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RESEARCH ARTICLE

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'Know when to fold 'em': Policy uncertainty and acquisition abandonment

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Abstract

This study investigates how policy uncertainty affects the acquisition process during the post-announcement period. Utilising a sample of Australian mining project acquisitions over 1998–2017, we find that rising policy uncertainty after initial acquisition announcements is associated with delays in deal completion. In addition, prolonged high policy uncertainty plays an important role in triggering acquisition abandonment. Further, the stock market reacts less negatively to deal abandonment decisions made amid protracted policy uncertainty, and such reactions are associated with managers' explanations for terminating the deals. Overall, our findings highlight the importance of policy uncertainty as a 'deal-breaker' in acquisitions.

KEYWORDS

acquisition abandonment, event study, mining sector, policy uncertainty, post-announcement period

JEL CLASSIFICATION

G34, G38

1 | INTRODUCTION

Uncertainty is often a 'deal-breaker' in acquisitions (Picker, 2016). The multitude of unknowns surrounding government policy and regulation pressures dealmakers to renegotiate and even terminate announced acquisitions. Although practitioners publicly speculate on the link between policy uncertainty and acquisition abandonment, little empirical evidence on this link has been provided in the literature. In addition, early research on industrial organisation documents highly differential impacts of regulation uncertainty on firms of various sizes (Bartel & Thomas, 1987; Neumann & Nelson, 1982; Pashigian, 1984; Thomas, 1990), however, the literature has largely ignored early-stage or junior participants'

acquisition attempts under uncertainty. Utilising a sample of project acquisitions by Australian mining exploration entities (MEEs), this study aims to fill this gap by investigating the impact of policy uncertainty on acquisition abandonment decisions in the early-stage, small firm setting.

We hypothesise that policy uncertainty affects the acquisition process during the post-announcement period and even acquisition outcomes. This premise is grounded on economic theories of incomplete contracting, which argue that contracts are inherently incomplete because contracting parties cannot fully anticipate or explicitly specify all future states of the world (Aghion & Bolton, 1992; Hart & Moore, 1988; Tirole, 1999). In terms of acquisition contracts specifically, an initial acquisition agreement does not guarantee the completion of the deal (Bhagwat et al., 2016; Skaife & Wangerin, 2013). Acquisition parties continue to receive new information after signing the original agreement and keep reviewing the pending transaction (Hotchkiss et al., 2017; Lai et al., 2022). If policy uncertainty rises and persists after the initial deal announcement, it may change the economic implications of the proposed investment, potentially triggering acquisition renegotiation or even abandonment.

We test our main hypothesis in the context of project acquisitions by Australian MEEs. This setting offers unique empirical advantages. First, the mining sector is economically important. Australia's economy significantly depends on the mining sector, which accounts for one-third of all companies listed on the Australian Securities Exchange (ASX), contributes over 50% of export income, and generates 21% of the economy's growth.[1,2] MEE participants actively engage in mineral exploration and acquisition activities in over 100 countries.[3] Hence, any uncertainty affecting the mining sector is likely to become a focal point of political debate in Australia. For instance, the introduction of a federal mining tax in 2010, arguably, became a protracted political saga that had dominated two federal elections and contributed to the demise of two prime ministers (Eccleston & Hortle, 2016).

Second, project acquisitions are often referred to as 'lifeblood' of junior participants in the mining, oil & gas, biotechnology, and pharmaceutical sectors (i.e., Cunningham et al., 2021).[4] These junior participants are characterised by high inherent business risk, a lack of internal funding, and increased regulatory scrutiny from various levels of government. This unique setting for investigating acquisitions is in contrast to the extant literature's focus on large firms. Additionally, the long interval between deal initiation and resolution (i.e., on average, 12 months) in MEEs' project acquisitions fits the assumption of incomplete contracting theories, providing researchers an ideal setting to observe attributes of managers' investment adjustments *after* acquisitions are announced. Therefore, the findings of this study would be of interest to policy makers, academics, and industry participants.

Using a hand-collected sample of project acquisitions by Australian MEEs from 1998 to 2017, we investigate the impact of policy uncertainty on the acquisition process, with a particular focus on the interim period and acquisition outcomes. We measure the Australian policy uncertainty using a news-based index, developed by Baker et al. (2016) (hereafter, BBD). This index has been used in prior studies as a good indicator of policy uncertainty (e.g., Gulen & Ion, 2016; Xu, 2020).

The main findings of this study are as follows. First, we show that a rise in policy uncertainty after initial deal announcement is associated with a delay in deal completion. Our

[1]Source: ASX Metals & Mining Sector Profile; Ministers for the Department of Industry, Science, Energy, and Resources.

[2]Source: Minerals of Council of Australia.

[3]As a large resource-based economy, Australia is one of the most active mining acquisition markets. For example, Australian mining acquisitions worth a total of US$3 billion in the first half of 2020. (see Evan, 2020).

[4]There is an emerging literature considering corporate investment at the project level. For example, Décaire et al. (2020) examine project-level investment decisions in the US oil & gas industry; Cunningham et al. (2021) investigate acquisitions of drug projects in the US pharmaceutical industry.

estimations suggest that, holding other variables at their sample means, a 27% increase in the post-announcement policy uncertainty index results in an extra month of deal closing time. We also document a positive association between rising policy uncertainty and the likelihood of acquirers extending the deal closing date. Our results are consistent with the real options theory (Dixit & Pindyck, 1994), where managers tend to delay deal resolution when facing elevated policy uncertainty.

Second, we provide empirical evidence confirming anecdotal observations that protracted policy uncertainty triggers acquisition abandonments. Specifically, when high policy uncertainty persists for 12 months without interruption, the probability of acquirers abandoning announced deals in the following month increases by 11%, controlling for other potential deal-breakers in acquisitions. Our results are robust to different model specifications, alternative measures of policy uncertainty, an instrumental variable approach, as well as a sector-level policy uncertainty index. Importantly, our results highlight a key dimension of policy uncertainty, that is, the duration of uncertainty (Gulen & Ion, 2016). We find that not only the level but also the duration of policy uncertainty negatively impacts acquisition outcomes. Our findings thus shed new light on factors affecting acquisition outcomes.

Third, we show that the firm-specific cost of acquisition abandonment, as perceived by the equity market, hinges on the extent of policy uncertainty. On average, the market reaction to acquirers' announcements of deal abandonment is negative. Nevertheless, the market tends to penalise acquirers' deal abandonment decisions to a lesser extent after observing a longer period of high policy uncertainty. For instance, when high policy uncertainty lingers for more than 1 year, the negative impact of deal abandonment on acquirers' shareholder value becomes insignificantly different from zero. These results continue to hold using a propensity score-matched sample of completed and terminated acquisitions. Hence, we provide evidence indicating that investors consider acquirers' exposure to policy uncertainty.

We also rule out the possibility that the less negative market reactions to acquirers' abandonment decisions under uncertainty is due to market inattention (e.g., DeHaan et al., 2015; Duchin & Schmidt, 2013). We find that, rather than being distracted under uncertainty, investors do differentiate bad news (i.e., acquisition termination) based on the information provided by managers. For example, the market prefers acquirers stepping away from deals subject to policy uncertainty or regulatory risk. Investors react less negatively when a pending transaction is terminated under uncertainty to avoid the sunk cost fallacy (Arkes & Blumer, 1985). Yet, if an acquirer withdraws from a proposed deal due to its inability to secure acquisition financing, then the market is unforgiving. Further analysis suggests that such findings are unlikely to be driven by low business confidence (Danbolt et al., 2015; Nartea et al., 2020). Collectively, these results confirm that stock market reactions to deal abandonments efficiently incorporate policy uncertainty considerations.

This study makes several contributions to the literature and has meaningful policy and practice implications. First, it adds to the literature on policy uncertainty and acquisition activities. Prior studies primarily investigate the impact of policy uncertainty on acquisition likelihoods and initial deal announcements using a sample of completed acquisitions (e.g., Bonaime et al., 2018; Nguyen & Phan, 2017). We distinguish our work from these studies by focusing on the impact of policy uncertainty on the acquisition process *after* deal announcements. We provide novel evidence showing that policy uncertainty delays deal closings and triggers deal abandonment, lending empirical support for incomplete contracting theories in the acquisition setting.

Second, we extend prior M&A studies by examining firm-specific costs of acquisition abandonment, as perceived by the equity market. Prior work focusing on completed deals provides little insight on the consequences of deal abandonments, which are often assumed costly to shareholders (e.g., Luo, 2005). We document that an abandonment may be less detrimental under prolonged high policy uncertainty, because such decisions can potentially help the

acquirer avoid 'throwing good money after bad' (Arkes & Blumer, 1985). We further rule out market inattention or sentiment as alternative explanations for the muted market reactions to acquirers' abandonment decisions under uncertainty. This evidence is novel to both the M&A literature and market inattention research.

Third, we contribute to a better understanding of small, early-stage firms' acquisition attempts under uncertainty in a manner relevant to market participants and policy makers. Small firms under regulation uncertainty are disadvantaged due to limited resources, making them worse off compared to large, established firms (Bartel & Thomas, 1987; Neumann & Nelson, 1982; Pashigian, 1984; Thomas, 1990). Larger firms can also 'actively' manage policy uncertainty or risk through their political connections, activism, lobbying or campaigns (e.g., Ferris et al., 2016; Hassan et al., 2019; Ovtchinnikov et al., 2020; Wellman, 2017). However, these activities may not be feasible or affordable for most small or early-stage firms. We provide practical suggestions that adopting an option-like deal structure enables small acquirers to step away from a deal without incurring substantial costs. This approach offers a more flexible framework for small firms navigating through uncertain policy environments, allowing them to adapt and make better-informed decisions as new information emerges. Such strategy can help level the playing field and support their growth and success in the face of ever-changing policy landscapes.

The remainder of the paper is organised as follows. Section 2 outlines the background of the Australian mining sector and presents empirical predictions. Section 3 describes sample firms and MEE project acquisitions. Section 4 reports empirical results and discusses our main findings. Section 5 provides robustness tests and Section 6 concludes the paper.

2 | RESEARCH BACKGROUND AND EMPIRICAL PREDICTIONS

2.1 | Research background

This study focuses on how policy uncertainty affects the acquisition process *after* acquisitions are announced. To facilitate this, we utilise a hand-collected sample of project acquisitions by Australian MEEs, a setting offering unique empirical advantages. First, the structure of the mining industry features a large majority of MEEs, with a much smaller number of mid-tier producers and a few globally diversified resource giants (e.g., BHP Billiton, Rio Tinto).[5] Unlike diversified producers that focus primarily on mine management and cash flow maximisation, MEEs have a homogeneous business objective: undertaking exploration activities with the aim of making economically viable resource discoveries. As such, the payoffs from successful project acquisitions can be substantial. This setting is thus unique for investigating acquisitions in contrast to the predominant focus on large firms in the existing literature.

Second, MEEs are subject to several frictions in the M&A market compared to acquirers in other sectors. For instance, MEEs face elevated levels of policy uncertainty and stringent mining-related regulations due to work health and safety concerns (Christensen et al., 2017), environmental protection (Heenetigala et al., 2015), taxation (Monem, 2003), and product-related fears (Ferguson & Lam, 2023). In addition, MEEs are capital-constrained 'cash burners' with no operating revenue in the exploration phase, which routinely takes 10–20 years to transition to mine development (Ferguson & Lam, 2023). Further, MEE project acquisitions have a long duration between deal initiation and resolution due to the lengthy due diligence phase, which typically includes on-ground exploration activities. The long interval between

[5]Source: ASX Metals & Mining Sector Profile.

deal initiation and resolution (on average, 12 months) aligns with the assumption of incomplete contracting theories.

