Country-Level Distance Measures and Cross-Border Acquisition Returns: Evidence from US-Listed Acquirors, 2010 to 2024

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Dissertation submitted in partial fulfilment of requirements for the International MSc in Finance, at Universidade Católica Portuguesa and for the MSc in Management at ESCP Business School, 22.05.2026.

Abstract

This thesis examines whether US-listed acquirors earn abnormal announcement returns on completed cross-border acquisitions and whether four hypothesised channels explain cross-sectional variation in those returns. Using an event study of 1,157 transactions announced between 2010 and 2024, combined with a stepwise OLS regression framework estimated across six specifications with standard errors clustered at the target country level, the analysis yields three principal findings.

The aggregate CAPM-based cumulative average abnormal return for the three-day window is 0.315%, broadly consistent with prior evidence, but conceals a pronounced structural break. The pre-2016 subsample generates a highly significant CAAR of 0.911%, while the post-2015 subsample produces -0.219%, statistically indistinguishable from zero. This divergence is consistent with tightening regulatory scrutiny of cross-border transactions, rising geopolitical uncertainty, and the gradual erosion of the US governance advantage relative to developed market targets over the sample period.

In the cross-sectional analysis, governance distance, cultural distance, and bilateral trade intensity are uniformly insignificant in the full-sample joint specification, though split-sample analysis reveals meaningful heterogeneous effects within each dimension that full-sample estimates obscure. Relative deal size is the only hypothesis variable to achieve robust significance, with a positive coefficient that contradicts the hubris-based prediction and is concentrated entirely in the pre-2016 period.

The findings suggest that short-run announcement returns in cross-border M&A are better explained by transaction-specific characteristics than by broad country-level distance measures, and that pooled estimates from heterogeneous sample periods may mask regime-specific dynamics that temporal stability tests would reveal.

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Title: Country-Level Distance Measures and Cross-Border Acquisition Returns: Evidence from US-Listed Acquirors, 2010 to 2024

Keywords: cross-border mergers and acquisitions, event study, announcement returns, governance distance, cultural distance, bilateral trade intensity, relative deal size, structural break

Resumo

Esta tese examina se adquirentes listados nos EUA obtêm retornos anormais no anúncio de aquisições transfronteiriças concluídas e se quatro canais hipotetizados explicam a variação transversal desses retornos. Com base em um estudo de eventos de 1,157 transações anunciadas entre 2010 e 2024, combinado com uma estrutura de regressão OLS stepwise estimada em seis especificações, com erros-padrão agrupados ao nível do país-alvo, a análise apresenta três principais resultados.

O retorno anormal médio acumulado agregado, baseado no CAPM, para a janela de três dias é de 0.315%, em linha geral com evidências anteriores, mas oculta uma forte quebra estrutural. A subamostra pré-2016 gera um CAAR altamente significativo de 0.911%, enquanto a subamostra pós-2015 produz -0.219%, estatisticamente indistinguível de zero. Essa divergência é consistente com o aumento do escrutínio regulatório sobre transações transfronteiriças, a crescente incerteza geopolítica e a gradual erosão da vantagem de governança dos EUA em relação a alvos em mercados desenvolvidos ao longo do período analisado.

Na análise transversal, distância de governança, distância cultural e intensidade do comércio bilateral são uniformemente insignificantes na especificação conjunta da amostra completa. Contudo, a análise por subamostras revela efeitos heterogêneos relevantes que as estimativas agregadas ocultam. O tamanho relativo da transação é a única variável de hipótese com significância robusta, apresentando coeficiente positivo, contrário à previsão baseada em hubris, concentrado integralmente no período pré-2016.

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Título: Medidas de distância em nível de país e retornos de aquisições transfronteiriças: evidências de adquirentes listadas nos EUA, de 2010 a 2024

Palavras-chave: fusões e aquisições transfronteiriças, estudo de evento, rendibilidades no anúncio, distância de governação, distância cultural, intensidade do comércio bilateral, dimensão relativa da transação, quebra estrutural

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List of Abbreviations

CAAR	cumulative average abnormal return
CAPM	Capital Asset Pricing Model
CAR	cumulative abnormal return
CEPII	Centre d'Études Prospectives et d'Informations Internationales
CFIUS	Committee on Foreign Investment in the United States
Compustat	Compustat North America Fundamentals Annual
Eikon	Refinitiv Eikon API
FF3	Fama–French three-factor model
FX	foreign exchange
GDP	gross domestic product
H1	governance distance hypothesis
H2	cultural distance hypothesis
H3	bilateral trade intensity hypothesis
H4	relative deal size hypothesis
HC3	heteroskedasticity-consistent covariance estimator type 3
HML	High Minus Low (Fama–French value factor)
KS	Kogut–Singh index
M&A	mergers and acquisitions
MSCI	Morgan Stanley Capital International
NYSE	New York Stock Exchange
OLS	ordinary least squares
Refinitiv	Refinitiv Workspace Deals Screener
SE	standard errors
SMB	Small Minus Big (Fama–French size factor)
SPAC	special purpose acquisition company
UK	United Kingdom
US	United States
VIF	variance inflation factor
WGI	Worldwide Governance Indicators
WITS	World Integrated Trade Solution
WRDS	Wharton Research Data Services

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1. Introduction

Cross-border mergers and acquisitions represent one of the most consequential and capital-intensive strategic decisions available to corporate managers, yet the question of whether they create value for acquiring firm shareholders remains empirically contested. US-listed acquirors completed over USD 4 trillion in cross-border transactions between 2010 and 2024, deploying capital across jurisdictions that differ substantially in institutional quality, cultural norms, and economic integration with the United States. Whether these differences between acquiror and target country systematically shape the market's assessment of a deal at announcement is a question with direct implications for how boards evaluate targets, how investors price foreign acquisitions, and how the academic literature models the determinants of acquiror returns in international settings.

The existing empirical literature offers an incomplete answer. Event studies consistently document small positive or near-zero aggregate announcement returns for US acquirors in cross-border transactions, broadly consistent with market efficiency but leaving open the question of what drives the substantial cross-sectional dispersion around that average (Andrade, Mitchell and Stafford, 2001; Moeller, Schlingemann and Stulz, 2004; Erel, Liao and Weisbach, 2012). A growing body of work has sought to explain this dispersion through country-level distance measures, including governance quality differentials, cultural distance, and bilateral trade intensity, with mixed and often conflicting results. A further limitation of much existing work is its reliance on sample periods that predate the significant tightening of regulatory scrutiny over cross-border transactions that began in the mid-2010s, raising the question of whether findings from earlier periods remain relevant in the current environment. Whether the market's reception of foreign acquisitions has changed structurally over time, and whether country-level channels that may have operated in earlier periods remain operative today, are questions that the literature has not yet directly addressed.

This thesis addresses these questions using an event study of 1,157 completed cross-border acquisitions announced by US-listed acquirors between 2010 and 2024. Abnormal returns are estimated under both the CAPM and the Fama–French three-factor model across five event windows, and cross-sectional variation in announcement returns is examined through a stepwise OLS regression framework with standard errors clustered at the target country level. Four hypothesised channels are tested: the governance distance hypothesis (H1), which predicts that acquirors earn higher returns when targeting countries with weaker institutional quality

than the United States; the cultural distance hypothesis (H2), which predicts lower returns for more culturally distant targets; the bilateral trade intensity hypothesis (H3), which predicts higher returns for targets in countries with stronger trade relationships with the United States; and the relative deal size hypothesis (H4), which examines whether transaction scale relative to acquiror size is associated with announcement returns. The sample spans 63 target countries across four geographic regions, with the United Kingdom, Canada, and Germany together accounting for 45.8% of all transactions.

The analysis yields three principal findings. First, the aggregate announcement effect is positive but modest, with a full-sample CAPM CAAR of 0.315% for the three-day window, and is driven entirely by the pre-2016 subsample, which generates a CAAR of 0.911% compared to -0.219% in the post-2015 period, a difference significant at the 1% level. This structural break is the central empirical contribution of the thesis and suggests that the conditions supporting positive announcement effects in cross-border M&A have weakened materially since 2015. Second, governance distance, cultural distance, and bilateral trade intensity are all statistically insignificant in the full-sample joint specification, though split-sample analysis reveals meaningful heterogeneous effects within each dimension that full-sample estimates conceal. Third, relative deal size is the only hypothesis variable to achieve robust significance, with a positive coefficient that contradicts the hubris-based prediction and is concentrated entirely in the pre-2016 period.

These findings contribute to the cross-border M&A literature in two ways. They extend and nuance the null results on country-level distance variables documented in prior work by showing that these variables exhibit conditional effects that aggregate specifications mask, and they document a structural break in the valuation of cross-border acquisitions around 2015 that has not been previously characterised in the literature. The latter finding has methodological implications for future event studies: pooled estimates from heterogeneous sample periods may obscure regime-specific dynamics, and temporal stability should be tested rather than assumed.

The remainder of the thesis is structured as follows. Chapter 2 reviews the theoretical and empirical literature on cross-border M&A announcement returns and the four hypothesised channels. Chapter 3 describes the data sources, sample construction, event study methodology, and regression design. Chapter 4 presents the empirical results, including the main event study findings, subgroup patterns, temporal heterogeneity, and cross-sectional regression results.

Chapter 5 discusses the interpretation of the findings, limitations of the study, and practical implications for managers and investors. Chapter 6 concludes.

2. Literature Review

This chapter reviews the literature that motivates the empirical analysis. It begins with the M&A announcement return literature, which establishes why short-window acquiror returns are the appropriate measure of value creation and which deal characteristics explain cross-sectional variation in returns. It then considers the cross-border M&A literature, which highlights how national borders introduce additional frictions and opportunities that affect acquisition outcomes. The chapter subsequently reviews three country-level distance channels, governance, culture, and bilateral trade, and discusses relative deal size as a transaction-level determinant of announcement returns. Section 2.5 identifies the remaining gaps in the literature and derives the four hypotheses that guide the empirical analysis.

2.1 Announcement Returns in M&A

The empirical study of merger and acquisition announcement returns rests on a theoretical foundation that distinguishes three broad motives for corporate combinations: synergy creation, agency conflicts, and managerial overconfidence. These three explanations are not mutually exclusive and together structure the theoretical backdrop against which the cross-sectional predictions of this thesis are developed. Their treatment here is deliberately concise, as none of the three is directly tested in the empirical analysis. Their function is to establish why announcement returns are the right measure of value creation, why they are expected to be small on average, and why payment method, target type, and deal scale are the deal-level characteristics most likely to carry explanatory power in the cross-section.

The synergy hypothesis holds that acquisitions occur because the combined entity is worth more than the sum of its parts, through operational economies, market power, financial synergies, or the redeployment of underutilised assets. Under this view, the acquiror's announcement return should reflect the market's assessment of the net present value of expected synergies less the premium paid to the target. Jensen and Ruback (1983) and Bradley, Desai and Kim (1988) document that the gains from acquisition activity are systematically skewed toward target shareholders, with acquiror returns close to zero on average. This asymmetry motivates the use of acquiror-only announcement returns as the dependent variable: the acquiror CAR provides a measure of the market's assessment of deal value net of the acquisition premium, subject to

the caveat that short-window returns also reflect noise and concurrent market information rather than deal fundamentals alone.

The agency hypothesis, formalised by Jensen (1986), posits that managers with free cash flow may pursue acquisitions that serve empire-building rather than value maximisation. Under this view, acquiror announcement returns may be zero or negative, reflecting investor scepticism about managerial motives. Andrade, Mitchell and Stafford (2001), in their review of three merger waves from 1973 to 1998, document that the equally weighted average acquiror announcement return is approximately zero across the full sample and is small and statistically fragile in many sub-periods. This pattern of modest and sometimes unreliable mean effects motivates the use of three complementary statistical tests in the event study design of this thesis, as described in Section 3.2.5, each addressing different potential violations of distributional assumptions rather than relying on a single parametric test.

The hubris hypothesis, proposed by Roll (1986), offers a third explanation in which managers systematically overestimate target values due to winner's curse dynamics: the firm that wins the bidding contest is likely the firm that made the most optimistic valuation error. Roll's framework generates a direct prediction about deal scale: larger bids relative to acquiror size reflect greater managerial commitment and therefore greater potential overconfidence, suggesting a negative relationship between relative deal size and acquiror announcement returns. This is the theoretical foundation for H4 in this thesis, and it is discussed further in Section 2.4 in the context of the cross-border setting where the direction of this prediction is theoretically ambiguous.

The method of payment is among the most robust empirical determinants of acquiror announcement returns. Travlos (1987) documents that equity-financed acquisitions generate significantly negative announcement returns relative to cash-financed deals. The standard interpretation invokes Myers and Majluf (1984): a manager who chooses to finance an acquisition with equity reveals to the market that the firm's shares are overvalued, triggering a downward price revision. Fuller, Netter and Stegemoller (2002) and Chang (1998) confirm this pattern across different target types, and payment method is therefore commonly included as a control variable in cross-sectional analyses of announcement returns.

A further regularity in the literature is the effect of target public status. Fuller et al. (2002) and Chang (1998) document that acquisitions of privately held targets and subsidiaries generate more positive announcement returns than acquisitions of publicly listed targets, reflecting lower

competition and the absence of an established market price. This compositional effect is relevant context for interpreting aggregate announcement returns in samples where private and subsidiary targets predominate.

2.2 Cross-Border M&A and Value Creation

Cross-border acquisitions differ from domestic transactions because national borders introduce additional frictions that affect both deal execution and the market's assessment of value creation at announcement. These frictions include information asymmetry about foreign targets, legal and institutional heterogeneity, currency exposure, and cultural distance. At the same time, cross-border acquisitions may offer strategic benefits less available in domestic transactions, such as access to new markets, firm-specific advantages exploitable in foreign settings, and alternative institutional environments. The net effect on acquiror announcement returns is therefore not determined by cross-border status alone but depends on whether expected synergies and strategic benefits outweigh the additional frictions and integration costs associated with operating across national borders.

A useful theoretical foundation is provided by Stulz (2005), who argues that financial globalisation remains constrained by country-level institutional differences. Even in integrated capital markets, variation in investor protection, agency costs, and the risk of expropriation by insiders or host country governments limits the portability of governance practices and the ability to create value across borders. This perspective motivates the analysis of institutional distance between the United States and the target country as a determinant of acquiror announcement returns, and connects directly to the governance distance hypothesis developed in Section 2.3.

Empirical evidence on cross-border acquisition performance is mixed and period-dependent. Early studies generally report positive announcement effects for US acquirors. Doukas and Travlos (1988) and Morck and Yeung (1992) find that cross-border acquisitions can create value, particularly when they allow firms to expand geographically or exploit firm-specific advantages in foreign markets, consistent with the view that international acquisitions may provide access to valuable growth opportunities unavailable domestically. More recent evidence is less favourable. Moeller and Schlingemann (2005) compare a large sample of cross-border and domestic acquisitions by US acquirors and find that cross-border transactions are associated with lower average announcement returns, attributing this partly to greater information asymmetry and valuation uncertainty in foreign target assessment. Conn, Cosh,

Guest and Hughes (2005) report a similar pattern for UK acquirors, suggesting that the challenges associated with foreign acquisitions are not specific to US firms. Taken together, the literature implies that cross-border M&A can create value but that this is conditional on deal characteristics, acquiror capabilities, and the institutional environment of the target country rather than being a general property of cross-border transactions.

The temporal dimension of this evidence matters. Cross-border M&A activity has historically occurred in waves that broadly correspond to domestic merger cycles but with distinct drivers. Andrade, Mitchell and Stafford (2001) and Betton, Eckbo and Thorburn (2008) document that merger waves are associated with periods of high equity valuations, low financing costs, and industry-level shocks that create pressure for consolidation. The cross-border component of these waves has been shaped additionally by capital account liberalisation, exchange rate movements, and the progressive integration of international capital markets. The post-2008 wave, which encompasses the sample period of this thesis, differs from earlier cycles in several respects: acquiror valuations recovered more slowly, financing conditions tightened relative to the pre-crisis period, and the composition of cross-border deals shifted toward transactions in which strategic and regulatory considerations played a larger role relative to pure financial arbitrage.

The regulatory environment governing cross-border acquisitions has also changed materially since 2015. The expansion of the Committee on Foreign Investment in the United States, known as CFIUS, through the Foreign Investment Risk Review Modernization Act of 2018 significantly broadened the scope of transactions subject to national security review, introducing new uncertainty into the announcement-period assessment of deals involving foreign targets in sensitive sectors. Concurrent developments in other jurisdictions, including the European Union's foreign investment screening framework and rising economic nationalism in several major target countries, contributed to an environment in which the regulatory completion risk associated with cross-border transactions increased substantially relative to the pre-2015 period. Baker, Bloom and Davis (2016) document a broad rise in economic policy uncertainty over this period, which the literature on investment and M&A activity links to increased option value of waiting and reduced acquiror willingness to commit to irreversible transactions. These structural shifts in the regulatory and macroeconomic environment suggest that the conditions governing cross-border acquisitions in the post-2015 period differ materially from those of earlier merger cycles, a distinction that the empirical literature has not yet fully examined.

The literature thus suggests that cross-border acquisition outcomes are shaped not by cross-border status per se but by the specific characteristics of the target country and the transaction, a distinction that motivates the focus of the following sections on country-level distance channels and deal-level determinants.

2.3 Country-Level Distance and Announcement Returns

The literature on country-level distance in cross-border M&A draws on three conceptually distinct but empirically related channels: institutional distance, cultural distance, and economic integration. Each generates a distinct prediction about acquiror announcement returns, and each has been studied primarily in isolation in the existing literature. This thesis estimates all three channels jointly on a single sample, allowing a direct comparison of their relative explanatory power.

The theoretical foundation for the relationship between institutional quality and cross-border acquisition outcomes draws on the law and finance literature initiated by La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998), who document systematic variation in investor protection across legal origin families. Countries with common law traditions tend to offer stronger minority shareholder protection than those with civil law traditions, and this variation in legal institutions shapes the costs of external finance, the severity of agency conflicts, and the ability of outside investors to constrain managerial discretion. In a cross-border acquisition context, these differences imply that the institutional environment of the target country affects both the governance costs the acquiror inherits and the scope for value creation through institutional upgrading. Building on this foundation, Rossi and Volpin (2004) document that cross-border mergers are more likely when the acquiror's home country has stronger investor protection than the target country, consistent with a governance arbitrage motive. Martynova and Renneboog (2008) find that governance differences between acquiror and target country are associated with distinctive deal structures and post-acquisition governance changes. The direct test of whether governance distance is priced in acquiror announcement returns was conducted by Ellis, Moeller, Schlingemann and Stulz (2017), who find that acquirors from better-governed countries earn higher returns when acquiring targets in countries with weaker institutional quality. They attribute this to the portable governance hypothesis: the transfer of superior management practices and governance standards to a target operating in a weaker institutional environment creates value that is anticipated by the market at announcement. In the present thesis, governance distance is operationalised as the difference between the US composite score

and the target country composite score constructed from the six World Governance Indicators, with a positive value indicating stronger US institutional quality.

