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Covid-19: Corporate diversification and post-crash returns

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Abstract

This paper examines the impact of corporate diversification on stock returns during and after the market crash caused by Covid-19. Using regression and survival analyses, we find that diversified firms experience worse returns and slower improvement in stock prices than focused firms. However, diversified firms trading at diversification premium have better returns and faster recovery compared to those trading at discount. Our findings presented here can be relevant to academics and industry professionals in their understanding of the role of corporate diversification in difficult times.

Keywords: Covid-19; corporate diversification; stock market crash; survival analysis; excess value

1. Introduction

The Covid-19 pandemic shocked the world economy and led stock markets to collapse by a third in early 2020 and remain volatile despite recent recovery (Rameli and Wagner, 2020; Ding et al., 2021, Vera-Valdes, 2021). Unlike the global financial crisis, the Covid-19 crisis started outside the financial sector and had immediate and far more dramatic real effects on the economy. The collapse in global trade and nationwide restrictions affected firms' ability to generate revenue, resulting in varying levels of decrease and recovery in stock prices across firms. We use this exogenous shock as a natural setting to examine the impact of pre-pandemic diversification characteristics of firms on their stock performance during and after the market crash. This is important, as better understanding of the role of corporate diversification in difficult times is needed (Kuppuswamy and Villalonga, 2016)[1].

We argue that diversification will have a negative impact on shareholders' perception of firms' ability to increase their value post-crash, consistent with the agency theory. Self-interested managers may use diversification to increase the size of the firm motivated by empire-building (Jensen, 1986), entrenchment (Shleifer and Vishny, 1989) or higher pay (Jensen and Murphy, 1990) at the expense of shareholders. Managers may also use diversification when they are over-confident about their ability to manage a complex diversified firm (Roll, 1986). Internal capital markets, which are important during crises when it is more difficult to obtain funds in external capital markets, could provide a great opportunity for such managers to over-invest (Martin and Sayrak, 2003). Moreover, information asymmetry between management at headquarters and division levels could lead to inefficient use of internal capital markets (Wulf,

[1] A substantial body of literature has examined the benefits and costs of corporate diversification in the context of its firm value implications but has not reached an empirical consensus. Early studies provide evidence consistent with value destruction (see Martin and Sayrak, 2003 for a review), while more recent ones suggest it creates or at least does not destroy value (see Maksimovic and Philips, 2013 for a review).

2009). Thus, our first hypothesis is that *diversified firms will experience worse post-crash returns and recovery than focused firms*.

However, diversified firms allocating internal capital efficiently will trade at premium, creating more value to shareholders (Khanna and Tice, 2001; Martin and Sayrak, 2003; Kuppuswamy and Villalonga, 2016). This is consistent with the resource based view of diversification that excess resources in one segment should be utilised in others to generate more profit given lower production costs because of economies of scope (Teece, 1982). Moreover, due to imperfectly correlated cash flows coming from different segments, diversified firms have lower default probability (Singhal and Zhu, 2013) and systematic market risk (Hann et al., 2013) which allow them to increase their debt capacity as external providers will be more willing to lend to less-risky firms (Lewellen, 1971). In the context of the Covid-19 crisis, diversified firms suffering from sudden decrease in revenue in one or more segments can efficiently use funds from segments that are less affected[2]. Kuppuswamy and Villalonga (2016) attribute the increase in the value of diversified firms during the global financial crisis to more efficient internal capital allocation. Thus, our second hypothesis is that *diversified firms trading at premium will experience better post-crash returns and recovery than those trading at discount*.