Overall, this study extends the scope of both the M&A and policy uncertainty literature to the MEE setting. Our findings provide insights into how small, high-risk firms could protect shareholders' interests around acquisition activities in the face of political uncertainty.

2.2 | Empirical predictions

There are wide-ranging motivations for acquisition parties revising or terminating an announced deal. These include adverse rulings by regulatory agencies, managers learning from market reactions to initial deal announcements (Liu & McConnell, 2013; Luo, 2005), targets' low-quality financial reporting (Skaife & Wangerin, 2013), funding issues, or differences in institutional features or cultures in cross-border transactions (Caiazza & Pozzolo, 2016). However, from a theoretical perspective, deal revisions are invariably a consequence of the restrictiveness of the initial contract. Incomplete contracting theory suggests that, since many future contingencies are left out of the initial contract due to difficulties in predicting future states of the world, a contract is likely to be revised (Aghion & Bolton, 1992). This is also applicable to acquisition contracts, especially those undertaken by small firms in highly information-asymmetric industries.

While its importance is widely acknowledged by the investment community, the post-announcement period in acquisitions is under-researched in the literature (Bhagwat et al., 2016; Lai et al., 2022; Skaife & Wangerin, 2013; Wong & O'Sullivan, 2001). Acquisition agreements tend to have a long interval between the initial deal announcement and scheduled completion date, which could last for months or even years (Chen et al., 2016; Ekelund et al., 2001). After announcing a proposed acquisition, transaction parties continue to receive new information, including deal- and firm-specific information, as well as other unexpected changes in market conditions or government policy. The newly emerged information allows both acquisition parties to improve the precision of the underlying transaction value and reveal problems in the existing deal (Hotchkiss et al., 2017). As a result, the economic prospects of the ongoing transaction are likely to change materially with the arrival of new information. We thus posit that, as an exogenous source of uncertainty, policy uncertainty is likely to trigger deal revisions or even terminations.

Specifically, we conjecture that policy uncertainty affects the acquisition interim stage in several ways. First, increases in policy uncertainty after the initial acquisition announcement will lengthen the deal completion time. Real options theory suggests that investors tend to 'wait-and-see' when uncertainty increases (Dixit & Pindyck, 1994; McDonald & Siegel, 1986). If policy uncertainty rises after acquisitions are announced, then acquirers will likely wait for additional information or the resolution of uncertainty, which extends the time it takes to close a deal.

Our second prediction is that protracted policy uncertainty is a key contributor to acquisition abandonment. Prior studies show that policy uncertainty poses financing challenges for businesses (Jens, 2017) and affects global commodity prices (Gospodinov & Jamali, 2018; Hou et al., 2020). It is conceivable that the economic prospects of proposed investments by MEEs might look worse in times of policy uncertainty. Importantly, although uncertainty increases the value of the option to wait, it also increases the cost of waiting (Alvarez, 1999). The degree of uncertainty largely determines which of these two opposing forces dominates in the pre-completion stage of the acquisition process. Theoretically, the waiting period is short if the extent of uncertainty is small (Stokey, 2016); however, when the degree of uncertainty is high, the incentives may no longer justify the wait. Hence, to avoid the cost of further waiting and potential future losses brought about by prolonged policy uncertainty, acquirers are likely incentivised to abandon pending transactions.

Third, we predict that the consequences of acquisition abandonment on acquiring firms' shareholder value will depend on the degree of policy uncertainty. The obvious consequences

of deal abandonment on acquirers include: (i) direct costs (e.g., legal and consulting fees); and (ii) damage to acquirers' reputations due to either substantial acquisition-related costs becoming sunk (Luo, 2005) or acquirers' inability to materialise investment opportunities (Schlingemann, 2004). We thus expect that deal terminations, on average, will negatively impact acquirers' shareholder value.

However, the effect of the same news may change under different states of the world (Boyd et al., 2005; Veronesi, 1999). Although an acquisition abandonment is often interpreted as bad news for acquirers' shareholders, it may be less detrimental under prolonged high policy uncertainty because such a decision could help the acquirer reduce *ex post* business risk. In sum, we conjecture that the stock market would react less negatively to acquirers' announcements of deal abandonment after a prolonged period of high policy uncertainty. We test these empirical predictions in Section 4.

3 | SAMPLE AND DATA

3.1 | Sample

This study focuses on project acquisition attempts by MEEs, which are defined by the ASX as entities whose primary focus is exploration for minerals (ASX Listing Rule 19.12). We follow the approach of prior studies in selecting the sample of MEEs (e.g., Bui et al., 2021; Ferguson et al., 2022; Ferguson & Lam, 2023; Ferguson & Pündrich, 2015). Specifically, our initial sample consists of metals and mining entities listed on the ASX (GICS Sector: Materials, GICS industry: Metals & Mining) from January 1998 to December 2017. Since MEEs typically have little operating revenue during the mineral exploration stage, we identify MEEs as entities with operating revenue being less than 15% of their market capitalisation (Ferguson & Pündrich, 2015).[6]

Data on project acquisitions are hand-collected from ASX announcements on the Morningstar DatAnalysis Premium database. The data collection process proceeds as follows. We first identify all initial announcements of project acquisitions by sample firms if an announcement falls in Announcement sub-type 'Acquisition', or has the following key words in its headline: 'acquire/acquisition', 'secure opportunity', 'obtain project', 'new project', 'purchase agreement', 'expand ground/expansion', 'option agreement', and 'farm-in agreement'. Next, we monitor the progress of each transaction subsequent to its initial deal announcement and collect all standalone announcements in relation to: (i) deal renegotiation, including extensions of deal closing dates and revisions of offer prices; and (ii) deal resolution, either completion or termination.[7] The final sample for our empirical tests consists of 979 project acquisitions from 491 unique MEEs.

3.2 | Measuring policy uncertainty

We measure policy uncertainty in Australia using the Australian news-based policy uncertainty index, developed by Baker et al. (2016). Specifically, the Australian BBD index is constructed in the same manner as the news-based policy uncertainty index for the US – counting the frequency of key words related to uncertainty (i.e., 'uncertain', 'regulation', 'deficit', 'tax',

[6]For example, summary statistics (untabulated) for ASX-listed mining producers (mining producing entities) and mining explorers (mining exploration entities or MEEs) between 1998 and 2017 show that: (i) Australian mining producers have total assets (market capitalization) of $2188 ($2456) million, compared to $32 ($56) million for MEEs; and (ii) the average operating cash receipts and operating revenue of mining producers are $453 million and $1148 million, respectively. This compares to an average of $0.8 million and $1.1 million for MEEs in operating cash receipts and revenue, respectively, with a median of $0.

[7]See Table A2 in Appendix for examples of announcement headlines of project acquisition renegotiations and terminations.

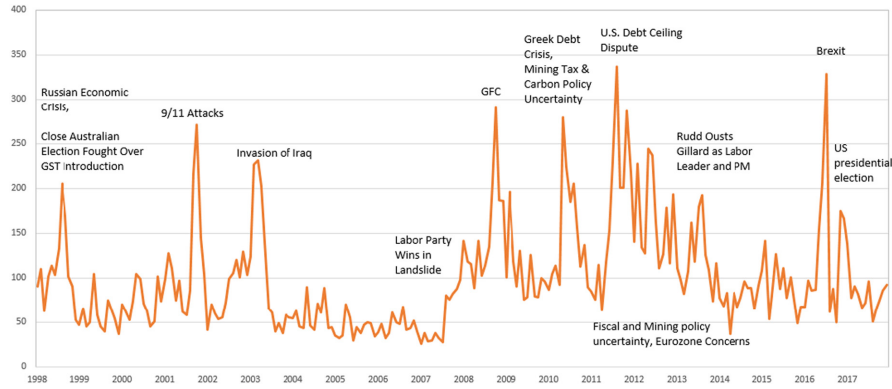

FIGURE 1 Australian policy uncertainty index. This figure plots the Australian policy uncertainty index, developed by Baker et al. (2016), during the period January 1998–December 2017. *Source*: http://www.policyuncertainty.com/australia_monthly.html.

'parliament', 'senate', 'tariff', etc) appearing in the eight largest local newspapers in Australia each month. The eight newspapers include *The Daily Telegraph*, *The Courier Mail*, *The Australian*, *The Age*, *The Advertiser*, *The Mercury*, *Sydney Morning Herald*, and *The Herald Sun*.[8]

Figure 1 plots the BBD policy uncertainty index over 1998–2017 and shows that the level of Australian policy uncertainty surged around events relating to financial crises, the mining and carbon tax policy debates, as well as around Australian elections. Though this news-based index captures the impact of some international events (e.g., 9/11, Brexit), Figure 1 clearly shows that a prolonged period of high policy uncertainty occurs between 2012 and 2013 and is unique to Australia. It is mainly attributed to the uncertainty with respect to domestic mining policy and Australian federal elections.

3.3 | Descriptive statistics of project acquisitions by MEEs

Table 1 reports the distribution of deal abandonments/renegotiations by calendar year. On average, 33.7% (13.3%) of announced acquisitions in our initial sample are terminated (renegotiated). The highest deal termination rate is 47%, observed in 2005 and 2008. This is closely followed by a deal termination rate of 45% in both 2012 and 2013, corresponding to 21 consecutive months of high policy uncertainty in Australia (i.e., above the sample mean) from June 2011 to February 2013. In addition, there are six consecutive years between 2010 and 2015 with deal renegotiation rates higher than the sample average, coinciding with the period of the mining and carbon tax debates as well as federal election uncertainty. Collectively, the patterns revealed in Table 1 suggest that policy uncertainty could be an important driver for acquisition renegotiation and even abandonment.

To provide descriptive evidence on potential determinants of acquisition abandonment, we further hand collect managers' explanations for deal abandonment from acquirers' announcements.[9] Table 2 shows that announced acquisitions are terminated for various reasons. The

[8]We also construct a sector-level policy uncertainty index that is specific to the mining sector in Australia. Our inferences remain unchanged using the newly-constructed sector-level index. See subsection 5.2 for details.

[9]See an example of an acquisition termination announcement in Table A3 in Appendix. Note that in Table 2, we count the number of reasons for deal abandonment, not the number of abandoned deals, because some announcements list more than one reason for deal abandonment. As a result, the total number of stated reasons in Table 2 is slightly larger than the total number of abandoned transactions.

TABLE 1 Distribution of deal termination and renegotiation.