The cultural distance literature originates with Hofstede (1980), who established the dominant empirical framework for measuring national cultural differences through dimensions including power distance, individualism, masculinity, and uncertainty avoidance. Kogut and Singh (1988) formalise a scalar distance measure based on these dimensions, producing the index that remains the most widely applied cultural distance measure in empirical work. The KS index has attracted methodological criticism, notably from Beugelsdijk, Kostova and Roth (2017), who question whether a single scalar adequately captures the multiple mechanisms through which culture affects cross-border outcomes. These limitations are acknowledged in the context of the variable construction in Section 3.3.3. Ahern, Daminelli and Fracassi (2015) provide the most direct financial evidence on cultural distance and M&A outcomes, documenting that greater cultural distance is associated with lower cross-border merger volume and lower combined announcement returns. Critically, their evidence operates primarily through merger volume and deal structure rather than through the short-window announcement return to the acquiror specifically. H2 therefore tests a more restrictive prediction than Ahern et al. (2015), examining whether cultural distance explains variation in acquiror announcement returns within the sample of completed deals, conditional on the transaction having occurred.

The bilateral trade intensity literature documents that trade relationships are among the strongest predictors of cross-border financial activity including M&A. Portes and Rey (2005) show that information frictions strongly shape cross-border asset flows, with bilateral trade serving as a proxy for the information environment between two countries. Erel, Liao and Weisbach (2012) formalise this in an M&A context, showing that bilateral trade intensity, geographic proximity, and accounting disclosure quality are significant positive predictors of bilateral merger likelihood across a large international sample. Their evidence establishes the informational channel as a driver of which cross-border deals occur. The present thesis extends this to ask whether the same channel affects how completed deals are valued at announcement, with bilateral trade intensity operationalised as the log bilateral trade share from World Bank WITS data. It should be noted, however, that bilateral trade intensity captures not only the information environment between two countries but also broader economic interdependence, so the channel through which trade predicts announcement returns is not unambiguous and may reflect reduced transaction uncertainty as much as reduced informational opacity specifically.

2.4 Relative Deal Size and the Cross-Border Context

Beyond country-level distance, the literature has identified several transaction-level characteristics that systematically predict acquiror announcement returns. Among these, relative deal size is an important transaction-level characteristic in the cross-border M&A literature because it directly connects acquiror commitment to the hubris hypothesis of Roll (1986).

Moeller, Schlingemann and Stulz (2004) document in a large domestic US sample that the announcement return to acquirors is negatively related to acquiror size and positively related to the relative size of the target. The negative acquiror size effect is attributed to empire-building tendencies among large firms and to the greater complexity of integrating large acquisitions. The evidence on relative deal size specifically, defined as the transaction value divided by acquiror market capitalisation, points toward a negative relationship: deals that are large relative to the acquiror are more likely to reflect managerial overreach or winner's curse dynamics where the acquiror has made the most optimistic valuation error in a competitive bidding process.

Whether this prediction extends to cross-border transactions is theoretically ambiguous. The additional due diligence requirements, regulatory complexity, and selection costs inherent in cross-border deals may alter the signal that deal scale conveys to the market. It is therefore an open empirical question whether the domestic negative relationship between relative deal size and acquiror announcement returns holds in a cross-border setting. H4 follows Moeller et al. (2004) in predicting a negative coefficient, while acknowledging that the cross-border context introduces conditions under which this prediction may not hold.

2.5 Research Gaps and Hypotheses Development

Against this backdrop, the existing literature leaves four questions that motivate the present thesis.

First, the foundational studies on which H1, H2, and H3 are based all use samples that end in 2007 or 2008, before the financial crisis and well before the material post-2015 regulatory tightening that has reshaped the cross-border acquisition environment. Ellis et al. (2017) cover 1990 to 2007, Erel et al. (2012) cover 1990 to 2007, and Ahern et al. (2015) cover data through 2008. Whether governance distance, cultural distance, and bilateral trade intensity continue to explain short-run announcement returns in an environment of elevated geopolitical uncertainty,

CFIUS expansion, and post-crisis market conditions is an empirical question these studies cannot answer.

Second, the three country-level distance hypotheses have been examined predominantly in isolation and on different samples and datasets. Estimating governance distance, cultural distance, and bilateral trade intensity simultaneously on the same sample allows a direct comparison of their relative explanatory power and a test of whether any channel retains significance once the others are controlled for.

Third, the relative deal size evidence is almost entirely domestic. Moeller et al. (2004) use US domestic transactions, and the cross-border applicability of the hubris-based prediction has not been examined directly. Whether the negative domestic relationship between relative deal size and acquiror announcement returns extends to cross-border settings remains an open question.

Fourth, the event study literature on cross-border M&A has produced fragmented evidence across different time periods, home countries, and control sets, making it difficult to assess how individual findings generalise. A methodologically consistent examination of a single acquiror country over a period encompassing multiple merger cycles, using a uniform estimation framework and a stepwise regression design, allows the individual contributions of each channel to be traced as controls are added. The four hypotheses formalise these research objectives:

H1 (Governance Distance): Acquisitions of targets in countries with weaker institutional quality than the United States generate higher announcement returns for US acquirors, as investors anticipate value creation through the transfer of superior governance practices to the target.

H2 (Cultural Distance): Greater cultural distance between the United States and the target country is negatively associated with acquiror announcement returns, as investors price anticipated post-merger integration frictions at announcement.

H3 (Bilateral Trade Intensity): Acquisitions in countries with stronger bilateral trade relationships with the United States generate higher announcement returns, as greater economic integration reduces information asymmetry and adverse selection risk in foreign target assessment.

H4 (Relative Deal Size): Larger transactions relative to acquiror market capitalisation are negatively associated with acquiror announcement returns, reflecting the heightened risk of managerial overconfidence and overpayment in materially large deals.

3. Data and Methodology

3.1 Sample Construction and Data Sources

3.1.1 Screening Criteria and Data Sources

The sample is drawn from the Refinitiv Workspace Deals Screener, which provides comprehensive coverage of announced and completed M&A transactions worldwide and is widely used in the academic literature for transaction-level deal data (Erel, Liao and Weisbach, 2012; Moeller, Schlingemann and Stulz, 2004). The initial universe was restricted to transactions satisfying six screening criteria for the period 1 January 2010 to 31 December 2024. First, only completed transactions are included, following standard practice in the event study literature (Andrade, Mitchell and Stafford, 2001; Moeller, Schlingemann and Stulz, 2004). Second, only deals with a reported transaction value of at least USD 50 million are included, following Moeller et al. (2004), to exclude micro-transactions whose announcement returns are likely dominated by noise rather than fundamental value assessments. Third, only acquirors listed on the NYSE or Nasdaq are included, ensuring a homogeneous institutional setting in terms of disclosure requirements and price series availability. Fourth, only US-headquartered acquirors are included, ensuring comparability of home-country governance and reporting obligations across the sample (Ellis et al., 2017). Fifth, only transactions with a non-US target are included, defining the cross-border dimension of the study. Sixth, only transactions in which the acquiror sought to acquire at least 50% of the target's shares are included, restricting the sample to control acquisitions and excluding minority stake purchases (Conn, Cosh, Guest and Hughes, 2005). The sample period begins in 2010 to capture a consistent post-financial-crisis environment, avoiding the structural breaks in market conditions and financing costs produced by the 2008 to 2009 recession.

Daily adjusted closing prices were retrieved from Refinitiv Workspace via the Eikon API. The cross-sectional regression variables were assembled from several additional sources. Governance distance was constructed from the World Bank Worldwide Governance Indicators (Kaufmann, Kraay and Mastruzzi, 2010). Cultural distance was measured using the Kogut–Singh index (Kogut and Singh, 1988) applied to Hofstede dimension scores (Hofstede, 1980).

Bilateral trade intensity is constructed as the log bilateral trade share from World Bank WITS bilateral partner trade files. Relative deal size was constructed by combining Refinitiv deal values with acquiror market capitalisation from Compustat North America Fundamentals Annual, accessed through WRDS. Factor return data and the risk-free rate are from Kenneth French's data library. The extended specification M6 additionally draws on World Bank GDP and exchange rate data and the CEPII bilateral distance database (Mayer and Zignago, 2011). Variable construction is described in detail in Section 3.3.

3.1.2 Sample Attrition

The initial Refinitiv export was reduced to the final sample through six sequential filters, reported in Table 1.

Table 1: Sample Attrition

From initial Refinitiv export to final event study sample of 1,157 completed cross-border acquisitions.

Filter step	N dropped	N remaining
Raw Refinitiv export		1,801
After missing Acquiror PermID	22	1,779
After subsidiary filter	221	1,558
After SPAC filter	77	1,481
After failed price pulls	55	1,426
After estimation / event / overlap filter	257	1,169
After post-hoc data quality exclusions	12	1,157

Note: The overlap filter excludes the later of two deals announced by the same acquiror within 255 trading days to reduce estimation-window contamination. Post-hoc exclusions comprise residual SPAC cases and observations with idiosyncratic price data problems including reverse split adjustment failures, extreme single-day price moves, and estimation windows contaminated by bankruptcy proceedings.

Twenty-two deals were removed because the Refinitiv Workspace record did not contain a valid acquiror identifier. A further 221 deals were excluded because the reported acquiror was a subsidiary vehicle rather than the ultimate parent company, which would produce price series reflecting the parent's overall performance rather than the transaction-specific announcement effect. Seventy-seven transactions flagged as reverse mergers in the Deals Screener were removed because these predominantly reflect SPAC-type structures whose announcement-period price dynamics are driven by trust redemption mechanics rather than genuine market valuation of the target. After these three pre-pull filters, 1,481 deals remained eligible for price retrieval. Of these, usable price data were obtained for 1,426 observations; the remaining 55 were dropped due to gaps in the available price history.

The final event study sample was then determined by applying three additional restrictions. Deals were excluded if the available price history yielded fewer than 120 valid trading days within the estimation window, if the full event window was not observable in the price series, or if the same acquiror had announced another deal within the preceding 255 trading days, in which case the later deal was excluded to prevent estimation-window contamination. Together these restrictions reduced the sample from 1,426 to 1,169 deals.

A final post-hoc review removed 12 additional observations through a systematic validation of price series quality, applying pre-specified criteria uniformly and not on the basis of announcement-period return outcomes. Three residual SPAC cases not identified by the earlier reverse merger flag were excluded. Nine further observations were excluded on data quality grounds: three exhibited reverse split adjustment failures, one had a corrupted price observation in the estimation window, one was a non-US listed company incorrectly included in the initial pull, one had an estimation window dominated by bankruptcy proceedings, and three exhibited extreme single-day price moves that could not be attributed to identifiable economic events. The full list of excluded observations is provided in Appendix A1. The resulting final sample consists of 1,157 completed cross-border acquisitions.

The effective regression sample is smaller than the event study sample because not all explanatory variables are observed for every transaction. Specifications M1 through M3 use 1,048 observations after accounting for missing firm-level controls. The full joint specification M4 uses 1,038 observations after additionally requiring a successful Compustat match for relative deal size. The extended specification M6 uses 1,020 observations due to additional missing values in the international control variables. Three target countries have no usable WITS coverage, resulting in 12 observations excluded from all specifications that include bilateral trade intensity; these countries are identified in Section 3.3.4.

3.2 Event Study Methodology

3.2.1 Rationale and Overview

To measure the short-run stock market reaction of acquirors to cross-border acquisition announcements, this study employs the event study methodology. Following the framework formalised by Brown and Warner (1985) and reviewed by MacKinlay (1997), the approach compares each acquiror's realised stock return around the announcement date with a counterfactual benchmark return estimated over a pre-event window. The difference between

the two is the abnormal return, interpreted as the market's assessment of the value implications of the announcement. This interpretation rests on the assumption of semi-strong market efficiency: if stock prices rapidly incorporate publicly available information, short-window abnormal returns provide a timely and informationally precise measure of the market's reaction (Fama, 1991). Confounding events accumulate over longer horizons, making short windows preferable for isolating the announcement effect. By conditioning on a pre-estimated expected return, the methodology additionally isolates the deal-specific component of the price reaction from concurrent market-wide movements. It should be noted that short-window returns may also reflect information leakage, concurrent news, and market microstructure noise rather than deal fundamentals alone.

At the deal level, the cumulative abnormal return (CAR) measures the total abnormal return accumulated by the acquiror over a defined event window. At the sample level, the cumulative average abnormal return (CAAR) aggregates individual CARs and, combined with appropriate statistical tests, allows inference about whether the average market reaction across all transactions differs significantly from zero. Deal-level CARs serve as the dependent variable in the cross-sectional regression analysis of Section 3.4.

The primary expected return benchmark is the Capital Asset Pricing Model, which ensures direct comparability with Ellis et al. (2017) and Erel et al. (2012) and is appropriate for the short-window focus of the analysis, over which risk adjustment explains only a small fraction of daily return variation (Brown and Warner, 1985; MacKinlay, 1997). The Fama and French (1993) three-factor model is estimated in parallel as a robustness check. Both specifications are described in Section 3.2.4.

3.2.2 Event Date Definition

The event date is defined as the first trading day on which the market can incorporate the announcement. Announcements on trading days are assigned $t = 0$ on that day; announcements on non-trading days are assigned to the next available trading day. This convention follows Brown and Warner (1985) and is standard in the event study literature. Since cross-border acquisitions are frequently announced outside US trading hours, particularly for transactions involving European or Asian targets, the market reaction may begin to be incorporated into prices before $t = 0$. The inclusion of $t = -1$ in the primary event window CAR(–1,+1) provides partial coverage for such cases.

3.2.3 Event and Estimation Windows

The primary event window is CAR(–1,+1). A three-day window is standard in the M&A event study literature (Andrade, Mitchell and Stafford, 2001; Moeller, Schlingemann and Stulz, 2004) because it captures same-day price incorporation and the possibility that information reaches the market before the official announcement date through press leaks or analyst briefings. The inclusion of $t = 1$ accounts for incomplete within-session price adjustment, which is particularly relevant for cross-border transactions given time zone differences and the greater information complexity of foreign target assessments. Four additional windows are examined to assess sensitivity to window choice: CAR(0,0) isolates the pure announcement day effect; CAR(–1,0) captures the announcement day and any pre-announcement leakage; CAR(–1,+5) assesses whether the initial reaction is sustained over the following week; and CAR(–5,+5) captures any pre-announcement drift over a symmetric eleven-day window.

Model parameters are estimated over the estimation window $t = -250$ to $t = -30$ relative to the announcement date, providing approximately one trading year of data while ensuring that estimated parameters reflect the firm's risk profile in the period immediately preceding the transaction. A minimum of 120 valid trading days within the estimation window is required, following Brown and Warner (1985).

The 30-trading-day gap between the end of the estimation window and the start of the event window prevents announcement-related price movements from contaminating the benchmark parameter estimates. Pre-announcement price run-ups driven by rumours, information leakage, or speculative trading are commonly observed in M&A settings (Schwert, 1996) and would introduce upward bias into the estimated parameters in the absence of such a gap. Medium-term pre-announcement price drift over the window $t = -210$ to $t = -11$ is separately computed and included as a control variable in the cross-sectional regressions.

3.2.4 Return Calculation and Normal Return Models

Daily stock returns are computed as log returns:

$$R_{it} = \ln\left(\frac{P_{it}}{P_{i,t-1}}\right)$$

where P_{it} is the adjusted daily closing price of firm i on day t. Log returns are used rather than simple arithmetic returns because they are time-additive and approximately normally

distributed for small daily price changes, which simplifies statistical inference (Campbell, Lo and MacKinlay, 1997).

Excess returns are computed by subtracting the daily risk-free rate R_{ft}, taken from Kenneth French's data library. Expected excess returns are modelled using the Capital Asset Pricing Model:

$$R_{it}^{e} = \alpha_i + \beta_i(R_{mt} - R_{ft}) + \varepsilon_{it}$$

where $R_{mt} - R_{ft}$ is the daily excess market return. The parameters α_i and β_i are estimated by OLS over the estimation window. Abnormal returns under the CAPM are:

$$AR_{it}^{CAPM} = R_{it}^{e} - \hat{\alpha}_i - \hat{\beta}_i(R_{mt} - R_{ft})$$

As a robustness check, expected returns are also estimated using the Fama and French (1993) three-factor model:

$$R_{it}^{e} = \alpha_i + \beta_{m,i}(R_{mt} - R_{ft}) + \beta_{s,i}SMB_t + \beta_{h,i}HML_t + \varepsilon_{it}$$

where SMB_t and HML_t are the daily size and value factor returns. The FF3 model provides a more demanding benchmark by controlling for size and value-related return components.

3.2.5 Cumulative Abnormal Returns and Statistical Tests

For each event window (τ_1, τ_2), the cumulative abnormal return for deal i is:

$$CAR_i(\tau_1, \tau_2) = \sum_{t=\tau_1}^{\tau_2} A\,R_{it}$$

The CAR is expressed in decimal form in all calculations and reported as a percentage in the text. The sample-wide cumulative average abnormal return is:

$$CAAR(\tau_1, \tau_2) = \frac{1}{N}\sum_{i=1}^{N} CA\,R_i(\tau_1, \tau_2)$$

Statistical significance is assessed using three complementary procedures to ensure that conclusions do not depend on any single distributional assumption. First, a cross-sectional t-test evaluates whether the mean CAR differs from zero, assuming homoskedasticity across firms. Second, the Patell (1976) standardised residual test standardises each abnormal return by the firm-specific residual standard deviation from the estimation window, down-weighting

high-volatility firms and increasing sensitivity to systematic announcement effects when cross-sectional variation in return volatility is large. Before computing parametric test statistics, CARs are winsorised at the 1st and 99th percentiles to limit the influence of extreme outcomes, following Moeller et al. (2004). Third, the Wilcoxon signed-rank test evaluates whether the median CAR differs from zero without relying on any distributional assumption, which is particularly important given that announcement return distributions typically exhibit excess kurtosis and non-normality. The Wilcoxon test is applied to pre-winsorised CARs to preserve the original rank structure of the data. Heteroskedasticity-consistent HC3 standard errors (White, 1980) are additionally employed in the cross-sectional regression analysis of Section 4.5.3 as a robustness check.

An overlap filter excludes the later of two deals announced by the same acquiror within 255 trading days, preventing the earlier announcement from contaminating the estimation window of the subsequent observation.

3.3 Variable Construction

3.3.1 Dependent Variable

The dependent variable in the cross-sectional regressions is the CAPM-based CAR(–1,+1). It is expressed in decimal form in all regression specifications. The dependent variable is winsorised at the 1st and 99th percentiles before estimation, consistent with the treatment applied in Section 3.2.5, and this winsorisation is held constant across all specifications to ensure comparability of coefficient estimates across the stepwise structure.

3.3.2 H1: Governance Distance

The first hypothesis tests whether US acquirors earn higher announcement returns when acquiring targets in countries with weaker institutional quality than the United States. The theoretical mechanism is institutional arbitrage: by transferring superior governance practices and shareholder protection frameworks to a target operating in a weaker institutional environment, the acquiror may generate value that the target could not produce independently (Ellis, Moeller, Schlingemann and Stulz, 2017). The predicted sign on governance distance is therefore positive.

