative abnormal return (firm's return minus the CRSP equal-weighted return on the same day) around the 3-day earnings announcement window. *CAR30* is the cumulative abnormal return around the 30-day earnings announcement window. Firm size (*SIZE*) is calculated as the log of market capitalization of the prior fiscal year. Market-to-book ratio (*M/B*) is calculated as the market value of the firm's equity at the end of the prior fiscal quarter plus the difference between the book value of the firm's assets and the book value of the firm's equity at the prior fiscal quarter, divided by the book value of the firm's assets at the prior fiscal quarter. Market-wide information proxy, (*MKTCORRELATION*), is the R-squared from regressing the market return on a firm's return of the prior year. Cash flow volatility (*CASHFLOWVOL*) is the standard deviation of cash flow from operations in the past 5 years (with a minimum of 3 years), where cash flow from operating activity is earnings before extraordinary items minus total accruals, scaled by average total assets.

			Test				Test	
	HIGH	LOW	Statistic	P-value	HIGH VIX	LOW VIX	Statistic	P-value
	(1)	(2)	(1-2)	(1-2)	(3)	(4)	(3-4)	(3-4)
CAR3 (%)	0.505	0.084	8.719	<0.0001	0.443	0.144	5.730	<0.0001
	(0.037)	(0.031)			(0.046)	(0.025)		
CAR30 (%)	0.312	-0.792	11.772	<0.0001	0.382	0.161	2.186	0.029
	(0.073)	(0.059)			(0.089)	(0.047)		
SIZE	6.701	6.227	45.023	<0.0001	6.618	6.331	-26.338	<0.0001
	(0.007)	(0.008)			(0.009)	(0.007)		
M/B	2.064	1.852	11.087	<0.0001	2.093	1.816	13.423	<0.0001
	(0.018)	(0.006)			(0.019)	(0.007)		
MKTCORREL	0.234	0.104	120.000	<0.0001	0.200	0.155	39.776	<0.0001
	(0.001)	(0.001)			(0.001)	(0.001)		
CASHFLOWVOL	0.124	0.110	14.852	<0.0001	0.124	0.112	12.667	<0.0001
	(0.001)	(0.001)			(0.001)	(0.001)		

Table 2 compares the values of the main variables across high and low macroeconomic uncertainty levels. I find significant differences in all variables across different macroeconomic uncertainty levels when using market uncertainty and the VIX index for proxies. The p-values of the t-statistics are all significant at the 1% confidence level. The *HIGH* (*HIGHVIX*) group includes observations when the macroeconomic uncertainty is at its highest quintile level, while the *LOW* (*LOWVIX*) group includes observations when the level of uncertainty is at the lowest quintile level. The announcement returns are significantly higher during periods of high macroeconomic uncertainty. The differences in the earnings announcement premium between high and low market uncertainty periods are 0.4% during the 3-day window and 1.1% during the 30-day window. The difference in returns is still significant when we compare high and low VIX periods; it ranges from 0.22% to 0.3%.

It is interesting to observe that both the degree of market-wide information, *MKTCORREL*, and firm-level cash flow volatility, *CASHFLOWVOL*, increase during periods of high macroeconomic uncertainty. This is consistent with prior studies (Moskowitz, 2003; Choi, 2013), which find that the covariance and the correlation of returns increase during recessions and high macroeconomic uncertainty periods.

Multivariate Results

Market Information and the Earnings Announcement Premium

In this section, I directly test the first hypothesis, which predicts a positive relationship between the degree of market-wide information and the announcement return. In Table 3, I find that the coefficient of *MKTCORREL* is positive and highly significant in all specifications (models 1, 3, 4, and 6). The dependent variable is the 3-day *CAR* in models (1)-(3), and the 30-day *CAR* in models (4)-(6). The magnitude of the coefficient between market-wide information and the earnings announcement premium increases with the window length, which indicates that the earnings announcement premium risk exists longer than the announcement period.