Distribution of MEEs' project acquisitions by year					
		Termination		Renegotiation	
Year	No. of acquisitions	No. of terminated deals	%	No. of renegotiations	%
1998	10	3	30.0	1	10.0
1999	9	0	0.0	3	33.3
2000	11	4	36.4	1	9.1
2001	11	3	27.3	2	18.2
2002	15	5	33.3	2	13.3
2003	25	10	40.0	5	20.0
2004	30	12	40.0	4	13.3
2005	34	16	47.1	3	8.8
2006	34	11	32.4	2	5.9
2007	61	15	24.6	5	8.2
2008	66	31	47.0	8	12.1
2009	66	19	28.8	7	10.6
2010	88	25	28.4	12	13.6
2011	100	41	41.0	14	14.0
2012	86	39	45.3	17	19.8
2013	69	31	44.9	10	14.5
2014	77	23	29.9	13	16.9
2015	53	20	37.7	8	15.1
2016	91	17	18.7	10	11.0
2017	43	5	11.6	3	7.0
Total	979	330	33.7	130	13.3

Note: This table presents the yearly distribution of project acquisitions announced by ASX-listed mining exploration entities (MEEs) between 1 January 1998 and 31 December 2017.

most commonly stated reason is related to specific news about acquired assets (e.g., resource potential, exploration technicality), which accounts for 28.9% of all abandoned transactions. It is noteworthy that regulation/policy uncertainty or risk is the second-most listed reason for acquisition abandonment (12.4%). The next two most popular reasons are acquirers' shift in exploration/business focus (9.1%) and acquisition funding difficulties (8.8%). Others include due diligence conditions not being satisfied (6.8%), changes in economic/market conditions (6.5%), and legal disputes (4.7%).

We also summarise deal resolution time by stated reason in Table 2. On average, MEE acquirers take 12 months to abandon announced deals. The longest pre-closing period (21 months) occurs due to acquirers' shift in their exploration/business focus. This is followed by a 13-month pre-closing period that reflects acquirers' inability to secure acquisition financing in time, highlighting MEEs' typical financial constraints due to a lack of operating revenue and limited access to debt financing (Bui et al., 2021). In comparison, if an acquirer is not satisfied with due diligence results, then it takes a relatively shorter time (5 months) to terminate the deal. When facing uncertainty in the stock/commodities market, MEE acquirers take 12 months to abandon announced transactions. Overall, Table 2 implies that MEE acquirers often face a number of challenges when attempting to close deals.

TABLE 2 Termination reasons and deal resolution time.

Stated reasons for termination	(1) Frequency		(2) Time-to-resolution (average in months)
	N	Percent	
1. Asset-specific information about the acquired asset (resources potential/technicality)	98	28.9	12
2. Regulation/policy uncertainty	42	12.4	11
3. Shift in exploration/business focus	31	9.1	21
4. Funding difficulty (acquirer cannot secure financing in time)	30	8.8	13
5. Due diligence conditions not being satisfied	23	6.8	5
6. Changes in economic/market conditions	22	6.5	12
7. Other (e.g., legal disputes)	16	4.7	9
8. Unknown	77	22.7	12
Total	339	100.0	12

Note: This table presents: (i) managers' stated reasons for deal terminations; and (ii) average deal resolution time. The sample includes project acquisitions announced by ASX-listed mining exploration entities (MEEs) between 1 January 1998 and 31 December 2017. The stated reasons are hand collected from acquiring firms' announcements available on Morningstar DatAnalysis Premium database.

We next conduct univariate analysis to provide preliminary evidence on the factors affecting acquisition outcomes. Table 3 reports the mean value of characteristics of completed versus terminated transactions at the deal-, firm-, and macro-level. For example, at the deal-level, option-like acquisitions account for 31% of completed deals and 62% of terminated deals. Option-like acquisitions include option agreements (e.g., acquiring an option to purchase a project) and earnout agreements (e.g., a portion of purchase price is deferred and dependent on the target achieving performance milestones or *ex post* events). These deals are similar to compound options: acquirers with option-like deals not only secure exploration opportunities, but also ensure the flexibility to cap the costs of bad news by terminating ongoing transactions after gaining additional information during either the option period or the 'grassroots' exploration stage, long before the acquisition price is fully paid (Ferguson et al., 2022). Importantly, option-like deals have few contractual protection mechanisms (e.g., termination fees, material adverse event clauses). Hence, due to the relative ease of abandonment of such transactions, it is unsurprising that most terminated transactions are option-like deals.

In addition, the average acquirers' cumulative abnormal return (CAR) of completed acquisitions (10%) around the initial deal announcement is significantly higher than that of terminated deals (6%). Acquirers' CAR is the acquiring firm's 5-day announcement CAR, centred on the announcement date, and calculated based on the market-adjusted model with the equally-weighted daily return of all ASX-listed stocks as the market benchmark. As expected, announcements of deal termination receive an average market reaction of −6%, compared to 2% for announcements of deal completion. This difference is statistically significant at the 1% level, suggesting that acquisition abandonments generally impair acquirers' shareholder value.

With respect to firm-level characteristics, acquirers that terminate announced deals are smaller in size and have less acquisition experience than acquirers that successfully close transactions. The two groups are similar in terms of their financial leverage, market-to-book ratio, and stock volatility. A comparison of macro-economic fundamentals further reveals that, before the actual deal resolution dates, terminated deals often face higher macro-level uncertainty and weaker capital-raising environments than do completed deals. Such environments include longer periods of high policy uncertainty, higher economic and commodity price volatility, and lower stock market returns. In line with managers' stated reasons listed in

TABLE 3 Characteristics of completed versus terminated acquisitions.

	(1) Completed deals ($N = 649$)	(2) Terminated deals ($N = 330$)	(3) Diff. (1)–(2)	(4) Diff. *t*-stat
Deal-level variables				
All stock (0/1)	0.21	0.12	0.09***	(3.86)
All cash (0/1)	0.17	0.14	0.03	(1.08)
Option-like deal (0/1)	0.31	0.62	−0.32***	(−9.78)
Initial CAR	0.10	0.06	0.04***	(2.59)
Resolution CAR	0.02	−0.06	0.08***	(4.97)
Deal resolution time (months)	7.30	12.21	−4.91***	(−6.71)
Firm-level variables				
Ln(Total assets)	15.79	15.57	0.23***	(2.60)
Financial leverage	0.89	1.26	−0.37	(−1.05)
Market-to-book ratio	4.57	2.44	2.13	(0.96)
Cash holdings (%)	37.33	41.62	−4.29**	(−2.06)
Stock volatility	1.10	1.00	0.10	(1.33)
Past acquisition experience	4.91	4.11	0.81***	(2.84)
Marco-level variables				
Federal elections (0/1)	0.08	0.10	−0.02	(−0.97)
Implied volatility (VIX)	18.69	20.17	−1.48***	(−1.07)
Stock market returns (%)	0.45	0.13	0.32***	(−2.47)
Commodity price volatility	8.95	9.94	−0.99**	(−2.23)
Prolonged high policy uncertainty	2.46	3.27	−0.81**	(−2.42)
Prolonged high commodity price	40.08	44.93	−4.85*	(−1.91)
Prolonged positive stock market returns	1.51	1.24	0.27**	(2.45)
Prolonged high implied volatility	2.10	1.92	0.17	(0.62)

Note: This table reports the mean value of various characteristics of completed versus terminated acquisitions at the deal-, firm- and macro-level. See Table A1 in Appendix for detailed definitions and data sources of variables. The *t*-stat reported in column (4) is two-sample *t*-test for testing the difference in mean characteristics between completed and terminated deals. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table 2, the univariate analysis in Table 3 suggests that policy uncertainty appears to impact acquisition outcomes.

4 | EMPIRICAL RESULTS

4.1 | Policy uncertainty and deal resolution time

We begin our empirical analysis by investigating how policy uncertainty affects the acquisition process in the post-announcement period. Specifically, we examine whether changes in policy uncertainty after the initial acquisition announcement affect: (i) deal resolution time (the number of months acquirers take to close announced deals); and (ii) the likelihood of deal renegotiations (e.g., extending deal closing dates, revising offer prices). We model deal resolution time or the likelihood of deal renegotiation as a function of changes in policy uncertainty after initial deal announcements as follows, controlling for deal-, firm-, and macro-level characteristics:

$$Resolution\ Time_{i,j} \text{ or } Deal\ revison_{i,j} = \alpha + \beta \times \%\Delta PU_{i,j} + \lambda \mathbf{C} + \varepsilon_{i,j}, \quad (1)$$

in which $Resolution\ Time_{i,j}$ is the natural logarithm of one plus the duration (in months) between the date of the initial acquisition announcement and that of the deal completion or termination for deal *j* of firm *i*. *Deal revision* is a categorical variable, with '0' = no deal revision, '1' = revising offer price, and '2' = extending deal closing date. $\%\Delta PU_{i,j}$ is the relative change in policy uncertainty index during the interim period of deal *j* of firm *i*, calculated as $(PU_{resolution} - PU_{initial})/PU_{initial} \times 100$, where $PU_{resolution}$ ($PU_{initial}$) is the average 3-month BBD policy uncertainty index before the deal resolution date (initial deal announcement date).

The set of control variables, **C**, includes deal-, firm-, and macro-level characteristics. For deal-level controls, we follow prior M&A literature and include an indicator variable for payment method, *All stock (All cash)*, which equals 1 if the acquisition consideration is all paid in stock (cash), and 0 otherwise. We include *Initial CAR* to control for deal quality (Liu & McConnell, 2013; Luo, 2005). *Initial CAR* is the acquirer's 5-day announcement CAR, centred on the initial deal announcement date, and calculated based on the market-adjusted model. *Option-like deal* is an indicator variable that equals 1 if the announced acquisition has an option-like deal structure (e.g., an option agreement to purchase a project), and 0 otherwise (Ferguson et al., 2022). This variable captures the ease of deal renegotiation or abandonment, as some option-like deals are not associated with definitive acquisition agreements and have few contractual protection mechanisms.

Firm-level controls include variables commonly used in M&A studies, such as *Ln(Total assets)*, *Financial leverage*, *Market-to-book*, *Cash holdings (%)*, and *Stock volatility*. Firm-level accounting variables and stock volatility are measured in the fiscal year and 12-month period, respectively, prior to the initial acquisition announcement date. To control for acquirers' learning experience (Aktas et al., 2013; Golubov et al., 2015), we include *Past acquisition experience*, which is measured as the number of acquisitions announced by firm *i* before transaction *j* during the sample period.

Consistent with the policy uncertainty literature, we also include the following macro-level variables to control for uncertainty brought about by economic fundamentals: (i) *Federal elections*, an indicator variable that equals one if the initial announcement date of a deal is within the 3-month period before a scheduled federal election (Julio & Yook, 2012), to control for uncertainty related to specific Australian federal elections; (ii) *Stock market returns*, represents returns on the ASX All Ordinaries Index, to control for Australian stock market conditions; (iii) *Commodity price index*, from the Reserve Bank of Australia (RBA), to control for non-rural commodity price cycles;[10] and (iv) *Implied volatility*, the VXO index of implied volatility from the Chicago Board Options Exchange (CBOE), to control for general economic uncertainty. Changes in other macro-level variables during the pre-completion period are all measured similarly to $\%\Delta PU$. We estimate the model in Equation (1) and report regression results with different sets of controls in Table 4 columns (1)–(3). Standard errors are clustered by firm and year in all specifications.