Existing studies focusing on stock market crash returns find some evidence that diversified firms in the US did better during the crash period February-March 2020 than focused firms (Fahlenbrach et al., 2020; Onali and Mascia, 2020). However, such performance gap might disappear as investor perceptions change with the changing expectations of how the crisis will develop, e.g. the impact of further restrictions on different industries[3]. This is the case for

[2] See "Cash hoarders and conglomerates have their day in the sun". https://www.ft.com/content/5682a2d7-725d-49f3-ad3c-f270cc0deb21

[3] "Why the chances for a 'V'-shaped economic recovery are getting less likely by the day". https://www.cnbc.com/2020/04/06/coronavirus-update-a-v-shaped-economic-recovery-getting-less-likely.html

internationally diversified firms, initially punished by markets for the risk exposure associated with 9/11 attacks, and later experiencing positive abnormal returns (Li and Tallman, 2011). Moreover, the arrival of Covid-19 significantly increased economic anxiety and weakened investor sentiment (Fetzer et al., 2020). Thus, the impact of any factor on the short-term returns may be overshadowed by panic or overreaction during the crash period, i.e. investors sell-off any stocks.

We contribute to the existing literature in the following ways. Using regression analysis, we present first evidence that diversified firms experience worse post-crash abnormal returns compared to focused firms, and that diversified firms trading at premium experience better returns than those trading at discount in the Covid-19 crisis context. Previous studies focus on the relationship between diversification status of the firm and stock returns during the crash (Fahlenbrach et al., 2020; Onali and Mascia, 2020) but are silent on the post-crash impact of diversification and do not distinguish between diversified firms trading at premium *vs* discount. We are also first to apply survival or time-to-event analysis on stock prices to find that diversified firms experience slower improvement in prices than focused firms, while firms trading at premium have faster recovery compared to firms trading at discount. This extends the findings from regression analysis and adds to a very small literature that have applied survival analysis on stock prices (DesJardine et al., 2019). Finally, our analysis based on the UK data adds to the current studies, which, to the best our knowledge, are mostly carried out in the US context.

2. Data and regression results

We use the population of non-investment trust companies listed in the London Stock Exchange as at 1 January 2020. All data were obtained from Datastream with the sample end date of 23 March 2021. Following Ding et al. (2021), we use weekly share prices to calculate returns. Our

dependent variable is *CAR_1,* which is abnormal returns cumulated over the crash period of four weeks between 24 February and 23 March 2020. Abnormal returns are calculated using the market model event-study methodology with an estimation window of 52 weeks ending ten weeks before the event window:

$$AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{m,t}) \quad [1]$$

We next calculate buy-and-hold abnormal returns (*BHARs)* for 3, 6 and 12 months to measure long-term post-crash period performance starting from 24 March 2020[4] using the following formula:

$$BHAR_i = \prod_{t=T_1+1}^{T_2} (1 + R_{i,t}) - \prod_{t=T_1+1}^{T_2} (1 + (\alpha_i + \beta_i R_{m,t})) \quad [2]$$

We calculate diversification variables using SIC codes and segment-level sales data. *Diversified_Firm* is a dummy variable equal to 1 if a firm reports more than one 4-digit SIC business segment, 0 otherwise. Following Berger and Ofek (1995), we measure *Excess_Value* as the natural log of the ratio of the diversified firm's actual value and the sum of the imputed values of its segments as stand-alone firms. Actual value is measured as book value of total debt plus market value of equity, and the imputed value of each segment is equal to the segment's sales multiplied by the median ratio of capital to sales of focused firms in the segment. We require at least five focused firms in industry at least at 2-digit SIC code level to calculate this. Positive/negative values indicate that diversified firms are valued at more/less than their focused counterparts, i.e. trading at premium/discount. Excess value is often used as an indicator of the market discounting inefficient internal capital market of diversified firms (Khanna and Tice, 2001; Martin and Sayrak, 2003; Kuppuswamy and Villalonga, 2016).

[4] FTSE All Share started to recover from the crash on 24 March 2020
https://www.telegraph.co.uk/business/2020/03/24/ftse-soars-9pc-biggest-rise-since-2008/

Following existing studies, we control for *ROA*, *Size*, *Liquidity*, *Leverage* and *BTM* ratio (Ramelli and Wagner, 2020).