Governance quality is measured using the World Bank Worldwide Governance Indicators, which provide annual composite governance scores for over 200 countries based on six

dimensions: control of corruption, government effectiveness, political stability and absence of violence, rule of law, regulatory quality, and voice and accountability (Kaufmann, Kraay and Mastruzzi, 2010). The composite score for each country-year is the simple average across all six dimensions, following Ellis et al. (2017). Governance distance for deal i is defined as:

$$GovDist_i = WGI_{US,t} - WGI_{j,t}$$

where j is the target country and t is the announcement year. A positive value indicates stronger US institutional quality. Because WGI data are not yet available for 2024, values for 2023 are carried forward for deals announced in 2024, consistent with standard practice in studies using this dataset. Country name mapping details are provided in Appendix A2.

3.3.3 H2: Cultural Distance

The second hypothesis tests whether greater cultural distance between the United States and the target country is negatively associated with acquiror announcement returns. The theoretical mechanism is cultural friction: more culturally distant targets are harder to integrate, generating higher coordination costs and greater risk of communication failures during the post-merger period (Ahern, Daminelli and Fracassi, 2015). If investors anticipate these frictions at the time of announcement, acquisitions involving more culturally distant targets should receive more negative market reactions. The predicted sign on cultural distance is therefore negative.

Cultural distance is measured using the Kogut–Singh index (Kogut and Singh, 1988), which remains the most widely applied operationalisation of cultural distance in the international business and finance literatures (Beugelsdijk, Kostova and Roth, 2017). The index is based on the four original Hofstede cultural dimensions: power distance, individualism, masculinity, and uncertainty avoidance. The two additional dimensions available in the extended Hofstede dataset are excluded to maintain consistency with the original Kogut–Singh specification and with the majority of studies applying this measure (Ahern et al., 2015). The index is defined as:

$$KS_j = \frac{1}{4} \sum_{k=1}^{4} \frac{\left(I_{kj} - I_{k,US}\right)^2}{V_k}$$

where I_{kj} is the score of target country j on dimension k, $I_{k,US}$ is the corresponding US score, and V_k is the cross-country variance of dimension k computed across all countries in the Hofstede dataset. The variance standardisation ensures that each dimension contributes equally

to the index on a normalised scale, preventing dimensions with wider empirical dispersion from dominating the distance measure. The squared difference ensures the index is always non-negative, though it treats positive and negative deviations from the US score symmetrically without modelling their economic direction.

Hofstede dimension scores are time-invariant, so the same KS index value is assigned to all deals targeting a given country regardless of the announcement year. For target countries not directly covered by the Hofstede dataset, cultural distance scores are proxied using culturally and geographically proximate countries; in total 15 target countries are covered through proxies, accounting for 22 deals in the regression sample. Proxy assignments and known limitations of the KS index are provided in Appendix A3.

3.3.4 H3: Bilateral Trade Intensity

The third hypothesis tests whether acquirors earn higher announcement returns when acquiring targets in countries with stronger bilateral trade relationships with the United States. The theoretical mechanism is informational familiarity: bilateral trade relationships generate sustained commercial knowledge about foreign markets and produce information spillovers that reduce information asymmetry and adverse selection risk at announcement (Erel, Liao and Weisbach, 2012; Portes and Rey, 2005). It should be noted, however, that bilateral trade intensity captures not only the information environment between two countries but also broader economic interdependence, so the channel through which trade predicts announcement returns is not unambiguous. The predicted sign on trade intensity is therefore positive.

Bilateral trade intensity is constructed from World Bank WITS bilateral partner trade files covering US exports and imports by partner country. For each deal, the variable is defined as:

$$TradeInt_{jt} = \ln\left(\frac{Exports_{US,j,t} + Imports_{US,j,t}}{TotalTrade_{US,t}}\right)$$

where $Exports_{US,j,t}$ and $Imports_{US,j,t}$ are US exports to and imports from target country j in announcement year t, and $TotalTrade_{US,t}$ is the sum of bilateral trade across all individual partner countries in that year. The resulting measure is a log bilateral trade share, which is always negative since no single country accounts for more than 100% of US trade, with less negative values indicating stronger bilateral relationships. The log transformation is applied because the raw bilateral trade share distribution is strongly right-skewed, and the log produces a more symmetric distribution that reduces the influence of dominant trading partners. Unlike

cultural distance, bilateral trade intensity varies annually with actual trade flows. Because the WITS series ends in 2023, values for 2023 are carried forward for 2024 deal announcements. Three target countries have no usable WITS coverage (South Africa, Puerto Rico, and Taiwan) and are excluded from all specifications that include trade intensity, resulting in 12 excluded observations.

3.3.5 H4: Relative Deal Size

The fourth hypothesis examines the relationship between relative deal size and acquiror announcement returns in the cross-border context. The domestic US evidence of Moeller, Schlingemann and Stulz (2004) documents a negative relationship between relative deal size and acquiror returns, attributing this to the hubris hypothesis of Roll (1986). In the cross-border setting the sign is theoretically ambiguous: a willingness to commit substantial resources may signal strategic conviction and superior target knowledge rather than overconfidence, and only financially strong acquirors are typically capable of executing large cross-border transactions. H4 is therefore tested as a two-sided alternative, with the sign to be determined empirically.

Relative deal size is defined as:

$$RelSize_i = \ln\left(\frac{DealValue_i}{MarketCap_i}\right)$$

where $DealValue_i$ is the reported transaction value in USD millions from Refinitiv Workspace and $MarketCap_i$ is the acquiror's market capitalisation at the fiscal year end preceding the announcement, computed from Compustat North America Fundamentals Annual. The most recent fiscal year end preceding the announcement by no more than 548 days is used as the reference period, following Moeller et al. (2004), to exclude stale market capitalisation values while avoiding look-ahead bias. Acquiror market capitalisation was successfully matched for 1,095 of the 1,157 deals in the final sample, a coverage rate of 94.6%.

The log transformation is applied because the raw ratio is strongly right-skewed, and the log makes the coefficient interpretable as a semi-elasticity. Because $\ln(DealValue/MarketCap) = \ln(DealValue) - \ln(MarketCap)$, log market capitalisation is mechanically embedded in the relative deal size variable. Including both as separate regressors introduces collinearity, confirmed by a VIF exceeding 15 for log market capitalisation when both are included simultaneously. Log market capitalisation is therefore included as a

standalone control in M1 through M3 and excluded from M4 through M6 once relative deal size is introduced, following Moeller et al. (2004).

3.3.6 Control Variables

The regression includes several groups of control variables that account for observable deal and firm characteristics known to affect announcement returns independently of the four hypothesis variables, following the standard specification in the cross-border M&A event study literature (Moeller, Schlingemann and Stulz, 2004; Ellis, Moeller, Schlingemann and Stulz, 2017).

At the deal level, log deal value is included as the natural logarithm of reported transaction value in USD millions. In specifications M1 through M3, log deal value and log market capitalisation enter separately as controls for transaction scale. In specifications M4 through M6, log market capitalisation is excluded and log deal value remains as a standalone scale control. Payment method is captured through a cash dummy equal to one for all-cash transactions and a stock dummy equal to one for all-stock transactions, with all other payment structures as the omitted reference group. Prior research consistently documents that cash-financed deals receive more positive market reactions than equity-financed deals, reflecting the adverse selection interpretation that stock issuance signals acquiror overvaluation (Myers and Majluf, 1984; Travlos, 1987). Target public status is controlled for using indicators for publicly listed and subsidiary targets, with private targets as the reference category. Fuller, Netter and Stegemoller (2002) and Chang (1998) document that acquisitions of privately held and subsidiary targets generate more positive announcement returns than acquisitions of publicly listed targets, reflecting lower competition and the absence of an established market price.

At the firm level, five characteristics are constructed from Compustat North America Fundamentals Annual and included in all specifications. Leverage is total long-term debt divided by total assets. Book-to-market is the ratio of book value of equity to market capitalisation at the fiscal year end preceding the announcement. Cash flow per equity is operating cash flow divided by book equity. Pre-announcement runup is the acquiror's CAPM-based cumulative abnormal return over the window $t = -210$ to $t = -11$ relative to the announcement date. This window maintains a clear separation from the event period and captures pre-announcement price drift not absorbed by the estimation window gap. Sigma is the standard deviation of CAPM residuals over the estimation window, capturing firm-level return volatility during the pre-announcement period and controlling for systematic differences in volatility across deal types or geographies.

Five additional country-level controls are included in M6 only to assess robustness to further country characteristics. Because several of these controls, particularly geographic distance and GDP, are likely correlated with the governance, cultural, and trade variables underlying H1 through H3, M6 should be interpreted as a demanding robustness check rather than a preferred baseline specification. Log GDP of the target country is the natural logarithm of annual nominal GDP in current USD from the World Bank World Development Indicators, controlling for target country size. Log geographic distance is the natural logarithm of the great-circle distance between the US and target country capitals from the CEPII database (Mayer and Zignago, 2011), capturing physical remoteness and coordination costs. Log FX volatility is the natural logarithm of the standard deviation of year-on-year changes in the official annual average exchange rate between the target country currency and the US dollar. Serial acquiror is a binary indicator equal to one if the same acquiror had previously announced at least one other cross-border acquisition within the sample prior to the focal transaction, proxying for acquisition experience. Prior deal same country is a binary indicator equal to one if the same acquiror had previously announced an acquisition in the same target country within the sample, proxying for country-specific familiarity.

3.4 Cross-Sectional Regression Design

3.4.1 Model Specification

To examine whether cross-sectional variation in announcement returns is systematically related to the four theorised channels, the study estimates ordinary least squares regressions at the deal level. OLS is the appropriate estimator because the dependent variable is continuous and unbounded, with no theoretical reason to expect censoring or truncation in the CAR distribution, and the primary interest lies in the conditional mean association between announcement returns and the explanatory variables (Wooldridge, 2010). The full specification, estimated in M4, takes the following form:

$$CAR_i = \alpha + \beta_1 GovDist_i + \beta_2 KS_i + \beta_3 TradeInt_i + \beta_4 RelSize_i + \gamma' Controls_i + \varepsilon_i$$

where $Controls_i$ includes the deal-level controls, firm-level controls, and fixed effects for acquiror industry and target region. Reduced specifications M1 through M3 enter the hypothesis variables sequentially as described in Section 3.4.2.

Each coefficient β_k represents the expected change in CAR(–1,+1) associated with a one-unit increase in the corresponding hypothesis variable, holding all other variables constant. Because

the dependent variable is in decimal form, a coefficient of 0.003 implies a 0.3 percentage point change in CAR per unit change in the independent variable. Economic significance is assessed by translating each coefficient into the expected CAR change associated with a one standard deviation increase in the respective variable, expressed in basis points. H1 predicts $\beta_1 > 0$, H2 predicts $\beta_2 < 0$, H3 predicts $\beta_3 > 0$, and H4 is tested as a two-sided alternative.

The adjusted R^2values are expected to be modest given that idiosyncratic deal-level noise dominates short-window announcement return variation. The objective is not to maximise explained variance but to test whether the four hypothesised channels carry statistically significant and economically meaningful associations with announcement returns after controlling for standard deal and firm characteristics.

Potential multicollinearity among the hypothesis variables was assessed using pairwise correlations and variance inflation factors computed on the M4 regression sample. The highest pairwise correlation is between the KS index and log bilateral trade intensity, reflecting the tendency for culturally proximate countries to also be stronger US trading partners. All VIFs for the hypothesis variables remain well below conventional thresholds, confirming the absence of multicollinearity concerns; full VIF values are reported in Appendix A8.

3.4.2 Stepwise Structure M1-M6

The hypothesis variables are introduced sequentially across six specifications rather than entered jointly in a single model. This stepwise approach allows an assessment of how each coefficient changes as additional controls and competing variables are introduced, and reveals the incremental improvement in model fit through the change in adjusted R^2across specifications, bearing in mind that the incremental fit depends on the order in which variables are introduced.

The six specifications build cumulatively from M1 to M4. M1 establishes the baseline with deal-level and firm-level controls only, including log market capitalisation as a standalone size control. M2 adds governance distance. M3 further adds cultural distance. M4 introduces bilateral trade intensity and relative deal size jointly, completing the four-hypothesis specification and replacing log market capitalisation with log relative deal size as described in Section 3.3.5. M5 and M6 are parallel extensions of M4 rather than sequential steps: M5 augments M4 with year fixed effects, and M6 augments M4 with the five international controls described in Section 3.3.6.

Year fixed effects are introduced only in M5 rather than in all baseline models. The temporal structure of the results is itself a finding of interest: aggregate time trends in the valuation of cross-border acquisitions are a substantive research question rather than a nuisance to be absorbed. Including year fixed effects in all specifications would absorb this variation by construction. Year fixed effects are therefore retained as a robustness check in M5 rather than as a default control.

For H1, two additional specifications extend the analysis beyond the stepwise framework. The piecewise specification decomposes governance distance into separate positive and negative gap terms, allowing the estimated effect to differ depending on the direction of the institutional gap. The interaction specification augments M2 with a post-2015 indicator and its interaction with governance distance, testing whether the governance premium changes across the two subperiods. Both specifications use the same control vector and clustering approach as the baseline and are reported in Appendix A4.

For H2, a proxy robustness check re-estimates the baseline specification after excluding the 22 deals involving the 15 target countries with proxied Hofstede scores, testing whether the H2 result is sensitive to measurement imprecision at the margins of Hofstede coverage. No analogous extension specifications are estimated for H3; distributional and temporal heterogeneity in the trade intensity effect are addressed through the split-sample analysis and the subperiod regression.

A split-sample analysis is conducted for H1, H2, and H3 to examine whether full-sample results conceal heterogeneous effects across the distribution of each country-level variable. For each variable the M4 specification is estimated separately on above-median and below-median subsamples, following Ellis et al. (2017). The subsamples are defined by the level of the hypothesis variable, not by the announcement year. Temporal heterogeneity is addressed separately through a subperiod regression that splits the sample at end-2015.

3.4.3 Standard Errors, Fixed Effects, and Sample Variation

Standard errors are clustered at the target country level throughout all specifications. The rationale is that multiple deals share the same target country and therefore the same values of the country-level explanatory variables: governance distance, cultural distance, and bilateral trade intensity do not vary across deals within the same country in the same announcement year, though they do vary across years as WGI and WITS data are updated annually. This within-country-year constancy induces error correlation among deals targeting the same country that

would cause conventional standard errors to understate the true sampling variability of the coefficient estimates (Petersen, 2009). Clustering at the target country level produces standard errors that are robust to this within-group dependence and yields more conservative inference than heteroskedasticity-only corrections.

The regression sample spans 63 unique target countries across all specifications, which is sufficient for the asymptotic properties of cluster-robust standard errors to provide reliable inference (Cameron and Miller, 2015). As a further robustness check, the full M4 specification is re-estimated with HC3 heteroskedasticity-robust standard errors; results are reported in Section 4.5.

Region and acquiror industry fixed effects are included in all specifications. Region fixed effects absorb time-stable unobserved heterogeneity related to the geographic location of the target, such as common legal traditions, regional economic conditions, or trade agreements. Acquiror industry fixed effects absorb industry-specific variation in the propensity to make cross-border acquisitions and in the typical announcement return patterns associated with different acquiror industries. Year fixed effects are included only in M5.

The effective sample size varies across specifications as a consequence of differential data availability. The baseline dataset contains 1,157 transactions. Specifications M1 through M3 use 1,048 observations after accounting for missing firm-level controls. Specifications M4 and M5 use 1,038 observations after additionally requiring a successful Compustat match for relative deal size. The extended specification M6 uses 1,020 observations due to additional missing values in the international control variables. The missing values are not necessarily random, meaning that the effective samples across specifications may differ not only in size but also in composition, and changes in coefficient estimates across the M1-M3 to M4-M6 boundary may partly reflect differences in sample composition rather than the addition of new variables.

4. Results

4.1 Descriptive Statistics

4.1.1 Sample Composition

The final sample comprises 1,157 completed cross-border acquisitions announced by US-listed acquirors between 2010 and 2024.

Deal volume varies substantially over time, peaking at 102 transactions in 2014 and 98 in 2015, before declining in the post-2015 period. The trough of the sample is 2020 with only 38 observations, coinciding with the COVID-19 pandemic and the associated disruption in global dealmaking.

In geographic terms, the sample is heavily concentrated in a small number of developed markets. The United Kingdom, Canada, and Germany alone account for 45.8% of all transactions, and the ten largest target countries together represent 72.5% of the sample. Under the MSCI classification, 88.6% of deals involve a developed-market target. The 132 emerging market deals span 31 nations, with Brazil, Mexico, China, and India representing the largest emerging market target countries. A complete listing of all target countries with at least 10 observations, including mean announcement returns, is provided in Appendix A5.

The composition by target status shows a predominance of non-public targets: subsidiaries account for 45.3% of deals and private targets for a further 39.1%, while publicly listed targets account for only 13.7%. Payment structure is dominated by cash, which accounts for 67.4% of all transactions. Within the 924 deals with a classifiable payment structure, excluding the 201 transactions for which Refinitiv records no payment method and the 32 deals classified as other or choice-based structures, 84.4% are cash-only and only 2.2% are stock-only. High Technology and Industrials are the two largest acquiror industries, jointly accounting for 37.9% of the sample, with a similar distribution on the target side. Listing venues are concentrated on the two main US exchanges, with 65.7% of acquirors trading on the New York Stock Exchange and 34.3% on Nasdaq. Finally, 50.1% of deals are made by serial acquirors and 6.2% involve a target country in which the same acquiror had previously announced a deal, indicating that a meaningful share of the sample consists of firms with prior cross-border experience. A comparison of announcement returns between the 1,051 deals successfully matched to Compustat and the unmatched remainder yields no statistically significant difference, confirming that the Compustat subsample is not systematically selected on the dependent variable.

Table 2: Sample Composition

Sample consists of 1,157 completed cross-border acquisitions announced by US-listed acquirors between 2010 and 2024.

