LUISS

Department of Corporate Finance

Chair of Advanced Corporate Finance

EXIT STRATEGIES IN VENTURE CAPITAL: A THEORETICAL AND EMPIRICAL ANALYSIS

SUPERVISOR

Prof. Pierluigi Murro

CO-SUPERVISOR

Prof. Rosella Santella

CANDIDATE

Emanuele Corrado

ID Number: 774881

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To my family and best friends,
who supported me along this journey

INTRODUCTION

I. Background and relevance of Venture Capital in the economic landscape

Over the past few decades, venture capital (VC) has emerged as a crucial part of the global innovation economy. It has profoundly gained recognition for its ability to fund groundbreaking ideas and help early-stage businesses grow.

As traditional financial institutions often shy away from the high risks tied to unproven business models, venture capital has stepped in to fill a critical financing gap.

This support allows startups to aim for ambitious goals that might otherwise be unattainable. Its influence is ultimately prominent in technology-intensive and innovation-driven sectors, where rapid growth and disruptive ideas are often key to success.

The rise of venture capital has not only spurred the growth of globally influential companies but has also changed the institutional and policy landscapes for entrepreneurship.

Governments around the globe are implementing targeted strategies to replicate thriving startup ecosystems, offering regulatory incentives, research and development subsidies, and supportive legal frameworks. Meanwhile, venture capital itself has evolved into a sophisticated financial tool that combines funding, strategic oversight, and access to influential networks, significantly impacting a startup's growth trajectory.

This blend of finance and strategic support has made venture capital a major player in enhancing productivity, competitiveness, and technological leadership.

The significance of venture capital stretches beyond its economic contributions. It also represents a unique philosophy of innovation that embraces risk, encourages experimentation, and accepts failure as an inherent part of the growth process.

This mind-set has profoundly shaped not only the way startups operate but also how markets value innovation and long-term potential. Therefore, understanding the venture capital model is key, not just for grasping the mechanics of startup-finance, but for appreciating how new economic value is created and captured in our fast-moving and unpredictable global economy.

II. Research objectives

This thesis takes a closer look at what drives startup exit strategies in the venture capital landscape, especially in the decision between an Initial Public Offering (IPO) and a merger or acquisition (M&A).

The objective is to identify and evaluate the various factors that play a role in this decision, not exclusively from a theoretical perspective but also through a data-driven approach.
The research explores how unique characteristics of firms - like their industry, revenue, and geographical reach - can influence the likelihood of choosing one exit path over another.
It also considers the wider context in which these decisions are made, recognizing that external events, such as economic shifts or sudden changes in investor sentiment, can significantly impact exit dynamics.
By combining quantitative analysis with historical insights, the thesis aims to shed light on the relationship between structure and volatility in determining exit outcomes.
In the end, it acknowledges the limitations of predictive modelling in an uncertain market environment, aiming to offer a framework that balances statistical insights with contextual awareness.

III. Methodology and structure of the thesis

To investigate these matters, the thesis employs a dual strategy, merging theoretical explanation with empirical modelling. The quantitative aspect relies on a logistic regression applied to a dataset of 403 VC-backed startup exits, which helps identify the significant variables that sway the decision between pursuing an IPO and opting for an acquisition.
Key factors include geographic location, industry classification, and revenue levels.
Simultaneously, the research confronts the contextual volatility that empirical models often miss. This is achieved through a focused analysis of historical market disruptions, like the dot-com crash, the 2008 financial crisis, and more recent events such as the COVID-19 pandemic and the tech valuation correction, demonstrating how external shocks can reshape exit opportunities, irrespective of firm-level fundamentals.
The thesis is structured to take the reader from theoretical foundations to applied analysis and contextual reflection. After laying out the theoretical basis of venture capital and exit models, the discussion transitions into a detailed empirical investigation and concludes with a broader look at macroeconomic unpredictability. In this way, the thesis offers a layered understanding of startup exit strategies that connects firm-level analysis with the systemic forces at play in financial markets.

CHAPTER 1

UNDERSTANDING VENTURE CAPITAL FRAMEWORK

SUMMARY: 1.1 INTRODUCTION TO VENTURE CAPITAL: DEFINITION AND MECHANISM - 1.2 THE EVOLUTION OF VENTURE CAPITAL - 1.3 DIFFERENTIATION WITH PEER FORMS OF FINANCING - 1.4 THEORETICAL FRAMEWORK: DECISION MAKING IN VC EXITS

1.1 Introduction to Venture Capital: Definition and Mechanism

The entrepreneurial activity carried out by startups is crucial to developing a flourishing economic landscape, as these organizations with enhanced activity can quickly foster market dynamics and help countries in achieving improvements across many economic indicators[1].

As this influence becomes clear, worldwide policymakers have progressively attempted to emulate the US economic startup growth phenomenon with various strategies[2], spacing from the promotion of entrepreneurship in education environments, the creation of startup accelerators and hubs to imitate the Silicon Valley flow, enabling startup-friendly policies, or boosting R&D expenditure incentives.

However, the main driver of the US startup surge has always been the presence of a florid venture capital network, as it offers tailored solutions and atypical schemes of arrangements that startups cannot sustain based on their substance otherwise.

A venture capital business traces its roots on private equity activity; a highly specialized investor who creates value by providing funds to early-stage businesses exhibiting strong growth potential but carrying out significant risk due to their prematurity in the business

[1] Schindehutte, M., Morris, M.H. and Kocak, A. (2008), "Understanding market-driving behaviour: the role of entrepreneurship", Journal of Small Business Management, Vol. 46 No. 1, pp. 4-26, doi: 10.1111/j.1540-627X.2007.00228.x.

[2] Jansen, H.J. (2024), "The venture capital lifecycle: the role of foreign venture capital in a developing startup scene in China", Asia Pacific Journal of Innovation and Entrepreneurship, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/APJIE-06-2024-0126

lifecycle. As progressively becoming a traditional form of financing, this structure provides equity financing at the exchange of ownership and decision-making control[3].

The aim of venture capitalists is not only restricted to the lucrative scope but also extends to the strategic practices enabling growth and scaling operations. Hence, this form of investment is a crucial engine of innovation and cash flows, as it contrasts the entry barriers in sectors with high capital requirements to foster productivity and competitiveness.

In addition, venture capitalists steer mentorship and guidance in those environments by offering their expertise and strategic insights in the field.

This participation helps startups define their business strategies, improve operational efficiency, and gain access to a community of customers and investors.

Hence, the relationship between venture capital and entrepreneurs is symbiotic, as investors benefit from a financial perspective after attaining the exit, while startups refine their business strategies and achieve operational growth.

The exit generally occurs either through the public sales, private ingestion, or eventually buybacks, enabling the venture capitalists to realize optimal ROIs. This mutually beneficial partnership highlights the connection of financial backing and innovation, with venture capitalists acting as catalysts for growth.

Despite its revolutionary potential, venture capital does not come without challenges. Because of the inherent risks connected with investing in early-stage enterprises, many startups fail to deliver the expected profits. The rigorous due diligence process required to analyse feasible investments, along with the active engagement required to support portfolio businesses, makes venture capital an inherently resource-intensive endeavour. Furthermore, the relationship between venture capitalists and entrepreneurs can occasionally become tense, especially when there are disagreements in vision or strategic aims. The demand for entrepreneurs to give up some ownership and decision-making power can be difficult because it limits their autonomy in running the business.

Economic volatility and fluctuations in markets further compound the dangers, as external factors such as regulatory changes, geopolitical instability, and market saturation can all have an impact on venture capital-backed enterprises' profitability[4]. Despite these limitations,

[3] Félix, Elisabete Gomes Santana, Cesaltina Pacheco Pires, and Mohamed Azzim Gulamhussen. “The Exit Decision in the European Venture Capital Market.” Quantitative Finance 14, no. 6 (2012): 1115–30. doi:10.1080/14697688.2012.714903.

[4] Laitinen, E.K., & Laitinen, T. (2022). Estimation of Long-Term Profitability of Startups: An Experimental Analysis. Theoretical Economics Letters, 12, 1773-1779

venture capital continues to play an important role in supporting innovation and economic progress. Rather than that, they emphasize the complexity of the venture capital ecosystem and the necessity for a deliberate, strategic strategy to fully realize its potential.

Venture capital depends upon a structured cycle of operations that aim to reduce the inherent risks of early-stage investments while maximising prospective profits. This method is built on a set of interconnected processes that provide thorough evaluation, strategy alignment, and ongoing monitoring of investments. The mechanisms can be roughly divided into many main stages.

In order to do so, investors must adopt a strategic approach which bundles financial analysis and risk management practices while being aligned with the vision of that business.

The venture capital process begins with discovering potential investment opportunities, often known as deal sourcing. This means using vast professional networks, referrals from industry experts, attendance at startup pitch events, and direct applications from entrepreneurs. Venture capital firms also aggressively track new trends and market movements to discover high-growth industries that fit their investing strategy.

Once possible prospects are found, they go through an initial screening procedure to determine their viability. At this stage, venture capitalists prioritize high-level factors as the product or service's innovation potential, the size and growth rate of the target market, and the founding team's expertise and experience. Only a minority of sourced possibilities advance to the next round, demonstrating the highly selective nature.

Subsequently, the actors are involved in the due diligence process. This phase encompasses an in-depth assessment of the competitive environment, financial forecasts, market positioning, intellectual property, and business model. The objective is to figure out whether the startup can achieve substantial growth and maintain its competitive advantage.

In order to verify the accuracy of the startup's forecasts, venture funders look at its past financial records, revenue models, and cost structures. To find any potential hazards related to regulations or compliance, legal due diligence is also carried out. To protect their investment, venture capitalists must be able to foresee and address possible obstacles at this point.

After due diligence is completed and a startup is deemed a potential investment, the next stage is to negotiate the terms of the transaction. This includes calculating the company's valuation, the amount of funding to be granted, and the ownership position that the venture capitalist will receive in exchange.

Investment structure entails carefully balancing the interests of both sides.

According to the entrepreneur, excessive equity dilution might result in a loss of control and long-term value. On the other hand, from the investor's standpoint, having adequate ownership and governance rights is crucial for protecting their investment and assuring alignment with the startup's strategic goals. Convertible preferred shares are a common instrument used in venture capital structuring because they allow flexibility in the case of an exit or further financing rounds[5].

After the financing agreements are settled, the startup receives the agreed-upon capital. However, it is typical for venture capitalists to release funding in tranches based on the completion of set milestones[6]. This milestone-based approach ensures that the firm stays focused on key performance indicators (KPIs) and makes measurable progress before receiving additional investment.

For example, early funding may be contingent on meeting product development objectives, whereas later tranches may be contingent on KPIs such as user acquisition, revenue growth, or market expansion. This staged method enables venture funders to control risk while actively monitoring the startup's success.

One of the distinguishing elements of venture capital is investors' active involvement in the firms they fund. Venture capitalists actively shape the company's strategic direction, mentor employees, and use their skills to solve problems. This collaborative method frequently extends to board involvement, in which venture investors assume governance roles to influence critical decisions.

Beyond strategic advice, venture capitalists leverage their networks to create opportunities for entrepreneurs. This includes making introductions to possible consumers, partners, or more investors, as well as providing information on market trends and competitive dynamics. The ultimate goal is to produce value that will accelerate the startup's growth and improve its market position[7].

Throughout the investment's lifecycle, venture capitalists actively monitor the startup's performance to ensure that it meets the agreed-upon strategic objectives. Regular updates,

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[5] Baker, Malcolm P. and Gompers, Paul A., Executive Ownership and Control in Newly Public Firms: The Role of Venture Capitalists (November 1999). Available at SSRN: https://ssrn.com/abstract=165173 or http://dx.doi.org/10.2139/ssrn.165173

[6] Colombo, G.M., Cumming, D., Mohammadi, A., Rossi-Lamastra, C., Wadhwa, A., "Open business models and venture capital finance, Industrial and Corporate Change", Volume 25, Issue 2, April 2016, Pages 353–370, https://doi.org/10.1093/icc/dtw001

[7] ibid. 6

financial reporting, and periodic reviews enable investors to assess progress and identify areas requiring extra support or action.

Monitoring also includes determining the startup's readiness for future fundraising rounds or prospective exits. Venture capitalists can handle issues and capitalize on emerging possibilities by collaborating closely with entrepreneurs.

As mentioned upwards, the ultimate step in the venture capital process is the realization of returns via an exit. Initial Public Offerings (IPOs), acquisitions by larger companies, and stock stake buybacks are common exit routes for venture capitalists.

Each exit strategy is tailored to the startup's individual circumstances, market conditions, and venture capitalist return expectations.

1.2 The Evolution of Venture Capital over Time

The boredom of venture capital as an entrepreneurial activity has to be attributed to the Americans over the 19th century.

As Gallo, Verdoliva (2022) cite, there is some indication that primitive kinds of stock involvement in firms began in the early Roman Empire. Money from family and friends has been a vital resource throughout the past, but financing through the stock sale has evolved in the contemporary era[8].

Forward in time, earlier economies used joint-stock firms to supply equity capital.

In the 15th century, British institutions established tailored programmes to boost trade in their colonies, and initial investments took on colonial expeditions with expectations of high profits[9], serving as an early example of structured financial players like private equity and venture capital firms.

Before the Second Industrial Revolution, wealthy entrepreneurs were often connected to founders through industry networks, engaging for the first time in financing cutting-edge technologies. By connecting in such a way, investors were able to discover new concepts, evaluate them, and acquire the knowledge required to put theory into practice: we may compare them to current “business angels”.

[8] Gallo, S., “Private Equity and Venture Capital: Theory, Evolution and Valuation”, Cham, Switzerland: Springer Nature Switzerland AG, 2022. Print.

[9] ibid. 8

The Brush Electric Company in Cleveland, which served as a centre for financiers and inventors, is an early example. Arc lighting, air liquefaction, electrical ore smelting, and the first electric vehicles, such as automobiles and trolleys, were all developed by people connected to the Brush Electric Company network. Inventors could polish and troubleshoot their ideas with peer help at the Brush shops, which functioned as a collaborative centre. Through casual conversations at the shops, investors in this network learnt about potential technology, and they frequently decided to become partners or owners in the companies they sponsored. Prolific inventors (defined as those with over 15 patents) who also held key positions in businesses were far more likely to keep their inventions or transfer them to their own enterprises in the Midwest during this time[10].

Nicholas T. (2019) instead attributes the start of the modern American venture capital model to whaling expeditions, deemed to be one of the first industries to deal with the complications of risk capital intermediation, organizational design, ownership structure, incentives, team building, and principal-agent trade-offs.

Whaling agents acted as intermediaries between wealthy individuals who provided funds and the captains and crew who embarked on expeditions, much like venture capitalists act as intermediaries between limited partners and entrepreneurial teams in portfolio companies.

Whaling had high rates of return on capital, but it also had high downside risk due to its unpredictable and hazardous nature[11]. It is not a surprise that since American whaling agents had proved how to fund and profit from these dangerous endeavours, by the mid-1800s, approximately 75% of the 900 whaling ships in the world were American.

In addition to that, payoff distributions in the two industries were exceptionally similar.

An in-depth study of the two businesses reveals how the great majority of venture-backed enterprises fail, resulting in a significant long tail. The “hits” are anticipated to balance out the investments that result in losses and average returns. According to the most recent performance of a top-tier venture capital company, startups produced 52% of the gross return on its portfolio while accounting for only 6% of the entire cost of the investment. This VC firm's individual investment decisions resulted in 62% losses, while 5% yielded multiples of more than 10 on the initial capital[12].

[10] Greenwood, Jeremy and Han, Pengfei and Sanchez, Juan M. and Sanchez, Juan M., Venture Capital: A Catalyst for Innovation and Growth (2022). Available at SSRN: https://ssrn.com/abstract=4077464

[11] Nicholas, T. (2019). The VC-An American History. Harvard University Press.

[12] ibid. 11

Davis, Gallman and Gleiter (2007), calculated the profitability of these voyages, comparing their IRR with a data set tracked by Preqin of all the funds spanning between 1981 and 2006 in the VC industry, highlighting that 34.5% of whaling voyages ended up closing a neutral or negative IRR, compared to the 32% of VC funds with the same results.

To reinforce the statement above, both activities show similar excess-return IRRs (over 100%)[13].

Now let's move onto the history starting from the previous century.

Prior to World War II, wealthy individuals and families were still the leaders in risk capital investments, despite Reiner (1989) highlight how the acceleration of the shift in the investment environment, drawing wealthy individuals away from venture investing, was exacerbated by the Great Depression and fiscal tightening in the 30s.

Following the 1929 stock market crash, individuals, wealthy or not, categorically avoided risky investments on their own initiative. The psychological aftermath of the 1929 crash, market shifts, tax increases, and new taxes all discouraged equity investment[14].

For many, these shifts made investing with unusual risk nearly impossible. Many people not only became more risk-averse in their investment decisions, but they also delegated more of them to bank trust departments, insurance companies, and other institutions.

Much capital was thus transferred from decision makers who had previously engaged in venture investing but were now wary of it to decision makers who were unable to do so.

By the late 1930s, financiers and analysts noticed that wealthy people were not investing in new businesses because the tax system significantly reduced their potential reward yet left them the downside risk, after three stringent moves of the "Revenue Act" progressively updated from 1932 to 1937. Such a spike in progressive tax rates, combined with tax-free status from government securities' investments, disrupted the venture investing environment.

World War II and the commencement of the Cold War brought new technology like aircraft, nuclear weapons, radars, and rockets, as well as a surge in funding by the United States Department of Defence. To capitalize on scientific discoveries, the primordial venture businesses were founded, marking the beginning of the modern PE and VC era.

In 1946, two prominent venture capital firms were established: American Research and Development Corporation (ARDC) and JH Whitney & Company. These companies were

[13] Davis, L. E., Gallman, R. E., & Gleiter, K. (2007). In Pursuit of Leviathan: Technology, Institutions, Productivity, and Profits in American Whaling, 1816-1906. University of Chicago Press.

[14] Reiner, M.L., "The transformation of venture capital : a history of venture capital organizations in the United States" (2008). Semantic Scholar

established to provide financial support to firms while maintaining a favourable risk-return ratio for investors.

Georges Doriot, dubbed the "Father of venture capital," founded the company alongside Ralph Flanders and Karl Compton, a former MIT president. The company's formation marked the beginning of institutional private equity, as it raised funds from sources other than wealthy families. ARD pooled resources from mutual funds, insurance companies, and an initial public stock offering. The founders understood how important it was for venture capitalists to advise the start-ups in which they invested.

In 1956, ARD invested $70,000 in Digital Equipment Corporation (DEC) in exchange for a 70% ownership stake. When DEC went public in 1966, ARD's share was valued at $38.5 million, representing a 100% annual return. While this investment was extremely successful, ARD's organizational structure did not dominate the industry. ARD's compensation structure hindered the company's ability to retain VC professionals responsible for evaluating and guiding startups towards success[15]. As Greenwood, Han, Sánchez (2022) linger on, while this investment was extremely successful, ARD's organizational structure did not dominate the industry. The compensation structure at ARD made it difficult for the company to retain the VC professionals required to evaluate startups and provide the necessary guidance for success[16].