Consistent with predictions, we find that a rise in policy uncertainty after initial deal announcements leads to a longer deal resolution time. The coefficients on $\%\Delta PU$ in columns (1)–(3) in Table 4 are all positive and statistically significant at the 1% level, suggesting that acquirers are likely to 'wait-and-see' amid rising policy uncertainty before concluding an announced deal. Specifically, the coefficient on $\%\Delta PU$ in Model 1 (column

[10]The RBA non-rural commodity price index covers bulk commodities (Iron ore, Coal), base metals (Lead, Zinc, and Nickel) and other resources (Gold, Copper ore) (Available at: https://www.rba.gov.au/statistics/).Given that more than 80% of MEE project acquisitions target gold, copper, and iron ore, we use this index to capture the potential impact of commodity price fluctuations on MEE project acquisition activities.

TABLE 4 Policy uncertainty, deal resolution time, and deal renegotiation.

	Model 1	Model 2	Model 3	Model 4 (multinomial logit)	
				Reference category: Revision = 0	
Dependent Var.	*Ln(1 + deal resolution time)*			*Revision = 1 (Revising offer price)*	*Revision = 2 (Extending deal closing date)*
%ΔPU	**0.002*** **	**0.002*** **	**0.004*** **	**−0.001**	**0.006*** **
	(5.25)	**(3.22)**	**(4.56)**	**(−0.26)**	**(2.86)**
Deal-level controls					
All stock	−0.181***	−0.254**	−0.250**	−0.201	−0.381
	(−2.60)	(−2.49)	(−2.40)	(−0.42)	(−0.97)
All cash	−0.018	0.027	0.065	0.721*	0.404
	(−0.23)	(0.25)	(0.63)	(1.89)	(1.31)
Initial CAR	−0.049	0.257	0.228	0.464	0.210
	(−0.43)	(1.62)	(1.37)	(0.62)	(0.55)
Option-like deal	0.483***	0.360***	0.375***	0.503	0.301
	(8.02)	(4.11)	(4.43)	(1.50)	(1.13)
Firm-level controls					
Ln(Total assets)	−0.004	−0.034	−0.028	−0.205*	−0.250**
	(−0.20)	(−0.82)	(−0.68)	(−1.70)	(−2.38)
Financial leverage	−0.011	0.007	0.008	−0.060**	−0.008
	(−1.29)	(0.44)	(0.59)	(−2.45)	(−0.53)
Market-to-book	0.000	−0.000	−0.001	0.002	−0.001
	(1.19)	(−0.08)	(−0.13)	(1.60)	(−1.49)
Cash holdings (%)	0.001	0.000	0.000	−0.018***	−0.003
	(0.57)	(0.27)	(0.28)	(−3.00)	(−0.63)
Stock volatility	−0.043*	−0.042*	−0.035	−0.244	0.079**
	(−1.76)	(−1.69)	(−1.54)	(−0.95)	(1.98)
Past acquisition experience	−0.012**	0.038*	0.037*	−0.033	0.001
	(−1.98)	(1.86)	(1.90)	(−0.88)	(0.04)
Marco-level controls					
%ΔCommodity price			0.003	0.003	−0.012
			(0.89)	(0.29)	(−1.20)
%ΔStock market return			0.000	−0.000	0.000
			(0.40)	(−1.09)	(0.21)
%Δ Implied volatility			−0.004**	0.001	−0.009*
			(−2.43)	(0.25)	(−1.90)
Federal election			−0.233*	−0.193	−0.581
			(−1.69)	(−0.31)	(−1.05)
Pre-announcement PU			0.518***	0.448	0.752*
			(3.12)	(1.02)	(1.96)
Pre-announcement commodity price			0.007	−0.000	−0.006
			(1.57)	(−0.03)	(−1.03)

TABLE 4 (Continued)

	Model 1	Model 2	Model 3	Model 4 (multinomial logit)	
				Reference category: Revision = 0	
Dependent Var.	***Ln*(1 + *deal resolution time*)**			***Revision = 1 (Revising offer price)***	***Revision = 2 (Extending deal closing date)***
Pre-announcement stock market return			2.121	−3.282	1.948
			(0.89)	(−0.40)	(0.28)
Pre-announcement implied volatility			−0.016	−0.018	−0.026
			(−1.05)	(−0.73)	(−1.12)
Constant	1.858***	2.084***	−0.873	−0.741	−1.069
	(5.09)	(3.13)	(−0.82)	(−0.26)	(−0.51)
Year FE	No	Yes	Yes	No	
Firm FE	No	Yes	Yes	No	
Adj-R^2 (Pseudo-R^2)	0.129	0.241	0.269	0.062	
N	979	792	792	979	

Note: This table reports regression results of the effect of changes in policy uncertainty during the post-announcement period on deal resolution time (Models 1–3) and the likelihood of deal revisions (Model 4). In Models 1–3, the dependent variable is *Deal resolution time*, which is the natural logarithm of one plus the duration (in months) between the date of the initial acquisition announcement and that of deal completion or termination. Model 4 is a multinomial logit model where the dependent variable, *Deal revision*, is a categorical variable with '0' = no deal revision (reference category), '1' = revising offer price, and '2' = extending deal closing date. *%ΔPU* is the relative change in the BBD policy uncertainty index during the interim period of an announced acquisition. Other variables are as defined in Table A1 in Appendix. In all model specifications, standard errors are clustered by firm and year. *t*/*z* -statistics are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

The coefficients of primary interest are highlighted in bold.

(1)) (coef. = 0.002, *t*-stat = 5.25) indicates that a 27% increase in policy uncertainty during the post-announcement period causes a 1-month delay in closing an announced deal, controlling for deal-, firm-, and macro-level characteristics. Given that nearly a quarter of our sample transactions experienced more than a 29% increase in policy uncertainty during the pre-completion stage, our findings suggest that policy uncertainty imposes non-trivial waiting costs on transaction parties. Our inferences are unaffected by: (i) including time and firm fixed effects in Model 2; and (ii) controlling for macro-level conditions and the pre-announcement uncertainty in Model 3.[11] Therefore, we provide empirical evidence showing that heightened policy uncertainty after deal announcements significantly lengthens deal resolution time.

We further test whether the likelihood of acquirers announcing an extension of deal closing dates is higher amid elevated uncertainty. We employ a multinomial logistic regression (Model 4 in Table 4) to examine how policy uncertainty affects deal revision decisions. The dependent variable in Model 4, *Deal revision*, is a categorical variable, with '0' = no deal revision, '1' = revising offer price, and '2' = extending deal closing date. The reference group in the multinomial logit model is the subsample of deals without any contract revisions, which are assigned a value of zero (*Deal revision* = 0). The explanatory variables in Model 4 are the same as those in Model 3.

[11]Nguyen and Phan (2017) find that it takes acquirers more time to complete deals when policy uncertainty in the year preceding the initial acquisition announcement is higher. However, they do not consider whether changes in policy uncertainty after initial deal announcements also affect the length of the interim period in acquisitions.

The results of the multinomial logistic regression indicate that a higher level of policy uncertainty after initial deal announcements motivates acquirers to wait longer and renegotiate an extended period for deal closing. The coefficient on *%ΔPU* under the category "Extending deal closing date' (*Revision* = 2) is positive and statistically significant at the 1% level (coef. = 0.006, *t*-stat = 2.86). However, revisions of offer price are not driven by policy uncertainty, as the coefficient on *%ΔPU* under the category "Revising offer price' (*Revision* = 1) is insignificantly different from zero. Overall, the results in Table 4 confirm the existence of a 'real options' effect in the acquisition interim stage.[12]

4.2 | Policy uncertainty and acquisition outcomes

Our findings in subsection 4.1 are consistent with the view that policy uncertainty delays deal resolution in the post-announcement period. The next question we consider is whether policy uncertainty affects acquisition outcomes. To test this prediction, we follow Gulen and Ion (2016) and construct a variable *Prolonged high PU* to capture both the level and duration of policy uncertainty. *Prolonged high PU* is the number of consecutive months of high policy uncertainty (above the sample mean) prior to deal closing dates. For example, $Prolonged\ high\ PU_{i,j}$ equals 12 if there is a consecutive 12-month period with high policy uncertainty prior to the closing date of deal *j* from firm *i*. By definition, *Prolonged high PU* equals zero when policy uncertainty is below the sample average. We then perform a logistic regression to analyse the determinants of deal termination:

$$Outcome_{i,j}(Terminated = 1) = \alpha + \beta \times Prolonged\ PU_{i,j} + \lambda \mathbf{C} + \varepsilon_{i,j}, \quad (2)$$

in which the dependent variable, $Outcome_{i,j}$, is an indicator variable that equals one if announced acquisition *j* of firm *i* is terminated, and zero otherwise. We include deal-, firm-, and macro-level controls in Equation (2). The first set of explanatory variables controls for deal-level characteristics, including *All stock*, *All cash*, *Initial CAR*, and *Option-like deal*.[13,14]

The second set of variables represents firm-level characteristics that are similar to the controls in Table 4, including *Ln(Total assets)*, *Financial leverage*, *Market-to-book*, *Cash holdings (%)*, *Stock volatility*, and *Past acquisition experience*. The macro-level control variables include *Commodity price volatility*, *Stock market returns*, and *Implied volatility*, which are measured in the 12-month period prior to the deal closing date. Similar to the construction of *Prolonged high PU*, we also construct an alternative set of macro-level variables,

[12]We also test a modified specification of Model 1 in Table 4. Specifically, in the modified model, the explanatory variable of interest *(%Δmodified PU)* is changes in the level of policy uncertainty from the announcement to the *N*th month after the announcement (*N* = 3, 6, 9, 12), and the dependent variable, *Modified deal resolution time*, is the natural logarithm of one plus the number of months between the *N*th month after the acquisition announcement and the date of deal resolution. The test samples are subsamples of deals that are not resolved in the *N*th month after deal announcement. Other controls are the same as those in Model 1 in Table 4. Regression results with different values of *N* show that our inferences are robust to the modified model specification.

[13]We note that deal protection devices in acquisition contracts (e.g., termination fee, material adverse change clauses) help prevent acquirers and targets from cancelling proposed transactions (e.g., Boone & Mulherin, 2007; Officer, 2003). However, few deals in our sample list deal protection devices in their initial deal announcements. Rather, MEE acquirers engaging in option-like acquisitions can often 'opt-out' without incurring penalties or doing so at the cost of option fees only. Given the unique feature of option-like acquisitions in the mining industry and the unavailability of detailed deal protection clause data, we therefore use an indicator variable, *Option-like deal*, to control for the degree of deal protection or the ease of deal termination.

[14]Deal value is not included in our model specifications due to difficulties to obtain or calculate the deal value of option-like acquisitions. For example, the values of earnout payments are often missing in initial acquisition announcements (e.g., Cain et al., 2011). Nevertheless, as prior studies show that deal size significantly influences market reactions to initial acquisition announcements (e.g., Moeller et al., 2004), using *Initial CAR* as a control variable helps mitigate the concern over the absence of deal value in our model specifications.

Prolonged high commodity price, *Prolonged positive stock market returns*, and *Prolonged high implied volatility*, to control for commodity price cycles, the capital raising environment, and the duration of high economic volatility, respectively. *Federal elections* is included to capture political uncertainty relating to Australian federal elections (Julio & Yook, 2012). Regression results of Equation (2) with different specifications are reported in columns (1)–(3) in Table 5.