Panel A: Distribution by year

Year	N	Mean deal value	Median deal value
2010	91	486.6	199.9

Year	N	Mean deal value	Median deal value
2011	86	715.6	240.6
2012	87	580.5	175.3
2013	83	444.4	208.1
2014	102	983.1	219.7
2015	98	745.4	200.6
2016	74	655.0	227.5
2017	76	604.1	189.3
2018	74	1,563.0	257.5
2019	68	861.4	244.9
2020	38	1,948.0	382.4
2021	99	1,317.8	344.1
2022	59	483.7	201.5
2023	60	1,363.8	206.7
2024	62	725.3	245.7
Total	1,157		

Panel B: Top 15 target nations

Target nation	N	% of sample
United Kingdom	238	20.6%
Canada	192	16.6%
Germany	100	8.6%
France	65	5.6%
Australia	55	4.8%
Netherlands	46	4.0%
Israel	44	3.8%
Switzerland	39	3.4%
Italy	34	2.9%
Sweden	26	2.2%
Spain	24	2.1%
Brazil	23	2.0%
Mexico	22	1.9%
Ireland	21	1.8%
Denmark	21	1.8%

Panel C: Distribution by target public status

Target status	N	% of sample
Subsidiary	524	45.3%
Private	452	39.1%
Public	159	13.7%

Target status	N	% of sample
Joint Venture	22	1.9%

Panel D: Distribution by payment method

Payment method	N	% of sample
Cash only	780	67.4%
Stock only	20	1.7%
Cash and stock combination	124	10.7%
Choice between cash, stock, or combination	11	1.0%
Other	21	1.8%
Unknown	201	17.4%

Panel E: Distribution by acquiror industry

Acquiror industry	N	% of sample
High Technology	229	19.8%
Industrials	210	18.2%
Healthcare	162	14.0%
Materials	121	10.5%
Financials	108	9.3%
Consumer Staples	71	6.1%
Consumer Products and Services	56	4.8%
Energy and Power	54	4.7%
Real Estate	54	4.7%
Telecommunications	36	3.1%
Media and Entertainment	32	2.8%
Retail	24	2.1%

Panel F: Distribution by target industry

Target industry	N	% of sample
High Technology	259	22.4%
Industrials	180	15.6%
Healthcare	156	13.5%
Materials	116	10.0%
Consumer Products and Services	88	7.6%
Financials	85	7.3%
Consumer Staples	66	5.7%
Energy and Power	59	5.1%
Media and Entertainment	42	3.6%
Telecommunications	39	3.4%
Retail	34	2.9%
Real Estate	33	2.9%

Note: Deal values in Panel A are reported in USD millions. Panel B reports the 15 most frequent target nations, which jointly account for 82.1% of the sample. Percentages in Panels C through F are calculated relative to the full sample of 1,157 deals. Industry and target nation classifications follow Refinitiv definitions.

To illustrate the breadth of transactions in the sample, three deals are worth highlighting. The largest transaction by deal value is S&P Global's acquisition of IHS Markit, a UK-based financial data and analytics provider, announced in November 2020 at USD 43.5 billion. The deal was framed as a data platform combination targeting high-growth adjacencies including ESG, climate, and private assets, but was financed through a combination of cash and stock and received a three-day announcement return of -2.2%, consistent with the adverse market reaction to equity-financed deals documented in Section 4.2. At the other end of the return distribution, Level 3 Communications' acquisition of Global Crossing, a Bermuda-incorporated telecommunications operator, announced in April 2011 at USD 3.0 billion, generated one of the highest announcement returns among large deals in the sample at 17.3%. The market appeared to reward the highly complementary network fit and the projected synergies from combining fiber infrastructure across three continents. The most negative large-deal reaction belongs to Mylan's USD 7.2 billion acquisition of Swedish drugmaker Meda, announced in February 2016, which produced a three-day return of -18.5%. The deal attracted immediate criticism for a 92% acquisition premium at a time when pharmaceutical valuations were declining broadly, illustrating how overpayment concerns can dominate the announcement-period market reaction even when the underlying strategic rationale is defensible.

4.1.2 Descriptive Statistics for Regression Variables

Table 3 reports descriptive statistics for all variables entering the cross-sectional regression analysis. The full sample of 1,157 deals is available for the dependent variable and the deal-level controls. Coverage is slightly lower for the firm-level controls, which require a successful Compustat match and are therefore available for 1,051 to 1,048 observations depending on the variable, and for the hypothesis variables bilateral trade intensity and relative deal size, for which 12 and 62 observations respectively could not be constructed due to missing external data coverage. The combined reduction in the full joint specification is 119 unique deals, yielding a regression sample of 1,038 observations in M4.

Table 3: Descriptive Statistics for Regression Variables

Full regression dataset. Variable coverage noted where N < 1,157.

Variable	N	Mean	SD	p25	p50	p75	Min	Max
Dependent variable								
CAR(–1,+1), CAPM	1,157	0.0032	0.0553	–0.0141	0.0035	0.0238	–0.2062	0.1913
Hypothesis variables								
Governance distance (H1)	1,157	–0.06	0.57	–0.41	–0.25	–0.03	–0.80	2.41
KS cultural distance (H2)	1,157	0.83	0.88	0.20	0.35	1.37	0.00	3.64
Log trade intensity (H3)	1,145	–3.75	1.33	–4.43	–3.63	–3.10	–9.81	–1.78
Log relative deal size (H4)	1,095	–3.05	1.56	–4.04	–3.04	–1.96	–8.25	1.44
Deal controls								
Log deal value	1,157	5.66	1.26	4.65	5.41	6.40	3.91	10.68
Cash dummy	1,157	0.67	0.47	0	1	1	0	1
Stock dummy	1,157	0.02	0.13	0	0	0	0	1
Public dummy	1,157	0.14	0.34	0	0	0	0	1
Subsidiary dummy	1,157	0.45	0.50	0	0	1	0	1
Firm controls (Compustat subsample)								
Log market capitalisation	1,051	8.60	1.70	7.40	8.46	9.73	3.40	13.58
Leverage	1,051	0.24	0.19	0.10	0.22	0.34	0.00	1.44
Book-to-market	1,050	0.42	0.35	0.22	0.36	0.57	–1.78	3.64
Cash flow / equity	1,048	0.23	2.26	0.12	0.21	0.32	–50.90	44.48
Pre-announcement runup	1,157	0.00	0.14	–0.07	0.00	0.07	–0.94	0.75
Sigma	1,157	0.02	0.01	0.01	0.02	0.02	0.00	0.07
International controls								
Log GDP (target)	1,149	27.96	1.06	27.32	28.23	28.66	22.02	30.54
Log geographic distance	1,147	8.75	0.58	8.84	8.91	8.97	7.64	9.65
Log FX volatility	1,133	–2.83	1.64	–3.85	–3.22	–2.45	–6.69	6.25

Note: CAR(–1,+1) reported in decimal form; all other continuous variables rounded to two decimal places. Variable definitions are provided in Section 3.3.

The dependent variable, CAR(–1,+1), has a mean of 0.32% and a median of 0.35% in decimal form, with a standard deviation of 5.53 percentage points. The full distributional properties are reported in Section 4.1.3.

Among the hypothesis variables, governance distance has a mean of -0.064 and a median of -0.246, confirming that the majority of target countries in the sample have institutional quality scores equal to or stronger than the United States. Negative values are expected given the sample's heavy concentration in high-governance developed markets, and imply that only 23.6% of deals involve a target country with meaningfully weaker governance than the US

acquiror, which limits the scope for institutional arbitrage to manifest. The Kogut–Singh cultural distance index has a mean of 0.832 and a median of 0.354, with a strongly right-skewed distribution. The median is less than half the mean, indicating that a small number of culturally distant target countries pull the average upward. The index ranges from zero for Anglo-Saxon markets to 3.640 for the most culturally distant targets in the sample. Log bilateral trade intensity has a mean of -3.75, corresponding to a bilateral trade share of approximately 2.4% of total US trade, and is available for 1,145 of the 1,157 deals. Log relative deal size has a mean of -3.05 and a median of -3.04, corresponding to a median raw ratio of 4.8% of acquiror market capitalisation, confirming that most acquisitions are small relative to the acquiring firm. The raw ratio distribution is strongly right-skewed, with a maximum of 423.7% of acquiror market capitalisation, motivating the log transformation used throughout.

Among the firm-level controls, median leverage is 0.220, median book-to-market is 0.364, and the median pre-announcement runup is near zero at -0.001, indicating no systematic directional drift in acquiror share prices in the period preceding the announcement. Cash flow per equity exhibits a wide range, from -50.9 to 44.5, reflecting the presence of both highly leveraged and highly profitable acquirors in the sample.

Table 4 reports pairwise correlations among the four hypothesis variables. The highest correlation is -0.453 between the Kogut–Singh index and log bilateral trade intensity, reflecting the tendency for culturally proximate countries to also be stronger US trading partners. All remaining pairwise correlations are below 0.25 in absolute value. Variance inflation factors for all hypothesis variables remain below 1.45, confirming that multicollinearity is not a concern for the baseline regression design. The full pairwise correlation matrix across all regression variables is reported in Appendix A7, and the complete VIF table is provided in Appendix A8.

Table 4: Pairwise Correlations Among Hypothesis Variables

Pairwise Pearson correlations among the four hypothesis variables. N = 1,085 (listwise deletion).

Variable	(1)	(2)	(3)	(4)
(1) Governance distance (H1)	1.00			
(2) KS cultural distance (H2)	0.24***	1.00		
(3) Log trade intensity (H3)	–0.08***	–0.45***	1.00	
(4) Log relative deal size (H4)	–0.11***	–0.06**	0.06*	1.00

Note: Variable definitions are provided in Section 3.3. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels respectively (two-tailed t-test).

4.1.3 Distribution of Announcement Returns

Announcement-period abnormal returns are broadly positive but highly dispersed across the sample. Table 5 summarises the distribution under the CAPM benchmark.

Table 5: Distribution of Announcement-Period Abnormal Returns

Distributional statistics for CAPM-based three-day cumulative abnormal returns, CAR(–1,+1), for the full sample of 1,157 deals.

Statistic	CAR(–1,+1)
N	1,157
Mean	0.315%
Standard deviation	5.527%
Minimum	–20.615%
1st percentile	–19.639%
Median	0.351%
99th percentile	18.081%
Maximum	19.135%
% Positive	56.2%
Jarque–Bera statistic	700.77
Jarque–Bera p-value	< 0.001

Note: Cumulative abnormal returns are estimated under the CAPM with market model parameters estimated over t = –250 to t = –30 relative to the announcement date, requiring a minimum of 120 valid trading days. The 1st and 99th percentiles indicate the winsorisation thresholds applied in the subsequent regression analysis. The Jarque–Bera test evaluates the null hypothesis of normality.

Figure 1 illustrates the empirical density of the winsorised CAR(–1,+1) distribution alongside a fitted normal curve for reference.

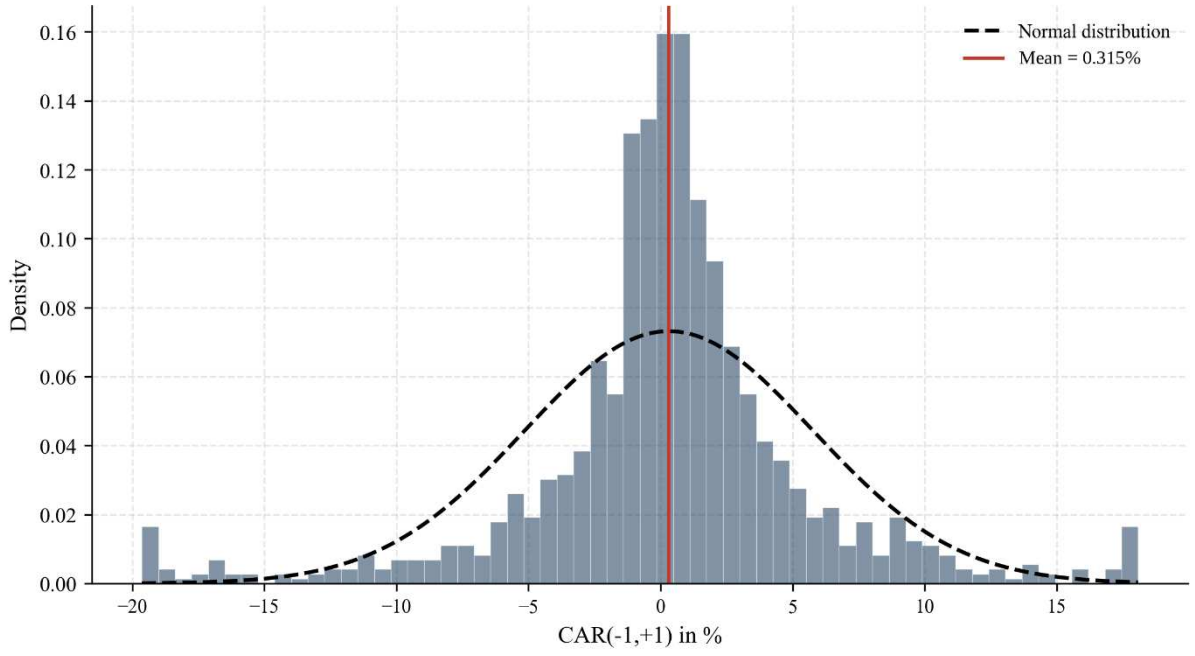


Figure 1: Distribution of CAPM-Based CAR(–1,+1)

Note: Empirical distribution of CAPM-based CAR(–1,+1), winsorised at the 1st and 99th percentiles, N = 1,157. The dashed line shows the fitted normal distribution for reference. The vertical line marks the sample mean of 0.315%.

The mean CAR(–1,+1) is 0.315% and the median is 0.351%, with a standard deviation of 5.527%. The 1st and 99th percentiles are -19.639% and 18.081% respectively, reflecting substantial heterogeneity in market reactions across deals. A total of 56.2% of observations exhibit a positive three-day announcement return, while 40.5% exceed 1% and 30.2% fall below -1%, indicating an asymmetric distribution with a heavier positive tail. The Jarque-Bera statistic of 700.77 ($p < 0.001$) strongly rejects normality.

The positive aggregate return is robust to the exclusion of dominant subgroups. Removing UK targets, the largest single country in the sample at 20.6% of all observations, leaves the CAAR at 0.302% ($p = 0.094$). Excluding High Technology acquirors and COVID-affected years 2020 and 2021 produces similarly stable estimates of 0.296% and 0.298% respectively. These sensitivity checks indicate that the headline figure is not mechanically driven by any single subgroup and that the aggregate positive return reflects a broad-based pattern across the sample.

4.2 Main Event Study Results

4.2.1 Aggregate Announcement Returns

The event study yields a positive and statistically robust aggregate announcement effect, concentrated in the narrow three-day window around the acquisition announcement. Table 6 reports cumulative average abnormal returns across five event windows and two benchmark models for the full sample of 1,157 deals.

Table 6: Main Event Study Results

Cumulative average abnormal returns (CAAR) across five event windows for the full sample of 1,157 deals, estimated under the CAPM (Panel A) and the Fama–French three-factor model (Panel B). Returns winsorised at 1%/99%.

Panel A: CAPM

Window	N	CAAR	t-stat	Patell Z	Wilcoxon p	% Positive
CAR(0,0)	1,157	0.225%**	2.039	3.661***	0.007***	52.5%
CAR(–1,0)	1,157	0.186%	1.539	1.360	0.087*	51.1%
CAR(–1,+1)	1,157	0.315%*	1.939	3.325***	0.000***	56.2%
CAR(–1,+5)	1,116	0.097%	0.473	1.101	0.049**	52.5%
CAR(–5,+5)	1,116	–0.024%	–0.103	0.202	0.331	51.3%

Panel B: Fama–French three-factor model

Window	N	CAAR	t-stat	Patell Z	Wilcoxon p	% Positive
CAR(0,0)	1,157	0.236%**	2.152	4.179***	0.002***	53.4%
CAR(–1,0)	1,157	0.180%	1.526	1.745*	0.065*	52.0%
CAR(–1,+1)	1,157	0.320%**	1.980	3.775***	0.000***	55.4%
CAR(–1,+5)	1,116	0.180%	0.876	1.591	0.045**	51.3%
CAR(–5,+5)	1,116	0.061%	0.262	0.485	0.228	53.2%

Note: Estimation window covers t = –250 to t = –30 (minimum 120 trading days required). t-statistics are cross-sectional. Patell Z is the standardised abnormal return test. Wilcoxon p is the two-sided p-value from a Wilcoxon signed-rank test on pre-winsorised returns. N is reduced for CAR(–1,+5) and CAR(–5,+5) due to deals lacking sufficient post-event trading days. *, **, and *** denote significance at the 10%, 5%, and 1% levels respectively.

The baseline CAPM results indicate a positive market reaction concentrated in the narrow announcement window. The CAAR for CAR(–1,+1) is 0.315%, with a cross-sectional t-statistic of 1.939 ($p = 0.053$) and a Patell Z-statistic of 3.325 ($p = 0.001$). The Wilcoxon signed-rank test rejects the null of a zero median return at the 1% level ($p < 0.001$), and 56.2% of all deals exhibit a positive three-day announcement return. The single-day window CAR(0,0) yields a CAAR of 0.225%, significant across all three tests including a Patell Z of 3.661 ($p < 0.001$). The two-day window CAR(–1,0) produces a smaller estimate of 0.186% that does not reach significance under parametric tests, though the Wilcoxon result is weakly suggestive ($p = 0.087$). The longer windows provide no evidence of sustained abnormal performance: both CAR(–1,+5) and CAR(–5,+5) are statistically negligible and the cross-sectional t-test fails to reject zero in either case. The positive effect is therefore concentrated in the narrow announcement window and does not persist over subsequent trading days.

The FF3 specification produces near-identical results. In the main window the CAAR is 0.320%, with a t-statistic of 1.980 ($p = 0.048$) and a Patell Z of 3.775 ($p < 0.001$). The same pattern of significance holds across shorter windows and disappears in the wider windows, confirming that the baseline finding is not an artefact of the expected return specification.

A notable feature of the results is the divergence across statistical procedures. The Patell and Wilcoxon tests consistently provide stronger support for positive abnormal returns than the cross-sectional t-test, which reaches only marginal significance at the 10% level for CAR(–1,+1) under the CAPM. This reflects the influence of cross-sectional dispersion on parametric inference given the non-normal return distribution documented in Section 4.1.3. As a further validation, applying the analysis to the broader pre-filter sample of 1,398 deals yields a CAAR of 0.276% for CAR(–1,+1), a difference of less than 4 basis points relative to the final sample,

confirming that the overlap filter does not materially affect the results. Figure 2 plots the daily average abnormal return for each event day from $t = -5$ to $t = +5$.