I include cash flow volatility to control for the firm-level information uncertainty related to the earnings announcement premium. The effect of market-wide information on earnings announcement returns is still significant when I control for cash flow volatility. For longer windows in model (6), the coefficient of cash flow volatility is insignificant; however, the coefficient of market correlation is still highly significant. The results indicate that the degree of market-wide information is associated with announcement risk rather than the firms' idiosyncratic disclosure risk itself. Consistent with the first prediction, the systematic component of earnings is associated with the earnings announcement premium, since the market-wide component of earnings cannot be diversified.

Macroeconomic Uncertainty and the Earnings Announcement Premium

Table 3 shows that the earnings announcement premium varies across firms with different degrees of market-wide information. A related question is whether the earnings announcement premium varies across different states of the economy. I expect that investor learning from market-wide information in earnings announcements depends on how certain investors are about the state of the economy. The second prediction is that the earnings announcement premium increases with the level of uncertainty in the economy. When investors are more uncertain about the economy, there is an increase in the required risk premium that compensates for the systematic component of earnings.

TABLE 3
MARKET AND THE EARNINGS ANNOUNCEMENT PREMIUM

The earnings announcement premium is compared across the cross section of firms. The dependent variable in models (1)-(3) is *CAR3*, and in models (4)-(6) is *CAR30*. *CAR3* is the cumulative abnormal return (firm's return minus the CRSP equal-weighted return on the same day) around the 3-day earnings announcement window. *CAR30* is the cumulative abnormal return around the 30-day earnings announcement window. Market-wide information proxy, (*MKTCORREL*), is the R-squared from regressing the market return on a firm's return of the prior year. Cash flow volatility (*CASHFLOWVOL*) is the standard deviation of cash flow from operations in the past 5 years (with a minimum of 3 years), where cash flow from operating activity is earnings before extraordinary items minus total accruals, scaled by average total assets. Firm size (*SIZE*) is calculated as the log of market capitalization of the prior fiscal year. Market-to-book ratio (*M/B*) is calculated as the market value of the firm's equity at the end of the prior fiscal quarter plus the difference between the book value of the firm's assets and the book value of the firm's equity at the prior fiscal quarter, divided by the book value of the firm's assets at the prior fiscal quarter. *** denotes significance at the 1% level, ** 5% level, and * 10% level.

	(1)	(2)	(3)	(4)	(5)	(6)
MKTCORREL	2.029***		2.184***	9.447***		9.743***
	(0.112)		(0.147)	(0.217)		(0.277)
CASHFLOWVOL		0.565***	0.481**		-0.236	0.037
		(0.197)	(0.203)		(0.372)	(0.384)
SIZE	-0.176***	-0.073***	-0.172***	-0.563***	-0.067***	-0.554***
	(0.011)	(0.013)	(0.015)	(0.022)	(0.024)	(0.029)
M/B	0.001	-0.038***	-0.026**	-0.007	-0.047**	-0.007
	(0.005)	(0.011)	(0.011)	(0.010)	(0.021)	(0.021)
Constant	1.068***	0.839***	1.085***	1.854***	0.526***	1.863***
	(0.069)	(0.093)	(0.098)	(0.133)	(0.176)	(0.185)
N	200460	141657	133145	200456	141653	133141
R-sq	0.002	0.000	0.002	0.009	0.000	0.009

I test this prediction in Table 4. High periods are when the level of macroeconomic uncertainty is at the highest quintile level, and low periods are when it is at the lowest quintile level. The dependent variable is a 3-day *CAR* in models (1)-(4), and a 30-day *CAR* in models (5)-(8). Models (1), (2), (5) and (6) include market return volatility as a proxy for market uncertainty, while models (3), (4), (7) and (8) include the VIX index as a proxy. I find that the difference in the earnings announcement returns between high and low macroeconomic periods is highly significant in all models, and the spread increases with the announcement window. The earnings announcement abnormal return increases from 0.3% to 4.2% during a 3-day window, and from 0.2% to 1.1% during a 30-day window, when the degree of macroeconomic uncertainty increases from the lowest to the highest quintile level. The results support my hypotheses that uncertainty related to the market and the economy is the main driver of the earnings announcement premium.

