Practice makes perfect? The effect of CEO and director experience on acquisition performance [†]

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ABSTRACT

This study examines whether prior CEO acquisition experience at other firms is associated with subsequent merger performance. First, using both the original and extended sample period, we replicate and confirm the results of Field and Mkrtchyan (2017) and find that independent directors' prior merger experience improves succeeding acquisition performance. Second, we extend their study by considering the effect of prior CEO acquisition experience. Similar to the effect for independent directors, we find that prior CEO acquisition experience improves performance in later takeovers. Consistent with CEO learning, we document a greater effect on subsequent takeover performance when prior acquisition experience is negative.

Keywords: Corporate governance; CEOs; mergers and acquisitions.

JEL Classifications: G30, G34, J24

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1. Introduction

The main objective of this study is to replicate and extend Field and Mkrtchyan (2017), who find that independent directors at bidding firms with prior merger and acquisition (M&A) experience at other firms engage in more value creating M&As. We extend Field and Mkrtchyan (2017) by expanding their analysis to chief executive officers (i.e., "CEOs"). We contend that CEOs arguably play an equal or more important role in decision making during M&As than independent directors. Therefore, we examine whether CEOs' prior acquisition experience at other firms leads to higher acquisition announcement returns. Furthermore, Field and Mkrtchyan (2017) find that the quality of prior acquisition experience matters: with bidding firms earning higher announcement returns when the past acquisitions completed by independent directors on the board are positive. We extend this analysis to the CEO of acquiring firms and expect that announcement returns will be higher when the CEO has better prior acquisition performance.

Prior research acknowledges that independent directors play an important role during M&As, as they are expected to advise and monitor the CEO and increase corporate value and efficiency (Bhagat and Black 2002; Schmidt 2015). While the independent directors' role is vital in the acquisition process to moderate managerial power and attempt to neutralise CEOs' self-serving motives, CEOs also have a crucial role in the M&A process. For instance, the CEO is likely to be the main instigator of M&A deals and take the primary role in deal negotiation (Adams *et al.*, 2005). Moreover, Graham *et al.*, (2013) argue that CEOs are less likely to share or delegate decision-making responsibility in mergers and acquisitions relative to other firm decisions. Consistent with prior experience enabling individuals to be effective at complex problem solving and decision making (McDonald *et al.*, 2008), Field and Mkrtchyan (2017) document that acquiring firm independent directors' prior acquisition experience leads to better subsequent acquisition outcomes. Whilst prior studies have examined how CEOs' attributes such as age and overconfidence (Malmendier and Tate 2008; Yim 2013) have an effect on their acquisition performance and outcomes, it is surprising that the effect of a CEO's prior acquisition experience on subsequent acquisition performance has not been addressed.

Earlier research also documents that the quality of prior acquisition experience matters, since directors with prior M&A experience possess more fully developed capabilities for identifying promising acquisitions and avoiding problematic ones (McDonald *et al.*, 2008). Importantly, Field and Mkrtchyan (2017) find that prior M&A performance actually represents directors' ability, as independent directors whose prior acquisition experience is positive generate higher announcement returns at subsequent acquisitions. As highlighted above, we argue that the CEO has the greatest responsibility in relation to an acquisition. We thus build upon, and extend, the findings of Field and Mkrtchyan (2017), and examine if acquiring firms with CEOs with better performing prior acquisition experience engage in higher performing acquisitions.

Consistent with the findings in Field and Mkrtchyan (2017) we find that bidding firms with independent directors with prior M&A experience engage in more value increasing M&As. Similarly, we document that bidding firm announcement returns are higher when independent directors have positive prior acquisition experience. These results hold for both an extended (1998-2018) and the original Field and Mkrtchyan (2017) sample period (1998-2014). The findings from our extension of Field and Mkrtchyan (2017) indicate that bidding firms with CEOs with prior M&A experience engage in more value increasing acquisitions. Interestingly, the positive effect of CEOs prior acquisition experience on M&A returns exists for negative but not positive prior acquisition experience suggesting that CEOs learn from prior acquisition mistakes.

The findings of this study make a number of contributions. First, we add to earlier literature and provide evidence on whether the prior acquisition experience of CEOs enhances or detracts from their subsequent acquisition performance, as well as providing evidence on a CEO's ability to learn from prior acquisition experience. Our study also has implications and provides evidence on the importance of prior M&A experience. Whilst Harford and Schonlau (2013) argue that board appointments for CEOs are made based on acquisition experience regardless of acquisition ability, we find that CEO acquisition experience is beneficial for subsequent M&A outcomes irrespective of the profitability of prior acquisition experience. Finally, this study extends prior literature examining the impact of CEO attributes on acquisition performance and activity (e.g. Malmendier and Tate 2008; Yim 2013; Gong and Guo 2014; Jenter and Lewellen 2015).

The remainder of this study is structured as follows. Section 2 describes the sample selection process and outlines the research design. The results of the study are presented in Section 3, whilst Section 4 outlines the study's conclusions.

2. Sample selection and research design

2.1 Sample selection

A sample of US acquisitions is identified for the period 1998 through 2018. Data for M&As is obtained from the Thomson Reuters Securities Data Company's (SDC) database. The sample includes completed acquisitions of US public, private and subsidiary targets made by US public acquirers. Our analysis is conducted using both the original 1998-2014 sample period in Field and Mkrtchyan (2017) and an extended sample period from 1998-2018. Buybacks, recapitalisations and exchange offers are excluded from the sample. The acquirer must obtain at least 51% of the target's shares, and financial firms (SIC codes 6000-6999) and utilities (SIC codes 4000-4999) are excluded.

To identify the prior work experience of each CEO and director, we rely on the Execucomp database as well as the Institutional Shareholder Services (ISS) 'Directors Legacy' and ISS 'Directors' database, to identify all other boards on which the director as served. We then use the SDC database to identify all acquisitions in the prior ten years conducted by other firms in which the CEO/director has served as either an executive or director. M&A transactions beyond those included in our sample are used to calculate CEOs' and directors' prior M&A experience as we capture acquisition experience for the past ten years. As such, mergers and acquisitions from 1988-2018 are included to calculate our experience variables. Stock price and returns data is collected using the Center for Research in Security Prices (CRSP) and WRDS Event Study, and accounting information from Compustat. After merging the data from SDC, ISS, Execucomp, CRSP, and Compustat and excluding any observations with missing information, a sample of approximately 1,810 acquisitions completed by 893 firms remain for the main tests.