We show that prolonged high policy uncertainty has a strong positive effect on acquisition abandonment decisions. Specifically, the positive coefficient on *Prolonged high PU* in column (1) (coef. = 0.032, *t*-stat = 2.44) suggests that an uninterrupted period of 12 months of high policy uncertainty prior to deal resolution is associated with an 11% increase in the probability of acquirers abandoning announced deals in the following month. We continue to obtain positive coefficients on *Prolonged high PU* in columns (2) and (3) after controlling for deal and acquirer characteristics, and alternative sets of macro-level variables. Our results are robust to linear probability regressions (OLS) with year and firm fixed effects, as well as controlling for deal resolution time and pre-announcement policy uncertainty (untabulated). Therefore, our findings imply that prolonged high policy uncertainty is a key driver for acquisition abandonment.

We note the possibility that, when facing prolonged policy uncertainty, an acquirer might still attempt to complete a deal if the terms of the acquisition agreement can be renegotiated to partially offset the acquiring firm's increased exposure to uncertainty. To investigate more fully the consequences of policy uncertainty on acquisition activities, we re-estimate Equation (2) using an ordered logistic regression, which adds deal renegotiation as a potential outcome of an announced transaction (i.e., Skaife & Wangerin, 2013). The dependent variable, *Outcome*, in the ordered logistic regression (columns (4) and (5) in Table 5) equals to one of the three outcomes ranked from least to most severe: *Outcome* = 0, 1, or 2 if the announced acquisition is completed without deal revisions, renegotiated and completed, or terminated, respectively. As expected, the parameter estimates for *Prolonged high PU* in columns (4) and (5) are all positive and statistically significant at the 1% and 5% level, respectively. Other explanatory variables in Table 5 are generally consistent with the literature. Our findings therefore confirm again that protracted policy uncertainty adversely affects acquisition outcomes.

4.3 | Acquirers' cost of deal abandonment under policy uncertainty

Having documented that policy uncertainty triggers acquisition abandonment, we now consider the impact of deal abandonment on acquirers' shareholder value. We use market reactions to gauge the firm-specific net cost of acquisition abandonment particularly in times of prolonged high policy uncertainty. As we argued earlier, the effect of the same news may change under different states of the world (Boyd et al., 2005; Veronesi, 1999). While we expect an average negative market reaction to acquirers' abandonment decisions, this negative impact on acquirers' shareholder value would differ depending on the degree of policy uncertainty.

We first report in Table 6 Panel A acquirers' 5-day resolution CAR [−2, +2], centred on the announcement date of a deal completion or termination. Acquirer abnormal returns are calculated using the market-adjusted model (e.g., Bonaime et al., 2018; Dyckman et al., 1984), with the equally-weighted daily market return of all ASX-listed stocks as the market benchmark, which is sourced from the Securities Industry Research Centre of Asia-Pacific (SIRCA). For the full sample presented in column (1), deal completions are met with a positive market reaction of 1.89% while terminations receive a negative −5.81%. Their difference is statistically significant at the 1% level. This is consistent with the notion that deal abandonment is interpreted as bad news to acquiring firms.

TABLE 5 Policy uncertainty and acquisition outcomes.

Dependent variable: Acquisition outcome					
	(1) Logit	**(2) Logit**	**(3) Logit**	**(4) Ordered logit**	**(5) Ordered logit**
Dependent Var.	***Completed = 0*** ***Terminated = 1***			***Completed = 0*** ***Renegotiated = 1*** ***Terminated = 2***	
Prolonged high PU	**0.032****	**0.033****	**0.034****	**0.038*****	**0.037****
	(2.44)	**(2.09)**	**(2.03)**	**(2.64)**	**(2.49)**
Deal-level controls					
All stock		−0.420*	−0.419*	−0.432**	−0.437**
		(−1.89)	(−1.88)	(−2.05)	(−2.08)
All cash		−0.183	−0.186	0.048	0.044
		(−0.85)	(−0.85)	(0.25)	(0.23)
Initial CAR		−0.814**	−0.805**	−0.629**	−0.623**
		(−2.41)	(−2.35)	(−2.25)	(−2.21)
Option-like deal		1.248***	1.251***	1.321***	1.325***
		(7.87)	(7.88)	(9.00)	(9.01)
Deal resolution time		0.025***	0.024***	0.030***	0.030***
		(2.93)	(2.90)	(3.67)	(3.60)
Firm-level controls					
Ln(Total assets)		−0.123**	−0.119*	−0.144***	−0.140**
		(−2.02)	(−1.94)	(−2.61)	(−2.53)
Financial leverage		0.027	0.025	0.019	0.019
		(1.41)	(1.30)	(1.16)	(1.10)
Market-to-book		−0.001	−0.000	−0.001*	−0.001
		(−0.83)	(−0.61)	(−1.66)	(−1.51)
Cash holdings (%)		0.001	0.002	−0.000	0.000
		(0.42)	(0.67)	(−0.12)	(0.10)
Stock volatility		−0.056	−0.063	0.014	0.010
		(−0.73)	(−0.83)	(0.63)	(0.43)
Past acquisition experience		−0.047**	−0.051***	−0.035**	−0.038**
		(−2.44)	(−2.64)	(−1.99)	(−2.21)
Marco-level controls					
Federal election		0.398	0.265	0.237	0.139
		(1.48)	(1.01)	(0.91)	(0.55)
Commodity price volatility		0.032**		0.024*	
		(2.10)		(1.74)	
Stock market returns		−6.579**		−7.190**	
		(−2.12)		(−2.42)	
Implied volatility		−0.016		−0.010	
		(−1.02)		(−0.65)	

TABLE 5 (Continued)

Dependent variable: Acquisition outcome					
	(1) Logit	(2) Logit	(3) Logit	(4) Ordered logit	(5) Ordered logit
	Completed = 0			*Completed = 0*	
	Terminated = 1			*Renegotiated = 1*	
Dependent Var.				*Terminated = 2*	
Prolonged high commodity price			0.002		0.002
			(0.74)		(1.22)
Prolonged positive stock market returns			−0.117**		−0.101**
			(−2.57)		(−2.44)
Prolonged high implied volatility			−0.012		−0.008
			(−0.66)		(−0.53)
Pseudo-R^2	0.004	0.117	0.115	0.102	0.100
N	979	979	979	979	979

Note: This table presents results from logistic regressions of deal termination on prolonged policy uncertainty. In columns (1)–(3), the dependent variable is an indicator variable that equals 1 if an announced acquisition is terminated, and 0 otherwise. In columns (4) and (5), the dependent variable is a categorical variable, *Outcome*, which is a set of three possible outcomes ranked from least to most severe for an announced acquisition: 0 = completed without deal revisions, 1 = renegotiated and completed, and 2 = terminated. Other variables are as defined in Table A1 in Appendix. Standard errors are clustered by firm and year. *z*-statistics are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

The coefficients of primary interest are highlighted in bold.

To gauge the differential impact of prolonged policy uncertainty on market reactions to acquisition outcomes, we partition the sample by policy uncertainty duration. If the market considers how long acquirers have been exposed to high policy uncertainty and the optimal timing of investment commitments, the difference in resolution CARs between completed and terminated deals should differ across varying degrees of policy uncertainty. Columns (2)–(4) in Table 6 Panel A show this is exactly what we observe. There is a discernible trend that the stock market penalises acquirers' deal abandonment decisions to a lesser extent after a longer period of high policy uncertainty.

We next use a regression framework to investigate the impact of deal abandonment on acquiring firms' shareholder value, controlling for various factors that may also influence announcement returns. Specifically, we regress acquirers' resolution CAR on *Prolonged high PU*, *Termination*, and their interaction term, as well as other controls. Of particular interest is the coefficient on the interaction term *Prolonged PU* × *Termination*, which captures the differential impact of high policy uncertainty duration on market reactions to acquisition outcomes. Regression results are presented in column (1) in Table 6 Panel B.

As expected, the coefficient on *Termination* in column (1) is significantly negative (coef. = −0.108, *t*-stat = −4.20), suggesting that deal abandonment decisions, on average, lower acquirers' shareholder value compared to successful completions. However, the positive and significant coefficient on the interaction term *Prolonged high PU* × *Termination* (coef. = 0.007, *t*-stat = 2.37) indicates that investors react less negatively to acquirers' deal abandonment decisions after a longer period of high policy uncertainty.

We also include interaction terms of *Termination* with all other explanatory variables and report the regression results in column (2). We continue to obtain a significantly positive coefficient on the interaction term *Prolonged high PU* × *Termination* (coef. = 0.008, *t*-stat = 2.79). Overall, our results in Table 6 indicate that, although the market on average reacts negatively

TABLE 6 Policy uncertainty and acquirers' CAR around deal resolution announcements.

Panel A: Summary of acquirers' cumulative abnormal return around deal resolution announcements

	(1)	(2)	(3)	(4)
Outcome	**Full sample**	**0 ≤ *Prolonged high PU* < 3**	**3 ≤ *Prolonged high PU* < 12**	***Prolonged high PU* ≥ 12**
(1) Completion	0.0189***	0.0242***	0.0116	−0.0128
	(2.91)	(3.05)	(0.90)	(−0.70)
(2) Termination	−0.0581***	−0.0647***	−0.0628**	−0.0104
	(−3.97)	(−3.43)	(−2.06)	(−0.35)
(3) Diff. = Completion – Termination	0.0769***	0.0889***	0.0743**	−0.0024
	(4.81)	(4.35)	(2.25)	(−0.07)

Panel B: Dependent variable: Acquirers' CAR around deal resolution announcements

	(1)	(2)
Termination	−0.108***	0.007
	(−4.20)	(0.03)
Prolonged high PU	−0.002	−0.003*
	(−1.40)	(−1.70)
Prolonged high PU* × *Termination	**0.007****	**0.008*****
	(2.37)	**(2.79)**
Controls	Yes	Yes
All interactions	No	Yes
Year FE	Yes	Yes
Adj-R^2	0.030	0.042
N	948	948

Note: This table reports the effect of policy uncertainty on acquirers' cumulative abnormal return (CAR) around announcements of deal resolution (completion/termination). Acquirers' CARs are 5-day cumulative abnormal returns to acquiring firms over the event window [−2, 2], calculated using the market-adjusted model with the equally-weighted daily return of all ASX-listed stocks as the market benchmark. Panel A presents acquirers' CAR around the announcement date of deal resolution (either completion or termination), segmented by high policy uncertainty duration prior to deal resolution dates. In Panel A, *t*-statistics in parentheses in rows (1) and (2) are for testing the hypothesis that acquirers' CARs are insignificantly different from zero. Row (3) reports results for testing the hypothesis that the difference in mean CARs between deal completions and terminations is zero (*t*-statistics in parentheses). Panel B reports cross-sectional analysis of acquirers' resolution CARs. The dependent variable is acquirers' 5-day CAR centred on the deal resolution announcement date. Other variables are as defined in Table A1 in Appendix. *t*-statistics are in parentheses and based on standard errors adjusted for heteroscedasticity. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

The coefficients of primary interest are highlighted in bold.

to acquirers' deal abandonment decisions, the negative effect is likely to be moderated when such decisions are made amid protracted policy uncertainty.