In Table 1, Panel A presents average values for all firms and focused *vs* diversified firms. The average *CAR_1* during the crash period is -24.7%. Although diversified firms lost less value during the crash (not statistically significant), they were outperformed significantly by focused firms in the following year. Diversified firms have lower liquidity but larger return on assets, size and leverage. Panel B reports abnormal returns across Fama-French 12 industry groups. Firms in energy and telecom suffered the most during the crash, while consumer durables and healthcare firms gained the most during the year after the crash. Utility stocks are the least affected both during and after the crash.

Table 1. Descriptive statistics

Panel A. Average values by focused *vs* diversified firms

	All firms (n=783)	*Focused_Firms (n=443)*	*Diversified_Firms (n=340)*	*Difference*
CAR_1	-0.247	-0.261	-0.228	-0.033
BHAR_1	-0.237	-0.253	-0.215	-0.038
BHAR_3	0.258	0.335	0.158	0.177***
BHAR_6	0.318	0.411	0.197	0.214***
BHAR_12	0.976	1.115	0.795	0.320***
Number_Segments	1.640	1	2.474	-1.474***
Herfindahl	0.837	1	0.624	0.376***
Entropy	0.261	0	0.602	-0.602***
Excess_Value	-	-	0.024	-
ROA	-0.020	-0.062	0.035	-0.097**
Size	12.47	12.06	13.01	-0.950***
Liquidity	0.146	0.174	0.110	0.064***
Leverage	0.202	0.190	0.217	-0.027**
BTM	0.784	0.856	0.691	0.165

Panel B. Abnormal returns by industry

Industry	*CAR_1*	*BHAR_3*	*BHAR_6*	*BHAR_12*
Nondurables	-0.250	0.207	0.233	0.737
Durables	-0.202	0.024	0.380	1.531
Manufacturing	-0.206	0.169	0.270	0.788
Energy	-0.388	0.461	0.256	1.187
Chemicals	-0.109	0.191	0.271	0.874
Business Equipment	-0.242	0.306	0.381	1.050
Telecom	-0.262	0.079	-0.010	0.374
Utilities	-0.018	-0.004	0.037	0.636
Shops	-0.232	0.249	0.350	1.042
Healthcare	-0.248	0.787	0.945	1.249
Finance	-0.240	0.110	0.100	0.506
Other	-0.266	0.245	0.342	1.161

Note: This table presents descriptive statistics for the data. *CAR_1* is calculated using formula (1) and *BHARs* are calculated using formula (2). Panel A presents mean values of variables for all firms and focused *vs* diversified firms. Differences in means are tested by a two-tailed *t*-test. Panel B reports mean abnormal returns for all firms by Fama-French 12 industry groups. *, ** and *** denote statistical significance at 10%, 5% and 1%, respectively.

Table 2 reports results of the regressions. The positive relationship between *CAR_1* and diversification is consistent with the findings in the US context[5]. The significance of this relationship is also not strong in Fahlenbrach et al. (2020) and Onali and Mascia (2020). Fahlenbrach et al. (2020) report that diversified firms do not perform significantly better than focused firms in industries highly exposed to the crisis, while Onali and Mascia (2020) report significant coefficients only for well performing stocks. As mentioned above, this could be because of the panicking or overreacting investors selling-off any stocks during the crash.

However, we find that diversified firms experience significantly lower returns during one year following the crash. This suggests that diversification is irrelevant or at the very best (if significant) provides resilience during the crash but negatively affects stock prices in the post-crash period. This is similar to Yong and Laing (2021) who find insignificant/significant relationship between multinational firms and abnormal returns in the short-run/long-run. Mean excess value of diversified firms in our sample is 2.4% and we find a positive relationship between *Excess_Value* and post-crash abnormal returns.