2.2 Research design

In our initial tests we replicate the main findings in Field and Mkrtchyan (2017). The basic research design is an ordinary least squares (OLS) regression with acquiring firm cumulative abnormal returns around takeover announcements as the dependent variable (*CAR[-1:1]*). Abnormal returns are measured over a three-day event window centred on the takeover announcement date with standard errors clustered by firm. The complete model used is as follows:

$$CAR[-1:1] = \alpha + \beta_1(\textit{Total number of prior acquisitions/Percent with acquisition experience}) + B_2\textit{Acquirer characteristics} + B_3\textit{Deal characteristics} + \varepsilon \quad (1)$$

Following Field and Mkrtchyan (2017) two measures of independent director acquisition experience are employed. The first measure is *Total number of prior acquisitions* calculated as the cumulative number of prior acquisitions each director participated in as an executive or director at another firm in the prior ten years. The second measure used to capture directors' board experience is *Percent with acquisition experience* defined as the percentage of independent directors who have participated in at least one prior acquisition when serving as an executive or director at another firm during the past ten years. We also replicate Field and Mkrtchyan's (2017) tests of the impact of independent director acquisition quality on acquisition announcement returns. This analysis is conducted by replacing the *Total number of prior acquisitions/Percent with acquisition experience* variables with measures of the profitability of prior acquisitions conducted by independent directors. Firstly, we use *Number of prior acquisitions with positive CAR/ Number of prior acquisitions with negative CAR,* which are respectively the cumulative number of prior acquisitions completed by independent directors at another firm in the prior ten years, which have positive/negative announcement CARs. Alternatively, we employ the variables *Percent with positive total CAR/ Percent with negative total CAR* which are respectively defined as the percentage of independent directors for whom the sum of CARs from all prior acquisitions in the prior ten years at other firms are positive/negative.

To undertake our extension of Field and Mkrtchyan (2017) we construct similar variables to those used in the original study for the CEO of acquiring firms. *CEO's prior acquisition experience* is defined as the number of acquisitions conducted by CEOs in the prior ten years at other firms as an independent director or executive. Similarly, *CEO's prior acquisitions with positive CAR/ CEO's prior acquisitions with negative CAR* are measured as the cumulative number of prior acquisitions completed by acquiring firm CEOs at another firm in the prior ten years as an independent director or executive, which have respectively positive/negative announcement CARs.

Acquirer and deal characteristics are also included in the regression models as control variables. These controls are consistent with those used by Field and Mkrtchyan (2017) and include acquirer characteristics: *Firm size, Market-to-book, Cash flow,* and *Leverage;* and deal characteristics: *Stock price run-up, Firm acquisition experience, CEO tenure, Certified insider, Public target, Cash deal, Relative deal size, Diversifying acquisition, High-tech deal* and *Industry M&A activity*. The definitions of all control variables are presented in Appendix A.

3. Results

Table 1 presents summary statistics (i.e., mean and median) for the two measures of independent director acquisition experience. Similar to Field and Mkrtchyan (2017) the descriptive statistics are separated into quintiles based upon prior director acquisition experience at other firms. Panel A presents details for *Total number of prior acquisitions.* In the most experienced quintile (i.e., Quintile 5), the average board had participated in 13.5 prior acquisitions. This compares with 15 acquisitions in Field and Mkrtchyan (2017). In comparison, the least experienced quintile has completed no prior acquisitions, and Quintile 3 has completed approximately 4 acquisitions. Panel B shows descriptive statistics for the variable *Percent with acquisition experience.* Once more, the lowest quintile has no independent directors with acquisition experience. The results for the middle and most experienced quintiles show respectively boards which have 24% and 66% of independent directors with acquisition experience. These figures are similar to the findings in Field and Mkrtchyan (2017), who document 28% and 61% of directors with acquisition experience over the same quintiles. Untabulated descriptive statistics summarising CEOs' acquisition experience indicates that in Quintile 2, CEOs have participated in 1.4 acquisitions on average, while in Quintile 3 and Quintile 4 CEOs have participated in 3.6 and 7.3 acquisitions on average, respectively. The mean and median firm size generally increases as CEOs' acquisition experience increases, indicating a strong relation between acquisition experience and firm size.

INSERT TABLE 1 HERE

Table 2 shows descriptive statistics for the replication and extension sample partitioned into firms with high and low acquisition experience. We define low acquisition experience and high acquisition experience following Field and Mkrtchyan (2017). First, as board acquisition experience is correlated with firm size, we regress the *Total number of prior acquisitions* on the log of firm size and log of firm size squared. The residual is then used to classify firms as either having 'low' acquisition experience or 'high' acquisition experience. Firms are classified as having low acquisition experience if the residual is equal to or below the median, and as having high acquisition experience if the residual is above the median. This is conducted in order to remove the effect of firm size from the variables of interest, as the two variables are correlated. Similar to Field and Mkrtchyan (2017) we document that firms with higher prior acquisition experience have significantly greater average announcement returns. Amongst the deal characteristics, we find that firms with high acquisition experience are more likely to be involved in cash deals and have a significantly higher median transaction value. These findings contrast to Field and Mkrtchyan (2017) who find no significant differences in deal characteristics across firms with high and low M&A experience. Acquirers with high M&A experience also have a significantly higher market-to book ratio and employ CEOs with longer tenure. These results are similar to Field and Mkrtchyan (2017).