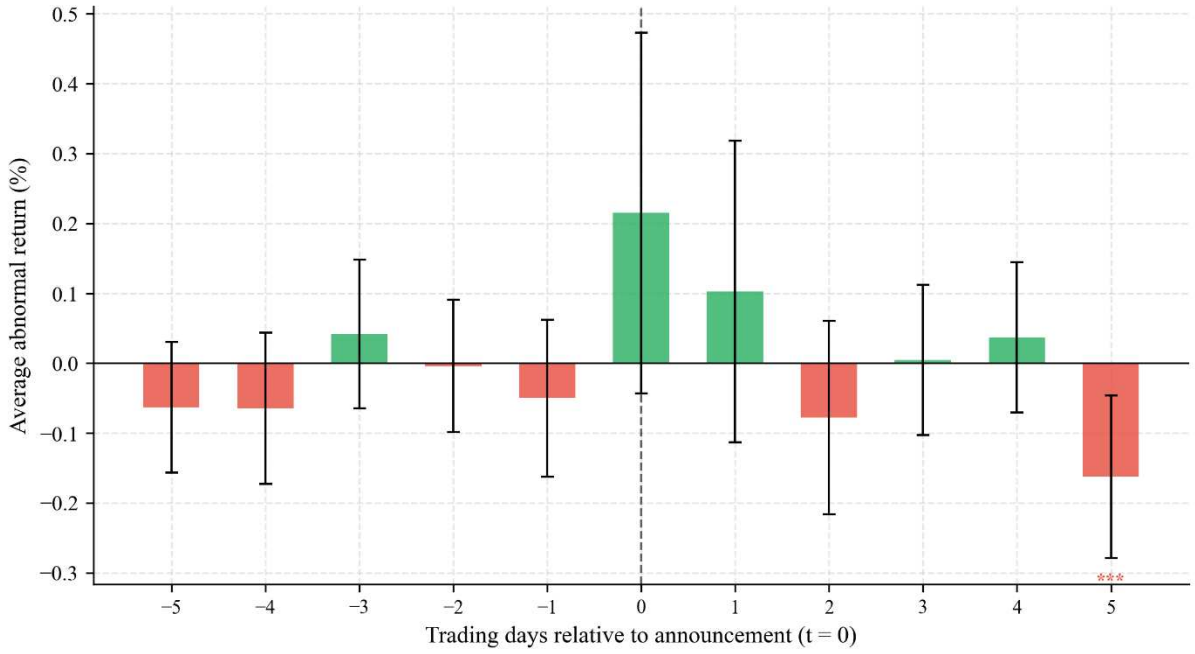


Figure 2: Daily Average Abnormal Returns Around Cross-Border Acquisition

Note: Daily average abnormal returns under the CAPM for event days t = −5 to t = +5. Error bars indicate 95% confidence intervals. N = 1,157 deals. * p < 0.10, ** p < 0.05, *** p < 0.01.

In the pre-announcement window, daily average abnormal returns fluctuate around zero without any systematic directional pattern, consistent with normal sampling variation rather than systematic information leakage. The sharp upward movement at $t = 0$ and $t = 1$ confirms that the market reaction is concentrated at the announcement. A notable exception is $t = 5$, which registers a statistically significant negative average abnormal return of -0.163% (p = 0.017). This reversal explains why CAR(–1,+5) is substantially smaller than CAR(–1,+1) despite the positive intermediate days, and is consistent with a partial mean-reversion in prices following the initial announcement reaction. Figure 3 shows the corresponding cumulative average abnormal return series, anchored at $t = -1$.

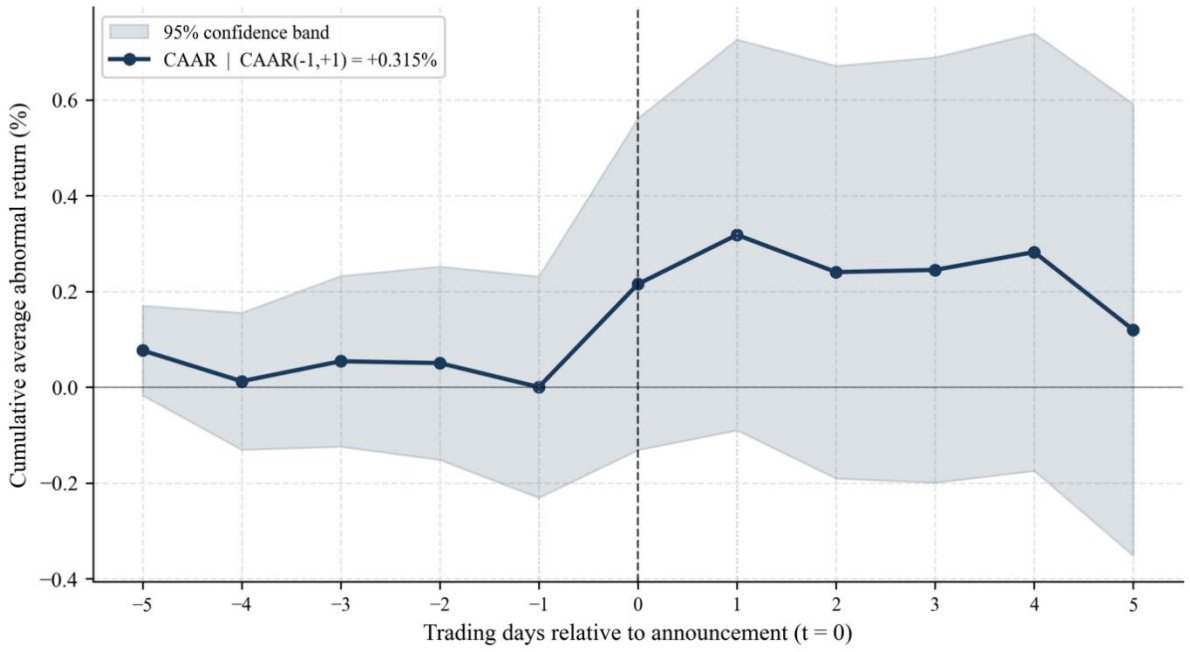


Figure 3: Cumulative Average Abnormal Returns Around Cross-Border Acquisition Announcements

Note: Cumulative average abnormal returns under the CAPM, anchored at t = -1, for event days t = -5 to t = +5. The shaded area indicates the 95% confidence band. N = 1,157 deals.

The CAAR rises sharply from zero at t = -1 to approximately 0.32% at t = 1, after which it stabilises before declining slightly at t = 5 due to the reversal documented above. Beyond t = 1 there is no evidence of post-announcement drift in either direction, reinforcing the interpretation of efficient price incorporation. In substantive terms, a three-day CAAR of approximately 0.32% represents a modest but positive average market endorsement of cross-border transactions by US-listed acquirors.

4.2.2 Subgroup Patterns

Announcement returns vary substantially across deal and target characteristics, reflecting the heterogeneous nature of cross-border acquisitions in the sample. The patterns documented below provide descriptive context for the regression analysis and offer preliminary evidence on several of the hypothesised channels. Table 7 reports mean CARs across a range of deal and target characteristics. These univariate comparisons are descriptive and do not control for correlated deal characteristics; their formal interpretation is deferred to the regression analysis in Section 4.4.

Table 7: Mean CAR(–1,+1) by Subgroup

Univariate analysis of CAPM-based three-day cumulative abnormal returns by subgroup. Returns winsorised at 1%/99%.

Panel A: By target region

Group	N	Mean CAR	t-stat	p-value	% Positive
Europe	698	0.582%***	2.913	0.004	59.6%
Americas ex-US	260	0.154%	0.438	0.661	55.8%
Asia-Pacific	141	–0.058%	–0.116	0.908	44.7%
Middle East & Africa	58	–1.265%	–1.500	0.139	44.8%

Panel B: By target public status

Group	N	Mean CAR	t-stat	p-value	% Positive
Subsidiary	524	0.660%***	3.114	0.002	57.3%
Private	452	0.123%	0.451	0.652	56.4%
Public	159	–0.255%	–0.485	0.628	52.8%
Joint Venture	22	0.147%	0.125	0.901	50.0%

Panel C: By payment method (excluding Unknown, Other, Choice)

Group	N	Mean CAR	t-stat	p-value	% Positive
Cash only	780	0.429%**	2.460	0.014	57.4%
Cash and stock combination	124	0.103%	0.126	0.900	51.6%
Stock only	20	–3.476%	–1.667	0.112	30.0%

Panel D: By absolute deal size (quartiles)

Group	N	Mean CAR	t-stat	p-value	% Positive
Q1 (≤ $104.9M)	290	–0.077%	–0.257	0.797	51.4%
Q2 ($104.9M–$224.6M)	289	0.382%	1.186	0.237	57.8%
Q3 ($224.6M–$599.9M)	289	0.276%	0.939	0.349	60.6%
Q4 (> $599.9M)	289	0.680%*	1.794	0.074	55.0%

Panel E: By relative deal size (quartiles)

Group	N	Mean CAR	t-stat	p-value	% Positive
Q1 (smallest)	274	–0.102%	–0.536	0.592	51.8%
Q2	274	0.162%	0.613	0.540	55.8%
Q3	273	0.405%	1.270	0.205	58.6%
Q4 (largest)	274	0.828%*	1.714	0.088	59.1%

Note: t-statistics test the null hypothesis that the group mean equals zero (two-tailed). All comparisons are univariate and do not control for correlated deal characteristics. Panel E requires a valid Compustat market capitalisation match (N = 1,095). *, **, and *** denote significance at the 10%, 5%, and 1% levels respectively.

By target region, European acquisitions generate the strongest and only statistically significant average reaction at 0.582% (p = 0.004), while Americas ex-US deals produce a modest 0.154% and Asia-Pacific deals near-zero returns at -0.058%. Middle East and Africa targets are

associated with the weakest mean CAR of -1.265%, though this estimate is statistically insignificant given the small group size of 58 observations.

By target public status, subsidiary acquisitions generate the highest mean return at 0.660% ($p = 0.002$), while publicly listed target acquisitions average -0.255%. Although the difference between public and non-public targets is not statistically significant in a formal difference test, the pattern is directionally consistent with prior M&A evidence that acquiror announcement returns tend to be more favourable for non-public targets.

By payment method, cash-financed transactions produce a mean CAR of 0.429% ($p = 0.014$). The contrast with stock-financed deals is striking: stock-only transactions exhibit a mean CAR of -3.476%, a difference of 3.9 percentage points relative to cash-only deals. Because stock-only deals represent only 2.2% of classifiable transactions, this subgroup should be interpreted cautiously; nonetheless the pattern foreshadows the robust negative stock-payment coefficient documented in Section 4.4.

By absolute deal size quartile, mean CARs increase from -0.077% in the smallest quartile to 0.680% in the largest ($p = 0.074$), though the difference between the extreme quartiles is not statistically significant at conventional levels. The pattern is more pronounced for relative deal size: mean CARs increase monotonically from -0.102% in the lowest quartile to 0.828% in the highest ($p = 0.088$), consistent with the transaction materiality argument examined formally in Section 4.4.

By acquiror industry, Industrials stands out with a mean CAR of 0.921% ($p = 0.004$) and Energy and Power at 1.105% ($p = 0.094$), while Telecommunications at -1.666% and Consumer Products and Services at -0.678% exhibit the weakest reactions. These industry-level differences reflect the heterogeneous composition of deals across sectors rather than a causal industry effect. A complete breakdown by acquiror industry is provided in Appendix A11.

At the country level, several individual target nations exhibit mean announcement returns that depart sharply from the sample average. Among the larger country groups, acquisitions of Israeli targets yield a mean CAR of -2.177% ($p = 0.032$, $N = 44$) and Netherlands targets yield 1.440% ($p = 0.023$, $N = 46$). Smaller country groups display similar dispersion: Belgium 2.480% ($p = 0.025$, $N = 16$), Mexico 2.173% ($p = 0.055$, $N = 22$), and Brazil -1.776% ($p = 0.089$, $N = 23$). These country-level dispersions are consistent with the substantial cross-sectional heterogeneity that the regression analysis in Section 4.4 seeks to characterise, but

should be interpreted descriptively given the small samples for several countries. A complete listing is provided in Appendix A5.

A preliminary split-sample analysis around the median of each hypothesis variable reveals heterogeneous patterns. For governance distance, deals in the above-median subsample, where US institutional quality is meaningfully stronger than the target country, show a positive and marginally significant coefficient on governance distance, while below-median deals yield an insignificant estimate, suggesting that the governance channel operates primarily in markets with pronounced institutional gaps. For cultural distance, the split reveals a counterintuitive pattern: the negative coefficient on the KS index is concentrated entirely in the below-median subsample, that is, among acquisitions in culturally proximate markets, while culturally distant deals show no significant directional pattern. For trade intensity, the split reveals a sign reversal: deals with above-median trade intensity, involving the most economically integrated target countries, are associated with a negative and significant coefficient, while deals in less integrated markets show a positive coefficient, a pattern inconsistent with the simple informational channel assumed in H3. These descriptive patterns are examined formally in Section 4.4.

4.3 Temporal Heterogeneity and Structural Break

The aggregate announcement return documented in Section 4.2 masks substantial temporal heterogeneity. Figure 4 illustrates the year-by-year pattern of deal volume and mean announcement returns over the full sample period.

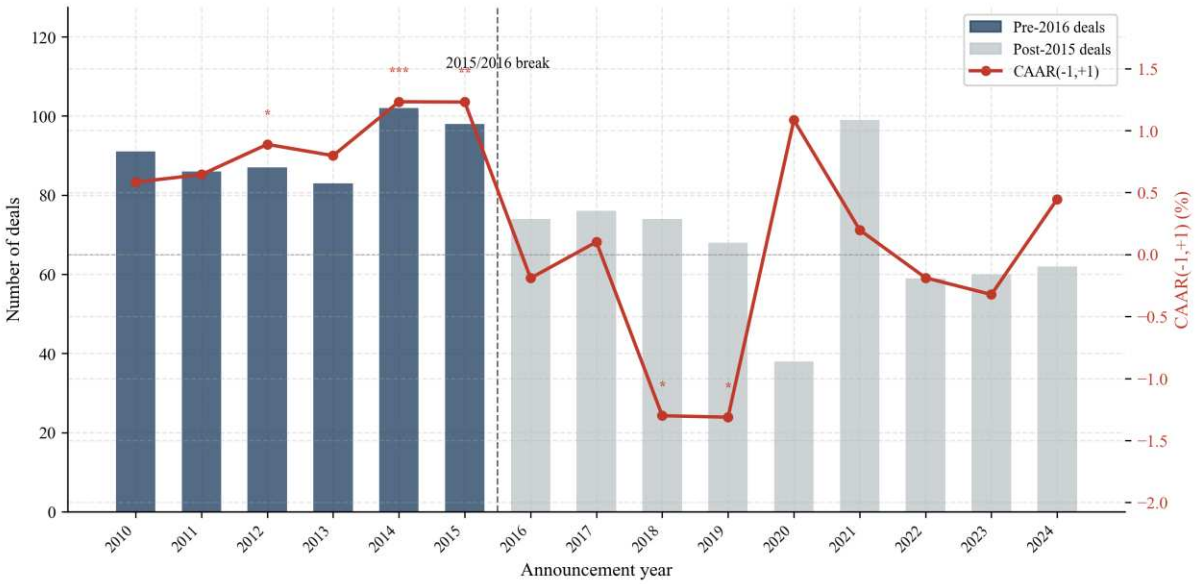


Figure 4: Annual Deal Count and Mean Announcement Return by Year

Note: Bars show the number of completed cross-border acquisitions per year (left axis). The line shows the mean CAPM-based CAR(–1,+1) in percent per year (right axis). *, *, *** indicate that the annual mean CAR differs significantly from zero at the 10%, 5%, and 1% levels respectively (two-tailed t-test). The dashed vertical line separates the 2010–2015 subsample from the 2016–2024 subsample.

In the earlier cohort, every year from 2010 to 2015 produces a positive mean CAR, with 2014 and 2015 generating the strongest reactions at 1.232% (p = 0.007) and 1.230% (p = 0.019) respectively. The pattern reverses sharply after 2015. From 2016 onwards, no year produces a statistically significant mean CAR, while 2018 and 2019 exhibit negative mean CARs of -1.300% (p = 0.063) and -1.312% (p = 0.067) respectively. Notably, 2018 recorded one of the highest mean deal values in the sample at USD 1,563M, suggesting that the negative market reactions in that year may partly reflect investor scepticism toward large cross-border transactions. This is consistent with the tightening of regulatory scrutiny over foreign acquisitions following the Foreign Investment Risk Review Modernization Act of 2018, which substantially expanded the scope of CFIUS review for cross-border transactions involving US targets and created uncertainty around deal completion. The remaining post-2015 years cluster near zero with no statistical significance. Table 8 formalises this observation.

Table 8: Pre/Post 2016 Structural Break in Announcement Returns

CAPM-based three-day cumulative abnormal returns split at end-2015. Returns winsorised at 1%/99%.

Subperiod	N	CAAR	t-statistic	p-value
2010–2015 (pre-2016)	547	0.911%***	4.349	< 0.001
2016–2024 (post-2015)	610	–0.219%	–0.905	0.366
Difference (pre minus post)		1.130%	3.490	0.001***

Note: t-statistics test the null hypothesis that the subperiod mean equals zero (two-tailed). The difference row reports the pre-2016 mean minus the post-2015 mean and the t-statistic from a two-sample difference-in-means test. *, **, and *** denote significance at the 10%, 5%, and 1% levels respectively.

The pre-2016 subsample of 547 deals generates a mean CAR of 0.911% that is highly significant (t = 4.349, p < 0.001), whereas the post-2015 subsample of 610 deals produces a mean of -0.219% that is statistically indistinguishable from zero (p = 0.366). The difference between the two periods is significant at the 1% level (t = 3.490, p = 0.001), confirming that the temporal shift visible in Figure 4 is not an artefact of sampling variation. Figure 5 illustrates the corresponding divergence in event-time return dynamics across the two subperiods.

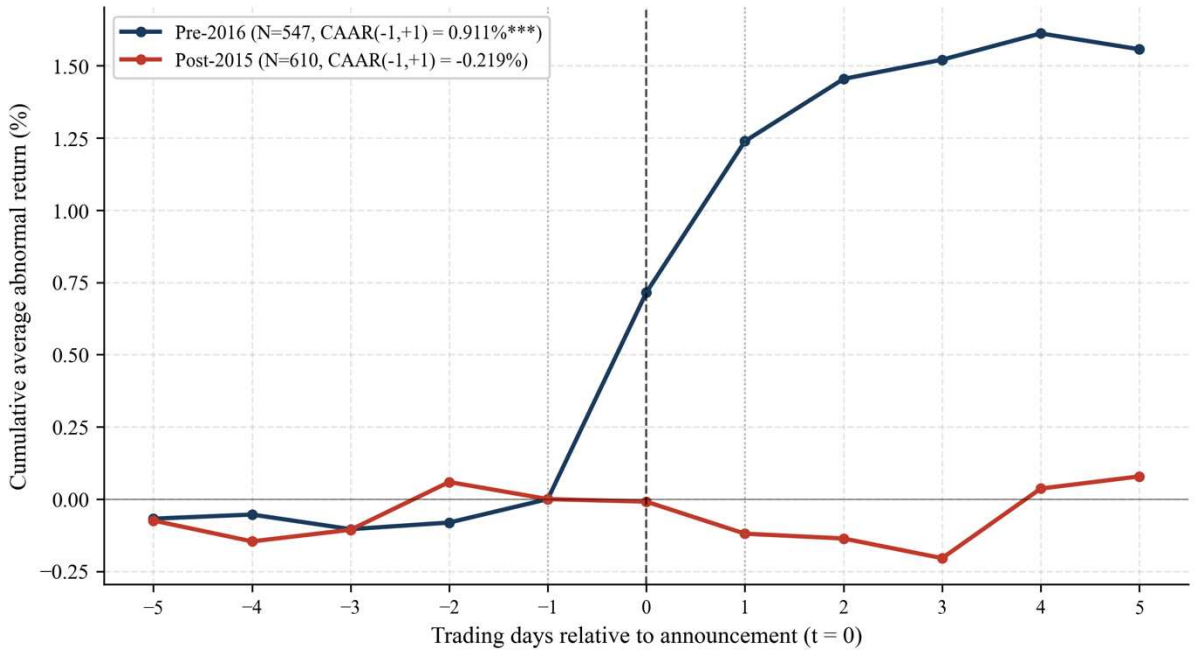


Figure 5: CAAR Event-Time by Subperiod

Note: CAPM-based cumulative average abnormal return plotted separately for the 2010–2015 subsample (N = 547) and the 2016–2024 subsample (N = 610), anchored at t = -1. The dashed vertical line marks the announcement date (t = 0). The dotted vertical lines mark t = -1 and t = +1. *** indicates that the pre-2016 CAAR(-1,+1) is significant at the 1% level. The post-2015 CAAR is not significantly different from zero.

