Stock Market Reactions to Corporate Venture Capital Announcements

Mats Jesper Krüger

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Stock Market Reactions to Corporate Venture Capital (CVC) Launch Announcements

Mats Jesper Krüger

This thesis investigates whether the public announcement of a corporate venture capital (CVC) program launch generates significant short-run abnormal stock returns for the announcing firm. While prior empirical work has examined capital market reactions to individual CVC investments and CVC-related disclosures, the stock price implications of CVC program launches have received limited direct attention. To the best of the author's knowledge, no prior study has conducted a systematic, multi-regional event study focusing specifically on this event type. The empirical analysis covers 61 CVC launch announcements by publicly listed firms from the United States, Europe, and Japan over 2020–2024. Expected returns are estimated using a market model with a pre-event estimation window of 250 trading days. Cumulative abnormal returns (CARs) are computed over three event windows and tested using one-sample t-tests and Wilcoxon signed-rank tests. Robustness checks include an alternative estimation window, event exclusions, and winsorization of the CAR distribution. Across all specifications, event windows, regional subsamples, and benchmark models, the results consistently show no statistically significant abnormal returns around CVC launch announcements. Mean CARs are small in magnitude and negative, with p-values well above conventional significance thresholds. These findings suggest that capital markets treat CVC program launches as informationally neutral events in the short run, consistent with the view that such announcements convey diffuse or ambiguous information insufficient to prompt an immediate price revision. The results contribute to the literature on corporate venturing and raise questions about when CVC-related disclosures become value-relevant to investors.

Keywords: Corporate venture capital, CVC launch announcement, event study, cumulative abnormal returns, capital market reaction, corporate venturing

Reações do Mercado de Capitais ao Anúncio do Lançamento de Programas de Corporate Venture Capital (CVC)

Mats Jesper Krüger

Esta dissertação investiga se o anúncio público do lançamento de um programa de *corporate venture capital* (CVC) gera retornos anormais de curto prazo estatisticamente significativos para a empresa anunciante. Estudos anteriores analisaram reações do mercado a investimentos individuais de CVC, mas as implicações no preço das ações decorrentes do lançamento de programas de CVC têm recebido atenção limitada. Nenhum estudo anterior realizou um estudo de evento sistemático e multirregional focado neste tipo de evento. A análise empírica abrange 61 anúncios de lançamento de CVC por empresas cotadas nos Estados Unidos, Europa e Japão entre 2020 e 2024. Os retornos esperados são estimados com um modelo de mercado e uma janela de estimação pré-evento de 250 dias de negociação. Os retornos anormais acumulados (RAA) são calculados para três janelas de evento e testados com testes t de uma amostra e testes de Wilcoxon. Os testes de robustez incluem uma janela de estimação alternativa, exclusão de eventos e winsorização dos RAA. Em todas as especificações, janelas de evento e subamostras regionais, os resultados mostram consistentemente ausência de retornos anormais estatisticamente significativos. Os RAA médios são negativos e de pequena magnitude, com valores-p acima dos limiares convencionais. Estes resultados sugerem que os mercados tratam o lançamento de programas de CVC como eventos informativamente neutros no curto prazo, contribuindo para a literatura sobre *corporate venturing*.

Palavras-chave: *Corporate venture capital*, anúncio de lançamento de CVC, estudo de evento, retornos anormais acumulados, reação do mercado de capitais, *corporate venturing*

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1. Introduction

1.1 Motivation and Research Question

Corporate venture capital (CVC) has become an established component of corporate innovation and growth strategies. Over the past decades, large listed companies across many industries have set up dedicated CVC programs to invest in early-stage ventures, access emerging technologies, and develop strategic options beyond their core business (Chesbrough, 2002; Dushnitsky & Lenox, 2006; Jeon & Maula, 2022). The establishment of such a program is typically communicated through a formal press release and thus represents one of the few occasions on which a firm publicly signals its long-term commitment to external venturing as part of its broader strategic agenda.

A large body of research shows that CVC can enhance innovation output and, under suitable conditions, contribute to firm value (Bierwerth et al., 2015; Dushnitsky & Lenox, 2006; Weiss & Kanbach, 2022). At the same time, recent reviews emphasize the heterogeneity and inherent tensions of CVC programs, for example between strategic and financial objectives or between autonomy and control, which may make their performance consequences difficult to predict (Jeon & Maula, 2022; Weiss & Kanbach, 2022). From a capital market perspective, CVC programs therefore constitute potentially important, but also complex, strategic initiatives whose value implications are not straightforward ex ante.

The event study literature has documented that stock markets react to a wide range of corporate events, including strategic alliances, R&D announcements, and venture capital transactions, when these events convey credible information about future cash flows and firm value (Brown & Warner, 1985; Chan et al., 1997; MacKinlay, 1997). More recently, several studies have examined CVC-related disclosures and investment announcements using event-study or return-based approaches, and report that at least some types of CVC news can be value-relevant (Chemmanur et al., 2014; Hamm et al., 2021; Kang et al., 2017). However, this empirical evidence is still limited and fragmented, with a predominant focus on individual CVC investments or on firms' general disclosure behavior rather than on the initiation of CVC programs themselves.

It therefore remains an open question whether the public announcement of a dedicated CVC program is perceived by investors as a value-relevant event. On the one hand, a CVC launch could

signal strategic foresight, a commitment to innovation, and access to high-growth ventures, which would be consistent with positive abnormal returns around the announcement date. On the other hand, investors may interpret CVC launches as costly and uncertain initiatives with diffuse objectives, such that the available information at the time of the announcement is too ambiguous to justify an immediate revision of stock prices.

Against this background, the central research question of this thesis is: Do CVC program launch announcements generate significant short-run abnormal stock returns for the announcing firm? To address this question, the study conducts a short-horizon event analysis of stock price reactions around the formal launch announcements of CVC programs by large, listed companies.

1.2 Contribution

This thesis contributes to the literature on corporate venture capital and capital market reactions to corporate strategic initiatives in three main ways. First, it focuses explicitly on CVC program launch announcements as a distinct type of corporate event. Prior empirical work on CVC and stock returns has mainly examined individual CVC investment announcements or broader information disclosure about ongoing CVC activities (Chemmanur et al., 2014; Hamm et al., 2021; Kang et al., 2017). By concentrating on the initial establishment of a dedicated CVC program, this thesis analyzes a more diffuse but strategically important signal that has so far received limited direct attention in the event-study literature.

Second, the study provides a systematic, multi-regional short-horizon event study of CVC program launches. The empirical analysis covers launch announcements by large, listed firms from the United States, Europe, and Japan over the period 2020–2024, thereby extending the predominantly U.S.-centric evidence on CVC-related capital market reactions. Expected returns are estimated using a standard market-model framework in line with established event-study methodology (Brown & Warner, 1985; MacKinlay, 1997), and cumulative abnormal returns are examined across several event windows and regional subsamples. This design allows the thesis to assess whether any stock price effects of CVC program launches are robust across institutional and market contexts.

Third, the thesis seeks to add to the broader discussion on when and how CVC-related disclosures become value-relevant to investors. In contrast to studies that document positive announcement

effects for selected CVC investments or for CVC information disclosure in specific settings (Chemmanur et al., 2014; Kang et al., 2017), the analysis of program launches offers evidence on a class of CVC events that is strategically important but relatively information-sparse at the time of disclosure. The finding that CVC launch announcements do not generate statistically significant abnormal returns across event windows, regions, and model specifications suggests that capital markets may treat these announcements as informationally neutral. This result, in turn, raises questions for future research about the conditions under which CVC-related announcements affect firm value and how firms might design their communication to make such strategic initiatives more informative for investors.

1.3 Overview of Methodology and Data

The empirical analysis is based on a short-horizon event study following the methodological framework established by Brown and Warner (1985) and MacKinlay (1997). The event of interest is the official public announcement of the establishment or launch of a CVC program by a large, listed company, as communicated through a press release. Events are identified through a systematic search of the Nexis Uni database covering the period from January 2020 to December 2024, supplemented by manual validation against original press releases to ensure accurate event dating and classification.

Daily stock return data for the parent companies are obtained from Refinitiv DataStream, and regional market benchmark data are assembled from broad equity indices for Europe, Japan, and Asia, alongside Fama-French market factors for the US. After applying standard data quality filters, the final estimation sample consists of 61 CVC launch announcements distributed across four regions: the US (N = 18), Europe (N = 14), Japan (N = 26), and Asia excluding Japan (N = 3). The three Asia ex Japan events are retained in the full sample but are not included in the regional subgroup analysis due to the insufficient subsample size.

Expected returns are estimated using a market model with event-specific alpha and beta coefficients, fitted over a pre-event estimation window of (-250, -10) trading days. Abnormal returns in the event windows (-1, +1), (-3, +3), and (-5, +5) are computed as the difference between realized and expected excess returns, and cumulative abnormal returns are aggregated at the event level. Statistical inference is based on one-sample t-tests and Wilcoxon signed-rank tests. As a

robustness check, the market model is complemented by a mean-adjusted specification, and the main results are subjected to three additional sensitivity tests: an alternative estimation window, the exclusion of an event with a notably short return history, and winsorization of the CAR distribution at the 5th and 95th percentiles.

1.4 Structure of the Paper

The remainder of this thesis is organized as follows. Chapter 2 reviews the relevant literature on corporate venture capital and capital market reactions to innovation-related announcements. Chapter 3 describes the data and sample construction. Chapter 4 presents the methodology, detailing the market model, the computation of abnormal returns and CARs, and the testing strategy. Chapter 5 reports the empirical results for the full sample, across event windows, benchmark specifications, and regions. Chapter 6 presents the robustness tests. Chapter 7 concludes with a summary of the key findings, implications, limitations, and suggestions for future research.