INSERT TABLE 2 HERE

Table 3 presents the results from replicating the analysis in Field and Mkrtchyan (2017) for both the original (column 1) and extended sample (column 2). Consistent with the results in Field and Mkrtchyan (2017) we find a positive and significant coefficient on both the *Total number of prior acquisitions* and *Percent with acquisition experience* variables across both the original and extended sample periods. These findings indicate that independent directors' acquisition experience at other firms is positively associated with acquiring firm announcement returns.[1] Amongst the control variables, we document that announcement returns are positively associated with acquiring firm leverage; cash flow and market-to-book ratio. We also find that bidding firms' prior acquisition experience is positively associated with announcement returns. In contrast, bidding firm size, the acquisition of public targets; diversifying acquisitions and high-tech deals result in lower acquiring firm announcement returns. The findings on the control variables are consistent with those in Field and Mkrtchyan (2017) except for the positive coefficient on the bidding firm's market-to-book ratio.

INSERT TABLE 3 HERE

In Table 4 we present the findings from replicating Field and Mkrtchyan's (2017) tests of the impact of the quality of independent directors' acquisition experience on subsequent M&A performance. Once more, we present the results separately using the original and extended sample and document similar findings for both samples. Turning firstly to the findings in columns (1) and (3), the results indicate that the number of prior acquisitions with positive, but not negative, CAR is significantly associated with M&A announcement returns. These results are similar to that in Field and Mkrtchyan's (2017). Columns (3) and (4) show the findings using *Percent with positive/negative total CAR* as the key test variable. Interestingly, our results show that the percent of independent directors with both positive and negative experience are associated with higher M&A announcement returns. These findings contrast with the results in Field and Mkrtchyan (2017), as that study only documents a significant effect of positive prior M&A CARs. A likely explanation for the difference in results is that Field and Mkrtchyan's (2017) analysis uses an expanded set of governance and director quality and expertise

[1] We only replicate the main findings presented in columns (1) and (2) of Table 3 in Field and Mkrtchyan (2017). The additional findings in Field and Mkrtchyan (2017) using additional director experience, director quality and governance characteristics as controls are not replicated in this study.

variables as controls in their regression. The conclusions from the findings on the acquirer and deal characteristic control variables are similar to those displayed in Table 3.

INSERT TABLE 4 HERE

Table 5 reports the results from estimating the regression model focusing on the prior acquisition experience of the bidding firm's CEO at other firms. The findings in column (1) indicate that similar to the effect for independent directors in Field and Mkrtchyan (2017), CEOs' prior acquisition experience is positively associated with M&A announcement returns.[2] In column (2) of Table 5, the CEO experience variable is partitioned into positive and negative prior experience. Interestingly, our results indicate that negative but not positive prior CEO experience increases M&A announcement returns. These findings are counterintuitive as they indicate prior M&A experience is beneficial for subsequent M&As even if negative. This effect is consistent with CEOs learning from earlier unprofitable M&As. Our findings also potentially explain the beneficial career consequences of both positive and negative acquisitions documented in Harford and Schonlau (2013). The findings on the control variables in Table 5 are similar to those presented in Table 2.

INSERT TABLE 5 HERE

4. Conclusions

This study replicates and extends Field and Mkrtchyan (2017) and contributes to prior literature by studying whether CEOs' prior acquisition experience at other firms is associated with subsequent M&A performance. We first confirm the findings in Field and Mkrtchyan (2017) that independent director acquisition experience is beneficial for both the original and an extended sample period. Moreover, in our extension of Field and Mkrtchyan (2017) we find that prior CEO acquisition experience is associated with higher subsequent M&A announcement returns. Interestingly, we find evidence that CEOs learn from past negative M&As, as this type of experience is more likely to be associated with subsequent higher acquisition announcement returns.

Our study adds to prior academic literature that examine CEO characteristics which affect merger and acquisition performance and activity (Malmendier and Tate 2008; Yim 2013; Gong and Guo

[2] Additional untabulated tests were conducted including both *Number of prior acquisitions* and *CEO's prior acquisition experience* in the same regression, and results are positively significant for both variables of interest, demonstrating the robustness of our results.

2014; Jenter and Lewellen 2015). For example, prior studies have examined the impact of CEO age (Yim, 2013), and overconfidence (Malmendier and Tate 2008) on takeover outcomes. However, at present no research has examined whether prior CEO acquisition experience is associated with takeover profitability. This study also adds to earlier research on the effect of prior M&A experience (Harford and Schonlau, 2013) on executive careers. As our findings indicate that even negative CEO acquisition experience can improve subsequent M&A outcomes, this result may explain the subsequent appointment of executives with negative M&A acquisition histories.

References

Adams, R. B., H. Almeida, and D. Ferreira, 2005, Powerful CEOs and their impact on corporate performance, *Review of Financial Studies* 18, 1403–1432.

Bhagat, S., and B. Black, 2002, The Non-Correlation Between Board Independence and Long-Term Firm Performance, *Journal of Corporation Law 27*, 231–273.

Field, L. C., and A. Mkrtchyan, 2017, The effect of director experience on acquisition performance, *Journal of Financial Economics 123*, 488–511.

Gong, N., and L. Guo, 2014, CEO Power and Mergers and Acquisitions. *SSRN Electronic Journal*.

Graham, J.R., C.R. Harvey, and M. Puri, 2013, Managerial attitudes and corporate actions, *Journal of Financial Economics* 109, 103–121.

Harford, J., and R.J. Schonlau, 2013, Does the director labor market offer ex post settling-up for CEOs? The case of acquisitions. *Journal of Financial Economics 110*, 18–36.

Jenter, D., and K. Lewellen, 2015, CEO Preferences and Acquisitions. *Journal of Finance 70*, 2813–2852.

Malmendier, U., and G. Tate, 2008, Who makes acquisitions? CEO overconfidence and the market's reaction. *Journal of Financial Economics 89*, 20–43.

Mcdonald, M. L., J.D. Westphal, and M.E. Graebner, 2008, What Do They Know? The Effects of Outside Director Acquisition Experience on Firm Acquisition Performance, *Strategic Management Journal 29*, 1155–1177.

Schmidt, B., 2015, Costs and benefits of friendly boards during mergers and acquisitions. *Journal of Financial Economics 117*, 424–447.

Yim, S., 2013, The acquisitiveness of youth: CEO age and acquisition behavio, *Journal of Financial Economics 108*, 250–273.