One concern over the validity of these results is that completed and terminated acquisitions could be fundamentally different. Deal- and firm-level differences between completed and terminated transactions may affect our results presented in Table 6. To address this concern, we employ a propensity score matching (PSM) method and select a group of control deals, which have *ex ante* similar observable characteristics as terminated transactions but have been successfully completed. Specifically, we first obtain the propensity score by estimating Model (2) in Table 5, which accounts for different levels of factors affecting acquisition outcomes and has the highest R^2 among the determinants models, to predict the probability of deal abandonment. For each treated (terminated) transaction, we select a control (completed) deal

that has the closest propensity score within a calliper of 0.05 with replacement. This matching method generates a matched sample of 401 acquisitions. Next, we rerun the acquirer resolution CAR cross-sectional models in Table 6 Panel B using the propensity score matched sample. Regression results are presented in Table 7. The coefficient on the interaction term between policy uncertainty and deal termination is positive and statistically significant at the 1% level across both model specifications. Therefore, our results remain robust to the matched sample analysis.

4.4 | Market inattention and muted market reactions to acquisition abandonments under uncertainty

Given the moderating effect that prolonged high uncertainty has on deal termination CAR, a natural question to ask is: why does the market 'forgive' acquisition abandonment decision during times of protracted policy uncertainty? We consider two possible explanations. First, deal abandonment decisions under high uncertainty could help reduce acquiring firms' exposure to *ex post* business risk. For transactions with an option-like deal structure (e.g., acquiring an option to purchase a project), abandonments prior to the full price being paid can help acquirers avoid the sunk cost fallacy (Arkes & Blumer, 1985). Therefore, such abandonments would not severely impair acquirers' shareholder value in times of high uncertainty.

An alternative explanation is that MEE managers may strategically time the release of abandonment news under high uncertainty to avoid market penalties (e.g., DeHaan et al., 2015). When managers foresee lingering policy uncertainty, they may delay disclosing acquisition abandonment decisions until a time when they expect such news to not draw as much attention from market participants. However, the continuous disclosure requirements of the ASX (ASX

TABLE 7 Policy uncertainty and acquirers' CAR around deal resolution announcements (PSM-matched sample).

Dependent variable: Acquirers' CARs around deal resolution announcements		
	(1)	**(2)**
Termination	−0.148***	−0.069
	(−4.76)	(−0.21)
Prolonged high PU	−0.007**	−0.007**
	(−2.37)	(−2.37)
Prolonged high PU* × *Termination	**0.011*** **	**0.012*** **
	(2.82)	**(3.15)**
Controls	Yes	Yes
All interactions	No	Yes
Year FE	Yes	Yes
Adj-R^2	0.038	0.044
N	401	401

Note: This table reports the effect of prolonged high policy uncertainty on acquirers' deal resolution CAR using a propensity score matched sample. Acquirers' CARs are 5-day cumulative abnormal returns to acquiring firms over the event window [−2, 2], calculated using the market-adjusted model with the equally-weighted daily return of all ASX-listed stocks as the market benchmark. The matching procedure is performed as follows. First, the propensity score is obtained by estimating Model (2) in Table 5 Panel A to predict the probability of deal abandonment. For each treated (terminated) transaction, a control (completed) deal is selected with the closest propensity score within a calliper of 0.05 with replacement. The regression model specifications are the same as that in Panel B of Table 6. Variables are as defined in Table A1 in Appendix. *t*-statistics are in parentheses and based on standard errors adjusted for heteroscedasticity. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. The coefficients of primary interest are highlighted in bold.

Listing Rules 3.1, 3.1A and 3.1B) do not allow for much discretion with respect to timing news releases of contract terminations.[15] It is not likely for managers to deliberately accelerate or delay by months any announcements on material acquisition termination. Otherwise, firms would fail to meet their disclosure obligations. Accordingly, the second explanation is less likely based on ASX's disclosure requirements.

Nevertheless, to provide further evidence on market (in)attention, we test whether the market reacts differently to deal terminations based on managers' explanations. To this end, we incorporate managers' explanations for acquisition abandonment (see Table 2) into acquirers' resolution CAR regressions. We construct a categorical variable *Reason* related to the eight categories listed in Table 2: (1) Asset-specific information about the acquired asset (resources potential/technicality); (2) Regulation/policy uncertainty; (3) Shift in exploration/business focus; (4) Funding difficulty (e.g., acquirer cannot secure financing in time); (5) Due diligence conditions not being satisfied; (6) Changes in economic/market conditions; (7) Other (e.g., legal disputes); and (8) Unknown. The variable *Reason* is set equal to zero if the announced deal is completed. We then follow the specifications in Table 6 Panel B and interact *Reason* with *Prolonged high PU*. Of interest are coefficients on the eight interaction terms *Prolonged high PU* × *Reason*, which capture whether investors, after observing protracted policy uncertainty, respond differently to deal termination announcements based on managers' explanations. Regression coefficients are reported in Table 8 with the full sample in column (1) and matched sample in columns (2) and (3).

We find that, rather than being distracted under high policy uncertainty, investors do differentiate acquisition abandonments based on managers' explanations. Specifically, investors react less negatively when an acquirer terminates a pending transaction under uncertainty to avoid 'throwing good money after bad' (reason 1) (Arkes & Blumer, 1985). The coefficients on *Prolonged PU* × *Reason2* are also significantly positive, suggesting that the market prefers acquirers stepping away from deals subject to policy uncertainty or regulatory risk. However, if a proposed transaction is withdrawn owing to the acquirer's inability to secure acquisition funding (reason 4), then the market is unforgiving. The intuition is that, since external funding for MEEs' exploration activities is key to their survival, foregone investment opportunities signal managers' inability to materialise further investments. Overall, we show in Table 8 that the firm-specific cost of deal abandonment is associated with *both* the degree of policy uncertainty and explanations that managers provide.

5 | ROBUSTNESS CHECKS AND ADDITIONAL TESTS

5.1 | Deal abandonment and acquirers' CEO capital

Prior studies document that managers 'listen to the market' when deciding whether to abandon proposed acquisitions that investors perceive to be value reducing (Luo, 2005). Liu and McConnell (2013) further argue that, if a CEO holds stock in an acquiring firm, then the CEO is likely motivated to reverse the value-destroying transaction because the negative initial market reaction affects his/her personal wealth. As such, a deal abandonment decision could be driven by a CEO's desire to recoup lost personal wealth at the initial deal announcement.

Although we have already included acquirers' initial CAR in the determinants models in Table 5 to control for managers' learning from the market, we follow Liu and McConnell (2013)

[15]The ASX requires all listed entities to comply with continuous disclosure obligations and immediately disclose information that has 'a material effect on the stock price or value of the entity's securities'. If a firm does not disclose to the general public 'when a previously announced material customer contract is terminated or does not proceed', then the firm fails to meet its disclosure obligations (ASX Listing Rules 3.1, 3.1A and 3.1B).

TABLE 8 Policy uncertainty, acquirers' deal resolution CAR, and deal abandonment reasons.

Dependent variable: Acquirers' CARs around deal resolution announcements			
	(1)	**(2)**	**(3)**
	Full sample	**PSMatched sample**	**PSMatched sample**
Prolonged high PU No. Reason1	**0.008****	**0.012*****	**0.014*****
	(2.14)	**(2.80)**	**(3.07)**
Prolonged high PU No. Reason2	**0.009****	**0.012****	**0.013****
	(2.06)	**(2.57)**	**(2.52)**
Prolonged high PU No. Reason3	0.003	0.003	0.005
	(0.49)	(0.45)	(0.68)
Prolonged high PU No. Reason4	0.019	0.025	0.025
	(1.40)	(1.55)	(1.57)
Prolonged high PU No. Reason5	−0.022*	−0.018	−0.014
	(−1.79)	(−1.49)	(−1.08)
Prolonged high PU No. Reason6	0.001	0.005	0.007
	(0.07)	(0.40)	(0.58)
Prolonged high PU No. Reason7	0.004	0.006	0.005
	(0.21)	(0.31)	(0.22)
Prolonged high PU No. Reason8	−0.001	0.001	0.004
	(−0.13)	(0.22)	(0.58)
Reason1	−0.135***	−0.167***	−0.184***
	(−4.22)	(−4.78)	(−4.88)
Reason2	−0.128***	−0.157***	−0.167***
	(−3.68)	(−4.27)	(−4.02)
Reason3	−0.049	−0.074	−0.097*
	(−1.10)	(−1.56)	(−1.86)
Reason4	−0.260**	−0.304**	−0.315**
	(−2.09)	(−2.33)	(−2.39)
Reason5	−0.077	−0.109	−0.128
	(−0.73)	(−1.06)	(−1.23)
Reason6	0.033	−0.008	−0.017
	(0.62)	(−0.15)	(−0.29)
Reason7	−0.115	−0.153	−0.175
	(−1.00)	(−1.33)	(−1.41)
Reason8	−0.021	−0.046	−0.071*
	(−0.63)	(−1.28)	(−1.77)
Prolonged high PU	−0.003**	−0.006***	−0.007**
	(−2.26)	(−3.01)	(−2.54)
Controls	Yes	Yes	Yes
Year FE	No	No	Yes
Adj-R^2	0.054	0.076	0.054
N	948	401	401

Note: This table follows the specifications in Table 6 Panel B and reports acquirers' resolution CAR regressions by incorporating the stated reasons for deal abandonment. The dependent variable is acquirers' CARs around deal resolution announcements, which are 5-day cumulative abnormal returns to acquiring firms over the event window [−2, 2], calculated using the market-adjusted model with the equally-weighted daily return of all ASX-listed stocks as the market benchmark. The categorical variable *Reason* corresponds to managers' explanations listed in Table 2: (1) Asset-specific information about the acquired asset (resources potential/technicality); (2) Regulation/policy uncertainty; (3) Shift in exploration/business focus; (4) Funding difficulty (e.g., acquirer cannot secure financing in time); (5) Due diligence conditions not being satisfied; (6) Changes in economic/market conditions; (7) Other (e.g., legal disputes); and (8) Unknown. *Reason* is set equal to zero if the announced deal is completed. Control variables are the same as those in Table 6 Panel B. *t*-statistics are in parentheses and based on standard errors adjusted for heteroscedasticity. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

The coefficients of primary interest are highlighted in bold.

and add more controls: CEO stock ownership and *ΔCEO capital*. *ΔCEO capital* is the product of acquirers' initial announcement CAR and CEO stock ownership. This variable measures the change in an acquirer CEO's wealth caused by the initial market reaction. We re-estimate the deal termination determinants model by including these two additional controls and report regression results in Table 9. As CEO ownership data are missing for a number of observations in our sample, we restrict our analysis in column (1) to observations with CEO ownership data, which reduces the sample size to 645. Alternatively, we assume that missing CEO ownership equals zero and report regression results in column (2). Consistent with our main findings in Table 5, the coefficients on *Prolonged high PU* in Table 9 remain positive and significant at the 5% level. Our results thus confirm that protracted policy uncertainty contributes to acquisition abandonment.

5.2 | Alternative measures of policy uncertainty and endogeneity

A potential concern with the BBD policy uncertainty index is endogeneity (e.g., Xu, 2020). This news-based policy uncertainty measure may coincide with other economic conditions, which induce acquisition abandonment. While different sets of macro-level variables are included in our model specifications to control for economic conditions, the effect of policy uncertainty on acquisition abandonment decisions may still be confounded by other macro-level factors. To ease this concern, we: (i) re-run our baseline model using an exogenous component of policy uncertainty index; and (ii) adopt an instrumental variable approach.