Two years later, the Small Business Act was enacted by the Senate "to improve and stimulate the national economy in general and the small-business segment thereof, in particular by establishing a program to stimulate and supplement the flow of private equity capital and long-term loan funds, which small-business concerns need for the sound financing of their business operations and for their growth, expansion, and modernization, and which are not available in adequate supply"[17].

What happened two decades on has decreed the institutionalization of venture capital, converging the interests of government policies, institutional funds and private investment into a more structured and innovative investment model.

Silicon Valley's emergence as a powerhouse of venture capital in the 1970s was a direct result of the convergence of technological innovation, academic influence, and financial evolution. What began as a regional hub for semiconductors transformed into the world's leading centre

[15] Greenwood, Jeremy and Han, Pengfei and Sanchez, Juan M. and Sanchez, Juan M., Venture Capital: A Catalyst for Innovation and Growth (2022). Available at SSRN: https://ssrn.com/abstract=4077464

[16] ibid. 15

[17] Small Business Act of 1958, Pub. L. No. 85-536, 72 Stat. 384 (1958).

for startup financing, largely because traditional banking institutions were reluctant to fund unproven, high-risk ventures. The banks, deeply invested in real estate and traditional industries, routinely turned away entrepreneurs who lacked tangible assets, leaving a massive funding gap for the Valley's innovators.

This culture of risk-taking and entrepreneurship was fuelled by Stanford University, which played a pivotal role in shaping the financial ecosystem that supported startups[18]. As documented, a construction management class at Stanford led by Robert Medeiros became an unexpected incubator for the idea of a financial institution dedicated to entrepreneurs. Students in the class, many of whom were engineers eager to launch their own ventures, repeatedly questioned why traditional banks refused to lend to startups. Medeiros and his students grappled with this problem, and this discourse eventually contributed to the creation of Silicon Valley Bank (SVB) - an institution designed to say "yes" to entrepreneurs when mainstream banks wouldn't.

SVB was, unfortunately, only one piece of a broader shift. Around the same time, firms like Cleaner Perkins and Sequoia Capital were being established, pioneering a new investment model that provided capital in exchange for equity. These venture capitalists understood that, while startups carried enormous risks, they also held the potential for exponential rewards. Unlike passive investors on Wall Street, Silicon Valley's VCs adopted a hands-on approach, mentoring founders, refining business models, and providing the strategic guidance needed to scale companies.

The impact of this financial shift became evident in the rise of groundbreaking companies that shaped the technology industry. Intel, founded in 1968 by Robert Noyce and Gordon Moore, was an early beneficiary of venture capital. At a time when semiconductor development was an uncertain business, Arthur Rock, one of the first true venture capitalists, stepped in to provide the necessary funding. His investment enabled Intel to refine its microprocessor technology, which ultimately revolutionized computing and positioned the company as a global leader.

Similarly, in 1976, Apple was founded by Steve Jobs and Steve Wozniak in a garage, but without sufficient capital, their vision for personal computing would have remained a hobbyist's dream. Enter Mike Markkula, an early Silicon Valley investor and former Intel

[18] Piqué, J. M., Berbegal-Mirabent, J., & Etzkowitz, H. "The Role of Universities in Shaping the Evolution of Silicon Valley's Ecosystem of Innovation", (2020). Triple Helix, 7(2-3), 277 321. https://doi.org/10.1163/21971927-bja10009

executive, who provided Apple with $250,000 in seed funding. Markkula didn't just inject money - he played a crucial role in structuring Apple as a company, shaping its business strategy, and positioning it for the explosive success of the Apple II, one of the first mass-market personal computers.

Beyond computing, venture capital also fuelled the growth of new industries. Atari, founded by Nolan Bushnell in 1972, pioneered the video game sector, a market that banks saw as too risky. Traditional lenders wouldn't finance a company making coin-operated arcade machines, but venture capitalists saw its potential. With their backing, Atari launched Pong, the game that ignited an entire industry worth hundreds of billions today.

Sequoia Capital invested in Tandem Computers, a 1974 startup specializing in fault-tolerant computing for financial institutions. The growing need for reliable banking and stock trading systems made Tandem's technology essential, and venture capital funding allowed it to scale rapidly.

The reach of venture capital extended beyond hardware and software. In 1976, Genentech, co-founded by Herbert Boyer and Robert Swanson, became a pioneering biotech company thanks to early venture funding. Swanson, himself a venture capitalist, recognized the potential of genetic engineering and secured capital to commercialize Boyer's research. This investment effectively launched the biotechnology industry, proving that venture capital could drive scientific breakthroughs just as it did technological ones.

Each of these companies - Intel, Apple, Atari, Tandem Computers, and Genentech - illustrates how Silicon Valley's venture capital ecosystem was uniquely suited to funding high-risk, high-reward ventures. Traditional banks would never have supported such unproven business models, but venture capitalists understood that disruptive innovation required bold financial backing. More than just providing money, these investors offered mentorship, industry connections, and strategic direction, making them an integral part of their portfolio companies' success.

By the late 70s and early 80s, venture capital had firmly established itself as the financial engine of Silicon Valley. The personal computing revolution, the rise of biotech, and the explosion of new industries all stemmed from the risk-taking mindset that venture capitalists embraced. This period laid the foundation for the modern startup ecosystem, proving that high-growth companies could thrive if given the right financial support. It also cemented Silicon Valley's

reputation not just as a hub for technological breakthroughs but as the birthplace of modern venture capital, an industry that continues to fuel innovation across the world today[19].

Transitioning into the 90s, the VC industry experienced unprecedented growth, primarily fuelled by the commercialization of the Internet. This period was marked by a surge in investments in Internet-based startups and a series of high-profile IPOs, with Netscape's 1995 offering standing out as a seminal event. The allure of potentially lucrative returns drew a diverse range of institutional investors into the VC fold, significantly expanding the capital base available to startups. Moreover, the global reach of the Internet facilitated a more geographically dispersed investment strategy, attracting American VCs to international markets.

In this context, speculative investment during this time period played a significant role in the growth of surveillance advertising. Soaring investment markets and the growing internet advertising sector engaged in a pattern of mutual reinforcement that began in 1995 and intensified until the bubble collapsed in 2000.

The privatization of interactive media was expected to create lucrative "winner takes all" markets. Risk investors encouraged a "get big fast" business development strategy to maximize potential. Modelled after the monopolistic successes of companies like Microsoft and Intel, get big fast was a "bet on a future state of the world in which a select group of 'winners' would dominate the e-commerce landscape."

Instead of pursuing incremental growth, the goal was to saturate a specific market as quickly as possible in order to gain "first mover" advantages, reduce competition, and reap the resulting super profits[20]. Netscape acted as a proof of concept, as it turned out to be the first company to strategically start a flood of follow-on VC investments. It started off by capitalizing $5 million equity investment from the renowned VC firm Kleiner Perkins Caufield & Byers: after centralizing its market strategy upon massive capital expenditures on advertising to enhance the brand's success, it quickly routed the competition, securing three quarters of the web with its Navigator[21]. Finally, the company made it to public listing on the 9th of August 1995,

[19] Colombo, M.G., Piva, E. and Rossi-Lamastra, C. (2014), "The Sensitivity of High-Tech Entrepreneurial Ventures' Employment to a Sales Contraction in a Negative Growth Scenario: The Moderating Role of Venture Capital Financing". Manage. Decis. Econ., 35: 73-87. https://doi.org/10.1002/mde.2645

[20] Crain, M., "The Dot Com Bubble" In "Profit over Privacy: How Surveillance Advertising Conquered the Internet", 75–92. University of Minnesota Press, 2021. https://doi.org/10.5749/j.ctv20zbktm.7.

[21] ibid. 20

definitely signalling Silicon Valley and Wall Street, with an entry price of $28 that marked a 166% boost in few hours. In a span of 8 hours, the IT company was $8 billion worth.

PBS's *Frontline* later described Netscape's Initial Public Offering as a historic move because the unprecedented demand for Netscape's stock took the financial sector by surprise, triggering a wave of speculative investment in the internet industry. Simultaneously, it was prophetic because it validated the "get big fast" strategy, which would come to characterize an entire generation of internet technology companies, commonly referred to as dot coms[22].

In the five years following the IPO, annual venture capital investment experienced a dramatic surge, increasing from approximately $7 billion in 1995 to nearly $100 billion by 2000. However, this rapid growth was not sustained, as investment levels subsequently declined to less than $40 billion per year over the next decade. A substantial portion of this capital was allocated to businesses focused on commercializing the internet. At the height of the dot-com bubble, in 1999 and 2000, nearly 80% of VC funding was directed toward internet-based companies. This influx of investment led to a sharp increase in the number of dot-com startups, as well as a substantial rise in individual funding commitments. Companies that, only a few years earlier, would have considered a few million dollars in venture capital a significant achievement were now routinely securing ten times that amount.

While Netscape had been an early trailblazer in the internet boom, its dominance in the web browser market was short-lived. Despite its historic IPO in 1995, Microsoft's Internet Explorer quickly emerged as a formidable competitor, benefiting from its bundling with the Windows operating system. By the late 1990s, Netscape's market shares plummeted, and the company struggled to maintain its early advantage.

Recognizing its challenges, Netscape was acquired by AOL in 1998 for $4.2 billion, a deal that was initially seen as a strategic victory. However, the acquisition did little to revive Netscape's relevance. As Microsoft continued to consolidate its browser monopoly, AOL eventually phased out Netscape's development, relegating it to history.

In their quantitative research, McAleer, Suen, and Wong (2016) measure the significance of a financial bubble through two measurements. First, they show how the average daily returns for NASDAQ in the 2 years before preceding the 2000 peak is approximately 0.11%, but then it increases five times to 0.63%, with the annualized return for the corresponding period increasing from 44% to approximately 221%; subsequently, the ratio of the number of days with positive returns to the number of days with negative returns increases from 56:44 to

[22] Crain, M., "The Dot Com Bubble" In "Profit over Privacy: How Surveillance Advertising Conquered the Internet", 75–92. University of Minnesota Press, 2021. https://doi.org/10.5749/j.ctv20zbktm.7.

68:32 for the 5 months preceding the peak.

These findings aren't particularly surprising. To account for the possibility of a bubble bursting, investors may demand higher returns than during normal periods. The first characteristic of bubble formation is a significant increase in the number of days with positive returns compared to negative returns in the four months leading up to the peak, as well as abnormally high returns in the same period[23].

By early 2000, warning signs of overvaluation and unsustainable business models began to emerge. Like Netscape, many internet-based companies had amassed staggering valuations despite lacking concrete revenue strategies, let alone profitability. The tipping point occurred when the Federal Reserve raised interest rates several times between 1999 and 2000, tightening monetary policy and reducing liquidity in financial markets. As the cost of borrowing rose, investor sentiment shifted[24]. In March, the NASDAQ peaked at 5,048 points, marking the pinnacle of the bubble.

What followed was a dramatic market correction as investors rapidly lost confidence in the long-term viability of many dot-com startups. The panic selling that ensued led to a cascading collapse, with the NASDAQ losing nearly 78% of its value by October 2002. Hundreds of dot-com companies either declared bankruptcy or were acquired at a fraction of their previous valuations.

As an imaginable result of the loss in investor confidence, total VC investments dropped from nearly $100 billion in 2000 to around $20 billion by 2003**,** marking an 80% decline**.**

The "easy money" era ended, as this correction forced a recalibration of venture investment strategies, emphasizing sustainability and profitability over mere growth prospects, and marked a maturing of the sector.

Just as the venture industry was experiencing its momentum, a global event broke down investor confidence. The direct effect on VC investments, funding of startups, and exit opportunities was brought about by the subprime mortgage crisis, further exacerbated by the collapse of Lehman Brothers in September 2008. Consequent to suffering severe portfolio

[23] McAleer, M., Suen, J. & Wong, W.K. “Profiteering from the Dot-Com Bubble, Subprime Crisis and Asian Financial Crisis.” JER 67, 257–279 (2016). https://doi.org/10.1111/jere.12084.

[24] The Federal Funds Effective Rate reached 6.52% in July 2000. To better acknowledge this trend, two years later the same rate was 1.73%. The federal funds rate is the interest rate at which depository institutions trade federal funds (balances held at Federal Reserve Banks) with each other overnight. When a depository institution has surplus balances in its reserve account, it lends to other banks in need of larger balances. In simpler terms, a bank with excess cash, which is often referred to as liquidity, will lend to another bank that needs to quickly raise liquidity. Source: Federal Reserve Bank of St. Louis. Effective Federal Funds Rate (FEDFUNDS). FRED, Federal Reserve Bank of St. Louis. Accessed [04/02/2025]. https://fred.stlouisfed.org/data/fedfunds.

losses in the public markets, institutional investors - especially limited partners like pension funds, university endowments, and high-net-worth individuals - pulled back on their commitments to venture capital funds for fear of illiquidity during an uncertain economic period. As a consequence, venture fundraising massively decreased: from about $31 billion raised in 2007 to $25 billion in 2008, it further went down to just $16 billion in 2009, which means a 50% decrease in only two years.

This shrinkage of available capital forcibly made VCs become very stingy in investing and concentrate their efforts only on enterprises that could present clear ways to profitability and well-defined sustainable models. Companies that had once benefited from aggressive capital injections and rapid scaling strategies found themselves unable to raise additional rounds. Investors became far more discerning, favouring sectors like enterprise software, SaaS, and cloud computing that required less upfront investment and provided more predictable revenue streams. Accordingly, many of those early-stage companies that had leveraged up on this "growth-at-all-costs" mentality of the previous decade either hunkered down in survival mode or simply shut down. This shift in investment strategy further had a telling effect on valuations, wherein startups previously valued for their future potential, as opposed to financial fundamentals, saw down rounds they needed to accept or risk insolvency.

Meanwhile, exit opportunities for venture-backed companies evaporated. The IPO market, a key mechanism through which VC firms were able to realize returns, essentially shut down. In 2007, 86 venture-backed companies had gone public in the U.S., raising several billion dollars of capital, while in 2008 that figure dropped to a mere catastrophic decline of 93%.

As it turned out, the M&A markets too did not prove any difference, as companies struggling with their own liquidity issues avoided risky acquisitions. When neither of the two routes of IPO and acquisitions succeeded in attracting capital, these portfolio firms stayed longer with VC firms than they actually thought, and the liquidity further deteriorated[25].

In fact, all such scenarios have taken the venture capital industry to a philosophical shift in the way investments are made. In place of rapid user growth and market share domination, investors now asked for profitability, or at least a clear revenue model. Start-ups had to adapt to changed investor expectations by reducing burn rates, cutting costs, and deferring expansion plans. The days of indiscriminate spending on marketing and customer acquisition gave way to an era of capital efficiency, where firms that could see their funding last longer were favoured over those

[25] Chaplinsky, S. J, Gupta-Mukherjee, S., "The Decline in Venture-Backed IPOs: Implications for Capital Recovery" (2012). Handbook on Academic Research on IPOs, Edward Elgar Publishing, Forthcoming, Darden Business School Working Paper No. 2199097, Available at SSRN: https://ssrn.com/abstract=2199097.

that needed a continuous infusion of capital. Many firms that hitherto relied on frequent funding rounds were forced into bridge financing, convertible note agreements, or even significant equity dilution just to stay afloat.

These immediate struggles did not keep the venture capital industry behind for long. With financial markets starting to stabilize, by 2010 a whole new wave of venture investment opportunities emerged. The rise of mobile computing, cloud infrastructure, and social media ignited recovery in the VC industry, with new frontiers now available for investment. Although the sum total of VC funding still came in below the pre-crisis levels and hovered at $22 billion in 2010, it contrasted strongly with the $16 billion recorded in 2009, a sure signal that investors had again developed a taste for risk[26]. In that sense, companies that had survived the storm (most of them in enterprise software and digital platforms) turned out to be the next generation of tech leaders, with firms like Facebook, LinkedIn, and Salesforce gaining from this more disciplined investment environment.

As in so many sectors, the real legacy of this 2008 financial crisis will be to send venture capital's investment practices back to sustainable investing criteria and an approach to venture capital that takes a more thoughtful, risk-constrained, fundamental basis. Yet the years to come would illustrate how, beyond the short-term pain, there was also important building for what was to prove a more restrained yet innovative VC ecosystem in this coming decade.

In the years following the 2008 financial crisis, venture capital slowly rebounded as the global economy stabilized and tech startups began to flourish[27]. By the mid-2010s, investments surged, particularly in tech, healthcare, and fintech, as new innovations and business models began to disrupt traditional industries. This momentum carried through to 2020, when the COVID-19 pandemic further accelerated the adoption of digital solutions, propelling venture capital into a new era of rapid, transformative growth.

As the 2019 Coronavirus pandemic unfolded, it became evident that some sectors were not only able to withstand the global disruption but also to flourish. A notable shift in venture capital focus during this period was towards healthcare, remote work technologies, and e-commerce—three areas that experienced a significant increase in both demand and investment.

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[26] State Science & Technology Institute (SSTI). "Useful Stats: U.S. Venture Capital Investment, 1995-2010, and Investment by State in 2010." SSTI Blog, February 16 (2011). Accessed February 4, 2025. https://ssti.org/blog/useful-stats-us-venture-capital-investment-1995-2010-and-investment-state-2010.

[27] Wall Street Journal, "VC Returns Have Lagged Behind Stocks. Are Secondary Markets the Solution?" Wall Street Journal (2020). https://www.wsj.com/articles/vc-returns-have-lagged-behind-stocks-are-secondary-markets-the-solution-007efd89.

The healthcare sector faced an immediate and pressing need for innovation. The pandemic hastened the adoption of telemedicine, diagnostics, and biotechnology at a speed that had previously seemed impossible. With social distancing measures in place and healthcare systems overwhelmed, the necessity for remote patient care, contact tracing technologies, and rapid-response diagnostics became critical. This shift led to a surge of venture capital into health tech companies, ranging from startups creating AI-driven diagnostic tools to those focused on vaccine research and distribution logistics. The urgency to tackle the pandemic transformed healthcare into not just a vital sector but a high-growth one, drawing investment from firms eager to seize both immediate opportunities and long-term changes in the healthcare landscape.
The global shift to remote work also opened new avenues for technology companies. As businesses rushed to sustain productivity while employees worked from home, the demand for communication, collaboration, and cybersecurity solutions skyrocketed[28]. Video conferencing platforms like Zoom and project management tools like Slack became indispensable for keeping operations running. In response, venture capital flowed into companies offering SaaS solutions, cybersecurity advancements, and tools aimed at improving the remote work experience. Investors understood that this transition was not just a temporary fix but a fundamental shift in how work would be conducted in the future, with hybrid and fully remote work models likely to become enduring elements of the business environment.
As a result, companies facilitating this transformation, from cloud computing infrastructure to workflow automation tools, found themselves attracting significant investment. E-commerce also saw a remarkable increase. With physical stores closing or becoming less accessible due to lockdowns, consumers flocked to online shopping, speeding up a trend that was already in motion. Retailers, many of whom had been slow to embrace digital solutions, were now compelled to swiftly transition to e-commerce platforms, leading to a surge in demand for logistics and delivery services. Venture capitalists recognized the shift: the future of retail was online, and businesses that could innovate in e-commerce technologies, supply chain management, and last-mile delivery were poised to benefit greatly. Consequently, there was a notable rise in investment directed toward e-commerce startups, especially in areas like direct-to-consumer brands, digital payments, and supply chain logistics.
The driving force behind these changes was a significant increase in technology investment. The pandemic served as a trigger, speeding up the digital transformation across nearly all areas

[28] Financial Times, "Why Returns Have Been Slow to Follow Investment in Digital Health." Financial Times, (2020), https://www.ft.com/content/221cdff1-d6bd-46d9-a826-553b849dfe74.

of society[29]. Tech startups addressing remote work issues, transforming healthcare, or reinventing retail emerged as clear winners. Investors, who had already recognized the potential of technologies such as artificial intelligence, cloud computing, and automation, became even more eager to support companies in these fields. The vast scale of transformation required innovation, and venture capital was ready to invest in the tech firms leading the charge. Companies that were set to excel in cloud infrastructure, machine learning, or data analytics became particularly prominent, as the global reliance on digital tools intensified like never before.