Table 2. Diversification and abnormal returns

	All_firms				Diversified_firms			
	CAR_1	*BHAR_3*	*BHAR_6*	*BHAR_12*	*CAR_1*	*BHAR_3*	*BHAR_6*	*BHAR_12*
Diversified_Firm	0.003	-0.079**	-0.112*	-0.186**				
	(0.028)	*(0.039)*	*(0.064)*	*(0.080)*				
Excess_Value					0.010	0.018	0.056**	0.073**
					(0.011)	*(0.012)*	*(0.023)*	*(0.034)*
ROA	-0.019	-0.067	-0.088	-0.163	0.157	0.097	-0.073	-1.183**
	(0.028)	*(0.047)*	*(0.087)*	*(0.133)*	*(0.187)*	*(0.185)*	*(0.316)*	*(0.487)*
Size	0.035***	-0.056***	-0.079***	-0.084***	0.046***	-0.045***	-0.048**	-0.018
	(0.008)	*(0.012)*	*(0.019)*	*(0.021)*	*(0.010)*	*(0.012)*	*(0.019)*	*(0.018)*
Liquidity	0.243*	0.591	0.631	0.780	-0.020	0.324	0.648	0.088
	(0.140)	*(0.418)*	*(0.587)*	*(0.496)*	*(0.215)*	*(0.244)*	*(0.412)*	*(0.480)*
Leverage	-0.093	0.482	0.403	0.059	-0.002	-0.020	-0.097	-0.434
	(0.073)	*(0.387)*	*(0.505)*	*(0.411)*	*(0.117)*	*(0.128)*	*(0.237)*	*(0.270)*
BTM	-0.017	-0.009	-0.023	-0.005	0.013	0.016	0.071*	-0.016
	(0.013)	*(0.014)*	*(0.041)*	*(0.016)*	*(0.028)*	*(0.021)*	*(0.040)*	*(0.047)*
Constant	-0.742***	0.681***	0.953***	1.503***	-0.979***	0.409**	0.154	1.514***
	(0.145)	*(0.191)*	*(0.320)*	*(0.397)*	*(0.177)*	*(0.197)*	*(0.313)*	*(0.308)*
Observations	783	783	783	783	340	340	340	340
R-squared	0.051	0.119	0.083	0.107	0.115	0.121	0.124	0.115

Note: This table presents the results of OLS regressions with abnormal returns as the dependent variable. *CAR_1* is calculated using formula (1) and *BHARs* are calculated using formula (2). The sample used in the first four models includes all firms. The sample used in the last four models includes only diversified firms. Industry dummies using Fama-French 12 groups are included but not reported. Robust standard errors are in parentheses. *, ** and *** denote statistical significance at 10%, 5% and 1%, respectively.

[5] Results are similar when we use *BHAR_1*.