2. Literature review and theoretical background

This chapter defines the term corporate venture capital (CVC), places it in its historical context, and anchors it theoretically. It then presents key empirical findings on the role of CVC in innovation and corporate value and discusses event studies on CVC announcements.

2.1 Concept and development of corporate venture capital

Corporate venture capital (CVC) refers to equity investments by established corporations in young, mostly unlisted firms, typically organized through a dedicated CVC unit or corporate fund (Chesbrough, 2002). In contrast to independent venture capital (VC), which primarily pursues financial returns, CVC explicitly combines financial objectives with strategic goals such as accessing new technologies, markets, and business models and strengthening the competitive position of the parent firm (Chesbrough, 2002; Dushnitsky & Lenox, 2006). As part of the broader domain of corporate venturing, CVC thus represents an equity-based mechanism for exploring opportunities beyond the firm's current product, market scope.

Chesbrough (2002) is widely regarded as a central early reference for the systematization of CVC. He proposes a two-dimensional framework that distinguishes between financially versus

strategically dominated objectives and between tight versus loose operational coupling between the corporate parent and the portfolio venture. Combining these dimensions yields four archetypes of CVC programs, ranging from relatively passive, return-oriented investments with limited operational interaction to tightly integrated, strategically oriented programs that actively seek technological and market synergies (Chesbrough, 2002). Subsequent reviews show that CVC units differ substantially along these dimensions and that differences in strategic intent and organizational integration shape both the processes and outcomes of CVC activities (Drover et al., 2017; Dushnitsky & Lenox, 2006; Weiss & Kanbach, 2022).

Historically, CVC activity has often been described as occurring in waves that closely mirror broader technology cycles and capital market phases. Early CVC programs emerged in the 1960s and 1970s, when large US industrial firms invested in emerging IT, electronics, and biotechnology ventures to gain early access to novel technologies (Dushnitsky, 2009). A second major wave occurred during the dot-com boom of the late 1990s, followed by a sharp decline after the bursting of the bubble. Since the mid-2000s, and particularly in the 2010s, CVC has experienced a renewed rise, driven by digitalization, platform-based business models, and the growing strategic relevance of ecosystem relationships in many industries(Drover et al., 2017; Jeon & Maula, 2022). Overall, these developments suggest that CVC activity tends to cluster in periods of heightened technological opportunity and abundant external financing, which is important when situating recent CVC launches in their macro context.

Recent reviews and bibliometric analyses indicate that CVC research has coalesced into several major thematic clusters. One cluster focuses on the antecedents and motives of CVC programs, including strategic objectives, organizational design choices, and contextual factors such as industry dynamism (Dushnitsky, 2009; Weiss & Kanbach, 2022). A second cluster examines governance and organizational arrangements of CVC units, for example their structural autonomy, incentive systems, and integration with corporate R&D and M&A functions (Jeon & Maula, 2022; Weiss & Kanbach, 2022). A third cluster investigates performance and innovation outcomes of CVC, including patenting activity, innovation quality, and long-term firm value, and generally finds that CVC can enhance innovation and performance when strategically aligned with the core business and embedded in supportive organizational contexts (Bierwerth et al., 2015; Dushnitsky & Lenox, 2006).

In addition to these thematic clusters, several authors emphasize that CVC programs should be viewed as dynamic rather than static phenomena. Studies on corporate venturing life cycles describe how CVC units evolve through phases of initiation, expansion, consolidation, and, in some cases, divestiture or closure, with the relative emphasis on strategic versus financial objectives shifting over time as corporate strategy, market conditions, and internal support change (Weiss & Kanbach, 2022). Related work on corporate venturing and organizational ambidexterity argues that CVC can be configured to support exploration, exploitation, or both, and that firms frequently reconfigure their CVC setups as part of broader attempts to balance these competing demands (Weiss & Kanbach, 2022). This dynamic view matters for how investors interpret CVC launch announcements, because stock market reactions are likely to depend not only on the mere presence of a CVC program but also on its perceived strategic intent, anticipated role, and organizational embedding within the firm's evolving strategic portfolio.

2.2 Strategic and financial objectives of CVC

Building on the dual strategic, financial logic outlined above, a substantial body of work examines how CVC contributes to innovation and firm performance. Dushnitsky and Lenox (2006) provide early evidence that CVC investments are positively associated with subsequent patenting and firm value, particularly when the ventures operate in technological domains that are complementary to the corporate parent's core business. In such settings, CVC effectively extends internal R&D by giving firms privileged access to external knowledge and technologies, thereby enhancing exploratory innovation. By contrast, CVC investments without a clear strategic fit show little or no value contribution, reinforcing the view that CVC is not intrinsically value-creating but highly context dependent (Dushnitsky & Lenox, 2006).

Building on this evidence, more recent research adopts a broader corporate venturing perspective and explicitly links venturing activities to knowledge acquisition and firm performance. Survey data on German SMEs shows that corporate venturing, measured across internal, cooperative and external modes, positively affects both knowledge acquisition and performance. Knowledge acquisition is found to mediate the relationship between venturing performance and these effects, which are strengthened by transformational leadership and technological turbulence (Schulze & Dada, 2025). These findings support the view, rooted in the knowledge-based view of the firm, that venturing activities create value primarily by expanding and recombining firms' knowledge

bases, and that organizational and environmental conditions critically shape the magnitude of this value creation. For the purposes of this thesis, CVC can therefore be interpreted as a specific external venturing mechanism that operates through similar knowledge and capability-building channels, even though it represents only one subset of the broader corporate venturing domain.

From a capability perspective, recent research increasingly conceptualizes CVC as one mechanism for building dynamic capabilities. Enkel and Sagmeister (2020) show in a multiple case study that external corporate venturing modes such as CVC investments, accelerators, and venture client units enable firms to sense technological opportunities, seize them through collaborative arrangements, and reconfigure internal resources, thereby developing dynamic capabilities over time (Enkel & Sagmeister, 2020). Weiss and Kanbach (2022), based on a systematic review of 172 studies, argue that corporate venturing can be structured to support exploration, exploitation, or ambidexterity, and propose an integrated framework that links different venturing setups to specific ambidextrous configurations. In this view, CVC is not only a financing activity but also a design variable in how firms orchestrate exploratory and exploitative innovation.

At the same time, CVC programs are characterized by inherent tensions that may limit or distort their performance impact. Jeon and Maula (2022) systematically review the CVC literature and identify several paradoxical tensions, including exploration versus exploitation, autonomy versus control, and strategic versus financial logics, which shape how CVC units are governed and how they interact with both internal and external stakeholders. These tensions can lead to agency conflicts, shifting priorities, or oscillations in strategic focus, all of which may weaken the consistency of CVC outcomes over time. Such dynamics imply that the performance effects of CVC are heterogeneous across firms and periods, which is important when interpreting aggregate empirical findings.

Overall, the literature largely suggests that CVC has the potential to enhance innovation and, under appropriate conditions, firm performance through mechanisms such as access to complementary knowledge, portfolio diversification, and the development of dynamic capabilities, but it also emphasizes that these effects are highly context-dependent and not universally positive (Bierwerth et al., 2015; Chemmanur et al., 2014; Dushnitsky & Lenox, 2006; Schulze & Dada, 2025; Weiss & Kanbach, 2022). For the purposes of this thesis, these insights imply that CVC launch announcements could, in principle, convey information about future innovation and performance

prospects, but that investors' interpretations may vary depending on how credible and well aligned a given CVC initiative appears within the firm's broader strategic and organizational configuration.

2.3 CVC compared to independent venture capital funds

Comparisons between corporate venture capital and venture capital funds reveal structural differences in objectives, governance, and time horizons. Independent VC funds are typically organized as limited partnerships with a fixed fund life and are primarily evaluated based on financial performance indicators such as internal rate of return (IRR), multiples of invested capital (MOIC), and exit outcomes (Drover et al., 2017). Fund managers' compensation is strongly performance-based through carried interest, which creates powerful incentives to maximize the financial value of portfolio companies and to time exits optimally. Consequently, independent VC investors focus predominantly on deal selection, value-adding support, and exit structuring with the aim of generating superior risk-adjusted returns for their limited partners.

CVC programs, in contrast, are embedded in the strategy and organization of the parent company and are designed to integrate strategic and financial goals (Chesbrough, 2002; Dushnitsky, 2009). While financial returns remain relevant, CVC units are simultaneously expected to create strategic benefits such as access to emerging technologies, exposure to new business models, and the development of exploratory options for future growth. This dual mandate can give rise to goal conflicts, for example, when maintaining a long-term collaboration with a promising venture is strategically attractive for the corporate, whereas an early exit would maximize the financial return from the investment (Jeon & Maula, 2022). Moreover, CVC managers often face complex accountability structures, as they must respond both to top management's strategic expectations and to internal financial performance metrics, which may not always be aligned (Jeon & Maula, 2022; Weiss & Kanbach, 2022).

At the same time, CVC investors can provide portfolio ventures with resources that go beyond what most independent VC funds can offer. In addition to capital, corporate investors may grant access to their customer base, distribution channels, technical infrastructure, manufacturing capabilities, and reputational assets such as brands and certification processes (Covin & Miles, 2007; Drover et al., 2017). These complementary assets can accelerate venture growth and commercialization, and they can generate reciprocal learning effects for the corporate parent

through joint development projects, pilot implementations, or privileged insight into emerging market segments. From the corporate's perspective, CVC investments therefore serve not only as a financing tool but also as a boundary-spanning mechanism that links internal and external innovation processes.