TABLE 4
MACROECONOMIC UNCERTAINTY AND THE EARNINGS ANNOUNCEMENT PREMIUM

The earnings announcement premium is compared between high and low macroeconomic uncertainty periods. The dependent variable in models (1)-(4) is *CAR3*, and in models (5)-(8) is *CAR30*. *CAR3* is the cumulative abnormal return (firm's return minus the CRSP equal-weighted return on the same day) around the 3-day earnings announcement window. *CAR30* is the cumulative abnormal return around the 30-day earnings announcement window. Market uncertainty is measured by the standard deviation of the daily market returns during the month. Monthly market uncertainty is sorted into quintiles. *HIGH* is a dummy variable, which equals one if the month is within the highest quintile market uncertainty group and zero otherwise. *LOW* is a dummy variable, which equals one if the month is within the lowest quintile market uncertainty group, zero otherwise. An additional uncertainty proxy is measured by the VIX. *HIGHVIX* is a dummy variable, which equals one if the month is within the highest quintile VIX group and zero otherwise. *LOWVIX* is a dummy variable, which equals one if the month is within the lowest quintile VIX group, zero otherwise. Firm size (*SIZE*) is calculated as the log of market capitalization of the prior fiscal year. Market-to-book ratio (*M/B*) is calculated as the market value of the firm's equity at the end of the prior fiscal quarter plus the difference between the book value of the firm's assets and the book value of the firm's equity at the prior fiscal quarter, divided by the book value of the firm's assets at the prior fiscal quarter. *** denotes significance at the 1% level, ** 5% level, and * 10% level.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
HIGH	0.040	0.064*			0.033	0.066		
	(0.038)	(0.039)			(0.075)	(0.076)		
LOW	-0.296***	-0.323***			-1.008***	-1.046***		
	(0.042)	(0.043)			(0.081)	(0.083)		
HIGHVIX			-0.085**	-0.066			0.317***	0.371***
			(0.042)	(0.042)			(0.081)	(0.083)
LOWVIX			-0.256***	-0.259***			-0.309***	-0.316***
			(0.043)	(0.044)			(0.084)	(0.085)
SIZE		-0.088***		-0.078***		-0.104***		-0.085***
		(0.010)		(0.010)		(0.019)		(0.019)
M/B		-0.005		-0.004		-0.026***		-0.026**
		(0.005)		(0.005)		(0.010)		(0.010)
Constant	0.352***	0.938***	0.365***	0.885***	0.145***	0.895***	-0.055	0.566***
	(0.022)	(0.066)	(0.020)	(0.065)	(0.042)	(0.129)	(0.039)	(0.127)
N	220782	215128	220782	215128	220777	215123	220777	215123
R-sq	0.000	0.001	0.000	0.000	0.001	0.001	0.000	0.000

TABLE 5
MARKET INFORMATION, UNCERTAINTY AND THE EARNINGS ANNOUNCEMENT PREMIUM

The earnings announcement premium is compared across the cross section of firms and the level of macroeconomic uncertainty. The earnings announcement premium is measured by *CAR3* and *CAR30*. *CAR3* is the cumulative abnormal return (firm's return minus the CRSP equal-weighted return on the same day) around the 3-day earnings announcement window. *CAR30* is the cumulative abnormal return around the 30-day earnings announcement window. Market-wide information proxy, (*MKTCORRELATION*), is the R-squared from regressing the market return on a firm's return of the prior year. Firms are sorted into quintiles depending on the level of market-wide information, *MKTCORREL*. Q1 group includes firms with the lowest level of market-wide information, while Q5 includes firms with the highest level of market-wide information. Macroeconomic uncertainty is measured using two proxies, market uncertainty and the VIX index. Market uncertainty is measured by the standard deviation of the daily market returns during the month. Monthly market uncertainty and the VIX index are sorted into quintiles. HIGH is a dummy variable, which equals one if the month is within the highest quintile market uncertainty group and zero otherwise. LOW is a dummy variable, which equals one if the month is within the lowest quintile market uncertainty group, zero otherwise. An additional uncertainty proxy is measured by the VIX. HIGHVIX is a dummy variable, which equals one if the month is within the highest quintile VIX group and zero otherwise. LOWVIX is a dummy variable, which equals one if the month is within the lowest quintile VIX group, zero otherwise. *** denotes significance at the 1% level, ** 5% level, and * 10% level.