3. Survival analysis

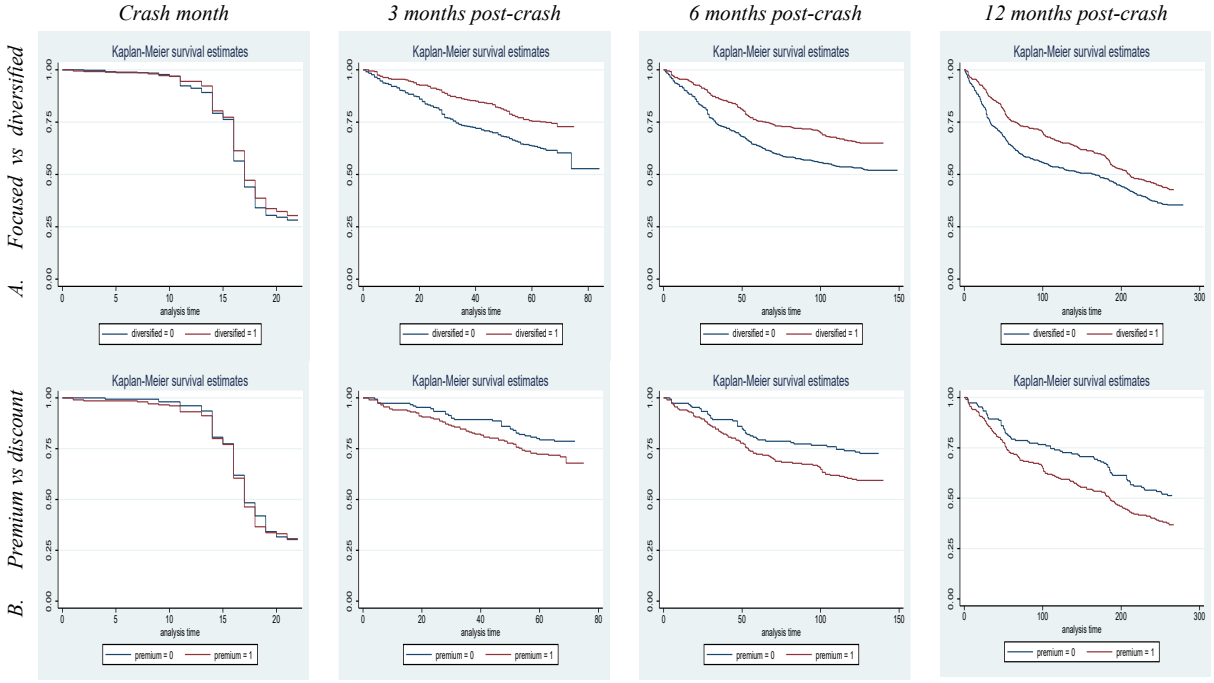
We next use survival or time-to-event analysis. The event of interest is a 35% decrease in stock prices during the crash and recovery of prices from the lowest point during the crash to the levels immediately preceding it, 21 February 2020[6]. We use the non-parametric Kaplan-Meier estimator to obtain cumulative probabilities of survival at a particular point in time, while considering time in daily intervals:

$$S_{t_i} = \prod \frac{n_i - d_i}{n_i}$$

Where n_i is the number of firms at the risk of event happening and d_i is the number of firms which experience the event at time t_i. Figure 1 provides Kaplan-Meier survival estimates of focused *vs* diversified firms and diversified firms trading at premium *vs* discount. Diversified firms are associated with higher and those that trade at premium with lower survival rates. Surviving means not experiencing the event, i.e. stocks not crashing by 35% during the crash month and not recovering to pre-crash levels 3, 6, and 12 months afterwards. The difference between survival functions is only statistically significant for post-crash period using the log-rank test for equality of survivor functions. This means it will take diversified firms more time to reach pre-crash stock prices after the crash than focused firms. However, diversified firms trading at premium will recover in stock prices faster than those trading at discount. These findings confirm the results of regressions in Table 2 that diversification has a negative impact on shareholders' perception of firms' ability to increase their value after the crash. However, diversified firms trading at premium, i.e. those seen to allocate resources efficiently, have an opposite impact.

[6] FTSE All Share index fell by 34% during the crash.

Figure 1. Non-parametric estimation of survival functions



Crash month	3 months post-crash	6 months post-crash	12 months post-crash
a) $\chi^2 = 1.00$	$\chi^2 = 16.30^{***}$	$\chi^2 = 15.95^{***}$	$\chi^2 = 8.77^{***}$
b) $\chi^2 = 0.03$	$\chi^2 = 3.01^{*}$	$\chi^2 = 6.55^{**}$	$\chi^2 = 8.11^{***}$

Note: This figure presents the results of non-parametric estimation of survival functions of the sample firms using Kaplan-Meier estimator for the crash month (24.02.20-23.03.20) and 3, 6, and 12 months after the crash. Panel A presents survival functions for focused *vs* diversified firms. Panel B presents survival functions for diversified firms trading at premium *vs* discount. Survival is stock prices not crashing by 35% during the crash month and not recovering to pre-crash levels 3, 6, and 12 months after the crash. The difference in survival functions is tested by log-rank test for equality. *, **, and *** denote statistical significance at 10, 5 and 1%, respectively.