Several authors have argued that minority equity stakes in start-ups can be interpreted as real options that grant the corporate parent the right, but not the obligation, to deepen the relationship in the future. This real-options view represents one influential way of conceptualizing CVC investments under high uncertainty (Dushnitsky, 2009; Enkel & Sagmeister, 2020). If a venture's technology or market position develops favorably, the corporate can exercise this option by making follow-on investments, forming strategic alliances, or pursuing an acquisition; if not, the relationship can be wound down with limited sunk costs. This real-options perspective is particularly relevant in dynamic, technology-intensive markets where uncertainty is high and traditional discounted cash flow analyses are of limited reliability. In such contexts, CVC enables firms to experiment at the periphery of their business model and to keep multiple growth paths open without committing to full-scale entry from the outset (Dushnitsky, 2009; Weiss & Kanbach, 2022).

Taken together, these differences imply that investors may need to interpret CVC announcements in a more complex way than independent VC transactions. Whereas IVC deals predominantly signal financial expectations about the funded venture, CVC initiatives also convey information about the corporate parent's strategic orientation, its approach to managing exploration and exploitation, and its capability to leverage complementary assets (Drover et al., 2017; Jeon & Maula, 2022). As a result, stock market reactions to CVC program launches may systematically differ from reactions to independent VC investments, and they may depend on how credible and coherent the announced CVC initiative appears within the firm's broader strategic and organizational configuration.

2.4 CVC, innovation, and capital market evidence

Building on this, a broader event-study literature suggests that capital markets do, in principle, respond to information about firms' innovation and cooperative strategies. Studies of joint ventures in the information technology sector document significantly positive abnormal returns for parent

firms following joint venture formation announcements and show that the magnitude of these returns depends on the strategic purpose and structure of the joint venture (Kogut, 1991). Similarly, a large-sample analysis of 119 strategic alliances finds that announcements of technologically oriented alliances lead to significantly positive abnormal returns, whereas marketing alliances generate much weaker effects (Chan et al., 1997). These findings indicate that investors particularly value alliance arrangements that promise technological and knowledge-based advantages.

Event studies of innovation and R&D events lead to comparable conclusions. In the biotechnology sector, Austin (1993) shows that announcements of successful innovative outcomes are associated with significantly positive abnormal returns for the innovating firms. Saad and Zantout (2009) find that firms announcing the discontinuation of corporate R&D programs experience significant negative abnormal returns during the announcement period, particularly when they are growth-oriented and financially constrained. In the biopharmaceutical context, Hwang (2013) reports positive stock price reactions to favorable clinical trial results and even larger negative reactions to failures, underscoring the stock market's sensitivity to signals about the success or failure of risky innovation projects.

Taken together, these strands of literature provide substantial evidence that markets often price information about firms' innovation activities and cooperative arrangements, particularly when such events are clearly linked to technological opportunities and future cash-flow implications (Austin, 1993; Chan et al., 1997; Hwang, 2013). CVC launch announcements share several features with these innovation- and alliance-type events: they involve the creation of collaborative relationships with external ventures, expose the corporate to new technologies and markets, and potentially shape the firm's long-term innovation trajectory. At the same time, the inherent tensions and heterogeneous designs of CVC programs, as highlighted in the preceding sections, may make it harder for investors to infer the precise innovation and performance implications of a given CVC initiative. This combination of evidence on market reactions to innovation- and alliance-type events, on the one hand, and the inherent ambiguity and heterogeneity of CVC programs, on the other hand, provides a natural motivation for the present study's empirical examination of stock market reactions to CVC launch announcements (Jeon & Maula, 2022; Weiss & Kanbach, 2022).

2.5 Event studies, capital market efficiency, and CVC announcements

The event study method is grounded in the semi-strong form of the efficient market hypothesis. In a semi-strong efficient market, all publicly available information is reflected in security prices, so that new public information, such as the announcement of a corporate action, should trigger an immediate adjustment in stock prices (Fama, 1970). Event studies operationalize this idea by estimating normal or expected returns with a reference model, subtracting these from observed returns to obtain abnormal returns, and cumulating them over a defined event window (Brown & Warner, 1985; Kothari & Warner, 2007; MacKinlay, 1997). In this sense, short-horizon event studies can be interpreted as empirical tests of semi-strong market efficiency with respect to specific information events (MacKinlay, 1997).

Brown and Warner (1985) show, based on extensive simulations with daily stock returns, that relatively simple normal-return models, such as the market model or a constant-mean-return model, produce well-specified test statistics in many typical applications. They also discuss key design choices, including the length of the estimation window and the selection of event windows, and emphasize the importance of appropriate test statistics when abnormal returns are aggregated across firms. Kothari and Warner (2007) extend this discussion by analyzing potential biases arising from overlapping events, event-induced variance, heteroskedasticity, and cross-sectional dependence, and by reviewing parametric and non-parametric test procedures that address these complications. Together with related surveys, these contributions establish the methodological foundations that underlie the empirical design of this thesis (Armitage, 1995; Corrado, 1989; Corrado & Zivney, 1992).

A small but growing empirical literature applies event-study or return-based methods to CVC-related announcements and disclosures. Sinha (2018) examines stock market reactions to corporate venture capital investment announcements for US public firms and reports that abnormal returns around the announcement date are generally not statistically different from zero. This evidence suggests that investors often view individual CVC investments as expected or incremental adjustments, or that the informational content of typical CVC press releases is perceived as limited. In contrast, Chemmanur et al. (2014) study voluntary disclosures of CVC investments by US listed companies and document that only about two thirds of CVC deals are publicly announced; among those that are disclosed, they find significantly positive abnormal returns of roughly 2 % on and

around the announcement date, with effects concentrated among firms facing severe information asymmetries. Their findings imply that CVC announcements can be value-relevant when they are part of a deliberate disclosure strategy and convey incremental information in otherwise opaque information environments.

Related work investigates the impact of CVC information disclosure more broadly. Kang et al. (2017) use an event-study design combined with regression analysis and find that CVC information disclosure can be associated with positive abnormal returns and improvements in firm value, suggesting that markets may reward transparent communication about CVC activities. Hamm et al. (2021) analyze CVC-related disclosures and financial reporting practices and show that CVC investments are often only partially reflected in firms' external reporting, which contributes to informational frictions and heterogeneity in how investors learn about CVC activities. Taken together, these studies indicate that the capital market relevance of CVC depends not only on the underlying investments, but also on the form, timing, and intensity of disclosure.

These CVC-focused studies can be interpreted against the backdrop of a broader event-study literature that demonstrates how capital markets react to other innovation- and alliance-related corporate events. Research on strategic alliances and joint ventures shows that announcements of technologically oriented alliances and joint ventures are typically associated with significantly positive abnormal returns for the participating firms, indicating that investors value cooperative arrangements that promise innovation and knowledge gains (Chan et al., 1997; Kogut, 1991). Event studies of innovation and R&D decisions yield similar patterns: successful innovation announcements tend to generate positive abnormal returns, whereas announcements of R&D cuts or project discontinuations lead to negative stock price reactions (Austin, 1993; Hwang, 2013; Saad & Zantout, 2009). Taken together, these strands of literature provide substantial evidence that markets often price information about firms' innovation activities and cooperative arrangements, particularly when such events are clearly linked to technological opportunities and future cash-flow implications.

At the same time, the existing CVC event-study evidence primarily focuses on individual investment announcements and on CVC-related information disclosure, where investors receive relatively concrete information about the funded ventures, transaction terms, or the firm's reporting practices (Chemmanur et al., 2014; Hamm et al., 2021; Kang et al., 2017; Sinha, 2018). In contrast,

the announcement of a CVC program launch typically communicates a high-level strategic intent to engage in external venturing, but does not specify the timing, number, or size of subsequent investments, nor their technological or market focus. From an information perspective, program launches therefore constitute more diffuse signals than individual deals or detailed disclosures, and their value implications are correspondingly harder to assess ex ante. To the best of the author's knowledge, no prior study has conducted a systematic, multi-regional short-horizon event study focusing specifically on CVC program launch announcements. This distinction provides the motivation for the present analysis of stock market reactions to the initiation of CVC programs.

3. Data and sample construction

This section is built upon the conceptual and empirical foundations that were discussed in the previous chapter. The data underlying the event study is described in this section. Specifically, it delineates the methodology for identifying CVC launch announcements, the construction of the event sample, and the assembly of stock return and market benchmark data for empirical analysis. By clearly documenting these steps, the chapter provides a methodological basis for the subsequent presentation of hypothesis tests and results in Chapter 5.

3.1 Event identification and sample construction

This study analyzes the capital market reaction to the announcement of corporate venture capital (CVC) programs by large, listed companies. An "event" is defined as the day on which a company officially announces the establishment or launch of a CVC arm or fund in a press release. The primary focus of this study is the initial public declaration of a CVC vehicle by the respective parent company. Subsequent CVC-related announcements, follow-on investments, or individual portfolio deals are not regarded as discrete events.

The identification of the relevant events is achieved through several steps. Firstly, a search was conducted on the Nexis Uni database for reports related to CVC activities of large corporations in the period from 1 January 2020 to 31 December 2024. A search employing keywords yields a total of 3,366 potential hits. Subsequently, each instance of interest is manually screened, and an event database is constructed, with the objective of retaining only those cases in which the company has clearly and officially communicated the establishment or launch of a CVC vehicle. For validation,

a comparison is made between the Nexis Uni reports and the original press releases of the respective companies, with the objective of ensuring that the date and content of the announcement are correctly recorded.