1.3 Differentiation with Peer Forms of Financing

Traditionally, we see venture capital as the primary source of entrepreneurial financing due to its flexibility and structured arrangements, with the limits circumscribed to early-stage startups with fast growth profile.

However, it is important to remark on the existence of a diverse landscape of financing for businesses, with various options tailored to the company's growth and stage of development and risk profile, as well as the attitude and character of the entrepreneur.

Remaining in the spectrum of startup financing, the choice between venture capital and business angel is closely linked to the need profiles of the underlying project. In recent years, however, the high return on investment demanded by venture capitalists, combined with the high risk and uncertainty of financing a venture offering less collateral, has led venture capitalists to expand the horizon beyond the early-stage market, opening the space to a burgeoning business angel activity.

Business angels (BAs) are typically former entrepreneurs or retired senior executives with investable assets exceeding $1 million, often referred to as 'high-net-worth individuals'. In addition to their capital, they contribute time and expertise, investing in high-risk, high-return ventures. Since they use their personal funds, they are classified as 'informal' investors. The amounts they invest usually range between $50,000 and $100,000, although amounts as low as $10,000 and as high as over $100,000 are not uncommon[30].

[29] Barron's. "Tech Investing in Private Markets Takes Guts. Know the Risks." Barron's (2021) https://www.barrons.com/articles/tech-stocks-private-markets-risk-73b48b85.

[30] Schmidt, S., Entrepreneur's choice between Venture Capitalist and Business Angel for start-up financing, Amburgo (2014).

The exit strategy is typically unplanned and depends heavily on the development of the venture. BAs often invest in startups within close geographic proximity to their homes and, due to their industry expertise, prefer ventures in sectors they are familiar with or have previously worked in[31]. For many BAs, the motivation goes beyond capital and equity growth; they are also interested in engaging with exciting new ventures, leveraging their business networks, and protecting their investments through active involvement[32]. In exchange for their equity contribution, BAs frequently assume roles as mentors or advisors, requiring entrepreneurs to consult with them on key decisions if they wish to retain the investment, which would be less significant to a VC participation (usually tending to be controlling stakes).

Therefore, while venture capitalists may provide larger sums with more structured terms, angel investors usually offer more flexible terms and a hands-off approach to management, with their involvement often limited to offering advice and mentorship.

As of 2023, the angel investment landscape in the United States and Canada has experienced notable changes. The Centre for Venture Research at the University of New Hampshire reports that the number of active angel investors increased to 422,350, up from 367,945 in 2022, marking a 14.8% rise. However, total angel investments decreased to $18.6 billion, a 16.4% decline from the previous year. In 2023, 54,735 entrepreneurial ventures received angel funding, a decrease of 12.2% over 2022 investments. On top of that, the average angel deal size in 2023 was $339,390, with 9.7% dilution and $3.5 million post money valuation[33].

In the same year, the report says the yield rate was 24.2%, a small decrease from the 2022 yield rate of 26.7%. This yield rate indicates that entrepreneurs seeking angel capital have a 1 in 4 chance of securing an angel investment. Yield rates in the 20%-25% range have historically been indications of a sustainable market over the longer term[34].

Angel investors often operate collectively, with a process where investments are made individually but under the guidance and structure of a group (referred to as a "gatekeeper"). The key benefit of angel syndicates is the pooling of expertise and resources among members in marketing, finance, and technology, which allows for more efficient due diligence, sharing of

[31] Lumme, A., et al. “Informal Venture Capital - Investors, Investments and Policy Issues in Finland.” International Small Business Journal., vol. 17, no. 2 (1999)

[32] De Clercq, D. et al., “An Entrepreneur’s Guide to the Venture Capital Galaxy.” Academy of Management Perspectives 20, no. 3 (2006), doi: http://www.jstor.org/stable/4166254.

[33] Sohl, J., “The Angel Market in 2023: An Inflection Point for Women Angels?”, Center for Venture Research, (2024).

[34] Sohl, J., “The Angel Market in 2023: An Inflection Point for Women Angels?”, Center for Venture Research, (2024).

investment opportunities, and increased investment capacity[35]. Syndicates were formed in response to the Jobs Act of 2012, which enabled the creation of special-purpose vehicles (SPVs), with the objective to facilitate the SPVs' investment in startups as a single entity**.** Moreover**, t**heir public profile improves transparency in the informal venture capital market, reducing search costs for both angels and entrepreneurs[36].

After investing, entrepreneurs benefit from the collective value provided by the syndicate's members, as well as the specialized monitoring and support that helps the venture meet key milestones for future funding[37].

Corporate venture capital (hereinafter, "CVC") involves established corporations investing in startups to gain access to new technologies or business models. While similar to traditional venture capital, CVCs often have a strategic interest in the company they invest in, beyond just financial returns. They may seek to integrate the startup's innovations into their own business or acquire the startup eventually.

The decision to engage in Corporate Venture Capital (CVC) investment is influenced by both economic and behavioural factors. CVC is considered part of a company's broader innovation strategy, where firms compare the marginal innovation output from CVC activities with that of internal research and development (R&D)[38]. Several industry-level factors, such as technological turbulence, patenting activity, the importance of complementary assets, and the intellectual property (IP) regime, as well as firm-level resources like absorptive capacity and available cash flow, drive CVC activity. Further research supports these findings and reveals a complex interaction between industry and firm-level factors. For example, while technological turbulence in an industry and the availability of resources within a firm are both linked to increased CVC activity, firms with abundant resources are less likely to pursue CVC in industries experiencing high levels of technological ferment[39]. Additionally, firms are more

[35] Mason, C. & Botelho, T., "The Role of the Exit in the Initial Screening of Investment Opportunities: The Case of Business Angel Syndicate Gatekeepers.", International Small Business Journal: Researching Entrepreneurship (2016), 34 (2): 157–75. doi:10.1177/0266242614563419.

[36]Mason, C., "The Real Venture Capitalists: A Review of Research on Business Angels", University of Glasgow, (2008).

[37] Shane, S. "Why encouraging more people to become entrepreneurs is bad public policy", Small Bus Econ 33 (2009). https://doi.org/10.1007/s11187-009-9215-5.

[38] Dushnitsky, Gary, and David B. Lenox. "When do incumbents learn from entrepreneurial ventures? Corporate venture capital and investing firm innovation rates." Research Policy 34, no. 5 (2005a): 615-639.

[39] Basu, K., Phelps, C., & Kotha, S. "Exploring the role of resources an industry context in corporate venture capital." Strategic Management Journal 32, no. 1 (2011).

inclined to engage in CVC rather than mergers and acquisitions when faced with high external market uncertainty[40].

Behavioural factors also play a role in these decisions. CVC practices often spread through contagion, starting with VC firms and then extending within an industry[41]. Moreover, when a firm's innovation performance exceeds expectations, it is less likely to initiate or continue CVC activities. Conversely, when performance falls short of expectations, the likelihood of launching a CVC unit is also reduced[42].

CVC represents an investment model where a corporation creates a dedicated arm to make investments in startups, aligning with the broader business goals of the parent company. The firm itself acts as both the investor and the sole limited partner, as opposed to traditional venture capital, where limited partners include a range of investors such as institutional funds, business angels, and other corporations. In this way, CVCs are generally more focused on integrating their portfolio companies' innovations into their own operations than on solely pursuing financial returns. In comparison, VC firms are motivated primarily by financial objectives, focusing on returns for their limited partners through mechanisms like IPOs or acquisitions.

The key goals of CVC, therefore, extend beyond simple financial return, as they also include gaining access to industry knowledge, market expertise, and networks that can enhance the parent company's competitive advantage. These strategic interests often play a more significant role than immediate financial outcomes. This is in contrast to VC, which also seeks financial returns but can be driven by strategic investment goals, particularly when a VC firm partners with a startup to help scale operations or develop synergies.

Startups that engage with CVCs often benefit not only from capital but also from access to the corporate parent's established market position, customer base, and technological infrastructure. While both CVCs and VCs act as strategic investors, the former are uniquely positioned to offer more direct integration with an established business, which can be an attractive advantage for a startup looking to scale in a structured environment.

Unlike VCs, CVCs focus on fostering long-term, strategic synergies that can lead to sustained collaboration, acquisitions, or the incorporation of innovations into the corporate parent's

[40] Tong, T., & Li, J. "Exogenous uncertainty, corporate venture capital, and innovation strategy." Journal of Business Venturing 26, no. 2 (2011).

[41] Gaba, V., & Meyer, M., "The diffusion of corporate venture capital practices." , Journal of Business Venturing 23, no. 2 (2008).

[42] Gaba, V., & Bhattacharya, P. "The relationship between innovation performance and corporate venturing decisions.", Journal of Business Research 65, no. 5 (2012).

operations over time. While VCs may seek quick exits to satisfy their limited partners, CVCs view their investments more holistically, aiming for enduring partnerships that contribute to broader innovation objectives.

Furthermore, CVCs tend to have a longer investment horizon than VCs. Many funds are structured as evergreen funds, which do not have a fixed life cycle and may continue indefinitely. This contrasts with the typical 5–10-years' investment horizon of VC funds, which are designed to seek exits and returns within a set period. The extended horizon of CVCs reflects the longer-term strategic goals of corporate investors who are less concerned with immediate financial returns and more focused on the sustainable integration of innovative solutions.

As stated on page 7 of this chapter, venture capital is a derivation of private equity activity, from which it derives the lucrative scope of the investment featuring a structured and non-linear process starting from the fund provisioning, management and harvesting, or the decision-making control and strategic direction to influence major resolutions; the distinction is instead evident in the timeframe of such processes, targets and risk profiles.

Although the risks inherent in each investment strategy also vary, private equity typically has lower return expectations than venture capital. Private equity produced average annual returns of 10.48% over the 20-year period ending on June 30, 2020[43], as their investments are made in well-established businesses with tangible assets, stable cash flows, and tested business models. Private equity firms' operational changes and strategies always carry some risk, but this risk is easier to manage than the core business risk that venture capital investors must deal with. Instead, startups, by their nature, are more prone to failure, and even successful startups can face years of volatility before reaching the point of a profitable exit.

Venture capital firms, on the other hand, focus on much riskier businesses, frequently with little to no revenue, and their investments are usually more speculative. Venture capital investments have the potential to yield higher returns: the top quartile of VC funds have had an average annual RoR ranging from 15% to 27% over the past 10 years, which is 5% to 17% excess return over S&P market factor[44].

[43]Jahn, M. "How Do Returns on Private Equity Compare with Other Investment Returns?" Investopedia, updated July 10, 2022. https://www.investopedia.com/ask/answers/040615/how-do-returns-private-equity-investments-compare-returns-other-types-investments.asp.

[44] Seraf-Investor. "Dividing the Pie: How Venture Fund Economics Work [Part II]." Seraf-Investor.com, accessed February 9, 2025. https://seraf-investor.com/compass/article/dividing-pie-how-venture-fund-economics-work-part-ii.

A recent study performed by Gokmenoglu and Altingunes (2024), examines the dynamics of how private equity and venture capital interact with broader financial markets, including the equity market (S&P 500), precious metals, real estate, and the U.S. Dollar index (DXY). It utilizes data from 2004 to 2022, covering key periods such as the global financial crisis and the COVID-19 pandemic, to study the volatility and return spillovers between these asset classes.
The research used the Diebold and Yilmaz (2012) methodology, which uses variance decomposition and a generalized vector autoregressive model (GVAR) to evaluate time-varying connectedness. In this mean, authors were able to document the dynamic relationships and spillovers between PE, VC, and other asset classes.
The quantitative analysis therein proves a stronger correlation of PE funds to equity markets, compared to VC results, as PE shows a 29.8% volatility and 25.1% return spillover from the S&P 500, while VC respectively exhibits 22.7% and 22.4% results.

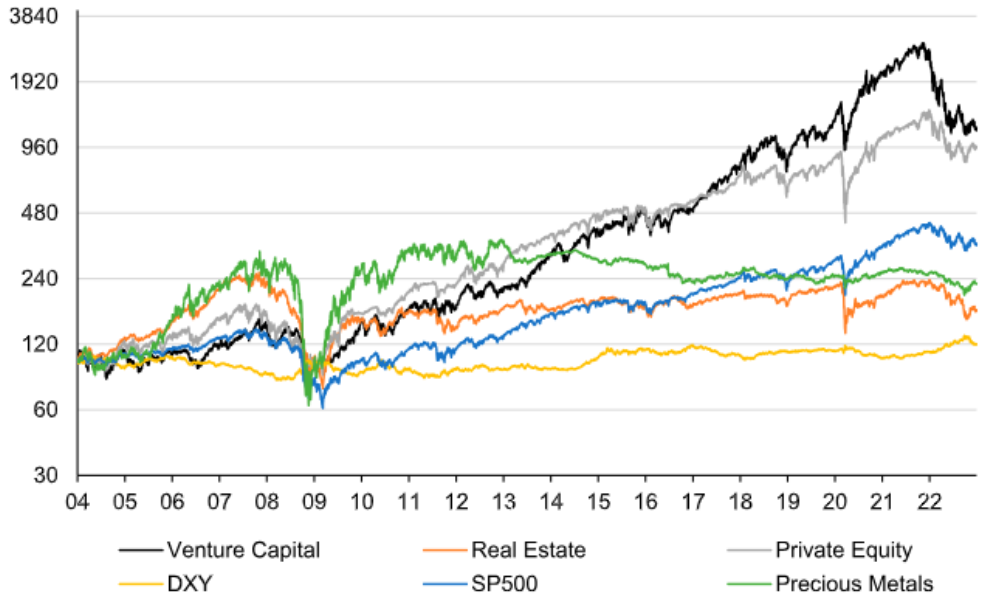

Figure 1: Historical trend of cumulative returns; source: *Gokmenoglu, K. K., Altingunes E., "Volatility and Return Spillovers between Private Equity Buyout, Venture Capital and Major Financial Markets." Investment Analysts Journal 53 (4): 366–86., (2024) p.7, doi:10.1080/10293523.2024.2312708.,*

An interesting fact is that such lower sensitivity of VC investments to market fluctuations has also been confirmed during COVID pandemic, marking an additional resiliency of tech and main VCs focus sectors to PE targets.

Instead, a contact point of PE and VC regards low spillovers to precious metals and real estate. For instance, PM shows 5.1% volatility spillover and 9.6% return spillover, and real estate (RE) shows 16.1% volatility spillover and 20.7% return spillover from the S&P 500, which is relatively low compared to PE and VC's spillovers from the equity market[45].

Still, both private equity and venture capital investments are long-term in nature, but the time horizon for private equity is typically longer. While private equity investments often last from five to ten years, venture capital investments are usually on a slightly shorter timeline, with harvest typically occurring within five to seven years. However, the timeline for both types of investments can vary depending on market conditions, the growth trajectory of the companies involved, and the success of the management strategies implemented.

Another important distinction between private equity and venture capital lies in the scope of the investments. Private equity firms often have a broader focus, investing in companies across a range of sectors and industries. They target larger companies that are often in need of significant capital for growth, restructuring, or operational improvements, to profit from deleveraging[46], EBITDA multiples' growth, and operation streamlining. The scope of these investments can be far-reaching, and private equity firms may target companies with substantial market capitalization and well-established customer bases.

In contrast, venture capital is more specialized and typically concentrated in high-growth sectors, particularly technology, healthcare, and other industries driven by innovation. Venture capitalists look for businesses that have the potential to disrupt existing markets or create entirely new ones. The scope of venture capital investments is narrower compared to private equity, as the focus is on high-growth, often nascent industries with a greater degree of uncertainty and volatility.

1.4 Theoretical Framework: Decision Making in VC Exits

VCs tend to prioritize defined characteristics when approaching startups in order to maximise the exit market multiples. In fact, the success of investments in high-risk, high-reward ventures is determined by the intricate and multi-stage framework of the venture capital decision-making process.

[45] Gokmenoglu, K. K., Altingunes E., "Volatility and Return Spillovers between Private Equity Buyout, Venture Capital and Major Financial Markets." Investment Analysts Journal 53 (4): 366–86. (2024) doi:10.1080/10293523.2024.2312708.

[46] The process of debt repayment through cash flow

According to Wall, Smith (1997), more than 70% of venture capital have difficulty in determining the proper time of their exit from a deal, thus continuously straining them.

On the theme, Cumming (2008) states a venture capital firm encounters numerous difficulties when it comes to the exit phase. For instance, when it comes time to exit, there are typically disagreements and conflicts between venture capitalists and entrepreneurs regarding the investee's worth. Also, a venture capital's ability to exit a deal would be adversely affected by severe information asymmetry against it; in particular, it would be difficult to exit the deal through an Initial Public Offering (Amit et al., 1998), which is the preferred exit method for venture capital in terms of return on investment (Gompers, 1995).

Thus, the critical factors must be well defined prior to the funding decision. Financing startups and early-stage businesses is a critical function of venture capitalists, whose choices influence not only the expansion of individual businesses but also the larger innovation ecosystem. In contrast to conventional investment choices, which frequently depend on predetermined financial indicators, venture capital decision-making uses a mix of industry knowledge, risk assessment methods, and qualitative judgement to manage uncertainty.

Based on a comprehensive survey of 885 institutional VCs, Paul Gompers, Will Gornall, Steven N. Kaplan, and Ilya A. Strebulaev's article "How do venture capitalists make decisions?" in the Journal of Financial Economics (2020) offers a thorough examination of the decision-making procedures used by venture capitalists. From sourcing deals to exiting investments, the writers examine the different phases of venture capital investment, highlighting the critical elements that impact each phase.

According to the study, venture capitalists give the management team's calibre more weight during the investment decision-making stage than other elements like the business plan, product, or market size. VCs consistently rank the experience, abilities, and flexibility of the founding team as the most crucial factor influencing the success of an investment, even though market timing and competitive positioning are also significant.