Table 1

Acquisition experience measures

This table presents summary statistics for two board acquisition measures using a US sample from 1998–2018. *Total number of prior acquisitions* is the total number of prior acquisitions in which independent directors of the principal firm have participated as either a director or executive of another bidder during the previous ten years. *Percent with acquisition experience* is the percentage of independent directors of the principal firm who have participated in at least one prior acquisition by serving as a director or executive of another bidder during the past ten years. *Firm size* is total assets of the principal firm measured in the fiscal year before the acquisition. *Number of observations* is the number of acquisitions conducted by principal firms. Means for each quintile are presented first, followed by medians in parentheses. In Panel A, firms are ranked by *Total number of prior acquisitions* such that Quintile 1 contains firms whose independent directors have the least acquisition experience and Quintile 5 contains firms whose independent directors have the most acquisition experience. In Panel B, firms are ranked by *Percent with acquisition experience* such that Quintile 1 contains firms with the highest percentage of directors who have participated in at least one acquisition and Quintile 5 contains firms with the lowest percentage of independent directors who have participated in at least one acquisition.

Panel A: mean (median) acquisition experience quintiles as measured by Total number of prior acquisitions

Quintiles by *Total number of prior acquisitions*	Least experience -----				-----> Most experience
	Quintile 1 [0]	Quintile 2 [1 – 2]	Quintile 3 [3 – 5]	Quintile 4 [6 – 9]	Quintile 5 [≥ 10]
Total number of prior acquisitions	0 (0)	1.4 (1)	3.9 (4)	7.3 (7)	13.5 (12)
Firm size, in millions	$2,145 ($904)	$3,787 ($1,423)	$4,943 ($1,930)	$9,024 ($3,277)	$11,398 ($2,925)
Number of observations	528	491	349	276	166

Panel B: mean (median) acquisition experience quintiles as measured by Percent with acquisition experience

Quintiles by *Percent with experience*	Least experience -----				-----> Most experience
	Quintile 1 [0%]	Quintile 2 [≤ 20%]	Quintile 3 [≤ 33%]	Quintile 4 [≤ 50%]	Quintile 5 [> 50%]
Percent with acquisition experience	0% (0%)	14% (14%)	24% (25%)	40% (40%)	66% (65%)
Firm size, in millions	$2,145 ($904)	$4,263 ($1,602)	$4,168 ($1,477)	$8,504 ($2,553)	$7,787 ($2,258)
Number of observations	528	366	326	425	136

Table 2
Summary statistics by acquisition experience

This table presents firm and deal characteristics, as well as acquisition performance of firms stratified by high and low board acquisition experience for a sample of acquisitions from 1998–2018. Board acquisition experience is measured as the total number of prior acquisitions outside the principal firm in which independent directors have participated in the prior ten years. Because board acquisition experience is correlated with firm size, we regress the *Total number of prior acquisitions* on log of firm size and log of firm size squared, and we use the residual to classify firms into groups with high and low acquisition experience. Firms are classified as having *Low acquisition experience* if the residual is at or below the median and as having *High acquisition experience* if the residual is above the median (results are similar if the *Percent with experience* measure is used). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively, for differences in means and medians. Differences in means are based on a *t*-test. Differences in medians are based on Wilcoxon rank sum test. Variable definitions are given in Appendix A

	Replication sample 1998 – 2014 (*N* = 1,689)				Extended sample 1998 – 2018 (*N* = 1,800)			
	Low acquisition experience		High acquisition experience		Low acquisition experience		High acquisition experience	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Firm characteristics:								
Firm size (billions)	4.86	1.16	5.20	1.88***	4.47	1.15	4.75	1.82***
Market-to-book	2.02	1.56	1.87**	1.61	2.03	1.55	1.83**	1.57
Leverage	0.15	0.13	0.15	0.13	0.15	0.13	0.15	0.12
Stock price run-up	0.11	0.02	0.09	0.02	0.11	0.02	0.09	0.02
Firm acquisition experience	1.87	1.00	1.81	1.00	1.87	1.00	1.78	1.00
CEO Tenure	10.92	8.00	10.48	8.00	10.57	8.00	9.27***	7.00***
Deal characteristics:								
Transaction value (billions)	1.13	0.19	1.12	0.26***	1.10	0.19	0.98	0.25***
Acquire public target	0.28	0.00	0.29	0.00	0.27	0.00	0.29	0.00
Relative deal size	0.27	0.14	0.25	0.13	0.27	0.14	0.25	0.13
Cash deal	0.43	0.00	0.57***	1.00***	0.42	0.00	0.56***	1.00***
Acquisition performance:								
CAR	0.01	0.01	0.01*	0.01	0.01	0.01	0.01*	0.01

Table 3
Board acquisition experience and acquirer returns (replication)

This table tests the relationship between board acquisition experience and acquisition announcement returns by presenting estimates from an ordinary least squares estimation for a sample of acquisitions from 1998–2014 and 1998-2018. The dependent variable is the acquirer's three-day cumulative abnormal return in percentage points. *Total number of prior acquisitions* is the total number of prior acquisitions in which independent directors of the principal firm have participated as either a director or executive of another bidder during the previous ten years. *Percent with acquisition experience* is the percentage of independent directors of the principal firm who have participated in at least one prior acquisition by serving as a director or executive of another bidder during the past ten years. *Firm size* is total assets of the principal firm measured inthe fiscal year before the acquisition. Standard errors, presented in parentheses, are adjusted for heteroskedasticity (White, 1980) and are clustered by firm. *, **, *** denote significance at the 10%, 5%, and 1% level, respectively. Variable definitions are given in Appendix A.