The resulting event dataset contains, among other things, a unique event identifier (event_id), the announcement date (event_date), the cleaned company name (company_cleaned), the International Securities Identification Number (ISIN) of the listed parent company, and additional information such as the event type, a short textual description, and, where available, the announced fund size in millions of US dollars. Based on the dataset under consideration, the initial identification is made of 67 distinct CVC launch events. However, for the empirical analysis, it is crucial that sufficient return and benchmark data are available for each event over the estimation window of the event study model. Following the integration of the event dataset with the return and index data, the estimation window can be constructed for 64 events. In a subsequent step, three events were excluded due to the unavailability of a mapping between their domestic stock exchanges and the regional benchmark indices employed in the analysis (namely, Chile, Brazil and Turkey). The absence of such a mapping renders the achievement of consistent market modelling unfeasible. The final estimation sample is thus composed of 61 CVC launch announcements that meet all data requirements and are utilized in the subsequent event study.

To ensure a consistent link between events, price data and subsequent panel structures, a unique numerical identifier is assigned to each event. A separate mapping table is then constructed, linking this event identifier to the corresponding ISIN of the parent company. This mapping table is employed in a consistent manner in both the event panel and the preparation of the return data, thereby ensuring that all analysis steps**,** from event identification and the construction of the stock panel to the merge with regional market indices**,** are based on a stable and reproducible assignment between event, company, and security. In accordance with the event dataset, the subsequent stage is to procure the price and market information necessary for the event study, as outlined in Section 3.2.

3.2 Return data and market variables

The measurement of price reaction is achieved through the utilization of daily stock prices of the listed parent companies, which are obtained via the Refinitiv DataStream. The starting point is the

ISIN of each parent company stored in the event dataset. For each ISIN, daily closing prices for the period from 1 January 2019 to 31 December 2025 are retrieved. The longer observation period prior to the occurrence of the event ensures that a sufficient dataset is available for the estimation window of the event study, while the period after the event allows for the analysis of different event windows. The raw price data are converted into a long format in Stata, where each observation is identified by a combination of date, ISIN, and price. It is evident that, upon consideration of the prices, a calculation of simple daily returns can be deduced. These returns are then utilized as the variable ret in the subsequent analysis.

In addition to individual stock returns, it is necessary to consider market variables to determine expected returns within the framework of a market model. To achieve this objective, the collection of data for the relevant domestic markets is conducted using Refinitiv DataStream as a primary source. For each relevant market, the initial step involves downloading daily index levels (price levels) and subsequently computing daily index returns using the Stata software. For this study, the EURO STOXX 600 is employed as a broad European stock index, the TOPIX is utilized for Japan, and the S&P/TSX Composite is used for Canada. For the Asian sample, the MSCI AC Asia ex Japan Index is utilized as a benchmark for stock markets in Asia, with the exclusion of Japan. Furthermore, for the US market, the Fama-French factors are employed, with reference to the market excess return (Mkt-RF) and the risk-free rate (RF) from the three-factor model of Fama and French (1993). It is imperative to note that all index and factor series are combined in a common dataset. This dataset contains the regional market returns derived from the index levels, the Fama-French factors, and the risk-free rate for each trading day (Fama & French, 1993).

The combined index and factor dataset is then matched to the event–return panel by trading date (merge m:1 date). The regional allocation of each stock is based on the country code in the ISIN, distinguishing between Europe, Japan, Canada, Asia (excluding Japan), and the US. For the regional analyses, the single Canadian observation (Quebecor) is grouped with the North American sample, reflecting the close economic and financial integration between Canada and the US. On this basis, a market return R_{mt} is defined for each observation as the return on the corresponding regional equity index. For each stock, excess returns are computed as

$$R_{it} - R_{ft}$$

and the corresponding market excess return is defined as

$$R_{mt} - R_{ft}$$

For US stocks, $R_{mt} - R_{ft}$ corresponds directly to the Fama–French market excess return factor $Mk_t - RF_t$, i.e. $R_{mt} - R_{ft} = Mk_t - RF_t$, whereas for non-US stocks $R_{mt} - R_{ft}$ is obtained by subtracting the risk-free rate from the respective regional index return. These variables form the basis for the event study model described in the following section.

3.3 Event time, abnormal returns, and link to methodology

To align each firm's return series with the corresponding announcement date in event time, a relative time variable, rel_day, is constructed for each event. These variable measures the number of trading days before or after the CVC announcement (e.g. −1 for the previous day, 0 for the event day, +1 for the following day). The definition of the three event windows in which abnormal returns are later aggregated is as follows: a narrow window (−1, +1), a central window (−3, +3), and a wider window (−5, +5). The basis for this definition is rel_day. The estimation of normal returns is achieved through the utilization of a pre-event estimation window, ranging from −250 to −10 trading days relative to the announcement date. Observations within this interval are reserved for the estimation of the return model and are not incorporated into the calculation of cumulative abnormal returns.

The abnormal returns for each stock-event observation are obtained by comparing the realized excess returns with the expected returns from a standard market model using the corresponding regional benchmark index. On this basis, cumulative abnormal returns (CARs) are computed by summing abnormal returns over the respective event windows at the event level. These are then used as the central outcome measure in the empirical analysis. The precise model specification, the construction of abnormal returns and CARs, and the statistical tests applied to evaluate average market reactions are described in detail in Chapter 4.

4. Methodology

4.1 Event study design, estimation and event windows

In this study, I employ a short-horizon event study to analyze stock market reactions to CVC launch announcements. This approach is informed by the event and return data described in Chapter 3, and follows standard approaches found in the empirical finance literature (Campbell et al., 1997; MacKinlay, 1997). Daily stock returns are aligned around the announcement date using the relative time variable rel_day, which measures the number of trading days before or after the CVC announcement (e.g. −1 for the previous day, 0 for the event day, +1 for the following day).

The aggregation of abnormal returns is conducted over three symmetric event windows: a narrow window (−1, +1), a central window (−3, +3), and a wider window (−5, +5). The (−3, +3) window is the primary specification, as it is designed to capture potential information leakage shortly before the announcement, as well as short-term price adjustment in the days following the event. The narrower (−1, +1) window is designed to focus on the immediate reaction and thereby facilitate the isolation of the pure announcement effect. Conversely, the wider (−5, +5) window allows for the possibility of more gradual price adjustment or delayed investor responses. A comparison of results across these windows provides a simple sensitivity analysis with respect to the choice of event horizon.

The estimation of normal returns is conducted over a pre-event estimation window ranging from −250 to −10 trading days relative to the announcement date. The duration of this period is such that it allows for stable parameter estimation, whilst excluding the immediate pre-event period, in which information leaks and preliminary price reactions may already occur. The combination of a relatively long pre-event estimation period and short, symmetric event windows follows common practice in event studies with daily data and is consistent with methodological recommendations in the literature (Brown & Warner, 1985; Campbell et al., 1997; MacKinlay, 1997). Short-horizon windows have been shown to mitigate several concerns raised in the event-study literature, including event-induced variance, cross-sectional dependence, and model misspecification (Brown & Warner, 1985; Kothari & Warner, 2007). These windows have been found to yield well-specified test statistics under a range of normal-return models.

Following the amalgamation of the event and return data with the benchmark series, it was determined that 64 events possessed sufficient return histories over the estimation window. Following the exclusion of three cases due to the inability to establish consistent regional benchmark mapping (i.e. Chile, Brazil and Turkey), the final baseline sample comprised 61 CVC launch announcements, which were utilized in the primary event-study analysis. A separate robustness analysis in Chapter 6 discusses the impact of shorter pre-event histories for selected observations.

4.2 Market model and abnormal returns

Based on the excess returns of the stocks and the respective market indices described in Section 3.2, I estimate a linear market model of the form

$$R_{it} - R_{ft} = a_i + \beta_i(R_{mt} - R_{ft}) + \varepsilon_{it}$$

where R_{it} denotes the stock return of firm i on day t, R_{ft} the risk-free rate, and R_{mt} the return of the assigned regional market index. This specification corresponds to the standard market model widely used in short-horizon event studies (Campbell et al., 1997; MacKinlay, 1997). In the implementation, I first construct excess stock returns and excess market returns by subtracting the risk-free rate and then estimate the regression separately for each event ID in the pre-event estimation window, obtaining event-specific estimates $\hat{\alpha}_i$ and $\hat{\beta}_i$. These coefficients are stored in a separate dataset and merged back into the event, return panel via the event identifier so that an expected excess return can be computed for each stock, day observation.

For each firm and trading day in the estimation and event windows, the expected excess return is calculated as

$$\hat{E}(R_{it} - R_{ft}) = \hat{\alpha}i + \hat{\beta}i(R_{mt} - R_{ft})$$

Abnormal returns are then defined as the difference between the realized and expected excess returns,

$$AR_{it} = (R_{it} - R_{ft}) - [\hat{\alpha}i + \hat{\beta}i(R_{mt} - R_{ft})]$$

which follows the standard event-study definition of abnormal performance (MacKinlay, 1997).

For each of the event windows (−1, +1), (−3, +3), and (−5, +5) defined above, cumulative abnormal returns (CARs) are obtained by summing abnormal returns over the respective days at the event level,

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

where $\tau_1$and τ_2 denote the lower and upper bounds of the event window in event time. These CARs constitute the main outcome variables used to test for statistically and economically significant stock market reactions to CVC launch announcements in the empirical analysis. The market model is chosen as the primary specification because prior simulation evidence suggests that it yields well-specified test statistics in many typical applications with daily data and often performs at least as well as simpler constant-mean alternatives (Brown & Warner, 1985).

4.3 Alternative specification and testing strategy

As a robustness check, I complement the market model with a mean-adjusted model in which the normal return of each stock is defined as its average return over the estimation window, as discussed in the event-study literature as a simple alternative to the market model (Campbell et al., 1997; MacKinlay, 1997). Specifically, I compute the mean daily return $\bar{R}_i$ for each stock i in the (−250,−10) interval and define abnormal returns in the event windows as $AR_{it} = R_{it} - \bar{R}_i$.Cumulative abnormal returns for the mean-adjusted specification are calculated by summing these abnormal returns over the same event windows (−1,+1), (−3,+3), and (−5,+5), which allows a direct comparison of the results across the two normal-return models.