Another crucial step in the venture capital decision-making process is deal sourcing. Most investments originate from networks, which include proactive deal scouting, personal connections, and referrals. To find promising startups before they gain widespread recognition, many venture capitalists rely on their connections in the industry and past experiences. This network-driven strategy emphasizes how crucial connectivity and reputation are to the venture capital ecosystem.

According to the study, venture capitalists employ a variety of financial models for deal structuring and valuation, such as heuristic-based valuation methods, comparable company

analysis, and discounted cash flow (DCF). VCs frequently favour preferred stock as a financing instrument because of the unpredictability of early-stage startups. Through anti-dilution clauses and liquidation preferences, this structure protects against downside risk while preserving control over key investment decisions.

A crucial component of venture capital is post-investment involvement, where VCs actively participate in governance and strategic decision-making. Many hold board positions and have a say in important financial and operational choices. According to the study, staged financing is a popular risk-reduction strategy that permits investors to contribute more money only after certain conditions are satisfied. When necessary, VCs will also replace founders or other important executives as part of their frequent involvement in executive decision-making. Returning back to the focus of the sub-chapter, VCs use exit strategies as the last step in the decision-making process in an effort to optimize their investment returns, and in order of occurrence, the strategy may involve IPOs, private M&A transactions or shares-buyback.

Among corporate literalists, Berkery (2007) highlights the significance of exit options. Venture capitalists are required to determine the viability of exiting through an IPO, stock buyback, merger, or acquisition. The state of the market, investor interest, and the company's financial situation all influence the exit strategy selection.

Second, a significant factor is the investee company's life cycle stage. While a business in its later stages might offer more alluring opportunities, a company in its early or formative stages might not be prepared for a profitable exit. Venture capitalists keep an eye on the company's growth trajectory in order to assess when it is appropriate to divest.

Third, Berkery notes that the venture capital firm's decision to exit may be influenced by other investment options. Even if an investment has not yet reached its peak valuation, a venture capital firm may decide to withdraw if it finds more promising deals elsewhere. On the other hand, a company might hang onto an underperforming investment for longer than anticipated if there are no better options.

Fourth, the decision-making process also considers dividends and financial returns from the current investment. A venture capital firm may decide to postpone exit if it observes sustained profitability through dividends or stock appreciation. To reduce losses, the company might look for an earlier exit if the expected returns are less than expected.

Berkery concludes by pointing out that venture capitalists occasionally decide to strategically lower their ownership of an investee business. This could be brought on by modifications to the company's overall investment strategy, changes in the market, or internal financial factors[47].

A venture capitalist's decision to exit a company is heavily influenced by the "investee's life cycle stage", as demonstrated by Puri and Zaretsky (2012). According to Chemmanur et al. (2014), an innovative company's value decreases over time as it grows and commercializes its innovative ideas. Venture capital has a number of options as the investee grows, including continuing to invest more or inviting other venture capitalists to participate in a syndicated investment or exit. This is because as the investee's value increases, so do its capital needs.

Hawkey (2002) lists instead eight criteria justifying venture capital choices to exit.

- Why: or the venture capitalist wants to pull out of the contract. This element, which Hawkey believes to be the most crucial one, would therefore dictate when and how to end the transaction. The venture capital may be in conflict with the entrepreneurs, or it may be facing another more lucrative deal and need money to invest in it; it may also be the case that the investee is not developing as expected and the venture capital wants to cash in on its investment as soon as possible.
- Value: does the exit strategy selected optimize the return on investment for venture capital?
- Control: to what extent does the venture capital have authority over the transaction of the selected exit? Furthermore, after the departure, does the venture capital firm still wish to maintain some kind of control over the investee?
- Risk: how hazardous is the transaction for the selected exit?
- Financial expectations: to what extent does the selected exit strategy meet the anticipated financial gain of the venture capital?
- Satisfaction and gratification: to what extent does the selected exit strategy meet the non-monetary objectives of venture capital, including reputational incentives?
- Payment certainty: the likelihood that the venture capital will be paid in full in accordance with the terms agreed upon with the buyer or buyers[48].

[47] The five considerations are taken from: Berkery, D., "Raising Venture Capital for the Serious Entrepreneur" New York, NY: McGraw Hill Professional; (2007).

[48] The 8 factors come by: Hawkey, J., "Exit Strategy Planning", Hampshire, UK: Gower Publishing, Ltd. (2002)

An empirical approach is instead carried out by Azarmi (2016) through the Delphi technique[49], to identify and categorize fourteen influential characteristics, engaging fifteen Spanish venture capitalists in three rounds of discussion to reach a consensus. The study underlines that while making exit decisions, venture capitalists should consider a multifactorial model, consisting of internal and external agents.

The study applied the Delphi method to identify the key factors influencing venture capital firms' exit decisions. Experts participated in three rounds of evaluations, refining the factors until a consensus was reached. By the third round, 14 factors were finalized with a 73.1% average agreement score, and no further modifications were suggested.

These factors were grouped into four categories:

- Factors related to investees: these include the Net Present Value (NPV) of the investee, its stage in the business lifecycle, performance measured against updated business plans, and financial stability.
- Factors related to venture capital firms: these involve the availability of alternative investment opportunities, access to financial resources, and the firm's ability to maintain financial control over the investee.
- Factors related to entrepreneurs: the entrepreneur's ability to attract additional funding plays a significant role. Venture capital firms tend to be more patient with experienced or well-connected entrepreneurs.
- Factors related to the external environment: changes in the market, competition from cheaper foreign products, and the legal and financial framework all impact exit decisions.

[49] "The Delphi method is based on collecting and converging the views of a group of experts in the study's subject (The Delphi Group) which is led and handled by a coordinator. The aim is to reach a consensus among the experts over the subject. Consensus is achieved by going through a systematic process. The process starts with defining the problem by the coordinator and guiding the Delphi group's discussion and continues by receiving the comments and views of the Delphi group members. The discussion is summarized by the coordinator. Afterwards, the synopsis of the discussion and the comments is fed back to

the Delphi group by the coordinator. This procedure of discussion, summarizing and feeding back is called a "Round of Delphi". The rounds of Delphi usually continue
until there is a consensus among at least two-thirds of the Delphi group members
on the subject at hand."

Azarmi, D., "The most influential factors in venture capitals' exit decision: A qualitative study among Spanish venture capitalists. In: M. Kosała, M. Urbaniec & A. Żur (Eds.), "Entrepreneurship: Antecedents and Effects", "Przedsiębiorczość Międzynarodowa", vol. 2, no. 2. Kraków: Cracow University of Economics (2016), pp. 257-268.

Factors' Category	Factors List
Factors regarding investees	- NPV (Net Present Value) of the investee and its deviation from the venture capital's previous projections and current expectation (mark: 87), - the investee's life cycle stage and if it is passed its fast-growth stage (mark: 84), - comparison of the investee's performance with its updated business plan (mark: 72), - comparison of the investee's performance with the venture capital's quantitative and qualitative performance criteria (mark: 69), - assessment of the investee's financial status and it's Altman Z-Score (mark: 68).
Factors regarding venture capitals	- attractiveness of the venture capital's alternative investment opportunities in comparison with keeping the current investment (mark: 79), - the venture capital's access to financial resources and its cache requirements (mark: 74), - the venture capital's contractual control rights and existence of a put agreement (mark: 70), - availability of buyers who are interested in the investee (mark: 68).
Factors regarding entrepreneurs	- the buyback ability of the entrepreneurs and existence of a call agreement (mark: 75), - the entrepreneurs' potential in attracting more funds and their previous records (mark: 71).
Factors regarding external environment	- priorities and preferences of the venture capital's fund providers and the capital markets (mark: 72), - financial legal system (mark: 68), - changes in the market of the investee's products/services (mark: 67).

Figure 2: Final list of the 14 most influential factors in a venture capital's exit decision, source: Azarmi, D. (2016)

A notable finding, not extensively covered in previous research, is that venture capital firms update an investee's business plan based on real-world conditions before making an exit decision. Additionally, firms with access to government funding may have different priorities, sometimes favouring strategic objectives like knowledge creation over immediate financial returns.

CHAPTER 2

IPOS AND M&A IN VENTURE CAPITAL CONTEXT

SUMMARY: 2.1 IPO AS AN EXIT STRATEGY - 2.1.1 LITERATURE REVIEW OF BENEFITS AND RISKS OF IPOS - 2.1.2 FAVOURABLE MARKET CONDITIONS FOR IPOS - 2.1.3 CASE STUDIES OF SUCCESSFUL VENTURE-BACKED IPOS - 2.2 MERGERS AND ACQUISITIONS AS AN EXIT STRATEGY - 2.2.1 LITERATURE REVIEW OF BENEFITS AND RISKS OF ACQUISITIONS - 2.2.2 THE ROLE OF M&A IN VENTURE CAPITAL - 2.2.3 CASE STUDIES OF NOTABLE ACQUISITIONS

2.1 IPO as an Exit Strategy

One of the most well-known and widely anticipated exit alternatives for venture capital-backed companies is an Initial Public Offering (IPO).

According to the US Securities and Exchange Commission (SEC) an IPO is the process of placing a company's stock on a publicly traded exchange for the first time. A private company becomes a publicly held one as a result of the IPO.

An IPO gives early investors liquidity, gives the company access to significant funds, and increases market visibility by transforming it from a private to a publicly traded corporation. It gives a business greater financial freedom while preserving its independence, in contrast to other exit strategies like acquisitions.

A successful IPO, which frequently generates substantial returns, allows the fruition of venture capitalists' investment. As part of what is commonly known as a "preplanned exit strategy", the choice to seek such exit method is often taken into consideration by the venture funds at the time of initial investment. A smooth transition to publicly traded companies is sometimes facilitated by the way financial arrangements are structured by investors who anticipate a public offering. These agreements provide entrepreneurs more authority over decision-making and frequently incorporate common equity financing rather than convertible instruments, which reflects the long-term growth ambitions connected to Initial Public Offerings.

As confirmed by the premises, IPOs provide greater upside potential compared to acquisitions, as public markets generally value high-growth firms more favourably than private buyers[50].

[50] Cumming, Douglas J. and Johan, Sofia A., "Preplanned Exit Strategies in Venture Capital", European Economic Review 52 (2008) 1209¿1241, Available at SSRN: https://ssrn.com/abstract=918979

Even while preparation is essential, not all businesses that want to go public succeed in accomplishing it. The performance of the firm, market conditions, and regulatory obstacles all have a big impact on whether an IPO is still a viable exit strategy.

An IPO is not risk-free, despite its benefits. The procedure is expensive, time-consuming, and exposes the business to heightened shareholder expectations and regulatory scrutiny. Furthermore, the timing and valuation of an IPO can be impacted by public market volatility, which occasionally forces businesses to postpone or scrap their plans. For these reasons, before deciding to use an IPO as an exit option, venture capitalists thoroughly evaluate the state of the market.

The preparation for an IPO is a complex and highly regulated process that requires close collaboration between the company, investment bankers, legal advisors, and regulatory authorities. Down below, we focus on how the phasing is structured.

The process begins with the draft of the registration statement, a document that must be submitted to the national security regulator. This statement contains comprehensive financial and operational information about the company to ensure that potential investors receive full and fair disclosure before making investment decisions. A key component of this statement is the preliminary prospectus, which is circulated among institutional investors in advance of the offering.

Once the proper committee reviews the registration statement, ensuring that all disclosures meet regulatory standards, the commission grants approval for the stock sale. At this stage, a final prospectus is prepared, detailing the number of shares to be issued and the offer price.

The valuation of the company is determined using financial methodologies such as discounted cash flow (DCF) analysis and comparative valuation multiples based on industry peers.

After establishing an initial price range, the company and its investment bankers embark on a roadshow, during which management presents the investment opportunity to institutional investors. The roadshow plays a critical role in the final price determination. Through a marketing process known as “book-building”, institutional investors indicate how many shares they are willing to buy and at what price. This demand assessment helps investment banks refine the offer price to optimize capital raised while minimizing the risk of a failed offering. While investor commitments in the roadshow are non-binding, market credibility and reputation typically ensure that expressed interest translates into actual purchases.

In the final stages before the IPO, the underwriting bank is required to adhere to the “quiet period”, during which it cannot issue public statements that might influence stock demand.

Following the last submission of the registration statement, the official IPO date is set, after which the company's shares become publicly traded on the stock exchange.

To stabilize the stock price post-IPO, lead underwriters are often granted the "green-shoe", option, a provision that allows them to purchase up to 15% more shares than originally offered at the IPO price, helping to manage excess demand. Additionally, many IPO agreements include a 180-day lockup period, preventing company insiders and early investors from selling their shares immediately after the offering. This restriction reduces market volatility and prevents a sudden oversupply of shares that could drive down the stock price.

After the expiration of the lock-up period, venture capitalists may retain minority stakes rather than fully exiting as if holding a "exchange option", which allows the VC to maintain its involvement with the venture and benefit from the market price's upside potential during the set term (e.g., before the end of fund life); cashing out is comparable to executing the exchange option. By maintaining a minority influence, the VC can wait for the market valuation to match or surpass its own internal evaluation of the venture's worth and realize an additional gain post-IPO. The value of this option is affected by asymmetry of information and uncertainty.

Unlike information asymmetry, which involves one party knowing more than the other in an economic exchange, uncertainty can be understood intuitively (and roughly) as the presence of an upside potential and a downside risk in an investment project, but the exchange parties do not know how the investment will unfold in the future (Dixit and Pindyck, 1994) [51].

Such exogeneity is a positive driver of the valuation since market pricing is not fully predictable and can surpass VC expectations.

VCs are more inclined to hold onto shares if they have positive private information, such as knowledge of impending patents or predicted industry breakthroughs, which they believe the market has not fully priced into the company. When uncertainty and private knowledge combine, the VC's motivation to maintain shares is potentiated[52].

The IPO process is particularly significant for venture capital-backed startups, as it provides investors with a liquid exit while allowing the company to raise capital at higher public market valuations. Studies have shown that IPOs, on average, offer a valuation premium of over 22% compared to acquisitions, making them an attractive option for high-growth firms with strong

[51] Li, Y., Chi, T. and Lan, S. Ann Wang, Q., "Venture capital exit after venture IPO", Strategic Entrepreneurship Journal, (2024) [10.1002/sej.1515], Available at
SSRN: https://ssrn.com/abstract=4898078 or http://dx.doi.org/10.2139/ssrn.4898078

[52] Li, Y., Chi, T. and Lan, S. Ann Wang, Q., "Venture capital exit after venture IPO", Strategic Entrepreneurship Journal, (2024) [10.1002/sej.1515], Available at
SSRN: https://ssrn.com/abstract=4898078 or http://dx.doi.org/10.2139/ssrn.4898078

financial fundamentals. A successful IPO not only ensures substantial returns for early investors but also positions the company for long-term expansion and financial stability in the public markets.

Moving beyond the technicalities of the IPO filing process, it is essential to consider how this strategic decision aligns with the company's broader innovation and growth objectives.

According to Schwienbacher (2008), the innovation strategy adopted by a company plays a critical role in determining the preferred exit strategy for venture capitalists.

His research highlights that more innovative ventures tend to favour IPOs, as they typically promise higher market valuations and greater public interest, which can significantly benefit both the exiting venture capitalists and the company's future growth prospects.

Schwienbacher's work underscores the importance of aligning a company's product development and innovation strategies with its long-term financial and exit planning. Companies aiming for an IPO should focus on sustaining high levels of innovation to attract favourable public and investor attention at the time of going public. This approach not only facilitates a successful IPO but also supports the company's valuation in the public market[53]

2.1.1 Literature Review of Benefits and Risks of an IPO

An Initial Public Offering is considered the most prestigious and financially rewarding opportunity to exit as a venture-backed startup, as it gains substantial access to huge capital, while gaining market credibility and better credit ratings; in turn, it satisfies higher IRR and Cash-on-Cash (CoC) venture capitalists' expectations than an M&A process.

Still, this path, while laden with opportunities for substantial growth and visibility, also brings significant challenges and risks that necessitate a thorough evaluation. This subchapter will serve the case.

Advantages of an IPO

- Capital Access and Growth Opportunities: one of the most compelling advantages of an IPO is the access to public markets, which allows companies to raise significant capital. This capital influx is critical for scaling operations, investing in new projects, or enhancing existing product lines. It provides a financial runway far exceeding what is

[53] The whole review is taken from: Schwienbacher, A. (2008). "Innovation and venture capital exits." The Economic Journal, 118, 1888–1916.

typically available through private funding routes, where investment may come with more stringent conditions[54].

- Enhanced Corporate Profile: going public can significantly enhance a company's visibility and stature, establishing its reputation in the broader market. This enhanced profile can lead to improved business prospects, partnerships, and customer contracts. Public companies are often seen as more credible and stable, which can be a competitive advantage in business dealings[55].
- Liquidity for Stakeholders: an IPO provides high exit yields to early investors, allowing them to realize the most remunerative returns on their investment, compared to M&A and buyouts[56]. This liquidity is not just a reward but also a strategic move that can facilitate further investment opportunities for the stakeholders involved[57].
- Recruitment and Retention: a public company can attract and retain top talent by offering stock-based compensation such as options and shares. This form of compensation helps align the interests of employees with those of the company and its shareholders, driving a collective effort towards the company success[58].

Challenges and Risks of an IPO

- Substantial Costs: the IPO process is expensive. It involves costs related to underwriting fees, legal and accounting services, and the ongoing expenses of compliance with regulatory requirements. These costs can be prohibitive, especially for younger companies still finding their financial footing[59].

[54] Gompers, P., "Optimal investment, monitoring, and the staging of venture capital." Journal of Finance, 50, 1461-1489 (1995).

[55] Black, B., & Gilson, R. J., "Venture capital and the structure of capital markets: banks versus stock markets". Journal of Financial Economics, 47(1), 243-277 (1998).

[56] Between 2005 and 2023, the average time from initial VC financing to IPO was approximately 5 years. Notably, in 2023, this duration shortened to about 3.8 years. Source: Statista. 2023. “Median Time from Initial Venture Capital Investment to Exit in the United States from 2005 to 2023.” Statista. Accessed February 26, 2025, url: https://www.statista.com/statistics/320793/median-time-venture-capital-exit-usa

[57] Lerner, J., & Tåg, J., "Institutions and venture capital." Industrial and Corporate Change, 22(1), 153-182 (2013).

[58] Kaplan, S. N., & Strömberg, P., "Venture capitalists as principals: Contracting, screening, and monitoring." American economic review, 91(2), 426-430 (2001).

[59] Chemmanur, T. J., & Fulghieri, P., "A theory of the going-public decision." Review of Financial Studies, 12(2), 249-279 (1999).

Such costs, however, vary accordingly with the company's size, complexity, and market conditions. Underwriting costs typically vary from 5% to 7% of the total amount raised. As a result, while there is no set amount required for an IPO, a company must carefully weigh the prospective expenses against the expected benefits of going public[60].