The source of this temporal break is difficult to identify with certainty from the present data. The post-2015 period coincides with a broader tightening of regulatory scrutiny over cross-border transactions, rising geopolitical uncertainty, and a shift in investor sentiment toward foreign acquisitions. A contributing factor is the gradual compression of the US governance advantage over this period: the US WGI composite declined from 1.244 in 2010 to 0.953 in 2020, recovering only partially to 0.995 by 2023 (Appendix A6). This erosion of the US institutional advantage relative to developed market targets may have attenuated the perceived benefits of cross-border acquisitions in the later part of the sample. This temporal instability has important implications for the interpretation of the full-sample results: the aggregate CAAR of 0.315% reflects the pooled average across two markedly different regimes.

The same temporal pattern is visible within the single largest target country in the sample. The United Kingdom alone accounts for 20.6% of all observations and produces an exactly even split of 119 deals in each subperiod. UK targets generate a mean CAR of 0.956% in the pre-2016 period (t = 1.929, p = 0.056), compared to -0.228% from 2016 onwards (t = -0.409, p = 0.683), a swing of 1.18 percentage points within a single country. The timing coincides with the June 2016 Brexit referendum and the subsequent repricing of UK-bound foreign

acquisitions, and corroborates the aggregate structural break at the country level rather than only at the pooled sample level.

4.4 Regression Results

4.4.1 Baseline Controls

The cross-sectional regression results reveal a consistent pattern across all six specifications: deal financing structure and relative transaction size are the primary deal-level determinants of announcement returns, while the country-level friction variables produce more nuanced results. Table 9 reports the full stepwise regression of CAR(–1,+1) across specifications M1 through M6. All specifications include region and acquiror industry fixed effects. Standard errors are clustered at the target country level throughout.

Table 9: Cross-Sectional Regression of Announcement Returns on Hypothesis Variables

Stepwise OLS regressions of CAPM-based CAR(–1,+1) on hypothesis variables and controls. Dependent variable winsorised at 1%/99%. Standard errors clustered at the target country level.

Variable	M1	M2	M3	M4	M5	M6
Hypothesis variables						
Gov. distance (H1)	–	0.0021	0.0021	0.0021	0.0014	0.0051*
KS distance (H2)	–	–	0.0000	0.0011	0.0017	0.0006
Log trade int. (H3)	–	–	–	0.0021	0.0024	0.0063**
Log rel. deal size (H4)	–	–	–	0.0032***	0.0026**	0.0032***
Deal controls						
Log deal value	0.0031**	0.0032**	0.0032**	–0.0001	0.0007	–0.0006
Cash	0.0031	0.0033	0.0034	0.0029	0.0046	0.0047
Stock	–0.0515**	–0.0512**	–0.0512**	–0.0525***	–0.0534***	–0.0431*
Public target	0.0023	0.0027	0.0027	0.0030	0.0030	0.0032
Subsidiary	0.0035	0.0034	0.0034	0.0031	0.0030	0.0030
Firm controls						
Log market cap	–0.0035***	–0.0036***	–0.0036***	–	–	–
Leverage	0.0125	0.0121	0.0121	0.0127	0.0153	0.0099
Book-to-market	0.0027	0.0026	0.0026	0.0031	0.0012	–0.0007
CF / equity	0.0010	0.0010	0.0010	0.0010	0.0008	0.0009
Pre-ann. runup	–0.0170	–0.0172	–0.0172	–0.0178	–0.0171	–0.0149
Sigma	0.0312	0.0347	0.0346	0.0956	0.2367	0.0509
International controls						
Log GDP (target)	–	–	–	–	–	–0.0070***
Log geo. distance	–	–	–	–	–	–0.0039

Variable	M1	M2	M3	M4	M5	M6
Log FX volatility	–	–	–	–	–	–0.0007
Serial acquiror	–	–	–	–	–	0.0035
Prior deal (same)	–	–	–	–	–	–0.0190
Model statistics						
N	1,048	1,048	1,048	1,038	1,038	1,020
R^2	0.048	0.048	0.048	0.048	0.071	0.059
Adjusted R^2	0.024	0.024	0.023	0.021	0.032	0.028
Year FE	No	No	No	No	Yes	No
Region / industry FE	Yes	Yes	Yes	Yes	Yes	Yes

Note: M1 is the baseline controls-only specification. M2 adds governance distance (H1), M3 adds cultural distance (H2), M4 adds trade intensity (H3) and relative deal size (H4). Log market capitalisation is excluded from M4–M6 to avoid collinearity with log relative deal size (VIF > 15). M5 adds year fixed effects to M4. M6 adds international controls. All specifications include region and acquiror industry fixed effects. *, **, and *** denote significance at the 10%, 5%, and 1% levels respectively.

The baseline specification M1 includes deal-level and firm-level controls only. The most consistent finding across all specifications is the stock payment dummy, which enters significantly negative in every model. In M1 the coefficient is -0.0515 ($p < 0.05$), rising in absolute magnitude to -0.0534 in M5 and -0.0431 in M6. This implies that stock-financed cross-border acquisitions are associated with announcement returns approximately 4 to 5 percentage points lower than comparable cash-financed deals, consistent with the adverse selection interpretation of Myers and Majluf (1984) whereby equity issuance signals acquiror overvaluation. Log deal value is positively associated with announcement returns in M1 through M3 (0.0031 to 0.0032, $p < 0.05$), but loses significance once log relative deal size enters in M4, at which point log deal value drops to -0.0001. Log relative deal size absorbs the size-related variation in returns that log deal value partially captured in the restricted specifications, as the two variables are mechanically related through acquiror market capitalisation. Log market capitalisation is negative and significant in M1 through M3 (-0.0035 to -0.0036, $p < 0.01$), consistent with larger acquirors generating smaller announcement returns, but is excluded from M4 onwards to avoid collinearity with log relative deal size.

4.4.2 Cross-Border Friction Variables: H1, H2, and H3

Examining the cross-border friction variables in turn, none of the three reach statistical significance in the main specifications M2 through M5. Governance distance enters M2 with a coefficient of 0.0021, carrying the predicted positive sign but indistinguishable from zero. The KS cultural distance index enters M3 with a coefficient of essentially zero (0.0000 under CAPM, 0.0003 in the individual H2 specification), and log trade intensity enters M4 at 0.0021,

positive as predicted but insignificant. These null results are stable across all intermediate specifications and robust to the inclusion of year fixed effects in M5. The split-sample analysis in Table 10 examines whether the null results mask heterogeneous effects across subsamples.

Table 10: Above vs Below Median Split-Sample Regressions: H1, H2, H3

Hypothesis variable coefficients from split-sample regressions estimated separately on above-median and below-median subsamples. All specifications follow the M4 structure. Dependent variable: CAPM-based CAR(–1,+1). Standard errors clustered at the target country level.

Panel A: H1 — Governance distance (median = –0.246)

Subsample	N	Coefficient	p-value
Above median (US governance stronger than target)	517	0.0078*	0.051
Below median (target governance closer to or stronger than US)	531	0.0189	0.247

Panel B: H2 — KS cultural distance (median = 0.354)

Subsample	N	Coefficient	p-value
Above median (high cultural distance)	451	–0.0016	0.452
Below median (low cultural distance)	597	–0.0764***	0.008

Panel C: H3 — Log trade intensity (median = –3.633)

Subsample	N	Coefficient	p-value
Above median (stronger US trade ties with target country)	502	–0.0182**	0.049
Below median (weaker US trade ties with target country)	536	0.0031*	0.064

Note: Each panel reports the coefficient on the hypothesis variable from a separate split-sample regression estimated on the above-median and below-median subsamples. All specifications follow the M4 structure: full deal and firm controls, region and acquiror industry fixed effects, with log market capitalisation excluded. *, **, and *** denote significance at the 10%, 5%, and 1% levels respectively.

For H1, Panel A shows that governance distance is positive in both the above-median subsample (0.0078, p = 0.051) and the below-median subsample (0.0189, p = 0.247). The above-median coefficient is marginally significant, suggesting a weak positive governance premium when the US institutional advantage is most pronounced, but the below-median estimate is imprecise and neither result constitutes robust support for H1.

For H2, Panel B reveals that both subsamples produce negative coefficients on the KS index, consistent with the predicted direction of H2. The below-median coefficient is -0.0764 (p = 0.008), indicating that among acquisitions in culturally proximate markets, greater cultural distance is associated with significantly lower announcement returns. The above-median coefficient is near zero (-0.0016, p = 0.452). This pattern suggests that cultural frictions may matter at the margin in near-distance markets where small differences in cultural fit are more salient, but the effect does not extend to culturally distant markets where investors may already price in integration risk.

For H3, Panel C reveals a sign reversal across subsamples. Above-median trade intensity deals show a negative and significant coefficient (-0.0182, $p = 0.049$), while below-median deals produce a positive and marginally significant coefficient (0.0031, $p = 0.064$). This sign reversal suggests that bilateral trade relationships do not uniformly facilitate value creation in cross-border acquisitions. Among the most trade-integrated country pairs, the market may discount returns due to heightened competition for targets or reduced information asymmetry gains, while in less integrated markets the novelty of the transaction may carry a modest positive signal. However, given the absence of significance in the full-sample specifications, this pattern should be interpreted with caution.

A complementary descriptive view of cross-sectional heterogeneity emerges from a quartile decomposition of raw mean CARs along each hypothesis variable, reported in Appendix A10. The patterns are non-monotonic across all three country-level dimensions. For governance distance, the second quartile generates a mean CAR of 0.911% ($p < 0.01$), while the first, third, and fourth quartiles cluster between 0.045% and 0.236% and are statistically insignificant, an inverse-U pattern inconsistent with a linear arbitrage interpretation. For cultural distance, the distribution is bimodal: the first quartile produces 0.336% and the fourth quartile 0.843% ($p < 0.01$), while the third quartile is the only negative cell at -0.383%, broadly consistent with a liability-of-foreignness pattern in which mid-range cultural distance is most penalised by markets. For trade intensity, the second quartile produces 0.884% ($p < 0.01$) while the remaining quartiles cluster near zero, indicating that the aggregate positive return is concentrated in a specific intermediate range of trade ties rather than scaling monotonically with integration. These descriptive patterns reinforce the finding that linear specifications fail to capture the cross-sectional structure of country-level effects, and motivate the regression-based subsample analysis in this section rather than substituting for it.

The overall pattern for H1 is consistent with the attenuation of institutional arbitrage opportunities over the sample period. As documented in Section 4.3, the positive announcement effect is concentrated in the pre-2016 period, and the US WGI composite declined from 1.244 in 2010 to 0.953 in 2020, compressing the governance distance between the US and its developed market acquisition targets. For H2, the null result in the full sample is consistent with the view that cultural frictions materialise primarily in post-merger integration and longer-horizon outcomes rather than at announcement. The known sensitivity of the KS index to the masculinity dimension, which produces anomalously high distance scores for Nordic countries, may also attenuate the precision of the cultural distance measure. For H3, the sign reversal

across subsamples and the absence of full-sample significance caution against a strong interpretation of the below-median finding.

4.4.3 Relative Deal Size: H4

Log relative deal size is the only hypothesis variable to reach statistical significance across the main specifications. In M4 the coefficient is 0.0032 ($p < 0.01$), stable at 0.0026 in M5 ($p < 0.05$) and 0.0032 in M6 ($p < 0.01$). The sign is positive, opposite to the predicted negative sign derived from the hubris hypothesis of Roll (1986) and the domestic evidence of Moeller, Schlingemann and Stulz (2004).

Economically, the M4 estimate implies that a one-standard-deviation increase in log relative deal size of 1.56 units is associated with approximately 0.50 percentage points higher CAR, a meaningful effect relative to the full-sample CAAR of 0.315%. The quartile analysis in Table 7 Panel E corroborates this pattern descriptively: mean CAR increases monotonically from -0.102% in the smallest relative deal size quartile to 0.828% in the largest.

The positive sign is interpretable in the cross-border context. Large cross-border deals face heightened scrutiny from boards, advisors, and regulators and require extensive due diligence. The positive market reaction to larger relative deals may therefore reflect a credible signal that the acquiror has identified a high-quality target that survived elevated selection thresholds, rather than an overpayment signal. An alternative interpretation is that larger relative deals proxy for greater strategic commitment and transformational intent, which markets reward at announcement even if execution risk is higher.

4.4.4 Full Stepwise Specification and Model Progression

The progression from M1 to M6 illustrates the robustness of the H4 finding and reveals two additional results in the extended specification. The H4 coefficient is stable throughout: 0.0032 in M4, 0.0026 in M5, and 0.0032 in M6, remaining significant at the 1% or 5% level in all three specifications. The stock dummy is similarly stable across all six models.

M6 adds five international controls to the M4 base: log GDP of the target country, log geographic distance, log FX volatility, a serial acquiror indicator, and a prior deal same country indicator. Two results from M6 are worth noting. First, log GDP of the target country enters with a coefficient of -0.0070 ($p < 0.01$), indicating that acquisitions of targets in larger economies are associated with significantly lower announcement returns. This is consistent with greater competition for targets in large developed markets compressing acquiror returns,

and with the market assigning a higher execution risk premium to transactions in complex large-scale economic environments. Second, log trade intensity reaches significance in M6 at the 5% level, suggesting that bilateral trade relationships do contain information relevant to announcement returns once country size is controlled for. Log geographic distance, log FX volatility, serial acquiror status, and prior deal same country are all statistically insignificant in M6.

The overall adjusted R-squared remains modest across all specifications, ranging from 2.4% in M1 to 2.8% in M6, with the higher 3.2% in M5 reflecting the absorption of temporal variation by year fixed effects.

4.5 Robustness

4.5.1 Alternative Return Models and Event Windows

To assess sensitivity to the choice of return model and event window, the full M4 specification is re-estimated across four event windows under both the CAPM and the Fama–French three-factor model. Table 11 reports the coefficients on all four hypothesis variables and the stock dummy across all eight model-window combinations.

Table 11: Robustness of Hypothesis Coefficients Across Specifications

All four hypothesis variable coefficients and the stock dummy under alternative dependent variables and specifications. All specifications follow the M4 structure with deal and firm controls, region and acquiror industry fixed effects, and log market capitalisation excluded. Standard errors clustered at the target country level.

Panel A: CAPM

	CAR(–1,+1)	**CAR(0,0)**	**CAR(–1,0)**	**CAR(–1,+5)**
Gov. distance (H1)	0.0021	0.0035*	0.0035	−0.0002
KS distance (H2)	0.0011	0.0013	0.0013	0.0052**
Log trade int. (H3)	0.0021	0.0022**	0.0032***	0.0038*
Log rel. deal size (H4)	0.0032***	0.0018**	0.0023***	0.0056***
Stock dummy	–0.0525***	–0.0468***	–0.0537***	–0.0606***
N	1,038	1,038	1,038	1,000
R^2	0.048	0.062	0.068	0.055

Panel B: Fama–French three-factor model

	CAR(–1,+1)	**CAR(0,0)**	**CAR(–1,0)**	**CAR(–1,+5)**
Gov. distance (H1)	0.0023	0.0039*	0.0038	0.0012
KS distance (H2)	0.0010	0.0014	0.0013	0.0045**
Log trade int. (H3)	0.0018	0.0023**	0.0029***	0.0036*

	CAR(–1,+1)	CAR(0,0)	CAR(–1,0)	CAR(–1,+5)
Log rel. deal size (H4)	0.0033***	0.0018**	0.0025***	0.0056***
Stock dummy	–0.0495**	–0.0461***	–0.0513***	–0.0553**
N	1,038	1,038	1,038	1,000
R^2	0.046	0.061	0.065	0.050

Panel C: Additional robustness checks (CAPM, CAR(–1,+1))

Specification	N	H4 coef	p-value	Sig
Baseline (clustered SE)	1,038	0.0032	0.009	***
HC3 heteroskedasticity-robust	1,038	0.0032	0.021	**
Excl. top 1% relative deal size	1,028	0.0029	0.026	**
Excl. top 5% relative deal size	993	0.0037	0.002	***

Note: Panels A and B report coefficients on all four hypothesis variables and the stock dummy across alternative event windows under the CAPM (Panel A) and the Fama–French three-factor model (Panel B). Panel C reports the H4 coefficient under alternative standard error and outlier specifications, using CAPM CAR(–1,+1) as the dependent variable. Outlier exclusions apply to H4 only; H1–H3 are not materially affected and are omitted for brevity. All specifications include the full M4 control set, region and acquiror industry fixed effects. *, **, and *** denote significance at the 10%, 5%, and 1% levels respectively.

The H4 coefficient is positive and significant across all eight model-window combinations, ranging from 0.0018 ($p < 0.05$) under CAPM CAR(0,0) to 0.0056 ($p < 0.01$) under both CAR(–1,+5) specifications. The pattern under FF3 is near-identical. This stability confirms that the H4 finding is not an artefact of the return model or event window choice.

For H1, H2, and H3, the results are largely stable at insignificance across the primary CAR(–1,+1) window under both return models. Two partial exceptions arise under shorter and longer windows. Under CAR(0,0) and CAR(–1,0), H3 reaches significance ($p = 0.025$ and $p = 0.001$ under CAPM respectively), and H1 is marginally significant under CAR(0,0) ($p = 0.087$). Under CAR(–1,+5), H2 reaches significance ($p = 0.023$ CAPM, $p = 0.046$ FF3). These window-specific results do not overturn the primary inference: the CAR(–1,+1) window captures the core announcement effect and is the theoretically motivated benchmark for cross-sectional analysis of short-window returns. The emergence of H3 under intra-day and same-day windows, and of H2 over the longer post-announcement window, is consistent with trade-related information being priced rapidly and with cultural integration concerns becoming more salient to investors over slightly longer horizons, but neither result is sufficiently stable to constitute a positive finding for H2 or H3.

For H2 specifically, excluding the 22 deals involving target countries with proxied Hofstede scores leaves the cultural distance coefficient and its significance unchanged, confirming that

the null result in the primary window is not attributable to measurement imprecision at the margins of Hofstede coverage. Full results are reported in Appendix A9.

4.5.2 Sample Splits and Outlier Sensitivity

The M4 specification estimated separately on the pre-2016 and post-2015 subsamples reveals substantial heterogeneity in the drivers of announcement returns across the two regimes. Table 12 summarises the results.