To statistically evaluate the average market reaction, I test whether the mean CAR across events differs from zero. For each combination of return model (market versus mean-adjusted) and event window, I conduct one-sample t-tests of the null hypothesis H_0: $\mathbb{E}[CAR_i(\tau_1, \tau_2)] = 0$ against the two-sided alternative H_1: $\mathbb{E}[CAR_i(\tau_1, \tau_2)] \neq 0$, following standard practice in short-horizon event studies (MacKinlay, 1997). In addition, I apply the Wilcoxon signed-rank test as a non-parametric procedure to assess the robustness of the results with respect to outliers and potential deviations from the normality assumption. The use of both parametric and non-parametric tests is in line with recommendations in the event-study literature, which highlight that non-normality and

cross-sectional heterogeneity can affect the size and power of conventional t-tests (Cowan, 1992; Kothari & Warner, 2007). Both types of tests are reported for all event windows and for both the market model and the mean-adjusted specification.

4.4 Hypotheses

The event study framework previously delineated is utilised to ascertain whether CVC launch announcements are concomitant with systematically positive stock price reactions. A substantial body of research has been dedicated to the study of innovation and alliance-related events. Much of this research has documented the occurrence of positive abnormal returns in instances where announcements are found to convey credible information regarding future growth opportunities or technological advantages (see Chan et al., 1997; Kogut, 1991; Austin, 1993; Hwang, 2013). Conversely, extant evidence pertaining to CVC-related announcements is more equivocal, suggesting that market reactions may be contingent on the informational content and context of the disclosure (Chemmanur et al., 2014; Sinha, 2018).

In light of the aforementioned context, the primary hypothesis of this thesis can be outlined as follows:

H1: CVC launch announcements are associated with positive cumulative abnormal returns around the announcement date.

The validity of this hypothesis is determined by the statistical significance of the mean CARs in the specified event windows (−1,+1), (−3,+3), and (−5,+5) in the market model and the mean-adjusted specification. Furthermore, the analysis explores whether the sign and magnitude of CARs differ across regions and event characteristics, thus providing further insight into how investors interpret CVC launches in different institutional and strategic settings.

5. Empirical results

5.1 Base CARs for the full sample

The empirical analysis commences with an examination of the cumulative abnormal returns (CARs) for the complete sample of CVC launch announcements. The objective of this subsection

is to test the primary hypothesis H1, which posits that CVC launch announcements are associated with positive cumulative abnormal returns around the announcement date.

The baseline estimation sample consists of 61 CVC launch events, as described in Chapter 3. The geographical distribution of these events is as follows: the United States (N = 18), Europe (N = 14), Japan (N = 26), and Asia excluding Japan (N = 3). For the purposes of the regional subgroup analysis in Section 5.4, the Asia ex Japan subsample is reported descriptively only, as a group of three events does not support reliable statistical inference. The period covered is from 2020 to 2024. As outlined in the data chapter, three events from Chile, Brazil and Turkey are excluded on the grounds that their home exchanges cannot be mapped to any of the regional benchmark indices utilized in the analysis. Furthermore, a single Canadian observation (Quebecor) is grouped with the North American sample due to the close economic and financial integration between Canada and the US.

The estimation of abnormal returns is achieved through the utilization of two benchmark specifications, namely the market model and the mean-adjusted model, as outlined in Chapter 4. For both models, expected returns are estimated over the pre-event window [-250, -10] and cumulative abnormal returns (CARs) are calculated for three symmetric event windows around the announcement date: [-1, +1], [-3, +3] and [-5, +5]. This design facilitates the capture of immediate as well as moderately more protracted market reactions and enables the assessment of the sensitivity of the results to the selection of event horizon.

Event Window	N	Mean CAR	Std. Dev.	t - Statistics	p - Value	Wilcoxon p
(−1, +1)	61	−0.465%	2.914%	−1.246	0.218	0.327
(−3, +3)	61	−0.602%	3.349%	−1.404	0.165	0.250
(−5, +5)	61	−0.266%	4.384%	−0.473	0.638	0.720
Mean-Adjusted Model						
(−1, +1)	61	−0.583%	3.802%	−1.542	0.129	0.267
(−3, +3)	61	−0.627%	4.679%	−1.449	0.153	0.243
(−5, +5)	61	−0.567%	5.576%	−1.009	0.317	0.720

Table 1: Cumulative abnormal returns for the full sample (N = 61)

Note: CARs are computed using the market model and mean-adjusted model over the estimation window (−250, −10). Statistical significance is assessed using one-sample t-tests and Wilcoxon signed-rank tests. None of the mean CARs are statistically significant at conventional levels ($p < 0.10$).

The pattern of daily abnormal returns around the announcement date is illustrated in Figure 1, which plots the average abnormal return (AAR) for each trading day from t = −10 to t = +10, spanning a wider window than the main event windows to provide a broader view of pre- and post-announcement return dynamics. Consistent with the insignificant CARs reported in Table 1, the AARs fluctuate around zero without any discernible spike or directional shift at t = 0. The absence of a systematic price reaction on the announcement day itself provides visual confirmation that CVC launch announcements do not trigger a discrete, information-driven revision of stock prices. The noise observed across the event window is consistent with random variation rather than a coherent market response.

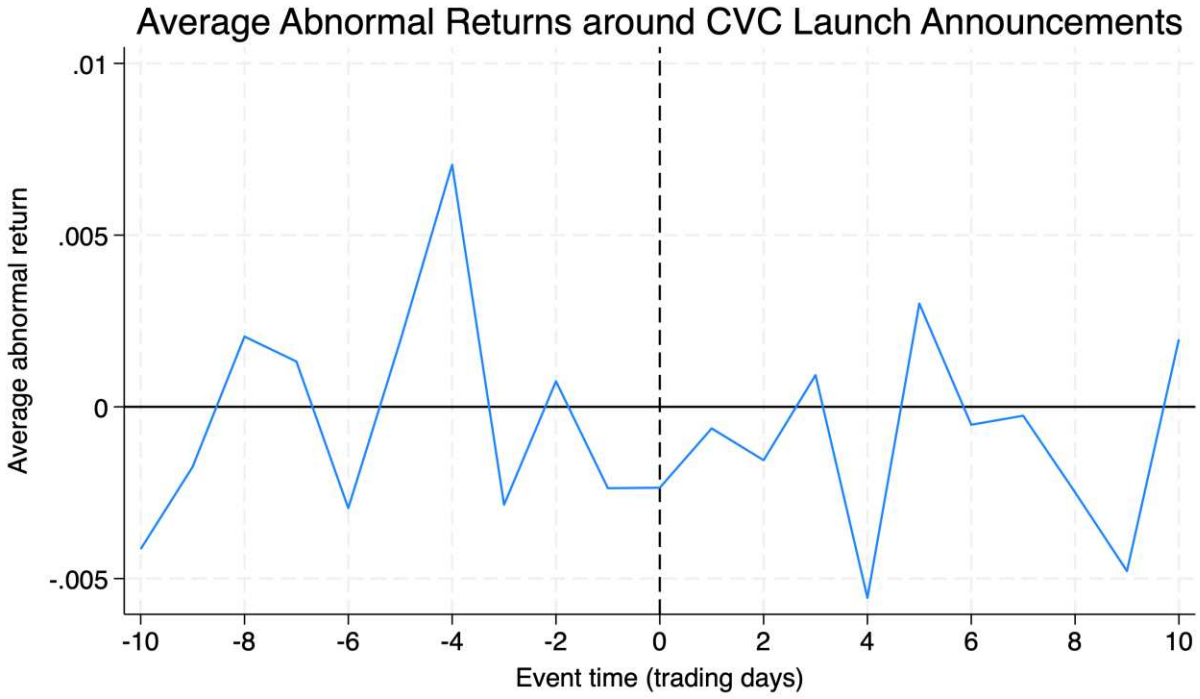

Figure 1: Average Abnormal Returns (AARs) around CVC launch announcement dates.

The figure displays the cross-sectional mean of daily abnormal returns for each event day relative to the announcement date (t = 0). Abnormal returns are estimated using the market model with a (−250, −10) estimation window. Full sample, N = 61.

Across all three event windows and both return models**,** the estimated mean CARs are negative but small in magnitude and never statistically different from zero at conventional significance levels.

The point estimates range in a narrow band from approximately −0.27% to −0.63%, which corresponds to economically very modest effects given daily stock return volatility. The observation that both the market model and the mean-adjusted model yield highly comparable CARs serves to reinforce the robustness of this zero-effect result. The evidence for the full sample indicates that H1 cannot be confirmed: on average, CVC launch announcements do not trigger significantly positive short-term stock price reactions for the announcing firms.

5.2 Comparison between event windows

A comparison of the three event windows provides insight into the temporal structure of the market reaction. In accordance with the market model, the central window (−3, +3) demonstrates the most significant negative effect, exhibiting a mean CAR of −0.602% ($t = -1.404$, $p = 0.165$). The narrower window, ranging from −1 to +1, yielded a comparatively modest effect size of −0.465% ($t = -1.246$, $p = 0.218$). Conversely, the wider window, ranging from −5 to +5, exhibited an even more negligible effect size of −0.266% ($t = -0.473$, $p = 0.638$). This pattern indicates a marginal negative drift in returns in the days surrounding the announcement date, which is partially offset when the timeframe is extended to ten trading days. This phenomenon may be attributed to partial price corrections occurring on days +4 and +5.