	(1) Replication sample (1998 – 2014)		(2) Extended sample (1998 – 2018)	
Total number of prior acquisitions	0.091**	-	0.090**	-
	(2.113)		(2.157)	
Percent with acquisition experience	-	2.403**	-	2.489**
		(2.309)		(2.470)
Ln (Firm size)	-0.374**	-0.384***	-0.397***	-0.411***
	(-2.471)	(-2.591)	(-2.785)	(-2.941)
Market-to-book	0.300***	0.303***	0.323***	0.325***
	(2.747)	(2.770)	(2.964)	(2.986)
Cash flow	6.924***	7.128***	7.447***	7.647***
	(3.033)	(3.143)	(3.318)	(3.429)
Leverage	4.872***	4.951***	5.096***	5.161***
	(2.725)	(2.786)	(2.938)	(2.994)
Stock price run-up	-0.137	-0.155	-0.149	-0.166
	(-0.254)	(-0.285)	(-0.281)	(-0.311)
Firm acquisition experience	0.133*	0.139*	0.127*	0.133*
	(1.823)	(1.912)	(1.742)	(1.842)
Ln (CEO tenure)	0.739***	0.742***	0.697***	0.704***
	(3.510)	(3.536)	(3.378)	(3.432)
Certified insider	-0.221	-0.222	-0.201	-0.199
	(-0.579)	(-0.588)	(-0.540)	(-0.541)
Public target	-3.054***	-3.059***	-2.925***	-2.931***
	(-6.820)	(-6.858)	(-6.861)	(-6.902)
Cash deal	1.142***	1.144***	1.052***	1.053***
	(3.306)	(3.306)	(3.118)	(3.120)
Relative deal size	0.264	0.237	0.142	0.124
	(0.347)	(0.314)	(0.195)	(0.171)
Diversifying acquisition	-1.338***	-1.350***	-1.343***	-1.364***
	(-3.503)	(-3.539)	(-3.708)	(-3.765)
High-tech deal	-1.803***	-1.848***	-1.812***	-1.849***
	(-2.849)	(-2.916)	(-2.917)	(-2.975)
Industry M&A activity	3.398	3.213	2.741	2.510
	(1.012)	(0.954)	(0.869)	(0.789)
Constant	1.281	1.289	1.460	1.490
	(0.989)	(1.006)	(1.183)	(1.218)
Observations	1,685	1,685	1,810	1,810
Adjusted R^2	0.0910	0.0922	0.0888	0.0903

Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4
Quality of board acquisition experience and acquirer returns (replication)

This table tests the relationship between board acquisition experience and acquisition announcement returns by presenting estimates from an ordinary least squares estimation for a sample of acquisitions from 1998–2014 and 1998-2018. The dependent variable is the acquirer's three-day cumulative abnormal return in percentage points. We measure the quality of director acquisition experience by decomposing the *Total number of prior acquisitions* variable into *Number of prior acquisitions with positive (negative) CAR*. We similarly decompose *Percent with acquisition experience* into *Percent with positive (negative) total CAR*. Standard errors, presented in parentheses, are adjusted for heteroskedasticity (White, 1980) and are clustered by firm. *, **, *** denote significance at the 10%, 5%, and 1% level, respectively. Variable definitions are given in Appendix A.

	(1)	(2)	(3)	(4)
	Replication sample (1998 – 2014)		Extended sample (1998 – 2018)	
Number of prior acquisitions with positive CAR	0.177**	-	0.155**	-
	(2.191)		(2.062)	
Number of prior acquisitions with negative CAR	0.066	-	0.085	-
	(0.679)		(0.936)	
Percent with positive total CAR	-	5.203***	-	4.995***
		(3.577)		(3.673)
Percent with negative total CAR	-	4.223**	-	4.261***
		(2.493)		(2.630)
Ln (Firm size)	-0.335*	-0.329*	-0.374**	-0.372**
	(-1.888)	(-1.928)	(-2.256)	(-2.322)
Market-to-book	0.268	0.244	0.347	0.323
	(1.186)	(1.082)	(1.536)	(1.441)
Cash flow	3.125	3.460	4.047	4.401*
	(1.213)	(1.372)	(1.620)	(1.798)
Leverage	2.581	2.819	2.894	3.067
	(1.187)	(1.321)	(1.390)	(1.499)
Stock price run-up	-0.031	-0.044	-0.044	-0.055
	(-0.047)	(-0.068)	(-0.069)	(-0.085)
Firm acquisition experience	0.066	0.078	0.069	0.081
	(0.707)	(0.857)	(0.758)	(0.912)
Ln (CEO tenure)	0.798***	0.830***	0.704***	0.744***
	(3.042)	(3.192)	(2.780)	(2.966)
Certified insider	-0.247	-0.308	-0.202	-0.248
	(-0.552)	(-0.701)	(-0.470)	(-0.585)
Public target	-3.248***	-3.272***	-3.121***	-3.151***
	(-6.188)	(-6.273)	(-6.329)	(-6.441)
Cash deal	1.528***	1.544***	1.348***	1.353***
	(3.729)	(3.754)	(3.380)	(3.386)
Relative deal size	1.069	1.004	0.964	0.907
	(1.162)	(1.093)	(1.087)	(1.026)
Diversifying acquisition	-1.516***	-1.545***	-1.514***	-1.553***
	(-3.505)	(-3.579)	(-3.746)	(-3.854)
High-tech deal	-2.393***	-2.585***	-2.423***	-2.581***
	(-2.992)	(-3.213)	(-3.142)	(-3.340)
Industry M&A activity	5.753*	5.558*	4.311	3.992
	(1.900)	(1.848)	(1.500)	(1.352)
Constant	-0.356	-1.039	0.065	-0.586
	(-0.143)	(-0.419)	(0.027)	(-0.245)
Observations	1,170	1,170	1,282	1,282
Adjusted R^2	0.0945	0.100	0.0886	0.0947

Robust t-statistics in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 5
CEO's acquisition experience and acquirer returns (replication with a twist)

This table tests the relationship between CEO acquisition experience and acquisition announcement returns by presenting estimates from an ordinary least squares estimation for a sample of acquisitions from 1998-2018. The dependent variable is the acquirer's three-day cumulative abnormal return in percentage points. We measure the quality of CEO acquisition experience using *CEO's prior acquisition experience* defined as the cumulative number of other firms' acquisitions in which CEOs were involved as an executive or as an independent director in the past ten years. We also decompose this variable into the *CEO's prior acquisitions with positive (negative) CAR*. Standard errors, presented in parentheses, are adjusted for heteroskedasticity (White, 1980) and are clustered by firm. *, **, *** denote significance at the 10%, 5%, and 1% level, respectively. Variable definitions are given in Appendix A.