CAR3		HIGH (1)	LOW (2)	Difference (1-2)	Test Statistic (1-2)	P-value (1-2)	HIGHVIX (4)	LOWVIX (5)	Difference (4-5)	Test Statistic (4-5)	P-value (4-5)
Sorted by											
MKTCORREL											
Q1	N	3374	3195				2684	2994			
	Mean	0.117	-0.518	0.634***	3.231	0.001	-0.117	-0.481	0.364	1.458	0.145
Q5	N	14442	16848				11363	12395			
	Mean	0.535	0.311	0.223***	2.891	0.004	0.534	0.375	0.159**	2.364	0.018
Q5-Q1		0.418***	0.829***				0.651***	0.856***			
T-Statistic		2.584	6.113				3.320	6.590			
P-value		0.01	<0.0001				0.001	<0.0001			

CAR30		HIGH (1)	LOW (2)	Difference (1-2)	Test Statistic (1-2)	P-value (1-2)	HIGHVIX (4)	LOWVIX (5)	Difference (4-5)	Test Statistic (4-5)	P-value (4-5)
Q1	N	3374	3195				2684	2994			
	Mean	-3.261	-2.679	-0.582	1.550	0.121	-2.166	-2.406	0.240	0.031	0.975
Q5	N	14442	16848				11363	12395			
	Mean	1.564	-0.317	1.881***	11.777	<0.0001	1.263	0.222	1.041**	2.036	0.042
Q5-Q1		4.825***	2.362***				3.429***	2.628***			
T-Statistic		14.769	9.666				8.630	10.850			
P-value		<0.0001	<0.0001				<0.0001	<0.0001			

Finally, I compare the earnings announcement premium across different levels of market-wide information and macroeconomic uncertainty. Table 5 reports the announcement cumulative abnormal returns across high and low levels of market-wide information and macroeconomic uncertainty. Firms are sorted into quintiles based on their level of market-wide information. I find that the degree of the systematic component in earnings affects the announcement returns significantly. The differences in the cumulative abnormal returns range from 0.42% to 0.86% during the shorter window and from 2.4% to 4.8% in the longer window. The earnings announcement premium is the highest for firms with the highest level of market-wide information that made announcements during high macroeconomic uncertainty times. The earnings announcement premium is still high for firms with the highest level of market-wide information that make announcements during low macroeconomic uncertainty times, but lower than that of firms that make announcements during high macroeconomic uncertainty periods. Finally, I find that investors learn less about the economy from announcements of firms with a low degree of market-wide information in their earnings. The differences in the earnings announcement premium across high and low macroeconomic uncertainty levels are insignificant for firms in the lowest quintile of *MKTCORR* (except for the differences in the 3-day *CAR* using market uncertainty as a proxy). This indicates that investors do not use the announcements of these firms to update their beliefs about the economy more when uncertainty is high.

CONCLUSION

The earnings announcement premium is a puzzle that many studies aim to understand. This paper adds to the literature by examining the relationship between the market-wide, systematic component of earnings and the announcement return. I find that the earnings announcement return increases with the level of market-wide information of a firm. This is consistent with the model of Savor and Povel (2011), who show that earnings announcements provide information about the firm, other firms, and the economy. The common component of earnings is systematic; therefore, the announcing firm faces a higher risk premium.

I also find that the earnings announcement premium varies across different states of the economy. When the level of macroeconomic uncertainty is high, investors learn more about the economy and other firms from earnings announcements, and therefore the announcement return increases. To my knowledge, this is first paper to show that the earnings announcement premium varies cross-sectionally across firms and over time, across different levels of macroeconomic uncertainty.

ENDNOTES

1. See Penman (1984), Kalay and Loewenstein (1985), and Chari, Jagannathan, and Ofer (1988).
2. Foster (1981), Han, Wild and Ramesh (1989), Freeman and Tse (1992), Ramnath (2002), and Thomas and Zhang (2008) provide evidence of such information spillovers. Savor and Wilson (2011) show that earnings announcements provide information about the economy. They find that the earnings announcement premium predicts future aggregate earnings growth. Also see Patton and Verardo (2012) for evidence of an increase in systematic risk during earnings announcement periods.

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