Figure 2 complements this analysis by plotting the cumulative average abnormal return (CAAR) trajectory from $t = -5$ to $t = +5$. The CAAR hovers close to zero throughout the pre-announcement period and drifts modestly negative in the days following the announcement, consistent with the small negative mean CARs reported across all three event windows. Importantly, there is no abrupt downward shift at $t = 0$ that would indicate a discrete market reaction to the announcement. The gradual drift observed in the post-event period is economically small in magnitude and, as evidenced by the test statistics in Table 1, statistically indistinguishable from zero across all specifications. Taken together, Figures 1 and 2 provide visual support for the conclusion that CVC

launch announcements are informationally neutral events from the perspective of capital markets.

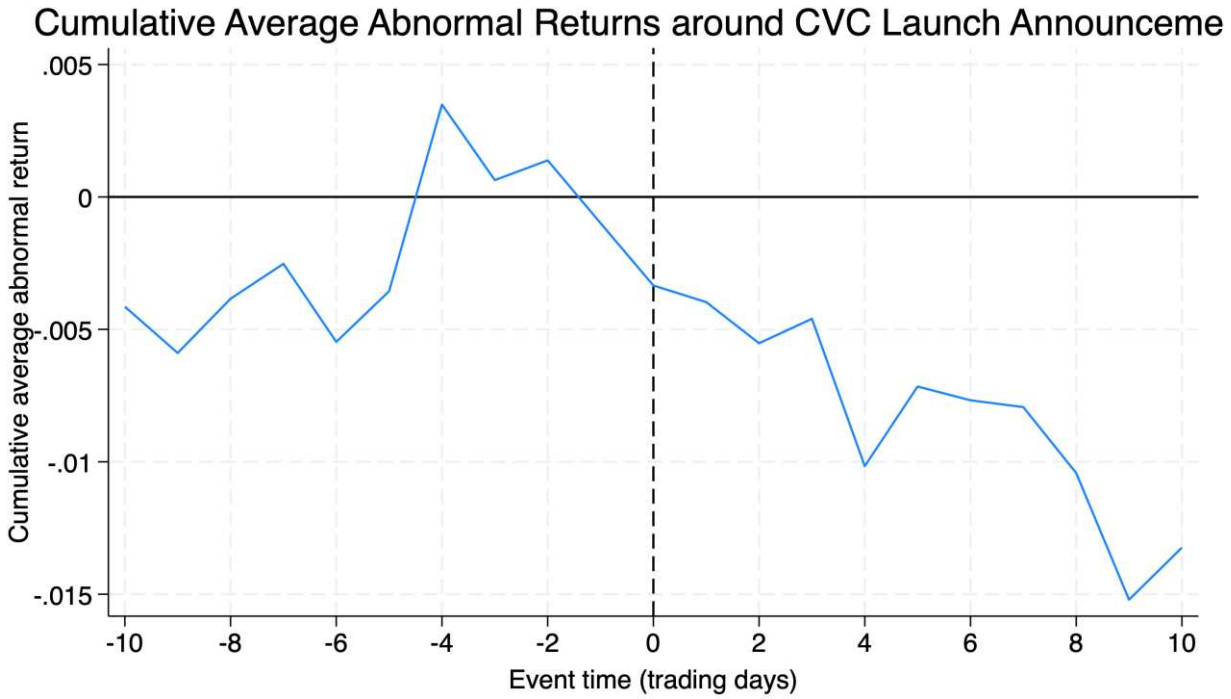

Figure 2: Cumulative Average Abnormal Returns (CAARs) around CVC launch announcement dates.

The figure plots the cumulative sum of daily AARs from t = −10 to t = +10 relative to the announcement date (t = 0, dashed line). Full sample, N = 61. Market model.

The mean-adjusted model displays a similar, albeit slightly flatter, pattern: the mean CARs amount to −0.583% for (−1, +1), −0.627% for (−3, +3), and −0.567% for (−5, +5). The reduced variation across windows in the mean-adjusted model is consistent with its more straightforward structure. This is because it benchmarks returns against a constant historical mean rather than filtering out contemporaneous market movements. Consequently, it is less sensitive to short-lived market-wide shocks that may be concentrated in specific days. Conversely, the market model adjusts for systematic market risk via the estimated beta, thereby ensuring that discrepancies in CARs across windows more clearly reflect idiosyncratic movements relative to the market.

From a methodological perspective, the narrow window (−1, +1) is particularly relevant for interpreting the test of H1. In a semi-strong efficient market, new public information should be incorporated into prices within a few trading days, and the (−1, +1) window is designed to capture both potential advance information (e.g. leaks or rumors on the previous day) and delayed reactions when announcements are released outside trading hours. The absence of statistically significant

CARs in this core window therefore suggests that CVC launch announcements are either largely anticipated by investors or perceived as too ambiguous to induce a clear short-term repricing of the announcing firms' shares.

5.3 Market model vs. mean-adjusted model

The comparison between the market model and the mean-adjusted model is used to assess the robustness of the baseline findings. As outlined in Chapter 4, the market model estimates event-specific intercepts and betas in the pre-event window and defines abnormal returns as the difference between realized and expected excess returns. In contrast, the mean-adjusted model benchmark returns against the average historical return of each stock without explicitly modelling market movements.

Despite these conceptual differences, both models yield qualitatively identical results for the full sample. Across all three event windows (−1, +1), (−3, +3), and (−5, +5), the mean CARs are consistently negative, small in magnitude, and statistically insignificant under both specifications. Quantitative disparities between the two models are negligible. For instance, within the (−3, +3) window, the mean CARs are −0.602% under the market model and −0.627% under the mean-adjusted model, with analogous trends manifesting in other windows. The substantial similarity between the two benchmark models serves to reinforce the conclusion that, on average, CVC launch announcements do not result in a systematic short-term revaluation of the shares of the firms making the announcements.

5.4 Results by region and event characteristics

Table 2: Cumulative abnormal returns by region (market model)

Region	Event Window	N	Std. Dev.	Mean CAR	t - Statistics	p - Value
US	(−1, +1)	18	3.613%	−0.629%	−0.738	0.470
US	(−3, +3)	18	4.406%	−0.900%	−0.866	0.399
US	(−5, +5)	18	5.136%	−0.087%	−0.072	0.943
Europe	(−1, +1)	14	3.511%	−1.230%	−1.311	0.213
Europe	(−3, +3)	14	3.527%	−0.547%	−0.580	0.572
Europe	(−5, +5)	14	5.350%	−0.496%	−0.347	0.734

Japan	(−1, +1)	26	2.057%	+0.132%	0.328	0.746
Japan	(−3, +3)	26	2.619%	−0.610%	−1.188	0.246
Japan	(−5, +5)	26	3.457%	−0.519%	−0.765	0.452

Table 2: Cumulative abnormal returns by region (market model)

The present subsection examines whether there exists a systematic difference in stock market reactions to CVC launch announcements across different regions and selected event characteristics. To this end, mean CARs are computed separately for the US, Europe, and Japan, the three regions for which sufficiently large subsamples are available for reliable statistical inference. The Asia ex Japan group (N = 3) is excluded from the regional hypothesis tests, as a one-sample t-test with two degrees of freedom is unreliable at this sample size: neither normality can be assumed nor can the standard error be estimated with adequate precision. The three Asia ex Japan events are nonetheless retained in the aggregate full-sample analysis but do not permit regional conclusions. Mean CARs are reported for the (−1, +1), (−3, +3), and (−5, +5) event windows under the baseline market-model specification. The null hypothesis that the regional mean CARs are equal to zero is tested using one-sample t-tests, analogous to the aggregate analysis in Sections 5.1 and 5.3.

The findings of the present study indicate that CVC launch announcements are associated with small and statistically insignificant stock price reactions in all major regions. In the US subsample, the mean CARs are moderately negative in the (-1, +1) and (-3, +3) windows (approximately -0.6% and -0.9%, respectively). However, the corresponding t-statistics of about -0.74 and -0.87 imply p-values well above conventional significance levels. When the window is extended to (-5,5), the estimated mean CAR is essentially zero (around -0.1%) and likewise far from statistical significance.

The European subsample displays a comparable pattern of modestly negative but imprecisely estimated CARs. For the (-1, +1) window, the mean CAR is approximately -1.2%, with a t-statistic of around -1.31 and a p-value above 0.21. Conversely, the wider (-3, +3) and (-5, +5) windows yield smaller negatives of around -0.6% and -0.5%, respectively, both with low t-statistics and high p-values. Taken together, these results suggest that any short-run valuation effects in US and European markets are limited in magnitude and not statistically distinguishable from zero.

For Japan, the estimated CARs are close to zero in the narrow event window and only slightly negative in wider windows. The mean CAR in the (-1, +1) window is approximately 0.1%, with a t-statistic approaching 0.33. This suggests that there is no discernible announcement effect on very short horizons. Within the (-3, +3) and (-5, +5) windows, the mean CARs approximate -0.6% and -0.5%, correspondingly. Nevertheless, the associated t-statistics (approximately -1.19 and -0.77) and p-values fail to provide compelling evidence against the null hypothesis of zero average abnormal performance.

The Asia ex Japan subsample comprises only three events and is therefore excluded from the regional hypothesis tests. For completeness, the raw mean CARs for this group are reported in Table 2, but no inferential conclusions are drawn.

When considered collectively, the regional analysis serves to reinforce the baseline result, which indicates that CVC launch announcements do not elicit substantial or statistically significant stock price reactions in the short term. Point estimates are, in general, modest in absolute value across all regions, and the lack of significance suggests that any potential heterogeneity in market responses is limited relative to the noise in daily returns. In accordance with this interpretation, the subsequent chapter undertakes an investigation into the robustness of the findings when the sample is divided according to alternative dimensions, the estimation window is modified, and supplementary robustness checks are implemented.