- Regulatory and Compliance Burdens: public companies face strict regulatory requirements, including regular disclosure of financial performance and transparency in operations. Compliance with these regulations requires robust internal systems and processes, which can be resource intensive[61].
- Market Pressures and Volatility: public companies are under constant scrutiny from investors and analysts, expected to meet quarterly earnings estimates and other market expectations. This pressure can lead to a short-term focus that may undermine long-term strategic initiatives. Additionally, a company's stock may experience significant price volatility due to factors beyond the company's control, such as economic downturns or shifts in investor sentiment[62].
- Dilution of Control: an IPO leads to dilution of the original stakeholders' control. The influx of new shareholders means that founders and early investors may have less influence over corporate decisions, potentially leading to conflicts over the company's strategic direction[63].
- Operational Shifts: transitioning from a private to a public company requires significant changes in how a company operates, including greater transparency and accountability. This shift can be challenging to manage, especially for companies that have operated in the private sphere for extended periods[64].
- Overpricing in stocks' placement: placing a stock with a surplus over the assessment done at the time of the bookbuilding can potentially spike the volatility, as investor may attempt to sell-short quickly. If the fundamentals cannot support the overvaluation, such

[60] Greenwich Capital Partners suggestion, https://greenwichcapital.com.au/insights/initial-public-offering-ipo/

[61] [61] Black, B., & Gilson, R. J., "Venture capital and the structure of capital markets: banks versus stock markets". Journal of Financial Economics, 47(1), 243-277 (1998).

[62] Gompers, P., "Optimal investment, monitoring, and the staging of venture capital." Journal of Finance, 50, 1461-1489 (1995).

[63] Lerner, J., & Tåg, J., "Institutions and venture capital." Industrial and Corporate Change, 22(1), 153-182 (2013).

[64] Kaplan, S. N., & Strömberg, P., "Venture capitalists as principals: Contracting, screening, and monitoring." American economic review, 91(2), 426-430 (2001).

overpricing is typically corrected by the market after listing, which frequently leads to a price drop as shares adjust to represent the company's presumed value. This imbalance can harm the company's long-term reputation and erode investor confidence.

- Underpricing in stocks placement: when an IPO is underestimated, companies risk "leaving money on the table", which means they can raise less capital if they cost shares close to their actual market value. This is often clear when an important "first day return" for investors, where the price of stock increases well after the price of the IPO after the trading starts. While a strong first day performance may indicate the enthusiasm of the investor, it highlights the gap between the offering value and the market demand.
  This unrealised capital goes directly to early investors and traders rather than the company, limiting the money available for development, loan repayment or strategic initiative[65].

2.1.2 Favourable Market Conditions for IPOs

A stable and growing market makes fertile soil for IPOs. Lowry (2003) observed that economic recovery and investor confidence can drive a business to launch an IPO[66].
The IPO decision is impacted by both external economic factors and a company's internal funding requirements. Lerner et al. (2003) demonstrated that in extremely adverse market conditions with low introduction prices, only firms with urgent short-term finance requirements or future high-yielding projects would agree to launch an IPO[67].
The quest for the optimal frame to launch an IPO involves identifying periods of low and high IPO concentration. The term "IPO Waves" refers to the pattern of a "hot" market with high activity followed by a "cold" market with lower intensity.
According to Van Bommel and Vermaelen's (2003) research, undervalued firms which opted for an IPO during a cold market era tend to have higher post-IPO investment rates[68].
The literature identifies three main drivers of IPOs birth:

[65] Jeppsson, H., "Leaving Money on the Table in Venture-Backed Biotechnology IPOs" Journal of Commercial Biotechnology, Volume n. 22, 27-38 (2013) Available at SSRN: https://ssrn.com/abstract=3180316

[66] Lowry, M. (2003). Why does IPO volume fluctuate so much? Journal of Financial Economics, 67, 3-40.

[67] Gompers, P., "Optimal investment, monitoring, and the staging of venture capital." Journal of Finance, 50, 1461-1489 (1995).

[68] Van Bommel, J., & Vermaelen, T. (2003). Post-Ipo capital expenditures and market feedback. Journal of Banking and Finance, 58, 1499-1520.

- Technological change and innovation. The emergence of new technologies often requires rapid development and substantial investment. Stoughton et al. (2001) argue that when a pioneering company, which holds a patent or has introduced a new technology, opts for an IPO, it discloses valuable information about its projected cash flow[69]. This transparency allows investors to better evaluate the market, prompting competitor firms, or "followers", to pursue their own IPOs. Supporting this, Lowry (2003) demonstrated that technological advancements create significant capital demands, leading multiple firms to go public to secure funding[70]. However, Helwege and Liang (2004) contested this view, asserting that technological innovation alone does not drive IPO waves, as IPO cycles occur more frequently than innovation cycles[71]. They concluded that the arrival of companies seeking capital, rather than technological shifts, better explains IPO surges. This trend was evident during the internet boom of the 1990s, which was later followed by waves of biotechnology and social networking companies. Furthermore, Hsu et al. (2010) observed that intense competition in the stock market during these periods reduces investor availability, disadvantaging late entrants from securing favourable conditions for their IPOs[72].

- Data Asymmetry. Another explanation for IPO waves is market data asymmetry, as suggested by Choe et al. (1993). During times of overvaluation, the number of IPOs tends to rise. Benveniste et al. (2003) observed that previous IPO performance often indicates to corporate executives whether it's the right moment for their own public offerings.[73] Banks play a vital role in sharing market information, and during bullish markets, they demand even more detailed data from companies to facilitate IPO transactions (He, 2007)[74]. Companies that spot overpriced IPOs often speed up their

[69] Stoughton, N. M., Wong, K. P., & Zechner, J. (2001). IPOs and product quality. Journal of Business, 74, 375-408.

[70] Lowry, M. (2003). Why does IPO volume fluctuate so much? Journal of Financial Economics, 67, 3-40.

[71] Helwege, J., & Liang N., (2004). Initial Public Offerings in hot and cold markets. Journal of Financial and Quantitative Analysis, 39, 541-569.

[72] Hsu, H.C., Reed, A., & Rocholl, J. (2010). The new game in town: competitive effects of IPOs. Journal Finance, 65, 495–528.

[73] Choe, H., Masulis, R., & Nanda V. (1993). Common stock offerings across the business cycle: theory and evidence. Journal Empirical Finance, 1, 3–31.

[74] He, P. (2007). A Theory of IPO Waves. The Review of Financial Studies, 20, 983-1020.

public listings to raise more capital than they initially intended. Chemmanur and He (2011) emphasized that firms entering the market early gain a reputational advantage, which helps them capture market share over those who come later[75]. Additionally, Boch and Dunbar (2014) noted that when average IPO prices exceed analysts' expectations, the number of IPOs increase[76]. However, high IPO prices can also indicate market saturation, leading some companies to scale back their share offerings or rethink their public listings entirely. Yung et al. (2008) found that IPOs launched during hot markets show greater yield variability and higher buyout rates[77]. Despite these findings, Lowry et al. (2011) warned that while examining the standard deviation of initial yields can reveal price trends, IPO decisions are generally long-term and shaped by factors beyond just short-term market fluctuations[78].

- Capital Market Yields. Market conditions significantly impact IPO activity. Ritter and Welch (2002) noted that the overall performance of the market is a crucial factor in determining when companies go public[79]. They found that IPO activity tends to drop sharply during bear markets, as negative conditions often discourage firms from pursuing an Initial Public Offering. As a result, many companies opt to delay their IPOs, waiting for better market conditions to enhance their chances of raising capital effectively. Pastor and Veronesi (2005) observed that IPO waves tend to occur after an uptick in market yields and are followed by declines[80]. Concentrations of IPOs emerge when forecasts start to indicate a rise in expected yields. Therefore, the choice to initiate an IPO can be likened to an American call option. The value of this option is influenced by market conditions; it rises when the market level increases.

[75] Chemmanur, T.J., & HE, J. (2011). IPO waves, product market competition, and the going public decision: Theory and evidence. Journal of Financial Economics, 101, 382–412.

[76] Boeh, K., & Dunbar, C. (2014). IPO waves and the issuance process. Journal of Corporate Finance, 25, 455–473.

[77] Yung, C., Colak, G., & Wang, W. (2008). Cycles in the IPO market. Journal of Financial Economics, 89, 192-208.

[78] Lowry, M., Officer, M., & Schwert, G.W. (2011). The variability of IPO initial returns. Journal of Finance, 65, 425–465.

[79] Ritter, J. R., & Welch, I. (2002). A Review of IPO Activity, Pricing, and Allocations. Journal of Finance, 57, 1795-1828.

[80] Pastor, L., & Veronesi, P. (2005). Rational ipo waves. Journal of Finance, 60, 1713-1757.

The year 2024 showcased a clear example of this trend, with a notable increase in IPO activity closely tied to strong market performance, especially in the United States and India.

The U.S. capital markets led the world in IPO proceeds, raising $32.8 billion, up from $24 billion in 2023[81]. This increase was largely fuelled by excitement around artificial intelligence and impressive performances from tech giants like Nvidia, whose stock surged by 172%, and Meta, which saw a 65% gain. Remarkably, this was the first time since 2021 that the U.S. outpaced China in total IPO valuations[82].

India also witnessed a significant IPO boom, completing 327 deals and raising $19.9 billion, a substantial jump from $6.6 billion the previous year, highlighted by notable listings such as Hyundai Motor India and Vodafone Idea[83].

In contrast, China experienced a downturn. IPO proceeds in China fell to $8.9 billion, a sharp drop from $45.3 billion in 2023[84]. This decline pointed to weaker market conditions and regulatory challenges, emphasizing the critical role of market yield forecasts in deciding when to launch IPOs. Market sentiment was crucial throughout the year. While major indices like the S&P 500 rose by 23.3%, marking consecutive years of over 20% gains for the first time since 1997-1998, investor confidence seemed more reserved[85].

The “AAII investor sentiment survey” indicated that 47.3% of individual investors anticipated a decline in stock prices over the next six months, the highest level of pessimism since November 2023[86]. This caution was driven by worries about potential overvaluation, high Treasury yields, and the influence of a few mega-cap tech stocks on market gains[87].

As Pastor and Veronesi (2005) suggested, the surge in IPOs following an increase in market yields in 2024 illustrates how market conditions can resemble an American call option: companies choose to "exercise" their option to go public when conditions are favourable but may hold off when faced with uncertainty[88].

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[81] “The U.S. Is Back at Top for Money Raised in IPOs - but This Country Had More Deals,” MarketWatch, December 31, 2024.

[82] MarketWatch, “The U.S. Is Back at Top for Money Raised in IPOs.”

[83] ibid. 81.

[84] ibid. 81.

[85] Financial Times, “US Stocks Soar More than 20% for Second Year in a Row.”, (December 31, 2024).

[86] The Wall Street Journal ,“Investor Sentiment Outlook: AAII Survey,”, (December 29, 2024).

[87] The Australian “US Stocks ‘Priced for Perfection,’ Goldman Sachs Warns,”, (December 30, 2024).

[88] Pastor, L., & Veronesi, P. (2005). Rational Ipo waves. Journal of Finance, 60, 1713-1757.

The dominance of the U.S. market and India's swift ascent show that investors pay close attention to anticipated returns before making market entry decisions. On the other hand, China's drop in IPO proceeds underscores how unfavourable conditions and low yield expectations can discourage public listings.

2.1.3 Case Studies of Successful Venture-Backed IPOs

Following the market conditions to boost IPO activity, this chapter will delve into the practical outcomes of the IPOs, examining the practical outcomes of these conditions. The theoretical framework of IPO waves, driven by technological innovation, data asymmetry and capital market yield, introduces why some company succeed and other do not; however, the history has been made by businesses who were capable of riding the wave thanks to proper strategic guidance.

In this chapter we will delve into the experiences of companies that successfully went public, focusing on how they used venture capital to drive their growth, meet market needs, and create substantial value for their investors and stakeholders. These examples highlight how businesses across different industries - of which we will mention biotech, IT and sharing urban transportation – have harnessed their venture funding to craft an engaging story that drew in investors and carried out a successful public offering.

Following a chronological order, a rare success story from the biotechnological industry took place in 1976. Genentech was founded by the biochemist Dr. Herbert Boyer and the venture capitalist Robert A. Swanson. The latter was intrigued by the potential of recombinant DNA technology designed by the scientist and the geneticist Stanley Cohen, so he involved his partner at Kleiner Perkins, Tom Perkins, to capitalize what was deemed a risky-profiled investment aimed at supporting the commercialization of this genetic engineering breakthrough. Boyer firstly agreed to give the young entrepreneur ten minutes of his time. Swanson's enthusiasm for the technique and belief in its commercial possibilities were contagious, and the meeting lasted three hours, resulting in the formation of Genentech. Despite criticism from both the academic and corporate circles, Swanson and Boyer pursued their project[89].

Genentech’s first and greatest triumph took place in 1978 when the company managed to synthesize human insulin utilizing recombinant DNA methods, a true milestone in

[89] Genentech first webpage, “Our founders”, https://www.gene.com/about-us/leadership/our-founders

biotechnology. This became the first time when a human protein was developed in bacteria[90], which was a revolutionary step, as the successful production of human insulin in bacteria provided, for the first time, a practical, scalable source of human insulin and resulted in the approval, in 1982, of human insulin for the treatment of diabetics[91].

With this advance of the industry, we could witness the vast potential of biotechnology to come up with life-saving drugs and the technology would be then the breeding ground for the upcoming innovation.

Genentech went public in October 1980, with Hamrecht & Quist as underwriter, a San Francisco-based investment bank affirmed in the high-growth tech and biotech startup operations. 1 million shares (excluding the over-allotment option to underwriters) were sold to investors at $35 per share, raising $35 million before underwriter fees. Investor interest was immense as the stock price surged from $35 to $89 per share in just a few minutes, finishing the day with a market valuation of $262 million[92]. This Initial Public Offering confirmed the biotech sector as a promising investment area and established a model for future biotech startups looking for venture capital and funding from public markets.

However, the issue of IPOs stock under-pricing explained upwards[93] was evident, as demonstrated by impressive "first day market returns" of the quickest purchasers; Jeppson (2018) outlines the first-day return, calculated as the percentage change from the IPO price to the first day closing price, was 103.6%. The money left on the table, calculated as the difference between the first day closing price and the IPO price multiplied by the number of shares offered, was $36.3 million: ($71.25 – 35) × 1.0 million shares[94].

Genentech remained at the forefront of the biotechnology sector for decades, generating essential medicines for cancer, autoimmune illnesses, and other significant health conditions. In 2009, Swiss pharmaceutical company Roche finalized its full acquisition of Genentech for $46.8 billion, starting from the initial proposal of $95 billion per share in cash.

[90] Riggs A.D., "Making, Cloning, and the Expression of Human Insulin Genes in Bacteria: The Path to Humulin", Endocrine Reviews, Volume 42, Issue 3 (2021), pp. 374–380.

[91] ibid 89.

[92] Jeppsson, H., "Leaving Money on the Table in Venture-Backed Biotechnology IPOs" Journal of Commercial Biotechnology, Volume n. 22 (2018), 27-38, Available at SSRN: https://ssrn.com/abstract=3180316

[93] view Chapter 2.1 "Challenges and Risks of an IPO", p.35.

[94] Jeppsson, H., "Leaving Money on the Table in Venture-Backed Biotechnology IPOs" Journal of Commercial Biotechnology, Volume n. 22 (2018), 27-38, Available at SSRN: https://ssrn.com/abstract=3180316.

Main synergies were established in the creation of the seventh largest U.S. pharmaceuticals company, with approximately $17 billion in annual revenues and 17,500 employees in the U.S. pharmaceutical sector, enriched by a combined sales force of about 3,000 people, strengthening its market reach.

The operation, according to Reuters' report, would have had financial sense if undertaken at any price under $120, despite the high price paid by Roche (22 times the 2010's earnings forecast)[95].

Genentech's rise from a small startup to a biotech powerhouse demonstrates the transformative influence of venture capital in speeding scientific innovation and altering the future of medicine.

Google's history-making August 19th, 2004, IPO is the unprecedented departure from traditional IPO tactics, offering valuable lessons on successful public offering process innovation.

This remarkable milestone was the culmination of an artfully negotiated venture capital path and was instrumental to Google's journey to becoming an international technology powerhouse.

Google's early growth was primarily fueled by strategic venture capital investments. In 1998, while still operating out of a garage in Menlo Park, California, Google received its first serious financial backing, a $100,000 cheque from Andy Bechtolsheim, co-founder of Sun Microsystems[96]. This seed provided Google the stage to take its innovative search algorithm and make it a scalable business model.

The following year, Google was backed with significant venture capital from two of the strongest Silicon Valley firms: Sequoia Capital and Kleiner Perkins Caufield & Byers. Both invested $25 million in 1999, a vote of confidence that endorsed Google's future and provided the company with the capital to grow its infrastructure, refine its search technology, and hire the best engineers. These investments not only accelerated Google's growth in the market but also entrenched its grip in the rapidly evolving world of technology.

Deviating from the conventional book-building process, Google employed a Dutch auction system for its IPO. This system attempted to democratize the allocation process by allowing more investors to participate, theoretically leading to a more equitable market-driven pricing of shares. The Dutch auction was designed to minimize the underpricing characteristic of

[95] Cage, Sam. "Roche's $46.8 Billion Genentech Deal Outshines Others." Reuters, March 13, 2009. https://www.reuters.com/article/business/roches-468-billion-genentech-deal-outshines-others-idUSTRE52B1DN. Accessed February 22, 2025.

[96] Mezzofiore, G., "Google's History Timeline." CNN, December 2018. Accessed February 22, 2025. https://edition.cnn.com/interactive/2018/12/business/google-history-timeline/index.html.

traditional IPOs, where stocks are usually offered at a discount to the market price, leading to first-day trading profits for early shareholders but sacrificing potential capital raised for the issuing company. Whether or not this tactic has succeeded in providing equitable share distribution and the best pricing is still to be argued by scholars[97].

Firstly, Google had initially fixed a price between $108 to $135 per share. Subsequently, however, due to some considerations like market sentiment and investor interest, the final offer price was brought down to $85 a share. On its first day of trading, the stock closed at $100.34, or 18% above the offering price. This modest day-one rise is just the reverse of the huge spikes characterizing regular IPOs, suggesting that the Dutch auction could have succeeded in achieving more balanced first-day pricing[98]

Google's IPO also stood out because of its two-class share structure, which consolidated voting authority within the founders and early shareholders. This was done to preserve the company's long-term perspective and autonomy from market pressures for the short term. Although these types of structures are said to shield innovative methods, they have also been argued against as being likely to limit public shareholders' powers and present issues of corporate governance[99]

The unusual aspects of Google's IPO, including its Dutch auction pricing and governance choices, provoked debates regarding the efficacy and fairness of traditional IPO practices.

In the view of some analysts, while the Dutch auction system promotes inclusiveness, it might deter institutional investors accustomed to the traditional allocation system, and this would impact the performance and liquidity of the stock. Moreover, the dual-class structure has sparked controversy regarding shareholders' rights and the balance of power in public companies[100].