Since different factors could affect survival rates, we also apply Cox (1972) semiparametric hazards model. If T is a random variable representing the time to event, the hazard rate $\lambda(t)$ represents the instantaneous rate of decrease/increase in stock prices at time t given the event does not take place up to that point:

$$\lambda(t) = \lim_{\Delta t \to 0} \frac{pr(t \leq T < t + \Delta t \mid t \leq T)}{\Delta t}$$

The Cox model allows including explanatory variables with the hazard rate defined as:

$$\lambda(t|x_i) = \lambda_0(t) \exp(x_i \beta_x)$$

Where x_i are explanatory variables, $\lambda_0(t)$ is a baseline hazard function, β are regression coefficients. Table 3 presents the results of Cox model estimations. We report the hazard ratios instead of regression coefficients. Hazard rates for diversified firms are 22% lower (1-0.780)

six months after the crash, e.g. prices are less likely to recover to pre-crash levels during the six months post-crash. However, diversified firms with higher excess value are more likely to recover with hazard rates being 11% higher (1.110-1) in the 12 months after the crash. These and the coefficient of *Diversified_Firm* during the crash month are consistent with both regression and Kaplan-Meier estimates.

Table 3. Cox semiparametric hazards model estimations

	Crash_ month	*3_months post-crash*	*6_months post-crash*	*12_months post-crash*	*Crash_ month*	*3_months post-crash*	*6_months post-crash*	*12_months post-crash*
Diversified_Firm	0.852*	0.762**	0.780**	0.883				
	(0.076)	*(0.104)*	*(0.092)*	*(0.086)*				
Excess_Value					1.136***	1.080	1.097	1.110**
					(0.052)	*(0.072)*	*(0.065)*	*(0.053)*
ROA	1.012	0.920	0.902*	0.879**	0.457*	1.971	1.582	1.595
	(0.083)	*(0.052)*	*(0.049)*	*(0.045)*	*(0.210)*	*(1.588)*	*(1.097)*	*(0.917)*
Size	1.051**	0.864***	0.879***	0.912***	1.049	0.909	0.933	0.941
	(0.022)	*(0.031)*	*(0.028)*	*(0.023)*	*(0.335)*	*(0.054)*	*(0.047)*	*(0.036)*
Liquidity	0.627	3.559***	3.479***	3.656***	1.107	1.645	3.259	3.974**
	(0.199)	*(1.399)*	*(1.267)*	*(1.192)*	*(0.738)*	*(1.565)*	*(2.616)*	*(2.642)*
Leverage	0.675	1.202	1.197	0.872	0.732	0.978	1.273	0.828
	(0.163)	*(0.412)*	*(0.376)*	*(0.251)*	*(0.316)*	*(0.717)*	*(0.798)*	*(0.411)*
BTM	0.949	1.034	1.027	1.028	0.895	1.339***	1.296***	1.138
	(0.035)	*(0.036)*	*(0.038)*	*(0.027)*	*(0.072)*	*(0.110)*	*(0.112)*	*(0.108)*
Observations	783	783	783	783	340	340	340	340
Failures	555	258	330	479	236	87	119	193
χ^2	40.75***	118.16***	132.36***	139.24***	25.49*	34.99***	46.43***	57.94***

Note: This table presents the results of Cox semiparametric hazards model estimations with time-to-event measured in days as the dependent variable. The sample used in the first four models includes all firms. The sample used in the last four models includes only diversified firms. Industry dummies using Fama-French 12 groups are included but not reported. Robust standard errors are in parentheses. *, ** and *** denote statistical significance at 10%, 5% and 1%, respectively.

4. Robustness

To test the main findings for robustness, we use alternative measures of diversification such as *Number_Segments* count variable and *Herfindahl* and *Entropy* (not reported for brevity) indices, which use both number of segments and segment sales. *Herfindahl* is a measure of concentration, i.e. larger *Herfindahl* means a more concentrated or less diversified firm. Results presented in Table 4 remain similar.