To obtain a clear identification of the evolutionary effect of Australian policy uncertainty on acquisition outcomes, we follow Xu (2020) and extract the exogenous component from the Australian BBD index. The exogenous component is able to capture incremental unpredictability about domestic policies beyond domestic economic forces and international shocks. Specifically, we regress the monthly Australian BBD index on the monthly news-based BBD index for the US and other macroeconomic variables as follows:

$$\begin{aligned} Aus\ BBD_t = a + \beta_1 US\ BBD_t + \beta_2 ASX\ stock\ market\ return_t + \beta_3 RBA\ Commodity\ price\ index_t \\ + \beta_4 VIX_t + Time\ trend + \varepsilon_t. \end{aligned} \tag{3}$$

The residuals, ε_t, are then used to capture Australian exogenous policy-related uncertainty (Xu, 2020). We average the residuals over the 12-month period preceding the deal closing month t and label it *Exog. PU*. We then rerun our baseline models in Table 5 using *Exog. PU*. We find that the coefficients on *Exog. PU* are consistently positive and significant at the 1% level (untabulated). Our results are thus robust to the alternative measure of Australian policy uncertainty.

We also adopt an instrumental variable approach to mitigate a potential error-in-measurement problem. We use the time (in hours) that the Parliament of Australia spent on legislation to instrument for prolonged policy uncertainty. If political leaders stall on legislative decisions or the outlines of a policy have not been agreed upon, then Parliament would spend more time deliberating over proposed bills or legislative issues, which leads to lengthy debate and creates more uncertainty. Therefore, the instrumental variable (IV) *Time on legislation* is likely to satisfy the relevance condition as an instrument for *Prolonged high PU*.

We obtain the variable, *Time on legislation*, from the website of the Parliament of Australia, which discloses the number of hours that Parliament spent on governmental legislation in each sitting. We calculate *Time on legislation* as the total number of hours Parliament spent on governmental legislation in the 6-month (or 2-quarters) period before deal closing

TABLE 9 Policy uncertainty, acquisition outcomes, and CEO ownership.

	Acquisition outcome (termination = 1)	
Dependent variable	**(1) Non-missing CEO ownership**	**(2) Missing CEO ownership assumed as zero**
Prolonged high PU	**0.040****	**0.032****
	(2.12)	**(2.01)**
Deal-level controls		
All stock	−0.645**	−0.376*
	(−2.06)	(−1.70)
All cash	−0.181	−0.196
	(−0.68)	(−0.91)
Initial CAR	−0.755	−0.983***
	(−1.32)	(−2.71)
Option like deal	1.153***	1.112***
	(5.94)	(7.13)
Deal resolution time	0.037***	0.025***
	(3.19)	(2.96)
ΔCEO capital	3.074	4.051
	(0.81)	(1.22)
Firm-level controls		
Ln(Total assets)	−0.120	−0.132**
	(−1.45)	(−2.11)
Financial leverage	0.043**	0.032*
	(2.08)	(1.80)
Market-to-book ratio	−0.001	−0.001
	(−1.29)	(−1.18)
Cash holdings (%)	0.003	0.001
	(0.74)	(0.27)
Stock volatility	−0.023	−0.047
	(−0.42)	(−0.64)
Past acquisition experience	−0.003	−0.044**
	(−0.14)	(−2.31)
CEO ownership	1.072	0.513
	(1.55)	(0.78)
Marco-level controls		
Federal election	−0.090	0.394
	(−0.26)	(1.47)
Commodity price volatility	0.012	0.031**
	(0.63)	(2.08)
Stock market returns	−8.045*	−6.383**
	(−1.92)	(−2.11)
Implied volatility	−0.008	−0.013
	(−0.38)	(−0.80)

(Continues)

TABLE 9 (Continued)

	Acquisition outcome (termination = 1)	
Dependent variable	**(1) Non-missing CEO ownership**	**(2) Missing CEO ownership assumed as zero**
Constant	0.206	0.829
	(0.14)	(0.77)
Pseudo-R^2	0.141	0.119
N	645	979

Note: This table follows the specification of Model 2 in Table 5 with additional control variables, *CEO ownership* and *ΔCEO capital*. The dependent variable *Acquisition outcome* is an indicator variable that takes a value of 1 if an announced acquisition is terminated, and 0 otherwise. *ΔCEO capital* is the change in stock capital owned by an acquirer's CEO, calculated as the product of the acquirer's initial deal announcement CAR and CEO stock ownership. Other variables are as defined in Table A1 in Appendix. Standard errors are clustered by firm and year-month. *z*-statistics are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

The coefficients of primary interest are highlighted in bold.

dates.[16] We then estimate the determinants model of deal abandonment using the *Time on legislation* measure as an instrument. Results from our two-stage regressions are reported in Table 10, which show that the coefficient on *Prolonged high PU* in the second-stage regression (column (2)) remains positive and statistically significant (coef. = 0.076, *t*-stat = 2.04). Therefore, our results are robust to the instrumental variable estimation, supporting the view that protracted policy uncertainty has a significantly negative impact on acquisition outcomes.

To further substantiate the robustness of our results, we also construct a news-based policy uncertainty index that is specific to the Australian mining sector. We then rerun the main tests using the sector-level policy uncertainty measure and our inferences remain unchanged. Specifically, to construct a mining-sector PU index, we use text archives, available in the Factiva database, of nine Australian newspapers from January 1998 onwards: *Daily Telegraph*, *Courier Mail*, *The Australian*, *The Age*, *The Advertiser*, *Mercury*, *Sydney Morning Herald*, *The Herald Sun*, and *The West Australian*. The first eight newspapers are the same news source as for the construction of the BBD index. We add *The West Australian* to our sector-level PU index due to the concentration of mining activities in the state of Western Australia.

For each newspaper, we count the number of articles that are classified under the Factiva Industry Category of 'Base Materials/Resources' and containing: (i) terms used in the BBD index: 'uncertain' or 'uncertainty', 'economic' or 'economy', and 'regulation', "Reserve Bank of Australia', 'RBA', 'tax', 'taxation', 'taxes', 'parliament', 'senate', 'cash rate', 'legislation', 'tariff', 'war'; and (ii) terms that are specific to the Australian mining sector and mineral exploration activities, as well as a list of metals and minerals: 'mining', 'metal' or 'metals', 'minerals', 'mining exploration', 'gold', 'copper', 'coal', 'iron ore', 'lithium', 'cobalt', 'rare earths', 'graphite', 'nickel', 'zinc', 'lead', 'silver', 'tin', 'uranium', or 'non-rural commodities' Such a comprehensive list of search terms and criteria ensures the validity of our sector-level policy uncertainty index. We next scale the raw counts by the number of all articles in the nine newspapers in each month from January 1998 to December 2017, and then rescale the resulting series to a mean of 100 over the sample period. A graph of the Australian mining-sector news-based policy uncertainty index is presented in Figure A1, together with the market-wide BBD index for comparison.

[16]Data can be obtained at: https://www.aph.gov.au/Parliamentary_Business/Statistics

TABLE 10 Policy uncertainty and acquisition outcomes (2SLS with instrumental variable).

Dependent variable: Outcome (termination = 1)		
	First-stage	**Second-stage**
Time on legislation	**0.038*** **	
	(8.84)	
Prolonged high PU		**0.076** **
		(2.04)
Controls	Yes	
Test of under-identification	64.123	
	(<0.001)	
Test of weak instruments	62.997	
	(<0.001)	
Adj-R^2	0.213	
N	956	

Note: This table follows Model 2 in Table 5 and reports results of a two-stage regression using *Time on legislation* as an instrument for *Prolonged high PU*. *Time on legislation* is the total number of hours the Parliament of Australia spent on governmental legislation in the 6-month period preceding the quarter of deal closing dates. Other variables are as defined in Table A1 in Appendix. *t*-statistics are reported in parentheses. We also report tests of under-identification (Kleibergen–Paap LM statistic with critical *p*-value in parentheses) and weak instruments (Kleibergen–Paap Wald rank *F*-statistic) based on Kleibergen and Paap (2006). *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

The coefficients of primary interest are highlighted in bold.

Given the significance of the mining sector in Australia, it is unsurprising that the sector-level policy uncertainty index is highly correlated with the aggregate-level BBD index. For example, both indexes peaked at times of the global financial crisis, wars, and federal elections. Importantly, the mining policy uncertainty index captures uncertainties specific to the sector, for example, the highest peak of the sector-level policy uncertainty was in 2010 when national debate around the Resource Super Profits Tax occurred. This is followed by 2011–2012 when Kevin Rudd ousted Julia Gillard as the Labor leader and Prime Minister in Australia, combined with the price plunge of key commodities (i.e., iron ore). The two indexes also differ at certain events, for example, the event of Brexit in 2016 did not affect the mining sector to the same extent as the whole market.

We next rerun the main tests (Tables 4–6) using the newly constructed Australian mining-sector PU index. These additional tests show that our results (untabulated) are robust to the sector-level policy uncertainty index.

5.3 | Market sentiment and MEEs' decision to abandonment announced acquisitions

We further consider the impact of market sentiment on acquisition outcomes. It is conceivable that acquirers may abandon announced deals in a period of weak market sentiment. To test this conjecture, we measure the Australian market sentiment using: (i) the Australian Consumer Confidence Index (CCI); and (ii) the National Australia Bank Business Confidence Index (BCI) (Nartea et al., 2020).[17] Both CCI and BCI are calculated as an average of the respective index in the 12 months prior to deal closings. We rerun the baseline model by adding

[17]We obtain the Australian CCI from the OECD database and collect the Australian BCI data from https://au.investing.com/economic-calendar/nab-business-confidence-217.

market sentiment and find that acquisition abandonment decisions are unlikely to be driven by market sentiment (untabulated). We also test whether market reactions to acquiring firms' announcements of deal abandonments vary with the degree of market sentiment (Danbolt et al., 2015). However, we fail to find such evidence (untabulated). Overall, there is little impact of market sentiment on acquiring firms' decisions to abandon announced deals and acquirers' abnormal returns around deal resolution dates.

5.4 | China's policy uncertainty and Australian MEE's decisions to abandonment acquisitions

In this subsection, we investigate how China's policy uncertainty affects Australia's mining acquisition activities, given that China is the largest importer of non-rural commodities (i.e., base metals, iron ore) from Australia. We consider two basic propositions. First, a higher level of China's policy uncertainty is associated with a higher likelihood of acquisition abandonment decisions made by Australian MEE acquirers. This is because heightened policy uncertainty in China may reduce China's demand for minerals and add frictions to importing from Australia, resulting in a halt in Australian MEEs' acquisition activities.

Alternatively, we posit that China's policy uncertainty is not associated with Australian MEEs' project acquisitions on the basis that, over the last two decades, metals and mining in Australia was the fastest growing export sector to China due to its strong demand. According to the Australian Department of Foreign Affairs and Trade, resource and energy commodity exports accounted for 80.9% of Australia's total exports to China in 2011, up from 44.5% in 2001. Even under the circumstances of worsening geopolitical tensions between China and Australia in recent years, the rise in China's demand for metals still contributed to a strong surge in mineral imports from Australia. In addition, unlike the global diversified mining producers (i.e., BHP, Rio Tinto), MEEs are early-stage firms focusing on exploration activities. It often takes 10–20 years for these junior mining explorers to enter the production phase (Ferguson & Lam, 2023). Therefore, owing to China's strong demand for minerals and the fact that MEEs are still in their early life-cycle stage, our second proposition is that China's policy uncertainty has little impact on Australian MEEs' decisions to abandon announced deals.