Table 12: Temporal Subsample Regression Results

M4 specification estimated separately on the pre-2016 and post-2015 subsamples. Dependent variable: CAPM-based CAR(–1,+1). Standard errors clustered at the target country level.

Variable	2010–2015 (pre-2016)	2016–2024 (post-2015)
Hypothesis variables		
Gov. distance (H1)	0.0073***	–0.0035
KS distance (H2)	–0.0031	0.0048*
Log trade int. (H3)	–0.0015	0.0067***
Log rel. deal size (H4)	0.0067***	–0.0008
Deal controls		
Log deal value	0.0000	0.0008
Cash	0.0055	0.0020
Stock	0.0022	–0.0508***
Public target	0.0049	0.0010
Subsidiary	0.0050	0.0013
Firm controls		
Leverage	0.0069	0.0184
Book-to-market	0.0025	0.0036
CF / equity	0.0010	0.0008
Pre-ann. runup	–0.0115	–0.0233
Sigma	0.4200	–0.0930
Model statistics		
N	493	545
R^2	0.092	0.097
Year fixed effects	No	No
Region / industry FE	Yes	Yes

Note: The sample is split at end-2015. The pre-2016 subsample covers announcements from 2010 to 2015 (N = 493 after Compustat and WITS matching). The post-2015 subsample covers 2016 to 2024 (N = 545). Both specifications follow the M4 structure with deal and firm controls, region and acquiror industry fixed effects, and log market capitalisation excluded. *, **, and *** denote significance at the 10%, 5%, and 1% levels respectively.

The results reveal that the H4 finding is concentrated in the pre-2016 period. In the pre-2016 subsample, the H4 coefficient is 0.0067 ($p < 0.001$), more than twice the full-sample estimate. In the post-2015 subsample the coefficient falls to –0.0008 and is statistically indistinguishable from zero ($p = 0.649$). This temporal instability of H4 is consistent with the broader structural break documented in Section 4.3, suggesting that the market's positive response to larger relative deals was a feature of the pre-2016 environment and has not persisted into the later period. A notable additional finding from the subsample split is that governance distance reaches significance in the pre-2016 subsample (0.0073, $p = 0.003$), consistent with the institutional arbitrage hypothesis but operative only in the earlier regime. In the post-2015 subsample, the pattern for H2 and H3 reverses: cultural distance reaches marginal significance (0.0048, $p = 0.052$) and bilateral trade intensity is positive and significant (0.0067, $p = 0.005$), suggesting that these channels may operate differently under the post-2015 regime even though they carry no explanatory power in the full sample.

Panel C of Table 11 reports outlier sensitivity checks for H4. Excluding the top 1% of relative deal size observations leaves the coefficient at 0.0029 ($p < 0.05$), and excluding the top 5% yields 0.0037 ($p < 0.01$). Both estimates are similar in magnitude to the baseline and retain significance, confirming that the H4 result is not driven by a small number of extreme observations.

4.5.3 Standard Error Specifications

Panel C of Table 11 reports the M4 coefficients for all four hypothesis variables under HC3 heteroskedasticity-robust standard errors alongside the baseline clustered estimates. For H1, H2, and H3, the HC3 p-values are 0.745, 0.372, and 0.413 respectively, each larger than the corresponding clustered p-values, confirming that the null results for the three distance hypotheses are not a product of conservative clustering. For H4, the HC3 estimate is 0.0032 ($p = 0.021$), preserving both the sign and the significance of the baseline result at the 5% level. The stock dummy similarly retains significance under HC3 ($p = 0.028$). The qualitative inference across all five variables is therefore unchanged under the alternative error specification.

5. Discussion

5.1 Interpretation of Findings

At the aggregate level, the event study provides qualified evidence that US-listed acquirors earned mildly positive abnormal returns around cross-border acquisition announcements over the 2010 to 2024 period. The average CAR(–1,+1) of approximately 0.32% under both the CAPM and FF3 specifications places the result within the range documented in the broader M&A literature, which typically finds small positive or near-zero announcement returns for US acquirors depending on sample period and deal characteristics (Andrade, Mitchell and Stafford, 2001; Moeller, Schlingemann and Stulz, 2004). The large dispersion and clear non-normality of announcement returns confirm that individual deal outcomes vary substantially around this modest mean.

The temporal structure of the aggregate result is more informative than the headline figure. The decomposition into pre-2016 and post-2015 subperiods reveals that the positive aggregate CAAR is driven entirely by the earlier cohort, which generates a CAAR of 0.911% compared to -0.219% in the post-2015 period, a difference significant at the 1% level. This pattern is consistent with a period of tightening regulatory scrutiny of cross-border transactions, rising macroeconomic and geopolitical uncertainty, and the gradual erosion of the US governance advantage relative to developed market targets over the sample period. The full-sample results therefore partly pool two different market regimes, and the conditions supporting positive announcement effects were more prevalent in the pre-2016 period.

Once the analysis moves to cross-sectional explanation, three of the four hypothesised channels receive little support in the full-sample joint specification. Governance distance, cultural distance, and bilateral trade intensity are all statistically insignificant in M4 and M5. This collective absence of support is theoretically informative in its own right. Country-level distance variables are likely too distal relative to the information investors actually respond to at announcement. Governance quality, cultural distance, and bilateral trade intensity may matter for integration difficulty, operational frictions, or long-run performance, but they are not strong short-run predictors of announcement returns in this setting.

The split-sample analysis in Table 10 reveals important heterogeneity within each of these dimensions. For governance distance, the coefficient in the above-median subsample, where US institutional quality is meaningfully stronger than the target country, is 0.0078 ($p = 0.051$),

suggesting that the institutional arbitrage mechanism may operate conditionally when the governance gap is sufficiently large. The below-median coefficient of 0.0189 is positive but insignificant ($p = 0.247$). The re-emergence of a significant governance distance coefficient in the pre-2016 temporal subsample (0.0073, $p = 0.003$) is consistent with the hypothesis operating under the right conditions rather than being rejected in principle. The piecewise and interaction specifications reported in Appendix A4 corroborate this interpretation. For cultural distance, both the above-median and below-median subsamples produce negative coefficients. The below-median coefficient is -0.0764 ($p = 0.008$), indicating that among acquisitions in culturally proximate markets, greater cultural distance is associated with significantly lower announcement returns. This pattern is consistent with cultural frictions being most salient at the margin, where small differences in cultural fit are more visible to investors, but dissipating in more culturally distant markets where integration risk is already anticipated. The above-median coefficient is near zero and insignificant (-0.0016, $p = 0.452$). The full-sample null result is consistent with the view that cultural frictions manifest primarily during post-merger integration rather than at announcement, a finding aligned with Ahern, Daminelli and Fracassi (2015) who document cultural distance effects on merger volume and deal structure rather than short-window returns. For trade intensity, the above-median subsample produces a negative and significant coefficient (-0.0182, $p = 0.049$), while the below-median coefficient is positive but marginally insignificant (0.0031, $p = 0.064$). This pattern suggests that bilateral trade ties do not uniformly facilitate value creation: in already highly integrated markets the informational advantage may be fully priced, while in less integrated markets a nascent bilateral relationship may carry a modest positive signal. The absence of full-sample significance cautions against a strong interpretation of either subsample result.

The only explanatory variable that consistently emerges as statistically significant is relative deal size, and even here the evidence is not straightforward. The coefficient is positive and significant across all baseline specifications, robust to alternative event windows and expected return models, and concentrated in the pre-2016 subsample (0.0067, $p < 0.001$). Yet the sign directly contradicts H4, which predicted a negative relationship based on the hubris and overpayment literature of Roll (1986) and Moeller, Schlingemann and Stulz (2004). Several interpretations are consistent with this finding in the cross-border context. Large relative transactions may signal managerial conviction and selectivity rather than overconfidence, as cross-border acquisitions require extensive legal, informational, and integration preparation that may itself function as a quality screen. There is also a selection argument: only financially

strong and well-governed acquirors are typically able to pursue large cross-border transactions, so the market reaction may partly reflect acquiror quality rather than deal characteristics alone. Finally, the composition of the present sample differs fundamentally from that of Moeller et al. (2004), which focused on domestic US acquisitions with a higher proportion of public-target deals where overpayment risk is greatest. With over 84% of deals involving subsidiary or private targets, the winner's curse mechanism is substantially weaker, and the sign reversal may reflect a genuine difference in the economics of cross-border versus domestic transactions.

The consistent negativity of the stock financing dummy across all specifications reproduces a familiar pattern from the broader M&A literature. The persistent negative association between equity financing and announcement returns fits the standard adverse selection interpretation of Myers and Majluf (1984): management willing to finance acquisitions with stock may be signalling that their shares are overvalued, prompting investors to revise downward their assessment of the acquiror's standalone value. The fact that this effect persists robustly in the cross-border setting strengthens the overall credibility of the empirical design.

Taken together, the findings suggest that short-run shareholder value effects in cross-border M&A are better explained by transaction-specific characteristics than by broad country-level distance measures. The event study shows that the market reaction is on average mildly positive but concentrated in the pre-2016 period. The regression analysis shows that this reaction is not robustly structured by governance, cultural, or trade distance in the full sample, though meaningful heterogeneity exists within each dimension. The most defensible overall interpretation is that investors respond primarily to deal-level signals that are immediately salient at announcement, while country-level frictions may matter later, indirectly, or only under certain market conditions. This pattern has an important implication: the conventional intuition drawn from domestic M&A does not transfer mechanically to cross-border settings, and investors appear to evaluate large foreign acquisitions through a different lens than standard hubris-based predictions would suggest.

5.2 Limitations

Several limitations bound the scope of the conclusions that can reasonably be drawn from this thesis.

The most fundamental constraint is the short-run measurement window. The event study captures how investors initially assess the expected value implications of a transaction, but it

does not speak to long-run acquisition success. In cross-border M&A this distinction is especially important because many of the most relevant frictions, including cultural integration problems, governance adaptation, and operational coordination across jurisdictions, unfold only after closing and may not be fully reflected in announcement-period returns. The absence of significant short-run effects for governance distance, cultural distance, and bilateral trade intensity should therefore not be interpreted as evidence that these variables are irrelevant for the ultimate success of cross-border acquisitions. They may matter substantially for long-run performance while remaining only weakly priced at announcement.

A related limitation concerns the level of measurement. The study relies on country-level proxies for several theoretically important mechanisms. Governance distance, cultural distance, and bilateral trade intensity compress substantial within-country heterogeneity and may fail to capture deal-specific realities such as the governance structure of the individual target, the integration capabilities of the acquiror, or the depth of prior business relationships between the parties. Firm-level measures of bilateral familiarity, such as analyst coverage overlap or institutional investor cross-holdings, would be more precise proxies for the informational and governance channels the hypotheses envision. The insignificance of H1, H2, and H3 is therefore at least partially attributable to measurement precision rather than to the absence of the underlying mechanisms.

The cultural distance measure carries an additional specific limitation. The Kogut–Singh index is known to be sensitive to the masculinity dimension of the Hofstede framework, which produces anomalously high distance scores for Nordic countries such as Sweden, Norway, and the Netherlands due to their unusually low masculinity scores relative to the United States. These countries collectively represent a substantial share of the sample. The resulting measurement error may attenuate the estimated cultural distance effect and contribute to the null result for H2.

The cross-sectional regression design is associational rather than causal. The estimates show whether certain deal, firm, and country characteristics are systematically related to announcement returns, but they do not identify causal effects in a strict econometric sense. Acquirors self-select into target countries based on strategic considerations, prior relationships, and industry dynamics that are unobserved in the data. The inclusion of deal-level controls, industry and region fixed effects, and year fixed effects reduces but cannot eliminate this concern.

Some findings are not temporally stable. The positive aggregate announcement effect and the relative deal size coefficient are both concentrated in the pre-2016 period and weaken substantially thereafter. The full-sample coefficients should therefore be interpreted as average relationships over a heterogeneous sample horizon rather than as fixed structural parameters. The linear OLS specifications may also not fully capture the relationships between country-level distance variables and announcement returns, given that the median split analysis in Section 4.4.2 indicates that effects differ across the distribution of each variable.

The interpretation of the relative deal size finding warrants particular caution. Although the positive coefficient is robust within the present framework, relative deal size may simultaneously capture perceived strategic importance, transaction salience, and acquiror quality in addition to deal risk. These channels cannot be disentangled in the current design, and the result should not be read as a definitive refutation of the hubris-based view of large acquisitions. A more modest conclusion is that, in this sample of cross-border transactions, larger relative deals were not penalised by investors in the way the initial hypothesis predicted. A specific measurement constraint is that log relative deal size is constructed as the log ratio of deal value to acquiror market capitalisation, meaning the two components cannot be disentangled: a high value may reflect a large deal, a small acquiror, or both.

The announcement date convention assigns $t = 0$ to the first trading day on or after the public announcement. For deals announced outside trading hours, this introduces a one-day lag between the information event and the measured return. While this is standard practice in event studies and the inclusion of $t = -1$ in the primary window mitigates the effect, some precision is lost for after-hours announcements.

Standard errors are clustered at the target country level throughout, which addresses within-country correlation but does not account for cross-sectional dependence arising from deals announced in the same calendar period. Year fixed effects in M5 partially absorb common time shocks, but calendar-year clustering is not implemented in the baseline specifications.

The pre-announcement runup control reduces but cannot fully eliminate contamination from pre-event price trends. If some announcements are partially anticipated, the runup window may not capture all relevant price movement prior to $t = -1$, leaving residual pre-event drift in the dependent variable.

The effective sample composition changes across specifications as missing values in the firm-level and country-level controls reduce the regression sample from 1,157 to 1,038 observations

in M4. These missing values are not necessarily random, meaning that coefficient estimates across specifications may reflect differences in sample composition in addition to the inclusion of additional variables.

The sample is deliberately selective. The thesis focuses on completed cross-border acquisitions by US-listed acquirors with deal values of at least USD 50 million. This improves comparability and data quality but limits external validity. The findings cannot be assumed to generalise automatically to smaller private deals, non-US acquirors, failed or withdrawn transactions, or deal markets outside the United States.

5.3 Practical Implications

For managers and boards, the most immediate lesson is that cross-border acquisitions are not inherently penalised by capital markets. The average announcement effect is mildly positive, and the market appears willing to reward foreign transactions that are perceived as strategically credible. The burden for executives is therefore not to justify the fact of international expansion but to communicate the deal-specific logic convincingly. Since the positive market reception was concentrated in the pre-2016 period and has weakened since, acquirors operating in the current environment of tighter regulatory scrutiny and elevated geopolitical uncertainty should not assume that historical reception patterns will persist. The strategic rationale needs to be demonstrably stronger, not assumed.

A second implication concerns the communication of deal structure. The consistently negative coefficient on equity financing across all specifications confirms that the market treats stock-financed acquisitions with scepticism, consistent with adverse selection concerns. For boards approving large cross-border transactions, the financing decision carries informational content that is priced at announcement. Where stock financing is strategically necessary, the announcement should address this directly and explain why the chosen structure reflects target valuation confidence rather than acquiror overvaluation.

For managers evaluating target countries, the results suggest that broad country-level indicators, including governance quality, cultural distance, and bilateral trade intensity, have limited value as capital market signalling tools at the point of announcement. Investors do not appear to reward or penalise cross-border deals based primarily on where the target is located. This does not mean these variables are operationally irrelevant: they likely matter substantially for post-merger integration and long-run performance. But managers should not rely on favourable

country-level characteristics as primary public justifications for a transaction, since the market responds more to deal-specific signals than to the geography of the target.

For investors evaluating newly announced cross-border transactions, the thesis suggests that immediately observable deal characteristics, particularly the scale of the transaction relative to the acquiror and the mode of payment, carry more short-run pricing information than country-level distance measures. Larger relative deals have historically been associated with more positive announcement returns, though this effect is concentrated pre-2016 and should not be treated as a reliable forward-looking signal. The more durable lesson for investors is that the pricing of cross-border acquisitions is time-varying and regime-dependent. Heuristics derived from the pre-2016 environment may not apply in the current market, and the temporal stability of any cross-border acquisition premium should be tested rather than assumed.

6. Conclusion

This thesis examines whether US-listed acquirors earn abnormal announcement returns on completed cross-border acquisitions and whether four hypothesised channels, namely governance distance, cultural distance, bilateral trade intensity, and relative deal size, explain cross-sectional variation in those returns. Using an event study of 1,157 transactions announced between 2010 and 2024, combined with a cross-sectional regression framework estimated across six specifications, the analysis yields three principal findings that collectively suggest a more nuanced picture of cross-border acquisition valuation than the existing literature implies.

The aggregate announcement effect is positive but modest and, critically, not stable over time. The full-sample CAPM CAAR of 0.315% for the three-day window CAR(–1,+1) is broadly consistent with prior evidence on US acquiror returns (Andrade, Mitchell and Stafford, 2001; Moeller, Schlingemann and Stulz, 2004), but the full-sample figure conceals a pronounced structural break. The pre-2016 subsample generates a highly significant CAAR of 0.911%, while the post-2015 subsample produces -0.219%, statistically indistinguishable from zero, and the difference between the two periods is significant at the 1% level. This divergence is consistent with tightening regulatory scrutiny of cross-border transactions following the Foreign Investment Risk Review Modernization Act of 2018, rising geopolitical uncertainty, and the gradual compression of the US governance advantage relative to developed market targets over the sample period. The practical implication of this finding extends beyond the present sample: studies relying on pre-2016 data to characterise the market reception of cross-

border acquisitions systematically overstate the returns available in the current environment. The headline positive return should be read as a pooled average across two qualitatively different market regimes rather than as a stable structural feature of cross-border M&A.

The three country-level distance variables, governance distance, cultural distance, and bilateral trade intensity, are uniformly insignificant in the full-sample joint specification. This collective null result is theoretically informative rather than merely negative. Country-level frictions are likely too distal from the deal-specific information investors process at announcement, and their effects may materialise primarily in post-merger integration and long-run performance rather than in the short-run return window. The split-sample analysis reveals meaningful heterogeneity within each dimension that the full-sample estimates obscure: governance distance shows a marginally significant positive effect when the US institutional advantage is largest and is significantly positive in the pre-2016 subsample, cultural distance is significantly negatively associated with returns in culturally proximate markets, and trade intensity shows a sign reversal across the distribution with a significant negative effect in highly integrated markets. These patterns suggest that the mechanisms underlying each hypothesis operate conditionally rather than universally, and that full-sample insignificance reflects averaging across heterogeneous subgroups rather than the absence of any underlying relationship. The finding that governance distance reaches significance only pre-2016 is consistent with the structural break interpretation: as the US governance advantage eroded, the institutional arbitrage channel that may have driven positive returns in the earlier period became less operative.