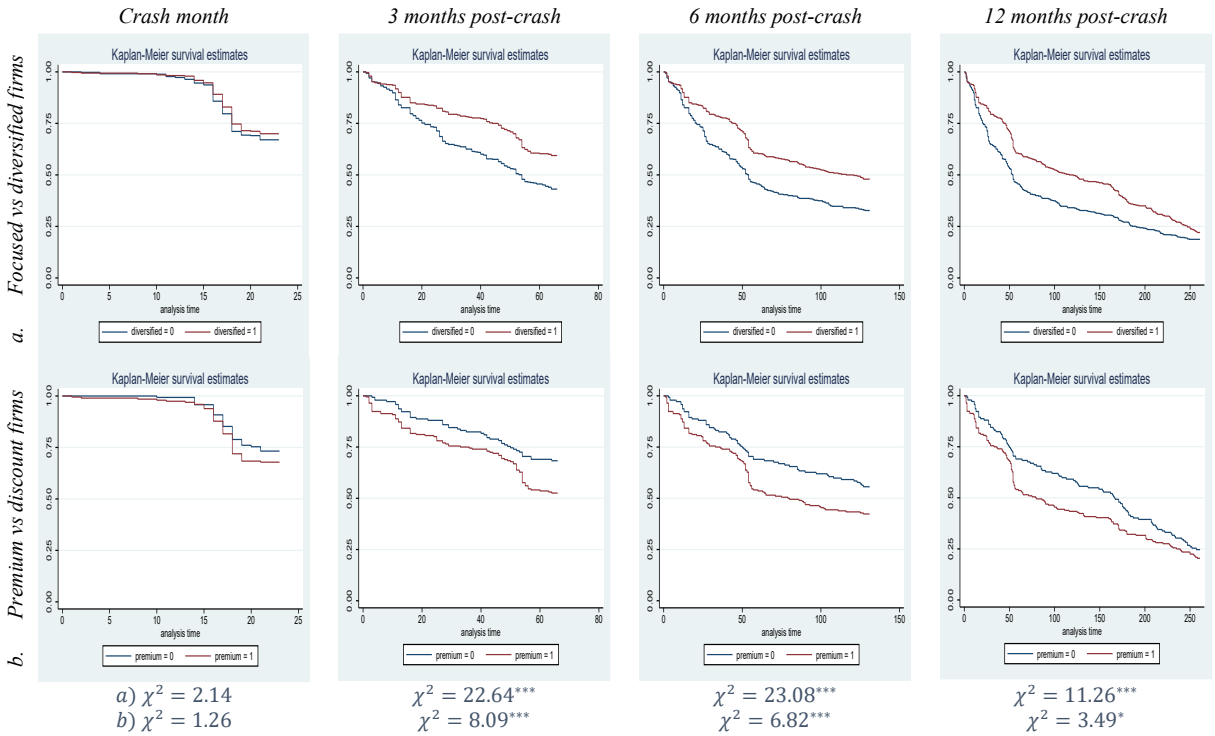
In Figure 2, we also use 50% decrease in stock prices during the crash month and 50% increase from the lowest point in that period as an alternative threshold in Kaplan-Meier estimations and find similar results.

Table 4. Diversification and abnormal returns: Alternative measures of diversification