6. Robustness Tests and Additional Analyses

This chapter evaluates the robustness of the main findings to alternative estimation choices and sample definitions. As noted by Kothari and Warner (2007), the reliability of event-study inferences depends critically on the stability of results across reasonable variations in model specification and sample construction. Three robustness checks are conducted: an alternative, shorter estimation window; the exclusion of event 26 from the estimation sample, which has a substantially shorter pre-event return history than the remainder of the sample; and a winsorization of the cumulative abnormal returns at the 5th and 95th percentiles. Across all checks, the null hypothesis of zero mean CARs cannot be rejected at conventional significance levels, thereby

reinforcing the conclusion from Chapter 5 that CVC launch announcements are not associated with statistically significant short-run stock price reactions.

6.1 Alternative Estimation Window

The baseline specification employs a pre-event estimation window of (-250, -10), spanning approximately one calendar year of trading days prior to the announcement. Brown and Warner (1985) demonstrate through simulation that the length of the estimation window can influence the precision of normal-return parameter estimates, and MacKinlay (1997) recommends assessing whether results are sensitive to this design choice. To this end, the first robustness check shortens the estimation window to (-200, -10), reducing the number of trading days used to fit the market model by approximately 50 days. The minimum number of required observations is adjusted proportionally to 135 trading days to retain the same 61 events as in the main analysis.

Event Window	N	Std. Dev.	Mean CAR	t - Statistics	p - Value	Wilcoxon p
(−1, +1)	61	3.018%	−0.422%	−1.093	0.279	0.421
(−3, +3)	61	3.510%	−0.571%	−1.270	0.209	0.325
(−5, +5)	61	4.527%	−0.272%	-0.469	0.641	0.693

Table 3: Robustness check with alternative estimation window (−200, −10)

Note: Market model CARs estimated using a shorter pre-event window. Results are consistent with the baseline.

The results under the shortened estimation window closely align with the baseline. In the (-1, +1) window, the mean CAR is -0.42% with a t-statistic of -1.09 and a p-value of 0.279. In the (-3, +3) window, the mean CAR is -0.57%, with t = -1.27 and p = 0.209. The (-5, +5) window produces a mean CAR of -0.27%, with t = -0.47 and p = 0.641. The Wilcoxon signed-rank test confirms these findings, with p-values of 0.421, 0.325, and 0.693 for the three windows, respectively. None of the estimates approaches statistical significance at the 10% level. Across all three windows, the point estimates are slightly smaller in absolute value than in the baseline specification, but the difference is negligible. These results suggest that the estimated expected returns, and thus the resulting CARs, are not materially affected by the shorter estimation window, consistent with the simulation evidence in Brown and Warner (1985) that market-model parameters tend to be stable across reasonable variations in estimation window length.

6.2 Sensitivity to Event 26

Event 26 has a substantially shorter pre-event return history than the remaining events in the sample, with only 28 valid observations in the (-250, -10) estimation window. In the baseline specification, the event is retained to preserve comparability with the main sample of 61 events. Excluding it would reduce the sample size and impose a selection rule that is not otherwise applied. Nevertheless, the short estimation window raises the concern that the alpha and beta estimates for this event may be imprecise, as Campbell et al. (1997) note that parameter estimates become unreliable when the estimation window contains very few observations. This robustness check therefore excludes event 26 from the estimation sample, reducing the sample to N = 60, and examines whether the aggregate CAR estimates are materially affected.

Event Window	N	Std. Dev.	Mean CAR	t - Statistics	p - Value	Wilcoxon p
(−1, +1)	60	2.693%	−0.315%	−0.908	0.368	0.410
(−3, +3)	60	2.990%	−0.403%	−1.044	0.301	0.401
(−5, +5)	60	4.234%	−0.104%	−0.190	0.850	0.871

Table 4: Sensitivity test excluding Event 26

The results show that the mean CARs move marginally toward zero relative to the baseline, rather than away from it. In the (-1, +1) window, the mean CAR is -0.32% with t = -0.91 and p = 0.368. In the (-3, +3) window, the mean CAR is -0.40% with t = -1.04 and p = 0.301. In the (-5, +5) window, the mean CAR is -0.10% with t = -0.19 and p = 0.850. Wilcoxon signed-rank p-values are 0.410, 0.401, and 0.871, respectively. These results do not alter the inference drawn in Chapter 5. The inclusion of event 26 produces slightly more negative point estimates in the baseline, suggesting that the event carries a below-average CAR, but its presence or absence leaves the overall interpretation unchanged.

6.3 Winsorized Cumulative Abnormal Returns

The third robustness check assesses whether the null result in the main analysis is driven by a small number of extreme observations at the tails of the CAR distribution. Kothari and Warner (2007) highlight that outlying observations can distort the mean CAR and inflate or deflate parametric test statistics in small samples, making it advisable to verify that aggregate findings are not dominated by a few influential events. The CARs computed under the baseline specification are therefore

winsorized at the 5th and 95th percentiles, replacing values below the 5th percentile with the 5th percentile value and values above the 95th percentile with the 95th percentile value. The procedure affects between three and four observations per event window, confirming that a small number of events have notably large or small CARs at both ends of the distribution

Event Window	N	Std. Dev.	Mean CAR	t - Statistics	p - Value	Wilcoxon p
(−1, +1)	61	2.192%	−0.372%	−1.326	0.190	0.267
(−3, +3)	61	2.780%	−0.585%	−1.642	0.106	0.243
(−5, +5)	61	3.815%	−0.222%	−0.455	0.651	0.695

Table 5: Robustness check with winsorized CARs

After winsorization, the mean CARs are somewhat smaller in absolute value relative to the raw baseline. In the −1, +1 window, the winsorized mean CAR is −0.37 percent with a t-statistic of −1.33 and a p-value of 0.190. In the −3, +3 window, the mean CAR is −0.58 percent with $t = -1.64$ and $p = 0.106$. In the −5, +5 window, the mean CAR is −0.22 percent with $t = -0.46$ and $p = 0.651$. In addition to the parametric t-tests, the Wilcoxon signed-rank test is applied as a non-parametric complement, following Cowan (1992) and Kothari and Warner (2007), to guard against non-normality and cross-sectional heterogeneity in small samples. The Wilcoxon p-values are 0.267, 0.243, and 0.695 for the three windows, respectively, and thus do not indicate statistically significant deviations from zero. It should be noted, however, that for daily stock returns the Wilcoxon test is less well specified than generalized rank tests such as the Corrado T3 statistic when return distributions exhibit right skewness, as discussed by Corrado (1989) and Corrado and Zivney (1992). Against this background, the non-parametric results in this thesis are best interpreted as a supplementary robustness check rather than as a definitive basis for accepting or rejecting marginal parametric findings.

The −3, +3 window yields the largest (in absolute value) winsorized mean CAR of −0.58 percent and the highest t-statistic in absolute terms and thus comes closest to conventional significance thresholds across all robustness specifications. While this estimate remains statistically insignificant at the 10 percent level and is not corroborated by the corresponding non-parametric test, it is reported here in the interest of transparency. Considering the small sample size and the limitations of the Wilcoxon test for daily stock returns, this isolated near-threshold estimate is not

interpreted as a robust deviation from the overall pattern of insignificance documented throughout the analysis.

Taken together, the three robustness checks show that the absence of statistically significant abnormal returns is stable across alternative estimation windows, sample definitions, and treatments of extreme observations. The point estimates remain small and predominantly negative throughout, while both parametric and non-parametric tests consistently fail to reject the null of zero mean CARs. This strengthens confidence that the baseline findings are not driven by a particular modelling choice or a small number of influential events

7. Conclusion

7.1 Summary of Key Findings

This thesis set out to examine whether corporate venture capital (CVC) program launch announcements generate significant short-run abnormal stock returns for the announcing firms. Using a short-horizon event study with 61 CVC launch events between 2020 and 2024, abnormal returns were estimated with a market model and a mean-adjusted model over three symmetric event windows around the announcement date. Across all three windows and both return models, the estimated mean CARs are negative but small in magnitude and never statistically different from zero at conventional significance levels. The point estimates for the full sample lie in a narrow range of roughly −0.27 to −0.63 percent, implying economically modest effects relative to typical daily stock return volatility. The close similarity between the market-model and mean-adjusted results supports the robustness of this overall zero-effect pattern.

Based on these findings, the primary hypothesis that CVC launch announcements are associated with significantly positive cumulative abnormal returns cannot be confirmed. The evidence suggests that, on average, capital markets do not systematically revalue firms' shares in the immediate aftermath of CVC program launch announcements in this sample and setting. A plausible interpretation consistent with semi-strong market efficiency is that such announcements convey relatively diffuse and ambiguous information about future cash flows, so that investors either anticipate them or do not consider them sufficiently precise to warrant an immediate price revision. At the same time, the relatively small overall sample size and the limited number of events

in some regional subsamples imply that the statistical power to detect moderate effects is constrained, particularly when returns are heterogeneous across firms. The full-sample null results should therefore be read as an absence of detectable announcement effects under the available data and research design, rather than as definitive evidence that CVC launches are universally value-neutral.

The regional analysis is broadly consistent with the aggregate findings. For the US, Europe, and Japan, mean CARs are small in absolute value and statistically insignificant across all event windows, with no region displaying a systematic pattern of positive or negative announcement effects. The Asia ex Japan subsample, which comprises only three events, is retained in the pooled full sample but excluded from regional hypothesis tests due to insufficient subsample size for reliable inference. Taken together, the results provide indicative evidence that short-run stock market reactions to CVC launch announcements are weak or absent across the three major developed regions studied, while recognizing that limited sample sizes reduce the ability to rule out moderate region-specific effects.