To test the above propositions, we rerun the baseline models in Table 5 by considering China's policy uncertainty. We measure China's policy uncertainty in two ways: (i) the natural log of China's BBD index; and (ii) the exogenous component of China's BBD index (constructed in a similar way as in Equation 3) in a 12-month period prior to deal closings.[18] Untabulated results show that the insignificant coefficients on both proxies are consistent with our second proposition. Nevertheless, this particular finding should be interpreted with caution, because neither China nor Australia's BBD index is able to fully capture the geopolitical uncertainty between the two countries specifically. This may affect the inferences of our results.

6 | CONCLUSION

This study investigates how policy uncertainty affects the acquisition process *after* initial deal announcements. Using a hand-collected sample of project acquisitions by ASX-listed MEEs

[18]The policy uncertainty index we use for China is based on the coverage from the *South China Morning Post*. See https://www.policyuncertainty.com/china_epu.html for details.

over the period 1998–2017, we provide robust evidence suggesting that policy uncertainty delays deal closings and triggers deal abandonment.

Our study highlights the significance of policy uncertainty as a crucial factor to consider when exploring the determinants of acquisition abandonment. We also offer practical insights into how early-stage participants respond to high policy uncertainty and protect shareholders' interests in acquisitions, as well as more generally in corporate investment activities.

Considering that early-stage firms in sectors characterised by inherent business risk and high information asymmetry (i.e., biotechnology, pharmaceutical, and oil & gas, etc) are often disadvantaged under uncertainty compared to large, established firms, we suggest adopting an option-like deal structure that enables acquirers to step away from a deal without incurring substantial costs. This approach could provide a more flexible framework for small firms navigating through uncertain policy environments, allowing them to adapt and make better-informed decisions as new information becomes available. Furthermore, such deal structures can help reduce the potential negative impact on acquirers' shareholder value in the event of deal abandonment. Overall, adopting such an adaptable strategy to manage policy uncertainty can help small firms level the playing field and support their growth and success in the face of ever-changing policy landscapes.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are publicly available.

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APPENDIX

TABLE A1 Variable definitions.

Variable	Definition	Data source
Policy uncertainty variables		
Prolonged high PU	The number of consecutive months with high BBD policy uncertainty index (above the sample mean) during the sample period.	The news-based Australian uncertainty index constructed by Baker et al. (2016). Available at: www.policyuncertainty.com/index.html
ΔPU%	Relative change in policy uncertainty, calculated as $(PU_{resolution} - PU_{initial})/PU_{initial}$ and expressed as a percentage, in which $PU_{resolution}$ and $PU_{initial}$ are the average 3-month policy uncertainty index before the deal resolution and initial announcement date, respectively.	
Exog. PU	The residuals from regressing Australian BBD index on the news-based BBD index for the US, ASX stock market return, RBA non-rural commodity index, and a time trend.	
Deal-level variables		
Outcome (0, 1)	An indicator variable that takes a value of 1 if an announced acquisition is terminated, and 0 otherwise.	Hand collected from Morningstar DatAnalysis Premium
Outcome (0, 1, 2)	A categorical variable that takes a value of 0 if an announced acquisition is completed without deal revisions, 1 if renegotiated and completed, and 2 if terminated.	
Deal revision (0, 1, 2)	A categorical variable with '0' = no deal revision, '1' = revision of offer price, and '2' = extension of deal closing date.	Hand collected from Morningstar DatAnalysis Premium
All stock (0, 1)	An indicator variable that equals 1 if a deal is fully paid by shares of the acquirer, and 0 otherwise.	Hand collected from Morningstar DatAnalysis Premium
All cash (0, 1)	An indicator variable that equals 1 if a deal is fully paid by cash, and 0 otherwise.	Hand collected from Morningstar DatAnalysis Premium
Option-like deal (0, 1)	An indicator variable that equals 1 if the announced acquisition is an option agreement (e.g., acquiring an option to purchase a project) or an earnout agreement (e.g., a portion of the purchase price is paid upon the target achieving predetermined performance milestones).	Hand collected from Morningstar DatAnalysis Premium
Deal resolution time	The number of months between the initial acquisition announcement and resolution date.	Hand collected from Morningstar DatAnalysis Premium
Initial CAR	Cumulative stock return to the acquiring firm over the window (−2, +2), centred on the initial deal announcement date, net of the equally-weighted return of all ASX-listed stocks over the event window.	SIRCA Databricks

TABLE A1 (Continued)

Variable	Definition	Data source
Resolution CAR	Cumulative stock return to the acquiring firm over the window (−2, +2) centred on the announcement date of deal completion or termination, net of the equally-weighted return of all ASX-listed stocks over the event window.	SIRCA Databricks
Firm-level variables		
Ln(Total assets)	Natural logarithm of book value of total assets	Morningstar DatAnalysis Premium
Market-to-book	Closing share price on the last day of a firm's financial year divided by shareholders' equity per share.	Morningstar DatAnalysis Premium
Financial leverage	Total assets divided by shareholders' equity	Morningstar DatAnalysis Premium
Cash to total assets (%)	Cash holdings divided by total assets	Morningstar DatAnalysis Premium
Stock volatility	Standard deviation of a firm's monthly stock returns in the prior 12 months before the initial deal announcement.	SIRCA SPPR
Past acquisition experience	Number of project acquisitions announced by an acquirer prior to deal *j* during the sample period.	Hand collected from Morningstar DatAnalysis Premium
CEO ownership	The proportion of ordinary shares held by CEOs at the financial year-end before the acquisition announcement.	Hand collected from financial reports
Macro-level variables		
Federal elections	An indicator variable which takes a value of 1 if the initial deal announcement date is within a 3-month period before a scheduled Australian federal election between January 1998 and December 2017, and 0 otherwise.	Australian Politics and Elections Database elections.uwa.edu.au/
Implied volatility	Average monthly VXO-implied volatility index from the Chicago Board Options Exchange (CBOE) in the 12-month period before the deal resolution date.	Bloomberg
Stock market return	Average monthly return on the ASX All Ordinaries Index in the 12-month period before the deal resolution date.	Bloomberg
Commodity price index	Non-rural Commodity Prices Index in the 12-month period before the deal resolution date.	Reserve Bank of Australia
Commodity price volatility	Standard deviation of monthly commodity price index in the 12-month period before the deal resolution date.	Reserve Bank of Australia
Prolonged high implied volatility	Number of consecutive months with high VIX (above the sample mean) before the deal resolution date.	Bloomberg
Prolonged positive stock market return	Number of consecutive months with positive stock market returns before the deal resolution date.	Bloomberg
Prolonged high commodity price	Number of consecutive months with a high commodity price index (above the sample mean) before the deal resolution date.	Reserve Bank of Australia
Time on legislation	Time (in hours) that the Parliament of Australia spent on governmental legislation in the 6-month period preceding the deal resolution date.	https://www.aph.gov.au/Parliamentary_Business/Statistics

TABLE A2 Examples of announcement headlines of project acquisitions, deal renegotiations, and terminations.

ASX code	Company name	Project name	Announcement date	Announcement header
Deal renegotiation announcements				
AGY	Argosy Minerals Limited	Albetros Diamond	15/07/2003	Renegotiation of Albetros Agreement
AIW	Ausroc Metals Ltd	Shenglong	29/09/2014	Amendment of Shenglong agreement
EMG	Emergent Resources	Beyondie Iron	16/03/2010	Beyondie Acquisition – Variation to Agreement
AMN	Agrimin Limited	Yunt Dag	05/07/2012	Extension to Yunt Dag Agreement
BDR	Beadell Resources Limited	Cracow	30/06/2008	Cracow Completion Date Extended
DEG	De Grey Mining Limited	Indee new	02/10/2017	Settlement of Indee Transaction extended by up to 12 months
Deal termination/completion announcements				
DGO	DGO Gold Limited	Yandan	27/07/2011	Withdrawal from Heads of Agreement for the Yandan Project
OVR	Overland Resources	Trojan Gold	20/10/2017	Termination of Heads of Agreement- Trojan Gold Project
AAG	Aragon Resources Limited	Hot Chilli	12/11/2009	Hot Chilli Acquisition Not to Proceed
ESR	Estrella Resources Limited	Mt Edwards	06/01/2017	Completion of Acquisition Of Mt Edwards Lithium
GMR	Golden Rim Resources	Paguanta	28/07/2016	Golden Rim Completes Acquisition of the Paguanta Project
AGO	Atlas Iron Limited	Mt Webber	05/05/2009	Atlas exercises option to acquire iron ore rights in Pilbara
NMT	Neometals Limited	Nannine	05/07/2013	Lapse of Option to acquire Nannine Mining Centre

TABLE A3 Examples of deal termination/renegotiation announcements.

1. Caeneus Minerals Ltd (CAD) announced on 11/09/2015

Title: TERMINATION OF AGREEMENT WITH POSEIDON NICKEL LIMITED.

Caeneous Minerals Ltd ("Caeneus' or 'the company') advises that it has terminated the binding agreement ("Agreement') with Poseido Nickel Limited (ASX: POS) ("Poseidon') in relation to the Company's acquisition of contractual rights ("Acquisition') to mine the Silver Swan underground nickel mine.

The Company was unsuccessful in raising the required funds ("Capital Raising') to complete the Acquisition on or before the Completion date of 14 September 2015 due to current economic conditions and falling commodity prices.

2. CBH Resources Limited (CBH) announced on 17/06/2003

Title: Re: Update on Elura Mine Purchase.

Consolidated Broken Hill Ltd and Pasminco Australia Ltd have agreed to extend the unconditional date for the purchase of the Elura Mine at Cobar, New South Wales, to 18th July 2003.

The extension of time is to seek greater certainty on two key issues – Workers Compensation Insurance premiums, and the rescission of the current Elura Consent Award enabling implementation of modern labour arrangements at the Mine.

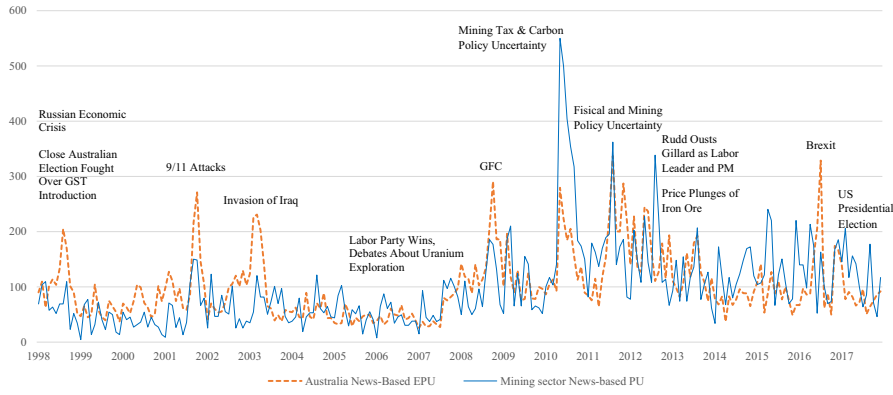

FIGURE A1 Australian BBD policy uncertainty index and mining-sector policy uncertainty index over the period 1998–2017.