Venture capital was instrumental not just in funding Google's early growth but in guiding its strategic course right up to the IPO. Having the involvement of the top venture capital specialists gave Google access not just to the funding it needed to continue growing but also to the credibility it required to attract the best talent, increase its market visibility, and experiment

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[97] Berkeley Technology Law Journal. "Google's IPO: A Revolution in Public Offerings?" Berkeley Technology Law Journal 20, no. 1 (2005): 405–442. Accessed February 22, 2025. https://www.btlj.org/data/articles2015/vol20/20_1_AR/20-berkeley-tech-l-j-0405-0442.pdf.

[98] Hild, M., "The Google IPO", 3 J. Bus. & Tech. L. 41 (2008) Available at: https://digitalcommons.law.umaryland.edu/jbtl/vol3/iss1/4

[99] Fleischer, V., "Branding the Google IPO (Teaching Case)", (January 25, 2006). UCLA School of Law, Law-Econ Research Paper No. 06-04, Available at SSRN: https://ssrn.com/abstract=881607

[100] Hild, M., "The Google IPO", 3 J. Bus. & Tech. L. 41 (2008) Available at: https://digitalcommons.law.umaryland.edu/jbtl/vol3/iss1/4

with novel strategies for its public offering. Google's IPO success did not only affirm the soundness of the firm's business model but also evidenced the contribution of venture capital towards scaling game-changing technologies.

From what we have learnt, Google's IPO is a case study of unconventional public offering methods, showing the complexities and trade-offs in striking a balance between equitable access, appropriate pricing, and good corporate governance. At the same time, it highlights the pivotal role that venture capital played in propelling Google from a garage start-up to one of the globe's most influential technology companies.

Uber's Initial Public Offering on May 10th, 2019, marked a significant milestone in the company's evolution from a disruptive startup to a publicly traded entity. This event was the culmination of a series of substantial venture capital investments that fueled Uber's rapid expansion and market dominance in the ride-hailing industry.

In 2010, Uber secured its first major funding, a $1.3 million round led by First Round Capital. This initial investment provided the capital needed for Uber to develop its platform and launch operations in San Francisco. The following year, Uber raised an additional $11 million in a Series A funding round led by Benchmark Capital, which enabled its expansion into new markets such as New York City and Paris[101].

Over the next several years, Uber attracted significant investments from a range of venture capitalists and institutional investors. Notably, in 2014, the company raised $1.2 billion in a Series D funding round, bringing its valuation to $17 billion. This influx of capital allowed Uber to accelerate its global expansion and diversify its services[102].

By the time of its IPO, Uber had raised approximately $13.2 billion across multiple funding rounds, with contributions from 188 investors, including prominent firms like HarbourVest Partners and Summit Partners[103]. The IPO was priced at $45 per share, with an expected

[101] Investopedia. "The Story of Uber: A Venture-Backed Startup Turns into A Billion-Dollar Company." Last modified November 10, 2015. Accessed February 22, 2025.

[102] PitchBook. "Uber by the Numbers: A Timeline of the Company's Funding and Valuation History." Last modified October 7, 2021. Accessed February 22, 2025. https://pitchbook.com/news/articles/uber-by-the-numbers-a-timeline-of-the-companys-funding-and-valuation-history.

[103] Uber Funding track records. Available at https://tracxn.com/d/companies/uber/__wAOgbkstxol2NgmW5SFgVp8zBi7klH1GO5ziIlSERR4/funding-and-investors?utm_source=chatgpt.com#faqs

valuation between $80 billion and $90 billion. However, its stock closed the first day of trading at $41.57, reflecting a 7.6% decline, which valued the company at around $75.46 billion[104].
The underperformance of Uber's IPO has been attributed to several factors, including concerns over profitability, regulatory challenges, and intense market competition. Despite the initial setback, early venture capital investors saw substantial returns. For example, First Round Capital's initial seed investment of $510,000 in 2010 was estimated to be worth $2.5 billion at the IPO price of $45 per share.
In the years following the IPO, Uber's stock has faced price volatility. As of February 2025, the company's shares have appreciated significantly, trading at $76 per share, a 139% increase over the past year[105]. This growth is largely attributed to strategic initiatives, such as partnerships in the autonomous vehicle sector and an expanded range of services.
In August 2024, Uber announced collaborations with companies like Wayve and Cruise to advance its robotaxi ambitions, signaling a renewed focus on innovation and market expansion.

2.2 Mergers and Acquisitions as an Exit Strategy

An acquisition is a transaction belonging to the "market for corporate control" sphere where an investing company "acquirer" purchases stakes in the share capital of a "target" up to a degree of a full acquisition. This operation enables the existing shareholders, including individuals and venture institutions, to provide a liquidation of their proceeds, belonging to the target's equity holdings. This peculiar method offers an alternative option to the more capital-intensive IPOs due to the linked administrative and legal fees of the procedure, which could be more viable depending on market conditions and target firms' structure.
In case the target firm merges with the purchaser to create a combined entity, the appropriate definition is "merger" instead of acquisition. In both cases, the acquiring entity must purchase the stock or existing assets of the target either for cash or for something of equivalent value (such as shares in the acquiring or newly merged corporation). For simplicity, we refer to either mechanism as a takeover[106].

[104] Culture Partners: "The Uber IPO: A Case Study in Leadership and Organizational Culture." Last modified May 10, 2019. Accessed February 22, 2025. https://culturepartners.com/insights/uber-ipo.

[105] BSIC. "Uber's Road to IPO and Beyond: A Success Story That Might Just Continue." Last modified June 14, 2021. Accessed February 22, 2025. https://bsic.it/ubers-road-to-ipo-and-beyond-a-success-story-that-might-just-continue.

[106] Berk, J. and DeMarzo, P., "Corporate Finance". 5th Edition, Pearson, Boston (2020).

Acquirers may pursue either strategic or financial purposes. Venture capitalists typically prefer strategic buyers over financial buyers (PE) when it comes to M&A exits because of the potential for greater valuations and synergies. Strategic buyers, looking to improve their current operations, might provide premiums for startups that fit their business goals and have greater knowledge of business, allowing for less due diligence time and faster consummation of a deal[107].

This inclination is backed by the reality that acquisitions make up the larger share of venture-backed exits, with around 90% of these exits happening through corporate takeovers nowadays[108].

Another essential consideration to be made in the look of the deal structuring is the auction process. Depending on the seller's priorities in terms of price tension, competition, confidentiality and speed, the sell-side can opt for up to four main sales processes[109]:

- Negotiated Process. This method involves direct, one-on-one negotiations with a single buyer. It is the quickest approach, typically taking about four to six weeks, making it ideal when time is of the essence. Additionally, it ensures a high level of confidentiality, minimizing the risk of leaks or market speculation. Another significant advantage is the minimal disruption to the business. However, since there is no competitive bidding, the seller's bargaining power is diminished, which can limit the potential for a higher price. There is also an execution risk if financing falls through, as only one buyer is involved.
- Controlled Auction. This more structured process targets a select group of potential buyers and unfolds in two phases:
    - Phase I: Buyers submit indicative bids based on limited information, often just an "Extended Teaser".
    - Phase II: Selected buyers conduct detailed due diligence before submitting final offers.

  This method strikes a balance between competition and confidentiality, often resulting in higher pricing than a negotiated sale. The structured nature also ensures that the right buyers are engaged. However, it takes longer than a negotiated sale (by at least four

[107] Attolico, L., "Lecture 3 - Sell-Side M&A", Luiss Department of Business & Management (2024).

[108] Beam C., "The Wrath at Khan" The Atlantic, August 30th, 2024, https://www.theatlantic.com/ideas/archive/2024/08/silicon-valley-lina-khan-antitrust/679655

[109] ibid 107.

additional weeks on average) and may disrupt the company's operations. Some investors may also hesitate to participate due to the auction format.

- Broad Auction. This process reaches out to all potentially interested buyers, maximizing competition and driving valuations higher. Unlike a controlled auction, it does not exclude any potential bidder, leading to the best possible price discovery. However, it introduces timing uncertainties, as the speed of execution depends on the number of buyers and their ability to act quickly. This approach also compromises confidentiality, as a larger number of parties are aware of the sale, increasing the risk of leaks. Furthermore, the process can be quite disruptive to management due to extensive logistical and due diligence requirements.
- Non-Auction Auction. This is a hybrid method where the seller engages in parallel discussions with several buyers without informing them that they are part of a competitive process. This approach minimizes confidentiality risks compared to a traditional auction while still drawing in multiple bidders. In the initial round, buyers present non-binding indicative bids, which can foster participation since there is less pressure to inflate their offers. However, the lack of clear competition might result in weaker bidding pressure, which could lead to lower valuations. Furthermore, some buyers might request exclusivity as a condition for continuing negotiations, and coordinating multiple buyers on the same schedule can be quite difficult.

Venture capitalists (VCs) typically prefer controlled auctions for exiting their investments. These processes involve a limited number of potential buyers, creating competitive pressure while ensuring confidentiality. This method is compatible for strategic acquisitions, which might provide higher valuations because of the possible synergies involved[110].

A variety of motives have been proposed for undertaking acquisition activity, including increasing shareholder wealth (Salter and Weinhold, 1979), creating more opportunities for managers[111], fostering organizational legitimacy (Meyer and Rowan, 1977) or responding to pressures from the acquisitions service industry. Jemison and Stikin (1984), suggested acquisitions are an important vehicle for corporate strategic redirection and renewal. Under a strategic view, particularly in the case of venture-backed firms, acquisitions may enhance the firm's value through the creation of synergies with a larger entity (even though it is not rare to

[110] Vild, J. and Zeisberger, C., "Strategic Buyers vs. Private Equity Buyers in an Investment Process! (May 21, 2014). INSEAD Working Paper No. 2014/39/DSC/EFE, Available at:
SSRN: https://ssrn.com/abstract=2439589 or http://dx.doi.org/10.2139/ssrn.2439589

[111] Reid, S.R., "Mergers, Managers and the Economy". McGraw Hills (1968).

see “small fish acquiring big fish” phenomena)[112], which represents the main driver of any M&A transaction.

De Marzo and Berk (2020), cite the main rationales that concretely lead acquisition processes[113].

- Economies of scale. When firms merge, they can achieve cost reductions through larger-scale operations, especially in industries with significant fixed costs. By distributing these costs over a greater volume of production, the cost per unit decreases. Furthermore, firms can realize economies of scope by utilizing shared resources, distribution channels, or expertise across various product lines.
- Vertical Integration. Acquiring a company at a different stage of production—whether its upstream suppliers or downstream distributors—can result in cost savings and enhanced coordination. Backward integration, such as acquiring a supplier, ensures a reliable supply of essential inputs, often at reduced costs. Forward integration, like acquiring a distributor or retailer, enables a firm to manage product distribution, branding, and customer experience. However, vertical integration can also introduce challenges, including increased operational complexity.
- Expertise and Technological Advancements. Companies may choose to acquire other firms to gain access to advanced technology, research and development (R&D) capabilities, or specialized talent. This is particularly prevalent in sectors like pharmaceuticals, software, and artificial intelligence, where technological expertise serves as a crucial competitive edge. By acquiring firms with a robust innovation pipeline, companies can accelerate the time it takes to bring new products and services to market.
- Monopoly Gains. By purchasing competitors, firms can diminish industry competition and enhance their pricing power. This is especially appealing in markets dominated by a few large players. Reduced competition typically results in higher profit margins, but such acquisitions may face scrutiny from regulatory authorities under antitrust laws to prevent excessive market control.

[112] As suggested by the name, it refers to smaller entities acquiring larger ones due to market expansion necessities, access to valuable assets or to strengthen competitive position

[113] Berk, J. and DeMarzo, P., “Corporate Finance”. 5th Edition, Pearson, Boston (2020).

- Efficiency Gains. Mergers often enable companies to eliminate redundant functions, streamline operations, and cut costs. This can be achieved through better asset utilization, improved supply chain management, or the consolidation of overlapping departments, such as finance, HR, and IT.
- Tax Savings from Operating Losses. When a company with significant operating losses is acquired by a profitable firm, the acquirer can utilize the target's tax loss carryforwards to reduce its own taxable income, thus lowering its overall tax burden. This tax advantage can make acquisition targets more appealing, especially in sectors with fluctuating earnings.
- Diversification. Companies may seek acquisitions to mitigate business risk by broadening their revenue sources across various industries, geographic areas, or product categories. Diversification can help stabilize earnings, particularly for firms in highly cyclical markets. However, the benefits of diversification are often debated, as investors can achieve similar risk mitigation by maintaining a diversified stock portfolio.
- Earnings Growth. Mergers and acquisitions can boost earnings per share (EPS) if the acquiring company has a higher price-to-earnings (P/E) ratio compared to the target. This scenario is referred to as an accretive acquisition, where the acquirer's EPS rises after the merger. Nonetheless, EPS growth does not always reflect genuine value creation, as it may result from accounting practices rather than actual improvements in business performance.
- Managerial Motives to Merge. Not every acquisition is made with shareholders' best interests in mind. At times, personal interests of management come into play. Executives might pursue acquisitions to enhance their compensation, broaden their influence, or fulfil personal goals. Some CEOs may also overestimate their ability to generate synergies, which can lead to overpaying for targets. This tendency, known as managerial overconfidence, has resulted in numerous value-destroying acquisitions throughout history.

Once the rationale has been defined, the preparation phase starts. Therefore, the acquirer shortlists the potential acquisition target, through a thorough financial and strategic-cultural analysis. In order to depict the financial outlook of the target, the acquirer principally scrutinize the following financials.

- Financial Statement. Balance sheet (asset and liabilities composition, equity structure), income statement (revenues and cost structures belonging to profitability analysis; operating margins to determine operating efficiency such as COGS margin, gross profit, EBITDA, EBIT and net profit margins) and cash flow statements (operating, financing and investing activities of the year).
- Liquidity. Liquidity measures the extent to which an asset can be quickly converted into cash with minimal price impact. Firms with high liquidity have enough current assets to meet short-term liabilities without jeopardizing operational stability[114].
  Main liquidity ratios include.
  1. Current Ratio = Current Assets / Current Liabilities
  2. Quick Ratio = (Current Assets - Inventory) / Current Liabilities
  3. Cash Ratio = Cash and Cash Equivalents / Current Liabilities
- Solvency analysis is founded upon the extent to which a firm's assets exceed its liabilities over the long term, indicating financial sustainability and the ability to honor debt commitments[115]. Main ratios include:
  1. Debt-to-Equity Ratio = Total Debt / Total Equity[116]
  2. Interest Coverage Ratio = EBIT / Interest Expense
- Working Capital Efficiency. Effective working capital management is crucial in maintaining financial stability post-acquisition.
  1. Accounts Receivable Management: reviewing credit policies, collection efficiency, and overdue payments.
  2. Accounts Payable Optimization: assessing payment terms and vendor relationships.
  3. Inventory Management: evaluating inventory turnover rates and potential obsolescence risks.

However, public information may not be fully disclosed, as we are in the context of private transactions of venture-backed targets, where such non-public entities are not subject to stringent disclosure requirements.

[114] Ross, S. A., Westerfield, R. W., & Jaffe, J., "Corporate Finance" (13th ed.). McGraw-Hill Education (2022).

[115] Brigham, E. F., & Ehrhardt, M. C. "Financial Management: Theory & Practice" (16th ed.). Cengage Learning (2016).

[116] An alternative is Net Debt-to Equity ratio which adjust the debt formation through cash components

Moving forward, the strategic fit, which refers to how well the target company enhances or complements the strategy of the acquiring company[117], must be carried out. A detailed assessment of industry trends, competition benchmarking, market positioning and technological capabilities is performed to ensure that the acquisition aligns with the broader corporate goals of the acquiring firm[118]. In this context, both SWOT and Porter's analysis can be effective to assess the comparative potential of the target.

Previous studies have shown that companies with a strong corporate strategy are in a better position to make informed acquisition decisions, as they can incorporate both financial and non-financial factors into their evaluations (Salter & Weinhold, 1979)[119]. Successful acquisitions are often linked to effective strategic analyses that identify potential synergies between the acquiring and target companies.

In addition to strategic fit, assessing organizational fit is crucial. It pertains to how compatible the administrative practices, corporate cultures, and personnel structures are between the two companies[120]. Unlike strategic fit, which can be measured more easily, organizational fit necessitates a qualitative evaluation of how the two organizations will merge operationally after the acquisition[121]. However, many acquisition frameworks do not sufficiently evaluate the feasibility and costs associated with integration, which can lead to significant challenges after the merger. Already in the 60's Mace & Montgomery indicated that overlooking organizational fit can lead to issues related to employee motivation, leadership styles, and management control systems, all of which can impede the smooth transition of the acquired company into the parent organization[122].

The participation of key individuals in the acquisition process significantly influences its success[123]. In the pre-deal phase, the parties select the team to structure the key phases,

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[117] Jemison D.B, Sitkin M.B, "Corporate Acquisitions: A Process Perspective", Research Paper Series No. 732 (Rev.) Stanford, CA: Graduate School of Business, Stanford University (1984).

[118] Jemison D.B, Sitkin M.B, "Corporate Acquisitions: A Process Perspective", Research Paper Series No. 732 (Rev.) Stanford, CA: Graduate School of Business, Stanford University (1984).

[119] Salter, M.S., and Weinhold, W.A., "Diversification through Acquisition: Strategies for Creating Economic Value", New York: Free Press (1979).

[120] Jemison D.B, Sitkin M.B, "Corporate Acquisitions: A Process Perspective", Research Paper Series No. 732 (Rev.) Stanford, CA: Graduate School of Business, Stanford University (1984).

[121] ibid 120.

[122] M.L. Mace &G.G. Montgomery, "Management Problems of Corporate Acquisitions". Boston, Harvard University, Division of Research, Graduate School of Business Administration, p. 276, (1962).

[123] ibid 122.

involving corporate executives, financial analysts, accountants, investment bankers, tax & legal advisors and consultants. Including operating managers and essential staff throughout the process have been recommended as two means to enhance decision-making quality and strengthen commitment to post-acquisition integration[124].

At this stage, internal due diligence is performed, allowing the venture capitalist, acting as the seller, to assess their own business for any potential risks, liabilities, or financial discrepancies that could surface during the buyer's due diligence. Any issues related to financial statements, legal compliance, intellectual property rights, or operational efficiencies are proactively addressed to avoid complications later in the deal. The sell-side team also prepares essential documentation, including the information memorandum, which offers a comprehensive overview of the business, its financials, market position, and growth prospects. Furthermore, a process letter is created to outline the structure and guidelines for potential bidders, establishing clear expectations for the transaction process. A data room is also established; this secure platform houses confidential documents and reports for potential buyers to review during the later due diligence phase (VDD).

Now that the preparation of the deal has been set up, the parties move onto the first round offers[125]. In this phase, the formal sale process kicks off as the sell-side team reaches out to potential buyers. The first step involves distributing an initial teaser document, which gives a brief overview of the company without revealing sensitive details. Interested buyers must sign a Non-Disclosure Agreement (NDA) before they can access the complete information memorandum (IM). Along with the IM, the venture-backed sell-side team provides a "Process Letter" that outlines deadlines for submitting indicative offers and details the next steps in the process[126].