	(1) CAR [-1:1] (in percent)	(2) CAR [-1:1] (in percent)
CEO's prior acquisition experience	0.224*	-
	(1.772)	
CEO's prior acquisitions with positive CAR	-	0.105
		(0.146)
CEO's prior acquisitions with negative CAR	-	1.469**
		(2.196)
Ln (Firm size)	-0.317**	-0.292*
	(-2.358)	(-1.858)
Market-to-book	0.325***	0.363
	(2.966)	(1.581)
Cash flow	7.563***	4.120*
	(3.395)	(1.669)
Leverage	5.005***	2.701
	(2.891)	(1.298)
Stock price run-up	-0.175	-0.096
	(-0.327)	(-0.149)
Firm acquisition experience	0.116	0.069
	(1.616)	(0.766)
Ln (CEO tenure)	0.676***	0.642**
	(3.307)	(2.564)
Certified insider	-0.278	-0.293
	(-0.754)	(-0.686)
Public target	-2.942***	-3.144***
	(-6.843)	(-6.340)
Cash deal	1.077***	1.400***
	(3.185)	(3.520)
Relative deal size	0.124	0.985
	(0.169)	(1.111)
Diversifying acquisition	-1.308***	-1.486***
	(-3.624)	(-3.677)
High-tech deal	-1.746***	-2.310***
	(-2.793)	(-2.970)
Industry M&A activity	2.727	4.227
	(0.862)	(1.459)
Constant	0.037	-0.207
	(0.015)	(-0.087)
Observations	1,810	1,282
Adjusted R^2	0.0875	0.0858

Robust t-statistics in parentheses *** p<0.01, ** p<0.05, * p<0.1

Appendix A. Variable definitions

Variable	Definitions
Panel A: Board/CEO acquisition experience	
Total number of prior acquisitions	Cumulative number of other firms' acquisitions in which independent directors were involved as a manager or as a director in the past ten years.
Percent with acquisition experience	Number of independent directors who participated in other firms' acquisitions in the past ten years divided by the total number of independent directors.
Number of prior acquisitions with positive (negative) CAR	Cumulative number of other firms' acquisitions in which independent directors were involved as an executive or as a director in the past ten years which generated positive (negative) CARs.
Percent with positive (negative) total CAR	Percent of independent directors for whom the sum of CARs for all prior acquisitions in which the director participated during the past ten years outside the principal firm is positive (negative).
CEOs prior acquisition experience	Cumulative number of other firms' acquisitions in which CEOs were involved as an executive or as an independent director in the past ten years.
CEOs prior acquisitions with positive (negative) CAR	Cumulative number of prior acquisitions completed by acquiring firm CEOs at another firm in the prior ten years as an independent director or executive, which have positive/negative announcement CARs.
Panel B: Dependent variables	
CAR [-1:1]	Three-day cumulative abnormal return (in percentage points) calculated using a standard market-adjusted return model, where abnormal return is calculated as the difference between a firm return and the value-weighted market (CRSP) index return.
Panel C: Acquirer characteristics	
Firm size	Book value of total assets.
Market-to-book	Market value of assets divided over book value of assets. Market value of assets is book value of total assets minus book value of equity plus market value of equity.
Cash flow	Operating income before depreciation minus interest expense, income taxes, and capital expenditures, scaled by book value of total assets.
Leverage	Book value of debt divided by market value of total assets.
Stock price run-up	Bidder's buy-and-hold abnormal return (BHAR) during the period (-210,-11). The market index is the CRSP value-weighted return.
Firm acquisition experience	Cumulative number of acquisitions conducted by the firm in the past ten years.
CEO tenure	Number of years in the position of CEO.
Certified insider	Indicator variable that equals one if there is at least one non-CEO inside director who holds an independent directorship, zero otherwise.
Panel D: Deal characteristics	
Public target	Indicator variable that equals one for public targets, zero otherwise.
Cash deal	Indicator that equals one if financed only by cash and/or liabilities, zero otherwise.
Relative deal size	Deal value, as reported in Thomson One, divided by bidder's market capitalization, measured at the fiscal year end before the announcement.
Diversifying acquisition	Indicator variable that equals one if bidder and target are not in the same Fama-French 48 industry (Fama and French, 1997), zero otherwise.
High-tech deal	Indicator variable that equals one if bidder and target are both from high-tech industries as defined by Loughran and Ritter (2004), zero otherwise.
Industry M&A activity	The value of all corporate control transactions of $1 million or more reported by Thomson One for each prior year and Fama-French 48 industry (Fama and French, 1997) divided by the total book value of assets of all Compustat firms in the same Fama-French industry and year.

Appendix B. Shark Tank Pitch Template

“Practice makes perfect? The effect of CEO and director experience on acquisition performance”

<table>
<tr><td colspan="2">Pitcher Team Names</td><td><u>Senior mentor</u>: Martin Bugeja (UTS)
<u>ECRs</u>: Samir Ghannam (UTS) and Davina Jeganathan (UTS)</td><td>JEL code</td><td>G30; G34; J24</td><td>Date Completed</td><td>30/03/2020</td></tr>
<tr><td>(A)</td><td>Working Title</td><td colspan="5">“Practice makes perfect? The effect of CEO and director experience on acquisition performance”</td></tr>
<tr><td>(B)</td><td>Basic Research Question</td><td colspan="5">The main objective of this study is to replicate and extend Field and Mkrtchyan (2017), who find that independent directors with prior M&A experience engage in more value creating M&As. However, in contrast to Field and Mkrtchyan (2017) we argue that chief executive officers (i.e., “CEOs”) also play an important role in decision making during M&As. Therefore, we also examine whether CEOs’ prior acquisition experience at other firms leads to better subsequent acquisition announcement returns. In addition, we argue that independent directors that held positions of more responsibility when undertaking prior acquisitions at other firms, such as the CEO, chairperson and lead independent director, are likely to have greater influence on future M&A performance relative to other independent directors.</td></tr>
<tr><td>(C)</td><td>Key paper(s)</td><td colspan="5">Target Replication paper:
Field, L.C. & Mkrtchyan, A. 2017, ‘The effect of director experience on acquisition performance’, Journal of Financial Economics, vol. 123, no. 3, pp. 488–511.