The robustness checks in Chapter 6 reinforce these conclusions. Shortening the estimation window, excluding an event with a notably short pre-event return history, and winsorizing the CAR distribution at the 5th and 95th percentiles all leave the substantive inference unchanged: mean CARs remain small, predominantly negative, and statistically insignificant. The winsorized −3, +3 window yields the largest (in absolute value) mean CAR and a t-statistic that comes closest to conventional significance thresholds, but the corresponding p-value remains above 10 percent and the effect is not corroborated by the non-parametric test. Considering the small sample size and the known specification issues of the Wilcoxon test for daily stock returns, this isolated near-threshold estimate is reported for transparency but is not interpreted as a robust deviation from the overall pattern of insignificance.

7.2 Implications

The finding that CVC launch announcements do not generate significant short-run abnormal returns carries implications for investors, corporate managers, and researchers.

For investors, the results suggest that the capital market treats CVC program launches as informationally neutral announcements in the short run. Investors do not appear to systematically

reward or penalize firms for announcing a CVC initiative around the time of the announcement. This pattern is, at a superficial level, consistent with the semi-strong form of the efficient market hypothesis (Fama, 1970), under which stock prices should rapidly incorporate all publicly available information. At the same time, the observed near-zero reactions can equally be interpreted as evidence of an information deficit: typical launch press releases provide only high-level statements about strategic intent and rarely disclose concrete details on fund size, investment pace, target domains, or governance. From this perspective, markets may remain agnostic about the value implications of CVC launches not because they fully understand and discount them, but because the announcements do not contain enough decision-relevant information to warrant a meaningful price revision.

For corporate managers, the findings imply that announcing a CVC program alone is unlikely to generate an immediate positive market response. The existing evidence on CVC investments, particularly the work of Chemmanur et al. (2014), suggests that CVC announcements can be value-relevant when they convey credible and specific information in environments characterized by high information asymmetry. The present results are consistent with this view: a generic press release announcing the establishment of a CVC vehicle may not constitute such a credible signal. Firms seeking to generate positive market recognition for their CVC activities may therefore need to accompany announcements with more detailed disclosures about the program's strategic focus, fund size, governance structure, and intended investment scope. In this sense, the quality and specificity of communication may matter more than the act of announcing a program itself.

For researchers, the results connect to the organizational literature on CVC heterogeneity. As Jeon and Maula (2022) and Weiss and Kanbach (2022) emphasize, CVC programs differ substantially in strategic intent, governance design, and organizational integration. The aggregate null result is consistent with the interpretation that markets are unable to form a confident view about the likely performance of a given CVC program based solely on the launch announcement, because the announcement does not resolve the underlying uncertainty about whether the program is strategically well-designed and adequately resourced. The multi-regional scope of the study further suggests that this ambiguity is not confined to a single institutional context but extends across the US, Europe, and Japan, reinforcing the notion that program launches are inherently information-poor events from the perspective of public equity investors.

7.3 Limitations

Several limitations of the present study should be acknowledged, concerning both the data and sample construction and the methodological choices made in the empirical analysis.

First, the overall sample size of 61 events, while sufficient for a short-horizon event study under standard conditions, is relatively small for a multi-regional analysis and for detecting moderate effects. The regional subsamples, 18 events in the US, 14 in Europe, 26 in Japan, and only 3 in Asia excluding Japan, have limited statistical power, particularly when returns are heterogeneous across firms. In line with Kothari and Warner (2007), smaller subsamples in short-window event studies may fail to detect economically meaningful effects, especially when cross-sectional variance is substantial. The Asia ex Japan group was too small to permit any meaningful statistical inference and was therefore excluded from the regional subgroup analysis, which narrows the geographic scope of the comparative findings to three major developed regions. Consequently, the failure to reject the null hypothesis in the regional analysis should be interpreted as a non-rejection under limited power rather than as strong evidence that CVC launch announcements are value-irrelevant in all institutional contexts.

Second, the sample period covers only the years 2020 to 2024, a window that coincides with an unusually turbulent macroeconomic and financial environment, including the COVID-19 pandemic and pronounced volatility in technology-oriented stocks. Elevated market volatility and frequent macro shocks during this period may have increased noise in short-window abnormal return estimates, potentially obscuring moderate announcement effects. A longer sample period spanning more tranquil as well as more turbulent market regimes would allow for a more robust assessment of whether the observed null result is stable over time or specific to this macro-financial context.

Third, the event study design captures only the immediate short-run stock price reaction to the announcement. Even if markets do not respond significantly at launch, CVC programs may still create long-run value for the parent company through knowledge accumulation, innovation output, real option exercise, and strategic repositioning. Short-horizon event studies are not designed to detect value creation that materializes over months or years, and this remains an inherent limitation of the chosen design. Complementary analyses of long-run stock performance, innovation

outcomes, or operating performance measures would be required to obtain a more complete picture of the consequences of CVC program launches.

Fourth, the study does not distinguish between CVC programs of varying quality, strategic fit, or credibility. All 61 events are treated symmetrically, irrespective of announced fund size, prior CVC experience, the specificity of the strategic rationale, or the organizational embedding of the program. This pooling assumption is a notable limitation, as the theoretical and empirical literature suggests that CVC value creation is highly heterogeneous and context-dependent (Chesbrough, 2002; Dushnitsky & Lenox, 2006; Weiss & Kanbach, 2022). If positive announcement effects are concentrated among a subset of particularly credible or well-aligned CVC initiatives, aggregating across heterogeneous programs may average out such effects and contribute to the overall null finding.

Fifth, the informational nature of the events studied here differs from that examined in related CVC event studies. This thesis focuses on program launch announcements, which primarily communicate a high-level strategic intent to engage in external venturing, without specifying the timing, scale, or targets of subsequent investments. By contrast, studies such as Chemmanur et al. (2014) analyze selectively disclosed CVC investment deals that convey relatively concrete, cash-flow-relevant information about individual portfolio companies and transaction terms. From an information-efficiency perspective in the sense of Fama (1970), launch announcements thus constitute noisier and more ambiguous signals than deal announcements, which may rationally elicit weaker or no immediate price reactions. The null result in this thesis should therefore not be interpreted as contradicting prior evidence of positive reactions to some CVC investment deals, but rather as specific to the less precise information content of program initiations.

Finally, the non-parametric inference in this study relies on the Wilcoxon signed-rank test as a complementary robustness tool. For daily stock returns with skewed distributions, however, the Wilcoxon test has been shown to be less well specified than generalized rank tests such as the Corrado T3 statistic (Corrado, 1989; Corrado & Zivney, 1992). In this thesis, the Wilcoxon results are therefore interpreted as supplementary evidence rather than as a decisive basis for accepting or rejecting marginal parametric findings, and the near-threshold estimate in the winsorized −3, +3 window is explicitly not treated as a robust counterexample to the overall insignificance pattern. Future research could improve upon the present design by implementing Corrado-type rank tests

as the primary non-parametric procedure and by exploring alternative methods that account more explicitly for cross-sectional dependence and event-induced variance**.**

7.4 Suggestions for Future Research

The findings and limitations of this study point to several promising directions for future research, progressing from direct extensions of the present analysis to broader empirical and institutional questions.

The most immediate extension would be to examine the cross-sectional determinants of market reactions to CVC launch announcements. Rather than testing whether mean CARs differ from zero, future work could regress event-level CARs on characteristics such as announced fund size, firm size, leverage, R&D intensity, and prior CVC experience. This would allow researchers to identify the conditions under which CVC launches are value-relevant to capital markets, moving beyond the aggregate null result to a more nuanced understanding of the heterogeneity in market reactions.

Closely related is the question of disclosure quality and information asymmetry. Building on the framework of Chemmanur et al. (2014), future studies could systematically code the informational content of CVC launch press releases , for example, whether a fund size is disclosed, whether specific target sectors are named, and whether the program is framed as part of a broader innovation strategy and examine whether richer disclosures are associated with more pronounced market reactions. This would directly test whether the informationally neutral result observed here is a consequence of low disclosure quality rather than a genuine absence of value implications.

A third direction concerns long-run value effects. Given the multi-year nature of CVC value creation through portfolio investments and knowledge spillovers, it is plausible that markets under-react at launch and revise their assessments as the program becomes active and generates observable outcomes. A buy-and-hold abnormal return analysis or a calendar-time portfolio approach over horizons of one to three years following the announcement would shed light on whether the short-run null result is accompanied by long-run value creation or value destruction.

Fourth, a difference-in-differences or synthetic control design comparing the innovation output, patenting activity, and financial performance of CVC-launching firms against a matched control group of non-launchers would complement the event study evidence by capturing the real-side

effects of CVC programs that cannot be inferred from short-window stock price reactions alone. Panel data approaches that track CVC program activity over time, including investments made, portfolio exits, and program closures, could further illuminate how program performance evolves after the launch.

Finally, the non-parametric tests employed in this study rely on the Wilcoxon signed-rank test, which Corrado (1989) and Corrado and Zivney (1992) have shown to be less well-specified than the generalized rank test for daily stock returns exhibiting right-skewed distributions. While the Wilcoxon test is widely used in event study applications (Cowan, 1992), future replications of this analysis could adopt the Corrado rank test as the primary non-parametric procedure to improve test specification.

Finally, the multi-regional scope of this study suggests that institutional context deserves further attention. Comparative work that explicitly models how corporate governance regimes, venture capital market development, and national innovation system characteristics moderate the stock market reaction to CVC launches could provide important insights into why aggregate reactions are similarly muted across the US, Europe, and Japan. Such research would also help identify whether the observed null result reflects a genuine global pattern or a coincidence of offsetting regional effects that a larger and more granular dataset would decompose into meaningfully different stories. Overall, the findings suggest that while corporate venture capital has the potential to shape firms' long-term innovation strategies, the launch of a CVC program alone does not provide sufficient information for capital markets to reassess firm value in the short run.

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