Potential buyers then carry out their initial assessments, which include reviewing the IM, financial statements, and the company's market position. The sell-side team organizes Q&A sessions to address any early questions from buyers. Buyers then submit indicative offers, which are non-binding and include an estimated valuation along with their strategic intentions for the acquisition. The valuation theme is unique in venture-backed firms, since unlike public entities, they may not reflect positive cash flows but feature high-growth and scalability; thus, valuation methods shall balance traditional techniques with the aforementioned characteristics.

[124] Drucker P.F, "The Five Rules of Successful Acquisition", Wall Street Journal (1981)

[125] Attolico, L., "Lecture 3 - Sell-Side M&A", Luiss Department of Business & Management (2024).

[126] ibid 125.

Starting off with market-based approaches, the precedent transaction analysis compares the target company to recently acquired firms by using market exit multiples, to provide insights on the real market prices paid by buyers, reflecting industry trends and acquisition premiums.
Since EBITDA are generally negative at this stage, it is preferable to look at revenue multiples, such as EV/Revenues or EV/ARR (Annual Recurring Revenues) for SaaS companies. As recently disclosed by Aventis Advisors, according to their valuations, in January 2025 the former for SaaS corporations have climbed up to 7.3x on average, reflecting a 0.6x increase to the beginning of 2023, including improved profitability trends and a positive market reaction to AI integration within SaaS products, which has helped boost investor sentiment but still distant from the 18x registered before the quantitative-tightening policies to combat worldwide inflation trends[127].
The sell-side team subsequently narrows down the list to the most promising buyers based on the value of their offers, strategic alignment, and their capability to successfully complete the transaction[128].
A same discourse of the choice of market multiples is valid for the comparable company analysis, or "trading comps", which compares target companies' performance to sector peers.
However, such method differs from the classic trading comps, as these firms are not publicly listed; instead, valuation comes from private market data related to private market data, M&A activity and venture financing rounds.
Moving onto intrinsic valuation, the DCF stands out as the main assessment method for late-stage VC-backed startups, often adjusted to compensate for negative cash flows, unforecastable long-term projections and exit-EBITDA multiples to predict the exit-terminal value (again, the choice of the 5-7Y EV/EBITDA multiple is preferrable).
Finally, a peculiar method for earlier-staged startups with no cash flows at all, is represented by the venture capital method. The Venture Capital Method is a valuation approach used by VCs to estimate the future exit value of a company, discount it back to the present using a high target rate of return and determine the required ownership percentage for their investment. This method is particularly useful in early-stage investing, where future cash flows and market comparables are uncertain. The process begins by estimating the exit value based on a projected revenue or EBITDA multiple at a future exit, typically within a 5-10-year timeframe. Next, the target return is determined, which is usually high (ranging from 20-50% or more) to account

[127] Aventis Advisors. "SaaS Valuation Multiples: 2025 Update." Aventis Advisors (2025). https://aventis-advisors.com/saas-valuation-multiples/.

[128] Attolico, L., "Lecture 3 - Sell-Side M&A", Luiss Department of Business & Management (2024).

for the inherent risk of the investment. The estimated exit value is then discounted back to the present value using this target return rate. Finally, the required ownership percentage is calculated by dividing the present value by the amount the VC is investing.

This method is widely used in venture capital, especially for early-stage companies, as it provides a structured way to estimate valuation when traditional financial metrics are unreliable. However, it comes with challenges, as it is highly dependent on key assumptions, including exit timing, valuation multiples, and growth rates, which can significantly impact the final valuation outcome[129].

Coming back to the first-round structuring, on the buy-side this stage entails submitting an expression of interest and performing preliminary due diligence. Buyers examine the IM, evaluate the company's growth prospects, and pinpoint key areas for deeper investigation. They also investigate financing options to ensure they have the necessary funds to move forward. Based on their analysis, they present a first-round non-binding offer, also referred to as an indicative bid.

Then the parties' approach to the due diligence phase, being one of the most critical steps in the M&A process, where most deals encounter drawbacks. Once the shortlist of buyers is finalized, the sell-side grants selected buyers' access to the data room, where they can review legal, financial, operational, and commercial documents in greater detail. The goal is to provide buyers with transparency about the company's assets, liabilities, revenue streams, contracts, regulatory compliance, intellectual property rights, and workforce structure[130].

During this stage, management presentations are conducted, where senior executives from the selling company provide deeper insights into operations, future growth plans, and potential synergies with the buyer. Buyers may also conduct site visits to physically inspect operations, manufacturing plants, or headquarters. The Q&A process continues, allowing buyers to clarify any uncertainties about the business.

From the buy-side perspective, due diligence is focused on validating financial projections, assessing operational efficiencies, and identifying any potential risks that could impact valuation or integration. Buyers also refine their valuation models, confirm their financing structures, and prepare a final binding offer. This offer must be approved internally by the

[129] Sahlman, William A., and Daniel R. Scherlis. "A Method for Valuing High-Risk, Long-Term Investments: The 'Venture Capital Method'." Harvard Business School Case 288-006 (1987).

[130] Alkaraan, F., "Making M&A Less Risky: The Influence of Due Diligence Processes on Strategic Investment Decision Making", Cooper, C.L. and Finkelstein, S. (Ed.) Advances in Mergers and Acquisitions Advances in Mergers and Acquisitions, Vol. 18, Emerald Publishing Limited, Leeds (2019), pp. 99-110, https://doi.org/10.1108/S1479-361X20190000018007.

buyer's board before submission. In this phase, final financing arrangements are also made, whether through debt financing, equity issuance, or a combination of both.

We are now approaching the conclusion of the deal. The parties enter into the negotiation phase, in which final bids from selected buyers are reviewed, assessing the financial and strategic advantages of each offer, and using negotiation strategies to enhance value.

The peculiarity of the business is that, because of the lower complexity of the structure, the negotiation process between the acquiring company and the VC-backed firm tends to be more efficient, with deals typically closing in a matter of months instead of years.

This process includes discussions around key contract terms such as price, payment structure, representations and warranties, and post-closing obligations[131]. Once an agreement is finalized, the deal is signed and announced, and necessary regulatory or compliance filings are prepared.

On the buy-side, negotiation focuses on adjusting the bid based on findings from due diligence, determining the best structure for the deal, and negotiating essential contract terms to reduce risks. Buyers aim to secure favourable conditions, address issues uncovered during due diligence and ensure that financing arrangements are in place. Contract negotiations may involve discussions on indemnifications, earnouts, and integration plans to align the expectations of both parties.

Closing is the final step, where all conditions precedent are fulfilled, regulatory approvals are secured, including addressing potential issues from national Golden Powers vetoes or with intergovernmental regulatory institutions (such abuses of market power), and the transaction is executed. For the sell-side, this means confirming that all closing conditions are met and facilitating a seamless transition to the buyer. For the buy-side, it involves completing payments, taking control of the acquired entity or assets, and ensuring that post-closing obligations are established. Once all legal and financial details are confirmed, the deal is officially concluded.

[131]Attolico, L., "Lecture 3 - Sell-Side M&A", Luiss Department of Business & Management (2024).

2.2.1 Literature Review of Benefits and risks of acquisitions

As outlined by Beam C. (2024) in the previous sub-chapter, corporate takeovers of VC-backed companies currently account for 90% of exit strategies[132].

This growing trend underscores how venture capital investors are increasingly turning to acquisitions as a favoured way to achieve returns on their investments. On the wave of the dedicated chapter reserved to challenges and risks of IPO exits, this chapter will outline the literature on benefits and risks of exits performed through acquisitions with literature referencing.

Corporate takeovers offer several advantages, such as quicker liquidation of the proceedings after disinvestment, reduced vulnerability to market fluctuations, and strategic advantages that can boost the long-term value for both the acquiring firm and the startup being acquired. Nevertheless, acquisitions come with their own set of risks, including lower exit valuations, liquidity issues in stock-based deals, the chance of unsuccessful transactions, limited competition during bidding and the potential disruption in the original team

Advantages of M&A

- Faster Payouts. If IPOs have been statistically proved to be the fastest route to exit, or the lowest average investment duration in the view of receiving quicker cash proceedings upon disinvestment, M&A appears to be a swifter exit solution for venture capitalists, as the process does not entail extensive regulatory barriers as in IPOs. This immediacy in the monetization of the proceeds is particularly valuable for VC investors operating on fixed investment horizons (generally 7-10 years), as it allows them to reallocate capital to new opportunities without prolonged delays.
- Flexibility in Purchase Consideration. Purchase consideration refers to the mix of cash, stock, and/or other securities that the acquirer offers to the target's shareholders. In an all-cash transaction, the acquirer purchases all or a portion of the target's outstanding shares for cash. The equity value in this case is calculated by multiplying the cash offer price per share by the number of fully diluted shares outstanding. This type of transaction triggers a taxable event for the target's shareholders, unlike stock-based transactions, which, if structured properly, are not taxable until the shares are eventually sold.

[132] See "2.2 Acquisitions as exit strategies", p.45. Reference: Beam C., "The Wrath at Khan" The Atlantic, August 30th, 2024, https://www.theatlantic.com/ideas/archive/2024/08/silicon-valley-lina-khan-antitrust/679655

In a stock-for-stock transaction, the equity value is determined based on either a fixed exchange ratio or a floating exchange ratio, also referred to as a "fixed price".

The exchange ratio is calculated by dividing the offer price per share by the acquirer's share price.

A cash and stock transaction involves the acquirer offering a combination of cash and stock as purchase consideration. The cash portion represents a fixed value per share for the target's shareholders, while the stock portion can be structured using either a fixed or floating exchange ratio. The offer price per share will be the sum of the cash offer per share and the product between the exchange ratio and the acquirer' share price[133]

- Leveraging Market Volatility and Returns. As Lipton (2022) discusses in the context of M&A stock-for-stock transactions, parties can select a pricing mechanism that balances risk allocation between the acquirer and the target shareholders while maintaining deal certainty to account for the greater volatility in the current market environment. Traditionally, parties select fixed exchange ratios, where the offer price per-share (value to target) moves in line with the underlying share price of the acquirer. The amount of the acquirer's shares received, however, is constant: this benefits the acquirer by providing clarity on the amount of stock they will need to issue from the beginning. This enables them to evaluate the impact on per-share earnings with greater confidence. For target-VC which has return needs, a fixed exchange ratio means they can benefit from upside risk of the acquirer's stock price that occurs between the signing and closing, as well as from any favourable market response to the proposed merger[134].

  A floating exchange ratio allows target shareholders to receive a set dollar amount at closing, and the number of shares the acquirer issues is based on the acquirer's stock value at that time. This can be determined by the average price of the acquirer's stock, which might be calculated as a VWAP[135] or an average of sequential closing prices leading up to the closing date. This arrangement is designed to grant downside protection for target shareholders; if the acquirer's stock price drops between the signing

[133] Attolico, L., "Lecture 3 - Sell-Side M&A", Luiss Department of Business & Management (2024).

[134] Wachtell, Lipton, Rosen & Katz, "Addressing Market Volatility and Risk in M&A Agreements," Columbia Law School's Blue-Sky Blog, (2022).

[135] Volume-Weighted Average Percentage, Technical analysis tool that calculates the volume-traded weighted average price of a specific asset. Technical analysis tool that calculates the volume-traded weighted average price of a specific asset; VWAP = ∑ (shares purchased x price)/shares acquired in a single event

and closing, the exchange ratio is adjusted upward to ensure the dollar value of consideration remains the same[136].

- Early and progressive exits. M&A offer venture capital firms a diverse range of potential buyers, including private equity firms, large corporations, and international investors. This flexibility is especially valuable for startups that may not yet be IPO-ready but still hold strategic value for established firms looking to expand their market share, acquire cutting-edge technology, or eliminate competition[137]. Additionally, M&A transactions can be structured as staged exits, allowing VC investors to gradually reduce their stake while still benefiting from the company's future growth. This structured approach provides liquidity without forcing a full exit, aligning with investors' risk preferences and maximizing long-term value and support to the business.

Disadvantages of M&A

- Lower Valuation Premiums than IPOs: The exit valuation multiples offered in private acquisitions cannot keep the pace of public listing. Considering the extensive empirical analysis of Bayar & Chemmanur (2012) and defining the premium in a logarithmic scale as the ratio between IPO value and acquisition value, for < 50M deals, the short run valuation premium of IPOs is 42.43% and it is significant at the 1% level, while for the complementary deals, it shrinks to 16.50% with a p-value 0.30 at the same significance level. This decrease is not attributable to improved M&A valuations but in IPOs premium declines[138].
- Liquidity issues in stock for stock transactions. A common risk with takeovers shared with the IPOs in the view of a venture willing to exit from the business is the lock-up period arrangement. Introduced between the pre-merger commitment and post-acquisition integration, it prevents sudden share sellouts to ensure capital stability in the

[136] Wachtell, Lipton, Rosen & Katz, "Addressing Market Volatility and Risk in M&A Agreements," Columbia Law School's Blue-Sky Blog, (2022).

[137] Phillips, G., Zhdanov, A., "Venture Capital Investments, Merger Activity, and Competition Laws around the World", The Review of Corporate Finance Studies, Volume 13, Issue 2, May 2024, Pages 303–334, https://doi.org/10.1093/rcfs/cfad025

[138] Bayar, O., Chemmanur, T., "What drives the valuation premium in IPOs versus acquisitions? An empirical analysis", Journal of Corporate Finance, Volume 18, Issue 3 (2012), Pages 451-475,

ISSN: 0929-1199, https://doi.org/10.1016/j.jcorpfin.2012.01.007

acquiring company[139]. Through these crucial provisions to ensure a swift conclusion of the transaction, because of the lack of immediacy in their liquidation, venture capitalists' investments may be exposed to market fluctuations that may financially distress the returns of the proceedings if not well regulated.

- Deal Failure. A significant risk is the possibility of a deal falling through. M&A transactions are intricate and influenced by various factors that can lead to negotiations breaking down before they are finalized. Issues such as regulatory approvals, findings from due diligence, and differing expectations regarding valuations can all hinder a potential acquisition. If a deal collapses after lengthy negotiations, it can negatively impact the startup, resulting in diminished investor confidence, damage to its reputation, and challenges in finding alternative exit strategies. Moreover, failed acquisition attempts can put operational pressure on the startup, especially if resources were diverted to the transaction process instead of focusing on business growth.
- Limited Competition and Price Tension. Startups may have only a few potential buyers, particularly if they operate in a highly specialized market niche. With few interested acquirers, the startup may find itself without the leverage needed to negotiate a higher valuation, which could lead to a less favourable exit for VC investors. This situation is particularly worrisome if the acquiring company realizes that the startup has no viable alternative buyers, as it may propose less advantageous deal terms. With regards to deal structuring, such a situation most frequently occurs in restrictive auctions and one-to-ones[140], where competition is limited before structuring the roadshow process.
- Team Disruption. Finally, integrating a startup into a larger corporate structure can create challenges in retaining founders and key personnel. Many acquisitions require essential team members, such as the founding team or senior executives, to stay with the acquiring company for a designated transition period to ensure continuity and facilitate knowledge transfer. A study conducted by Aghasi, Colombo, and Rossi-Lamastra (2022) highlights that, for instance, founder-CEOs bring distinct firm-specific human capital, which makes them crucial assets during the implementation of

[139] Chen, Z., Liu, Y., and Rossi, S., "The Role of Lockups in Stock Mergers", Management Science, Forthcoming (2024). Available at SSRN: https://ssrn.com/abstract=3865712 or http://dx.doi.org/10.2139/ssrn.3865712

[140] Attolico, L., "Lecture 3 - Sell-Side M&A", Luiss Department of Business & Management (2024).

acquisitions[141]. Companies often prioritize keeping these leaders to take advantage of their extensive organizational knowledge and to ensure a more seamless integration process. However, if these individuals sense a disconnect with the new corporate culture or find their decision-making power diminished, they might decide to leave, which could ultimately reduce the value of the acquisition. For VC investors, this poses a risk that the acquired company may not perform with predicted ROIs.

2.2.2 The Role of M&A in Venture Capital

The growing reliance in M&A practices for venture capitalist on the verge to exit has contributed to boost economic growth through R&D activities.

Through empirical evidence on a sample of 1000 deals, Gordon & Zhdanov (2024) explored the connection between venture capital investments and M&A, indicating that the latter is essential in stimulating venture capital activity, mainly by providing viable exit opportunities for VC investors, which incentivizes them to engage in more deals. When there is a surge in mergers and acquisitions, venture capital investments typically rise as venture capitalists foresee lucrative exits through these acquisitions. In contrast, during times of diminished M&A activity, venture capital funding may experience a downturn due to apprehensions regarding the feasibility of exits.

M&A also acts as a catalyst for innovation, motivating startups to concentrate on disruptive technologies and sectors with high growth potential. The possibility of being acquired by a larger entity incentivizes startups to invest significantly in research and development (R&D), as they recognize the potential for a successful exit. This dynamic aligns with broader economic growth goals, as a vibrant M&A landscape fosters a competitive atmosphere that propels technological progress.

Nevertheless, some critics contend that an excessive dependence on M&A as an exit strategy may foster a managerial myopia in startup operations. Rather than pursuing long-term sustainable growth, startups might prioritize strategies that enhance their appeal as acquisition targets, potentially compromising their ability to scale independently. This raises questions about whether innovation driven by M&A is genuinely advantageous in the long term or if it simply results in incremental improvements rather than transformative advancements.

[141] Aghasi, K., Colombo, M.G. and Rossi-Lamastra, C., "Post-acquisition retention of target founder-CEOs: looking beneath the surface", Journal of Management Studies, 59 (4) (2022), pp. 958-997. ISSN 0022-2380

The relationship between mergers and acquisitions and venture capital is significantly shaped by regulatory environments and prevailing economic conditions. Nations that implement pro-takeover laws generally witness an increase in venture capital activities, as diminished legal obstacles facilitate the acquisition of startups by larger corporations. On the other hand, stringent antitrust regulations and competition laws can hinder M&A transactions, which may adversely affect venture capital investments by constraining exit options.

Additionally, trends specific to various industries are crucial in assessing the viability of M&A as an exit strategy. In sectors where Initial Public Offerings are infrequent, such as pharmaceuticals and artificial intelligence, M&A tends to emerge as the primary exit pathway. Conversely, industries like software and e-commerce may continue to maintain a balance between IPOs and acquisitions.[142].

Academic research further explores the complex interplay between mergers and acquisitions and venture capital, uncovering additional dimensions that influence investment cycles, innovation patterns, and market dynamics. A significant factor to consider is the impact of macroeconomic conditions on both M&A and venture capital activities. Research conducted by Gompers, Kovner, Lerner, and Scharfstein (2008), along with Kaplan and Lerner (2010), emphasizes how elements such as interest rates, liquidity cycles, and public market valuations play a crucial role in shaping these transactions[143]. Periods of public market expansion typically stimulate both M&A and venture capital investments, as elevated valuations present appealing acquisition prospects and motivate investors to allocate funds to emerging ventures. Additionally, in environments characterized by low interest rates, the cost of debt financing for acquisitions decreases, leading to a rise in M&A activity, while institutional investors, in pursuit of higher returns, direct more capital towards venture funds. This relationship between macroeconomic variables and investment choices highlights how external financial conditions not only affect the volume of transactions but also the strategies adopted by venture capitalists and acquirers.