Other Key Papers:
Harford, J., & Schonlau, R. J. (2013). Does the director labor market offer ex post settling-up for CEOs? The case of acquisitions. Journal of Financial Economics, 110(1), 18–36.

Yim, S. (2013). The acquisitiveness of youth: CEO age and acquisition behavior. Journal of Financial Economics, 108(1), 250–273.</td></tr>
<tr><td>(D)</td><td>Motivation/Puzzle</td><td colspan="5">Independent directors play an important role during M&As, as they are expected to advise and monitor the CEO and increase corporate value and efficiency (Bhagat and Black 2002; Schmidt 2015). While the independent directors’ role</td></tr>
</table>

		is vital in the acquisition process to moderate managerial power and attempt to neutralise CEOs' self-serving motives, CEOs also have a crucial role in the M&A process. For instance, the CEO is likely to be the main instigator in the initiation and negotiation of M&A deals (Adams, Almeida and Ferreira 2005). Whilst prior literature has established that independent directors' acquisition experience leads to better subsequent acquisition outcomes (Field and Mkrtchyan 2017), the effect of a CEO's prior acquisition experience on their subsequent acquisition performance has not been addressed. Similarly, some independent directors such as the chairperson or lead independent director are generally allocated higher responsibilities and are more involved in decision-making within a firm (Lamoreaux, Litov and Mauler 2018; Waelchli and Zeller 2013). As such, it is expected that they are more heavily involved in decision making within the acquisition process and will gain more knowledge and skills that may be useful in subsequent acquisitions. Therefore, we examine whether the presence of independent directors who held the position of CEO, chairperson or lead independent director during prior acquisitions at other firms results in better subsequent acquisition performance.
Three core aspects of any empirical research project		
(E)	**Idea**	Prior literature demonstrates that prior experience enables individuals to be effective at complex problem solving and decision making (McDonald, Westphal and Graebner 2008). Consistent with this idea, Field and Mkrtchyan (2017) find that independent directors with prior M&A experience engage in more value creating M&As. However, we argue that CEOs are the principal corporate decision makers in a firm and have the most influence in mergers and acquisitions (Graham, Harvey and Puri 2013). This is demonstrated through CEOs being less likely to share or delegate decision making responsibility in mergers and acquisitions relative to other firm decisions (Graham, Harvey and Puri 2015). Strategic decisions such as expanding the firm requires the use of information which is more likely to be possessed by the CEO in comparison to other firm members (Harris and Raviv 2005; Graham, Harvey and Puri 2015). Therefore, we expect that CEOs' prior acquisition experience is associated with subsequent acquisition outcomes. This leads to the first hypothesis: *Hypothesis 1: Firms with CEOs with acquisition experience engage in better-performing acquisitions.* Prior literature demonstrates that in addition to the CEO, the chairperson and lead independent director hold greater responsibilities within a firm in comparison to other directors. As the leader of the board, the chairperson or lead director are responsible for overseeing the highest standards of corporate governance within the board, ensuring the board of directors fulfils its assigned advising and monitoring obligations, as well as managing processes involved with

the CEO and other board members (Jensen 1993). These two positions are also required to limit the CEO's ability to act in self-interest and prevent firm decisions that may conflict with shareholders' interests (Lamoreaux, Litov and Mauler 2018). Specifically, lead independent directors are particularly helpful in focusing the board's talents and wisdom when difficult situations such as mergers and acquisitions arise (Lamoreaux, Litov and Mauler 2018; PriceWaterhouseCoopers 2010). Management might also see lead independent directors as having increased involvement in the strategic direction of the company, such as engaging in mergers and acquisitions (PriceWaterhouseCoopers 2010). Consequently, prior research demonstrates that the chairperson and lead director are more likely to take on more responsibility in mergers and acquisition activities than other independent directors. This leads to our second hypothesis.

Hypothesis 2: Firms with independent directors who gained prior acquisition experience as the CEO, chairperson or lead independent director engage in better-performing subsequent acquisitions.

Prior research identifies that expertise in making acquisitions effectively contributes to a firm's acquisitions decisions (McDonald, Westphal and Grabner 2008; Field and Mkrtchyan 2017). However, prior studies also imply that the quality of acquisition experience does matter, as these individuals possess more fully developed capabilities for identifying promising acquisitions and avoiding problematic ones (McDonald, Westphal and Graebner 2008). Field and Mkrtchyan (2017) indicate that prior M&A performance actually represents directors' ability, as independent directors whose prior acquisition experience is positive generate higher announcement returns. Consequently, as the CEO, the chairperson and lead independent director assume more responsibility in relation to an acquisition, we hypothesise the following:

Hypothesis 3a: Firms with CEOs with better performing prior acquisition experience engage in higher performing acquisitions.

Hypothesis 3b: Firms with independent directors with better performing prior acquisition experience as the CEO, chairperson or lead independent director engage in better-performing acquisitions.

Each of the hypotheses identifies prior acquisition experience at firms other than the firm at which the CEO or director is currently employed.