Relative deal size is the only hypothesis variable to achieve robust statistical significance, with a positive coefficient of 0.0032 in the full joint specification that is stable across all eight model-window combinations and significant in 11 of 12 robustness specifications. The positive sign directly contradicts the hubris-based prediction derived from Roll (1986) and Moeller, Schlingemann and Stulz (2004), but is interpretable in the cross-border context. Large foreign transactions require extensive due diligence and face heightened scrutiny from boards and regulators, so transaction scale may function as a credible quality signal rather than an overpayment indicator. The effect is concentrated entirely in the pre-2016 period and is absent thereafter, consistent with the broader temporal instability documented across the analysis. The composition of the sample, with over 84% subsidiary and private targets, also differs fundamentally from the domestic samples where hubris-based predictions have the strongest

empirical support, suggesting a genuine difference in the economics of cross-border versus domestic acquisitions rather than a methodological artefact.

These findings make two contributions to the cross-border M&A literature. First, they confirm and extend the null results on country-level distance variables documented in prior work (Chakrabarti, Gupta-Mukherjee and Jayaraman, 2009; Bhagat, Malhotra and Zhu, 2011) to a more recent and comprehensive US sample, while adding the insight that these variables exhibit meaningful conditional effects that full-sample specifications cannot detect. Second, and more distinctively, the thesis documents a structural break in the valuation of cross-border acquisitions around 2015 that has not been previously characterised in the literature. This finding has methodological implications for the field: pooled estimates from heterogeneous sample periods may mask regime-specific dynamics, and future event studies of cross-border M&A should routinely test for temporal stability rather than treating the full-sample coefficient as a fixed structural parameter.

The findings are subject to several constraints. The event study captures investor expectations at announcement rather than realised long-run value, the country-level proxies compress substantial within-country heterogeneity, and the cross-sectional design is associational rather than causal. The positive aggregate return and the relative deal size coefficient are both temporally concentrated, meaning that full-sample estimates should be interpreted as averages over heterogeneous regimes rather than as fixed structural parameters.

Several directions merit investigation in future research. The nature and timing of the regime shift around 2015 warrants closer examination: regulatory, macroeconomic, and geopolitical factors are all plausible candidates but cannot be separately identified in the present design, and a difference-in-differences approach exploiting specific regulatory events could yield cleaner identification. Firm-level measures of bilateral familiarity, such as analyst coverage overlap, institutional investor cross-holdings, or prior alliance relationships, would provide more precise tests of the informational and governance channels than the country-level proxies employed here. Extending the analysis to long-run buy-and-hold returns or operating performance would allow a direct test of whether governance distance, cultural distance, and trade intensity, while insignificant at announcement, nonetheless predict post-merger value creation over longer horizons. Finally, replicating the structural break analysis for non-US acquirors would establish whether the post-2015 deterioration in cross-border acquisition returns is a US-specific

phenomenon or a broader feature of the global M&A market in the current geopolitical environment.

Appendix

A 1: Post-hoc Exclusions from Final Sample

Observations excluded following systematic post-hoc validation of price series quality. Exclusions were applied uniformly based on pre-specified criteria and not based on announcement-period return outcomes.

Deal ID	Acquiror	Exclusion category	Reason
3839996040	BOA Acquisition Corp	SPAC	Residual SPAC case not identified by reverse-merger flag
4010731040	EDOC Acquisition Corp	SPAC	Residual SPAC case not identified by reverse-merger flag
3644878040	APi Group Corp	SPAC	Went public via SPAC October 2019
4020588040	Catalyst Biosciences	Data quality	Corrupted price observation of −4.5% in estimation window
3075511040	Eagle Bulk Shipping	Data quality	Reverse split adjustment failure
3641748040	Boxlight Corp	Data quality	Reverse split adjustment failure
3801070040	MoSys Inc	Data quality	Reverse split adjustment failure
3709281040	Flutter Entertainment	Data quality	Non-US listed company incorrectly retained in screen
3580243040	Novavax	Data quality	Seven extreme price moves; 15x price increase during event window
3807129040	Whiting Petroleum	Data quality	Chapter 11 bankruptcy proceedings during estimation window
2408315040	Nabi Biopharmaceuticals	Data quality	Single-day return of −66% in estimation window
2915463040	Adverum Biotechnologies	Data quality	Single-day return of −56% in estimation window

Note: Deal IDs are Refinitiv Workspace transaction identifiers. All exclusions were identified through the systematic validation procedure described in Section 3.1.2. The three SPAC cases were not captured by the reverse merger flag applied in the initial screening because they were structured as acquisitions of non-US targets rather than as standard SPAC mergers.

A 2: Refinitiv to WGI Country Name Mapping

Refinitiv target nation names mapped to their corresponding World Bank Worldwide Governance Indicators country names prior to merging. All remaining target nations matched directly by name without remapping.

Refinitiv target nation	WGI country name
China (Mainland)	China
South Korea	Korea, Rep.
Russia	Russian Federation
Taiwan	Taiwan, China
Hong Kong	Hong Kong SAR, China
Vietnam	Viet Nam
Egypt	Egypt, Arab Rep.
Turkey	Türkiye

Refinitiv target nation	WGI country name
Jersey	United Kingdom
Guernsey	United Kingdom
Cayman Islands	United Kingdom
Bermuda	United Kingdom
U.S. Virgin Islands	United States
Puerto Rico	United States
Monaco	France
Liechtenstein	Switzerland
Czech Republic	Czechia
Luxembourg	Luxembourg
Malta	Malta
Bulgaria	Bulgaria
Serbia	Serbia
Slovenia	Slovenia
Paraguay	Paraguay
Oman	Oman

Note: Offshore financial centre jurisdictions (Jersey, Guernsey, Cayman Islands, Bermuda) and US territories (U.S. Virgin Islands, Puerto Rico) are assigned to their governing or legally proximate country for WGI scoring purposes, consistent with the treatment in Ellis, Moeller, Schlingemann and Stulz (2017). Monaco is assigned to France and Liechtenstein to Switzerland on the same basis.

A 3: Hofstede Proxy Assignments

15 target countries without direct Hofstede (1980) coverage, assigned cultural distance scores using the proxy country indicated. Proxy assignments are based on cultural and geographic proximity. These 22 observations are excluded from the proxy robustness check reported in Appendix A9.

Target country	Proxy used
Jersey	United Kingdom
Guernsey	United Kingdom
Bermuda	United Kingdom
Cayman Islands	United Kingdom
Bahamas	United Kingdom
Monaco	France
Liechtenstein	Switzerland
Cyprus	Greece
Oman	Saudi Arabia
Bahrain	Saudi Arabia
Qatar	Saudi Arabia
U.S. Virgin Islands	United States
Puerto Rico	United States

Target country	Proxy used
Kazakhstan	Russia
Guatemala	Mexico

Note: Hofstede dimension scores are time-invariant and assigned uniformly across all deals targeting a given country regardless of announcement year. Proxy assignments reflect cultural and geographic proximity. The robustness of the H2 result to exclusion of these observations is confirmed in Appendix A9.

A 4: Extended Specifications for H1: Governance Distance

Panel A reports a piecewise decomposition of governance distance into separate positive and negative gap terms, allowing the effect to differ depending on the direction of the institutional gap relative to the United States. Panel B reports an interaction specification augmenting M2 with a post-2015 indicator and its interaction with governance distance. Both specifications use the same control vector and clustering approach as the baseline M2 specification.

Panel A: Piecewise specification

Variable	Coefficient	Std. Error	p-value
Gov. distance (positive gap)	0.0037	0.0045	0.408
Gov. distance (negative gap)	–0.0023	0.0086	0.787
Deal and firm controls	Yes		
Region / industry FE	Yes		
N	1,048		
R^2	0.048		
Adjusted R^2	0.023		

Panel B: Interaction specification (M2 + Post-2015 interaction)

Variable	Coefficient	Std. Error	p-value
Gov. distance	0.0054**	0.0025	0.032
Post-2015 indicator	–0.0128***	0.0033	0.000
Gov. distance × Post-2015	–0.0082	0.0052	0.116
Deal and firm controls	Yes		
Region / industry FE	Yes		
N	1,048		
R^2	0.061		
Adjusted R^2	0.035		

Note: Gov. distance (positive gap) = max(gov_distance, 0); Gov. distance (negative gap) = min(gov_distance, 0). The interaction specification tests whether the governance distance coefficient changes across the pre- and post-2015 subperiods. The negative and significant post-2015 coefficient confirms the structural break documented in Section 4.3. The interaction term is negative but insignificant ($p = 0.116$), suggesting that the attenuation of the governance premium in the post-2015 period is captured by the level shift rather than a differential slope. Standard errors clustered at the target country level. *, **, and *** denote significance at the 10%, 5%, and 1% levels respectively.

A 5: Target Country Distribution and Mean Announcement Returns

All target countries with N ≥ 10 deals. CAPM-based CAR(–1,+1), winsorised at 1%/99%.

Target nation	N	Mean CAR (%)	p-value
United Kingdom	238	0.364	0.331
Canada	192	0.246	0.552
Germany	100	0.058	0.896
France	65	0.983	0.208
Australia	55	0.222	0.778
Netherlands	46	1.440**	0.023
Israel	44	–2.177**	0.032
Switzerland	39	0.763	0.384
Italy	34	0.292	0.670
Sweden	26	–0.833	0.423
Spain	24	1.768	0.100
Brazil	23	–1.776*	0.089
Mexico	22	2.173*	0.055
Denmark	21	–0.181	0.886
Ireland	21	1.491	0.211
Norway	19	0.183	0.821
Japan	17	–1.319	0.153
Belgium	16	2.480**	0.025
China (Mainland)	15	–1.304	0.533
Singapore	12	2.202	0.260
India	10	–0.719	0.373
Hong Kong	10	–0.692	0.752

Note: p-values are from a two-tailed t-test of the null hypothesis that the country mean equals zero. Countries with fewer than 10 observations are excluded. *, **, and *** denote significance at the 10%, 5%, and 1% levels respectively.

A 6: US WGI Composite Score, 2010 to 2023

Annual composite score for the United States constructed as the simple average of the six World Bank Worldwide Governance Indicators: control of corruption, government effectiveness, political stability and absence of violence, rule of law, regulatory quality, and voice and accountability. Values for 2024 are proxied using the 2023 observation.

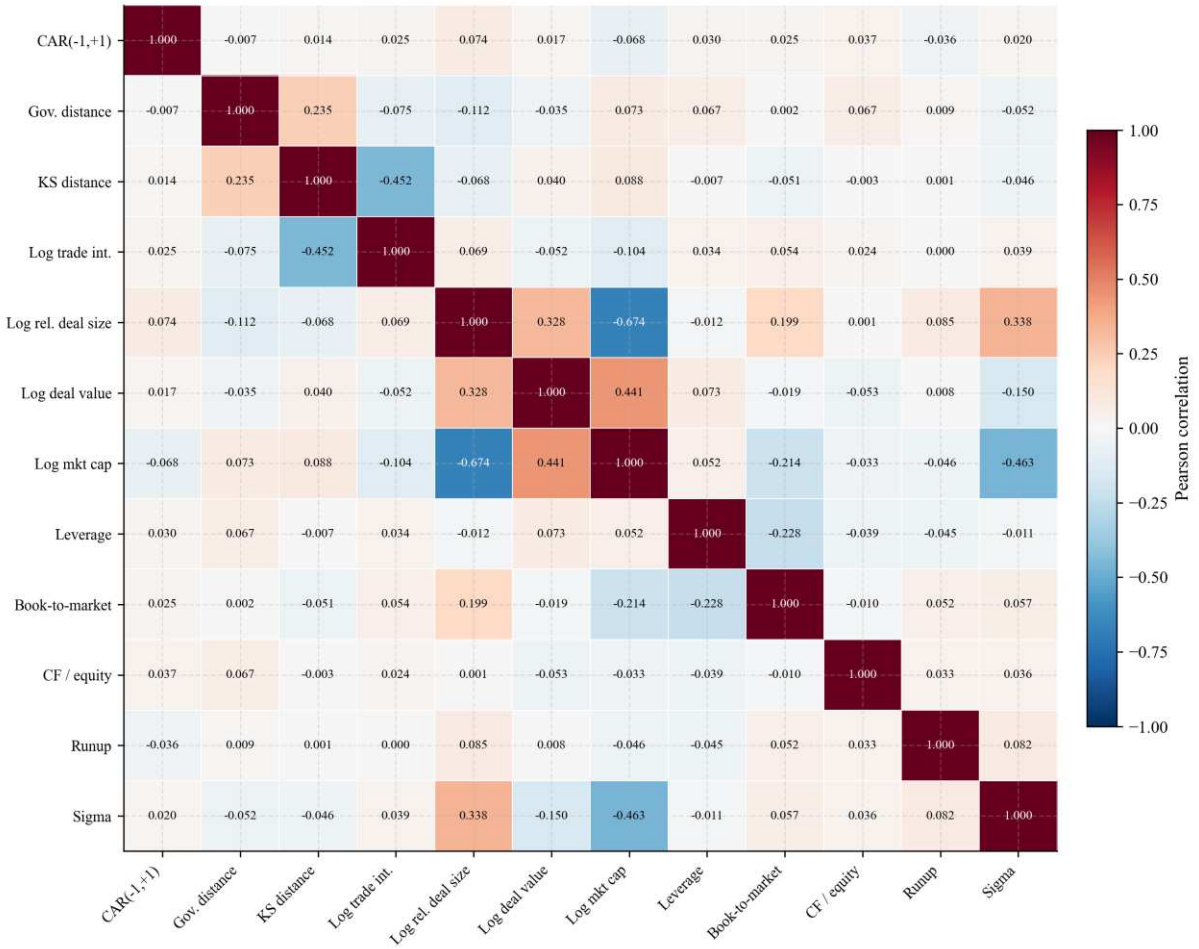
Year	WGI composite	Change from 2010
2010	1.244	–
2011	1.257	0.013
2012	1.272	0.028
2013	1.230	–0.014
2014	1.228	–0.016
2015	1.228	–0.016

Year	WGI composite	Change from 2010
2016	1.222	–0.022
2017	1.226	–0.018
2018	1.217	–0.027
2019	1.069	–0.175
2020	0.953	–0.291
2021	1.002	–0.243
2022	1.004	–0.240
2023	0.995	–0.249

Note: WGI composite is the simple average of the six World Bank Worldwide Governance Indicators for the United States in the given year, following Kaufmann, Kraay and Mastruzzi (2010). The decline from 1.244 in 2010 to 0.953 in 2020, recovering partially to 0.995 by 2023, is referenced in Section 4.3 as a contributing factor to the structural break in cross-border acquisition announcement returns. Change from 2010 is the difference between the given year and the 2010 baseline.

A 7: Full Pairwise Correlation Matrix

N = listwise deletion. Pearson correlation coefficients.



Note: Pearson correlation coefficients based on listwise deletion. The diagonal is 1.000 by construction.

A 8: Variance Inflation Factors

M4 specification. Log market capitalisation excluded to avoid collinearity with log relative deal size.

Variable	VIF
Gov. distance	1.085
KS distance	1.328
Log trade int.	1.269
Log rel. deal size	1.443
Log deal value	1.254
Leverage	1.073
Book-to-market	1.114
CF / equity	1.012
Runup	1.015
Sigma	1.243

Note: Variance inflation factors computed on the M4 regression sample with listwise deletion. Log market capitalisation is excluded from the M4 specification to avoid collinearity with log relative deal size (VIF > 15 when both are included simultaneously). All remaining VIFs are below 1.5, confirming the absence of multicollinearity concerns.

A 9: H2 Proxy Robustness Check: Cultural Distance

The baseline H2 specification is re-estimated after excluding the 15 target countries for which Hofstede scores were proxied using culturally proximate countries (22 observations; see Appendix A3). Both specifications follow the M2 structure with deal and firm controls, region and acquiror industry fixed effects, and standard errors clustered at the target country level. Dependent variable: CAPM-based CAR(–1,+1), winsorised at 1%/99%.

Variable	Full sample	Excl. proxy countries
KS cultural distance	0.0003	0.0005
	(0.0015)	(0.0015)
Deal and firm controls	Yes	Yes
Region / industry FE	Yes	Yes
N	1,048	1,027
R^2	0.048	0.048
Adjusted R^2	0.024	0.023

Note: The 15 proxy countries are Jersey, Guernsey, Bermuda, Cayman Islands, Bahamas, Monaco, Liechtenstein, Cyprus, Oman, Bahrain, Qatar, U.S. Virgin Islands, Puerto Rico, Kazakhstan, and Guatemala (see Appendix A3). The KS cultural distance coefficient and its significance level are unchanged by the exclusion, confirming that the null result for H2 is not attributable to measurement imprecision at the margins of Hofstede coverage. Standard errors in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels respectively.

A 10: Cross-Sectional Quartile Decomposition of Mean Announcement

Quartile decomposition of CAPM-based CAR(–1,+1) along each of the three country-level hypothesis variables. Quartiles are formed based on the hypothesis variable itself in each panel. Returns winsorised at 1%/99%. p-values from two-tailed t-test of the null hypothesis that the quartile mean equals zero.

Panel A: Governance distance quartiles (Q1 = target governance strongest, Q4 = US governance much stronger)

Quartile	N	Mean CAR
Q1	294	0.050%
Q2	296	0.911%***
Q3	280	0.045%
Q4	287	0.236%

Panel B: Cultural distance quartiles (Q1 = lowest cultural distance, Q4 = highest)

Quartile	N	Mean CAR
Q1	518	0.336%
Q2	145	0.200%
Q3	208	–0.383%
Q4	286	0.843%***

Panel C: Bilateral trade intensity quartiles (Q1 = weakest US trade ties, Q4 = strongest)

Quartile	N	Mean CAR
Q1	287	–0.092%
Q2	302	0.884%***
Q3	274	0.167%
Q4	282	0.291%

Note: Quartiles are formed on the basis of the hypothesis variable within the regression sample. Mean CAR is the raw univariate average within each quartile and does not condition on the controls used in the M4 regression. Sample sizes within each panel may differ slightly due to non-overlapping missing values across the three hypothesis variables. *, **, and *** denote significance at the 10%, 5%, and 1% levels respectively.

A 11: Mean Announcement Returns by Acquiror Industry

Univariate analysis of CAPM-based three-day cumulative abnormal returns by acquiror industry, for all industries with at least 20 deals in the sample. Returns winsorised at 1%/99%.

Group	N	Mean CAR	p-value
High Technology	229	0.394%	0.352
Industrials	210	0.921%***	0.004
Healthcare	162	0.031%	0.946
Materials	121	0.277%	0.631
Financials	108	0.234%	0.617
Consumer Staples	71	0.639%	0.277
Consumer Products and Services	56	–0.678%	0.358
Energy and Power	54	1.105%*	0.094

Group	N	Mean CAR	p-value
Real Estate	54	–0.249%	0.496
Telecommunications	36	–1.666%	0.238
Media and Entertainment	32	–0.283%	0.750
Retail	24	1.356%	0.180

Note: t-statistics test the null hypothesis that the industry mean equals zero (two-tailed). All comparisons are univariate and do not control for correlated deal characteristics. Industry classifications follow Refinitiv definitions. *, **, and *** denote significance at the 10%, 5%, and 1% levels respectively.

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