	CAR_1	*BHAR_3*	*BHAR_6*	*BHAR_12*	*CAR_1*	*BHAR_3*	*BHAR_6*	*BHAR_12*
Number_Segments	0.005	-0.048**	-0.059**	-0.102***				
	(0.016)	*(0.019)*	*(0.030)*	*(0.038)*				
Herfindahl					-0.026	0.191**	0.288**	0.433***
					(0.064)	*(0.079)*	*(0.129)*	*(0.161)*
ROA	-0.020	-0.068	-0.089	-0.164	-0.020	-0.067	-0.088	-0.163
	(0.028)	*(0.047)*	*(0.088)*	*(0.133)*	*(0.028)*	*(0.047)*	*(0.087)*	*(0.133)*
Size	0.035***	-0.055***	-0.079***	-0.082***	0.035***	-0.056***	-0.079***	-0.084***
	(0.008)	*(0.012)*	*(0.020)*	*(0.021)*	*(0.008)*	*(0.012)*	*(0.020)*	*(0.021)*
Liquidity	0.244*	0.599	0.647	0.804	0.246*	0.590	0.628	0.781
	(0.140)	*(0.420)*	*(0.589)*	*(0.497)*	*(0.140)*	*(0.419)*	*(0.588)*	*(0.497)*
Leverage	-0.092	0.481	0.403	0.058	-0.092	0.480	0.401	0.056
	(0.073)	*(0.388)*	*(0.506)*	*(0.412)*	*(0.073)*	*(0.387)*	*(0.506)*	*(0.412)*
BTM	-0.017	-0.009	-0.022	-0.005	-0.017	-0.009	-0.022	-0.005
	(0.013)	*(0.014)*	*(0.041)*	*(0.016)*	*(0.013)*	*(0.014)*	*(0.041)*	*(0.016)*
Constant	-0.743***	0.708***	0.990***	1.566***	-0.714***	0.491**	0.664*	1.073***
	(0.145)	*(0.193)*	*(0.325)*	*(0.393)*	*(0.155)*	*(0.205)*	*(0.341)*	*(0.415)*
N	783	783	783	783	783	783	783	783
R-squared	0.051	0.120	0.082	0.107	0.051	0.120	0.084	0.108

Note: This table presents the results of OLS regressions with abnormal returns as the dependent variable. *CAR_1* is calculated using formula (1) and *BHARs* are calculated using formula (2). The sample used in the first four models includes all firms. The sample used in the last four models includes only diversified firms. Industry dummies using Fama-French 12 groups are included but not reported. Robust standard errors are in parentheses. *, ** and *** denote statistical significance at 10%, 5% and 1%, respectively.

Figure 2. Non-parametric estimation of survival functions: 50% threshold



Crash month	*3 months post-crash*	*6 months post-crash*	*12 months post-crash*
a) $\chi^2 = 2.14$	$\chi^2 = 22.64^{***}$	$\chi^2 = 23.08^{***}$	$\chi^2 = 11.26^{***}$
b) $\chi^2 = 1.26$	$\chi^2 = 8.09^{***}$	$\chi^2 = 6.82^{***}$	$\chi^2 = 3.49^{*}$

Note: This figure presents the results of non-parametric estimation of survival functions of the sample firms using Kaplan-Meier estimator for the crash month (24.02.20-23.03.20) and 3, 6, and 12 months after the crash. Panel A presents survival functions for focused *vs* diversified firms. Panel B presents survival functions for diversified firms trading at premium *vs* discount. Survival is stock prices not crashing by 50% during the crash month and not increasing by 50%, from the lowest point during the crash month, in 3, 6, and 12 months after the crash. The difference in survival functions is tested by log-rank test for equality. *, **, and *** denote statistical significance at 10, 5 and 1%, respectively.

5. Conclusion

Our findings of the impact of diversification on investors' perceptions reflected in negative returns and slower stock recovery during the first year after the crash are consistent with agency and asymmetric information explanations. However, we also find evidence that diversified firms trading at premium weather the crisis better. This suggests that simply being a diversified firm with access to internal capital markets will not lead to better performance during difficult times such as the Covid-19 pandemic. The implication of our results is that better returns and recovery might be contingent upon whether diversified firms use internal capital markets efficiently. Our findings presented here can be relevant to academics and industry professionals in understanding the role of corporate diversification in difficult times. However, as the uncertainty continues with the crisis evolving, it is possible that these relationships change in the longer-term perspective, i.e. more than a year after the crash. Therefore, future work might focus on both long-term market and accounting performance of diversified firms after the pandemic. It would also be interesting to examine if there are any changes in segments reported by diversified firms and excess value resulting from the impact of the Covid-19 crisis.

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