		Identification strategy: Field and Mkrtchyan (2017) identify that it is possible that CEOs and directors with acquisition experience are not randomly allocated to firms, but systematically choose which firms to join. As such, that study appropriately addresses the endogeneity threat of non-random firm-director matching through employing an instrumental variables approach by estimating regressions in a two-stage least squares framework. Endogeneity could also arise due to omitted correlated variables. We attempt to address the omitted correlated variable problem by controlling for factors that potentially explain a firm's acquisition performance beyond CEOs' and directors' prior acquisition experience, as detailed in Model (1) in Section G.
(F)	**Data**	M&A data will be obtained from the Thomson Reuters Securities Data Company's (SDC) database. The BoardEx database will be used to identify the corporate governance variables (e.g. board size, board independence, co-option, director age, director tenure) for the years 2001-2018, and the ISS Directors' legacy database has comprehensive corporate governance data prior to 2001. Stock price and returns data will be collected using the Center for Research in Security Prices (CRSP) and WRDS Event Study, and accounting information from Compustat. All the data sources are available at UTS and no hand collection is required. Observations will be excluded due to missing data. Our sample of acquisitions will be collected from 1998 through 2018, and will include completed acquisitions of US public, private and subsidiary targets made by US public acquirers (100,706 initial observations approximately). This time period commences prior to the start of the period for governance data discussed above due to the need to identify prior M&A experience. Buybacks, recapitalisations and exchange offers will be excluded from the sample (approximately 27,787 observations deleted). The acquirer must obtain at least 51% of the target's shares, and financial firms and utilities will be excluded. After merging the data from BoardEx, Execucomp, CRSP, and Compustat and excluding any observations with missing information, a sample of approximately 1,600 firm-years remain. This number is based on a sample of acquisitions from 2001-2017 and will be revised once we obtain the ISS Directors' legacy data, as well as updated data for 2018.
(G)	**Tools**	The basic research design is an ordinary least squares (OLS) regression of cumulative abnormal returns around takeover announcements as the dependent variable (*CAR[-1:1]*) with clustering of standard errors by firm. The model used in the study is as follows: *CAR[-1:1]* = α+ β_1*(CEO M&A Experience/Total number of prior acquisitions/Percent with acquisition experience)* + B_2*Acquirer characteristics* + B_3*Deal characteristics* + ε *(1)*

CAR[-1:1] is defined as the acquirer's three-day cumulative abnormal return in percentage points.

To test whether CEOs' acquisition experience affects their subsequent acquisition performance, *CEO M&A Experience* is measured as the total number of prior acquisitions in which the CEO of the acquiring firm has participated in at firms other than the principal firm during the ten years prior to each acquisition, either as an independent director or executive.

To test whether directors who hold the position of CEO, chairperson or lead independent director during their involvement in acquisitions have better subsequent acquisition performance, two measures are employed. The first measure used is *Total number of prior acquisitions* and is measured as the cumulative number of prior acquisitions each director participated in as the chairperson, lead independent director or CEO at firms other than the principal firm during the ten years prior to each acquisition. The second measure used to capture directors' board experience is *Percent with acquisition experience*, which is the percentage of independent directors who have participated in at least one prior acquisition when serving as a chairperson, lead independent director or CEO of another bidder during the past ten years.

Acquirer and deal characteristics are also included in the models as control variables. *Firm size, market-to-book, cash flow, leverage, stock price run-up, firm acquisition experience, CEO tenure, certified insider, public target, cash deal, relative deal size, diversifying acquisition, high-tech deal* and *industry M&A activity* are included in the models as control variables. The definitions of all control variables can be found in Appendix A of Field and Mkrtchyan's (2017) paper.

Field and Mkrtchyan (2017) employ an instrumental variables approach to address potential endogeneity issues, by estimating regressions in a two-stage least squares framework. This approach is still considered acceptable in combating self-selection issues. We have the data and skills necessary to replicate this test.

The econometric software relevant to conduct the replication is Stata, which is available to all team members. The team have the appropriate skill set and knowledge to implement appropriate statistical and econometric tests.

Two key questions

(H)	**What's New?**	The novelty in the replication we propose to conduct is that it recognises that CEOs, chairs, and lead directors are heavily involved in the decision-making process during acquisitions, and thus their prior experience is likely to significantly affect subsequent acquisition performance. We also aim to highlight that the experience gained from acquisitions may differ based on directors' responsibility levels. Prior studies have examined how CEOs' attributes have an effect on their acquisition performance and outcomes, such as age and overconfidence (Malmendier and Tate 2008; Yim 2013), as well as how CEOs are rewarded in terms of post-M&A bonuses, compensation and future directorships (Grinstein and Hribar 2004; Harford and Schonlau 2013; Yim 2013). However, to date no study has examined whether a CEOs' prior M&A experience affects subsequent acquisition outcomes. In addition, no prior studies have examined whether directors with senior board roles during M&As affects subsequent acquisition performance. Overall, the results of this study will provide evidence as to whether the prior acquisition experience of CEOs, the chairperson and lead director enhances or detracts from their subsequent acquisition performance, as well as providing evidence on a director's ability to learn from experience based on their involvement in the process.
(I)	**So What?**	Our study has implications and provides evidence on the importance of prior M&A experience. Currently, as demonstrated in prior research, board appointments are made based on acquisition experience, regardless of acquisition ability (Harford and Schonlau 2013). However, this view is potentially misguided as we expect to find evidence that corroborates Field and Mkrtchyan's (2017) findings, thus indicating that firms experience better M&A outcomes when they hire CEOs and directors based on their acquisition ability, rather than their acquisition experience.
One bottom line		
(J)	**Contribution**	Firstly, this study extends prior literature examining the impact CEO attributes have on acquisition performance and activity (e.g. Yim 2013; Jenter and Lewellen 2015; Malmendier and Tate 2008; Gong and Guo 2014). Secondly, this study complements the existing literature focusing on how director expertise impacts acquisition performance (Huang et al 2014; Masulis and Mobbs 2011; Fahlenbrach, Low and Stulz 2010). To the best of our knowledge, this is the first study to acknowledge that independent directors' learning surrounding acquisitions may differ according to the levels of responsibility assumed by them within a firm. Field and Mkrtchyan's (2017) study assumes that all independent directors gain the same level of experience from engaging in acquisitions, but we argue that the acquisition experience gained changes according to a director's position on the board. Thirdly, this study contributes to research suggesting

		that boards with relevant knowledge are associated with superior acquisition outcomes (McDonald, Westphal and Graebner 2008; Kroll, Walters and Wright 2008).
(K)	**Other Considerations**	The team have the appropriate skill set to ensure the proposed replication is delivered on time. The data are readily accessible to all team members and all have the necessary experience to perform the relevant analysis in a timely manner.