Another vital consideration that extends beyond the initial analysis is the changing landscape of exit strategies. Although M&A remains the primary exit pathway for venture capital-backed companies, academic research offers a more detailed understanding of the decision-making

[142] The whole passage is taken from: Phillips, G., Zhdanov, A.,"Venture Capital Investments, Merger Activity, and Competition Laws around the World", The Review of Corporate Finance Studies, Volume 13, Issue 2, May 2024, Pages 303–334, https://doi.org/10.1093/rcfs/cfad025

[143] Gompers, P., Kovner, A., Lerner, J., and Scharfstein, D. "Venture Capital Investment Cycles: The Impact of Public Markets." Journal of Financial Economics 87 (2008) and Kaplan, S. N., and Lerner, J. "It Ain't Broke: The Past, Present, and Future of Venture Capital." Journal of Applied Corporate Finance 22 (2010).

process between acquisitions and Initial Public Offerings. Ewens, Nanda, and Rhodes-Kropf (2018) contend that specific industries, particularly those experiencing rapid growth such as software, fintech, and SaaS, continue to prefer IPOs as a feasible exit option[144].

Furthermore, as previously mentioned, IPOs often yield higher returns on investment at the time of exit.

The research conducted by Chemmanur, He, and Nandy (2010) delves into the ramifications of strategic choices made by firms, revealing that companies that pursue IPOs often retain greater independence and foster long-term innovation. In contrast, those that choose mergers and acquisitions gain access to the resources, networks, and economies of scale provided by the acquiring entity[145]. This differentiation underscores the strategic dilemmas faced by venture capitalists and entrepreneurs as they evaluate the most appropriate exit strategy, weighing the immediate financial benefits of an acquisition against the potential for enduring growth through public markets.

Additionally, the influence of regulatory frameworks on M&A dynamics warrants further investigation. While P. & Z. (2024) highlight the importance of M&A as a catalyst for venture capital activity, they do not adequately consider the effects of antitrust and competition regulations on these transactions[146]. Their research indicates that heightened scrutiny of significant technology acquisitions, especially those involving major players such as Google, Amazon, and Facebook, may hinder M&A-driven exits for venture capitalists by complicating the acquisition process for startups. Concurrently, more stringent antitrust regulations could have counterproductive effects, dissuading venture capitalists from investing in startups that do not present clear alternative exit strategies. Waller and Sag (2015) further investigate this paradox, positing that while M&A-driven consolidation can provide immediate incentives for innovation by offering lucrative exits to successful startups, excessive acquisition activity may diminish market competition and impede long-term technological advancement5[147]. The findings of Bradford and Chilton (2018) corroborate this concern, indicating a decline in

[144] Ewens, M., Nanda, R., and Rhodes-Kropf, M. "Cost of Experimentation and the Evolution of Venture Capital." Journal of Financial Economics 128 (2018).

[145] Chemmanur, T. J., He, S., and Nandy, D. K. "The Going-Public Decision and the Product Market." Review of Financial Studies 23 (2010).

[146] Phillips, G., Zhdanov, A., "Venture Capital Investments, Merger Activity, and Competition Laws around the World", The Review of Corporate Finance Studies, Volume 13, Issue 2, May 2024, Pages 303–334, https://doi.org/10.1093/rcfs/cfad025

[147] Waller, S., and Sag, M. "Promoting Innovation: The Law and Policy of Competition and IP." Iowa Law Review 100 (2015).

venture capital activity in nations with more rigorous M&A competition laws[148]. This evidence suggests that while regulatory oversight is essential to curtail anti-competitive practices, overly restrictive policies may inadvertently hinder the very innovation they aim to safeguard. An additional significant aspect of the discussion pertains to the influence of strategic mergers and acquisitions (M&A) on the outcomes for startups following a merger. The results of acquisitions can vary considerably, and the identity and intentions of the acquiring entity can profoundly affect the long-term implications for innovation and market dynamics. Research conducted by Bena and Li (2014) indicates that larger firms experiencing a decline in research and development expenditures are more inclined to acquire startups as a strategy to rejuvenate their innovation capabilities[149]. In a similar vein, Celikyurt, Sevilir, and Shivdasani (2010) propose that certain Initial Public Offerings are strategically designed to improve acquisition opportunities rather than to pursue independence[150]. The investigation by Hsieh, Lyandres, and Zhdanov (2011) emphasizes that acquisitions by leading firms in the industry often result in beneficial spillover effects, promoting knowledge transfer and enhancing innovation cycles.[151] Conversely, when dominant market players acquire disruptive startups primarily to mitigate competition, the outcomes can be detrimental, diminishing the motivation for ground-breaking innovation. This variability in post-merger results highlights the necessity for a more nuanced comprehension of M&A transactions, acknowledging that not all exits contribute equally to economic development and technological progress.

Looking forward, the landscape of venture capital exits is experiencing notable changes, with innovative models emerging that extend beyond the conventional IPO and M&A structures. Private equity buyouts and secondary sales are becoming increasingly prevalent, offering venture capitalists alternative avenues for liquidity. Research by Gornall and Strebulaev (2020) underscores the expanding role of private equity firms in acquiring venture-backed startups, particularly in less favourable public market conditions[152]. Another notable trend is the ascent

[148] Bradford, A., and Chilton, A. "Competition Law Around the World from 1889 to 2010: The Competition Law Index." Journal of Competition Law and Economics 14 (2018).

[149] Bena, J., and Li, K. "Corporate Innovations and Mergers and Acquisitions." Journal of Finance 69 (2014).

[150] Celikyurt, U., Sevilir, M., and Shivdasani, A. "Going Public to Acquire: The Acquisition Motive in IPOs." Journal of Financial Economics 96 (2010).

[151] Hsieh, J., Lyandres, E., and Zhdanov, A. "A Theory of Merger-Driven IPOs." Journal of Financial and Quantitative Analysis 46 (2011).

[152] Gornall, W., and Strebulaev, I. A. "Squaring Venture Capital Valuations with Reality." Journal of Financial Economics 135 (2020).

of Special Purpose Acquisition Companies (SPACs), which have emerged as a quicker and more adaptable alternative to traditional IPOs. Klausner, Ohlrogge, and Ruan (2022) examine the effects of Special Purpose Acquisition Companies on venture capital, highlighting that while they offer immediate liquidity, their long-term viability is still in question[153]. Furthermore, corporate venture capital is increasingly becoming a vital component of the startup ecosystem, as established companies invest directly in new ventures and create strategic partnerships that frequently result in pre-arranged mergers and acquisitions. The research conducted by Ma and Wang (2023) indicates that these collaborations are transforming the venture capital landscape, merging the distinctions between early-stage funding, corporate ownership, and acquisition tactics[154].

2.2.3 Case Studies of Notable Acquisitions

As outlined in the previous chapters, M&As are strategic mechanisms for companies aiming to broaden their market presence, blending a diverse range of rationales, such as diversification, vertical integration, and the reduction of competitive threats.
While some acquisitions are celebrated as transformative successes within their industries, others face criticism due to issues like overvaluation, ineffective integration, or cultural incompatibilities. This chapter aims to explore a selection of notable acquisitions of VC-backed firms to identify the critical elements that lead to successful transactions.

Back in May 2011, Microsoft made headlines by announcing its acquisition of Skype, which had previously filed for an IPO (that was never completed), for an astonishing $8.5 billion, which at the time was its biggest buy ever. This strategic move was all about boosting Microsoft's footprint in the booming internet communications arena. The plan was to weave Skype's features into a mixture of Microsoft products, such as Windows, Office, and Xbox, to enhance their real-time communication capabilities. By doing this, Microsoft aimed to gain an edge over competitors like Google and Apple, who were making strides in voice and video tech.[155].

[153] Klausner, M., Ohlrogge, M., and Ruan, E. "A Sober Look at SPACs." Yale Journal on Regulation 39 (2022).

[154] Ma, L., and Wang, J. "Corporate Venture Capital and Startup Innovation: The Strategic Role of Partnerships." Management Science 69 (2023).

[155] Microsoft. "Business Combinations." Microsoft Annual Report 2011: Financial Review, 2011.

The all-cash deal, valued at $8.5 billion, was about ten times Skype's revenue of $860 million in 2010. This price tag was a significant leap from Skype's earlier valuation of $2.75 billion in 2009 when eBay sold a majority stake to a group of investors led by Silver Lake Partners[156]. Even with a large user base, Skype had yet to turn a profit since it started in 2003. Before Microsoft stepped in, Skype had seen a few ownership changes.

After eBay sold its majority stake in 2009, the investor group, which included several venture capital firms, invested around $20 million in Skype and played a crucial role in its operations leading up to the Microsoft acquisition[157].

By looking at the acquisition valuation, the appropriate parameters belong to EV multiples, since the company was not publicly trading shares. The EV/Revenues made it to 9.9x, meaning the acquisition was completed with a valuation of 10 times the revenues' stream in 2010 ($860 million)[158], and an EV/EBITDA of 32.2x, indicating expectations for strong future growth and synergies.

The synergies streaming from the acquisition of Skype by Microsoft in 2011 were primarily driven by its integration into Microsoft's ecosystem, enhancing communication services across Microsoft 365, Outlook, and Xbox. By incorporating Skype's VoIP and video-calling capabilities, Microsoft aimed to boost subscription-based revenue and user engagement. Additionally, migrating Skype's infrastructure to Azure reduced operational costs while strengthening Microsoft's cloud revenue.

The success story of the Skype acquisition is a mixture. At first, it seemed like a great move for Microsoft, boosting their communication tools. However, Skype found it tough to keep up with the fierce competition from apps like WhatsApp, Zoom, and FaceTime. The COVID-19 pandemic really brought this decline into focus, as both consumers and businesses started leaning towards other options. In light of this, Microsoft decided to pivot towards Teams, their collaboration platform, which has seen impressive growth since then. Fast forward to February 2025, and Microsoft announced that they would be retiring Skype, originally founded in

[156] IMD International. Microsoft's Acquisition of Skype: The Value of Strategic Synergies. Harvard Business Publishing, 2011. https://hbsp.harvard.edu/product/IMD574-PDF-ENG.

[157] The Verge. "Skype to Retire in May as Microsoft Shifts Focus to Teams." The Verge, February 2025. https://www.theverge.com/notepad-microsoft-newsletter/625180/skype-retirement-end-of-support-may-microsoft-notepad.

[158] IMD. "Microsoft's Acquisition of Skype." IMD Business School, accessed March 15, 2025. https://www.imd.org/research-knowledge/finance/case-studies/microsoft-s-acquisition-of-skype/.

Estonia, in May 2025, with users being incorporated to Microsoft Teams, which by 2025 had grown to 320 million monthly active users[159].

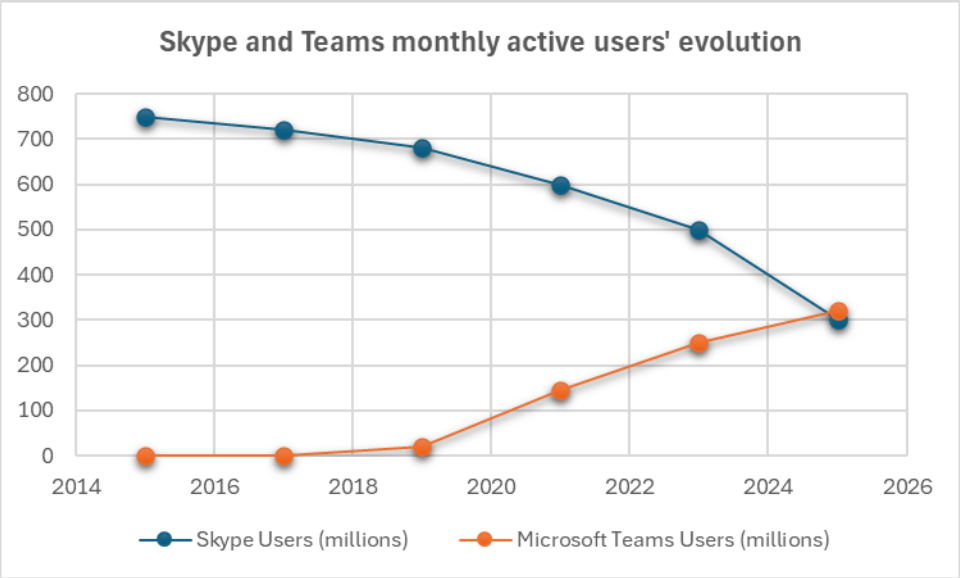

Figure 3: Skype and Teams monthly active users' evolution; evidencing the decline in favour of more friendly-using Microsoft Teams, post-Skype deal

Facebook's purchase of WhatsApp in 2014 for $19.6 billion is recognized as one of the most substantial technology transactions in history. This acquisition was motivated by Facebook's ambition to enhance its global presence, especially in emerging markets where WhatsApp held a significant market share. Renowned for its user-friendly interface, commitment to privacy, and absence of advertisements, WhatsApp was experiencing rapid growth, making it an appealing target for acquisition. A peculiarity of WhatsApp concerns the fact it has been backed by just one VC, which was Sequoia Capital, with a comprehensive $60 million seed investment deployed over three rounds.

Following the acquisition, there were widespread concerns regarding data privacy and potential monetization approaches. Facebook reassured users that WhatsApp would function independently and retain its ad-free model. Nevertheless, in the years that followed, Facebook increasingly integrated WhatsApp into its broader ecosystem, resulting in controversies surrounding data sharing and modifications to privacy policies. Despite these issues, the

[159] The Verge. "Skype to Retire in May as Microsoft Shifts Focus to Teams." The Verge, February 2025. https://www.theverge.com/notepad-microsoft-newsletter/625180/skype-retirement-end-of-support-may-microsoft-notepad; The Guardian. 2025. "Microsoft to Retire Skype." February 28, 2025. https://www.theguardian.com/technology/2025/feb/28/microsoft-skype.

acquisition has been financially advantageous, as WhatsApp remains one of the most popular messaging applications globally.

When Facebook announced its plans to acquire WhatsApp in February 2014, WhatsApp's founders attached a purchase price of $16 billion: $4 billion in cash and $12 billion remaining in Facebook shares. This price tag is dwarfed by the actual price Facebook paid: $21.8 billion. Facebook agreed to pay $19.6 billion, adding $3.6 billion to the original price as compensation to WhatsApp employees for staying on board at Facebook. However, Facebook share prices soared to $77.56 from $68 when the regulatory approval process concluded in October, pushed by investing momentum. By then, the agreed-upon 184 million Facebook shares inflated the final sale price by an additional $2.2 billion[160].

From a valuation standpoint, Facebook's acquisition of WhatsApp was noteworthy due to the elevated relative valuation involved. The transaction was completed at a price-to-revenue multiple of around 1,902x, a figure that is exorbitant relative to industry standards[161]. Considering that WhatsApp generated minimal revenue at the time of the acquisition, Facebook defended the premium by emphasizing WhatsApp's vast user growth potential (450M MAUs in 2013) and its potential for long-term monetization. This huge valuation represented a strategic bet on the network effect, with the expectation that WhatsApp's future user growth and engagement would ultimately lead to substantial revenue opportunities from advertising and data[162].

After a series of doomed acquisitions which concluded with the $8 billion Nokia deal, in 2016 Microsoft revealed its acquisition of LinkedIn for $26.2 billion, a transaction that stands as one of the most significant in the technology industry. This strategic initiative aimed to bolster Microsoft’s footprint in enterprise services by capitalizing on LinkedIn’s extensive professional

[160] Michael J.M,, "In Facebook's Deals for WhatsApp and Oculus, Lessons on Stock vs. Cash," The New York Times, October 16, 2014, accessed March 13, 2025, https://archive.nytimes.com/dealbook.nytimes.com/2014/10/16/in-facebooks-deals-for-whatsapp-and-oculus-lessons-on-stock-vs-cash/.

[161] Revenues 2013: $10,2 million, Acquisition price 2013: $19.6 billion

[162] Anders, George. "Facebook Justifies $19 Billion by Awe at WhatsApp Growth." Forbes, February 19, 2014. https://www.forbes.com/sites/georgeanders/2014/02/19/facebook-justifies-19-billion-by-awe-at-whatsapp-growth/.

network. The integration of LinkedIn with Microsoft's product offerings, including Office 365 and Dynamics, was intended to improve tools for workplace collaboration and productivity[163]. In contrast to other notable acquisitions that often face challenges during post-merger integration, Microsoft adopted a largely non-intrusive strategy with LinkedIn. The platform continued to function as an independent organization, with CEO Jeff Weiner directly reporting to Microsoft CEO Satya Nadella. This acquisition enhanced LinkedIn's capabilities by utilizing Microsoft's strengths in artificial intelligence, cloud computing, and data analytics. Over the years, LinkedIn has experienced significant growth in user engagement and revenue, illustrating how a thoughtfully executed acquisition can create lasting value.

LinkedIn raised over $150 million from multiple VCs in the startup phase, including Sequoia Capital, Bain Capital, Bessemer Venture Partners and Greylock Ventures.

Microsoft's Chief Financial Officer Amy Hood revealed the financing structure was mainly composed of debt, a way for the cash-rich company to reduce its tax bill. The company had $105 billion in cash and other liquid assets. Moody's said it was reviewing Microsoft's rare AAA debt rating for a possible downgrade[164].

Looking to the precedent transaction multiples, Microsoft's acquisition of LinkedIn was assessed at an EV/Revenue multiple of approximately 8.8x and EV/EBITDA of 105x, due to relatively low operating performance (EBITDA of $0.25 bn.)[165], based on LinkedIn's 2015 EOY statements, making it in the upper end of the valuation multiples' distribution[166].

Microsoft's readiness to pay a huge premium was influenced by LinkedIn's extensive user base, robust professional network, and the potential for synergies with Microsoft's enterprise software ecosystem. The acquisition has proven its worth, as evidenced by LinkedIn's substantial revenue growth and its contribution to Microsoft's overarching strategy in cloud computing and business services.

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[163] Microsoft. "Microsoft to Acquire LinkedIn." Microsoft News, June 13, 2016. https://news.microsoft.com/announcement/microsoft-buys-linkedin/?msockid=17384d1dc0be60741bcc590dc107619e.

[164] Reuters. "Microsoft to Buy LinkedIn for $26.2 Billion in Its Largest Deal." Reuters, June 13, 2016. https://www.reuters.com/article/business/microsoft-to-buy-linkedin-for-262-billion-in-its-largest-deal-idUSKCN0YZ1FO.

[166] Since LinkedIn financial performance resulted in negative P&L in 2015, which would impact the price, this time we rather choose the less skewed, EV/EBITDA.

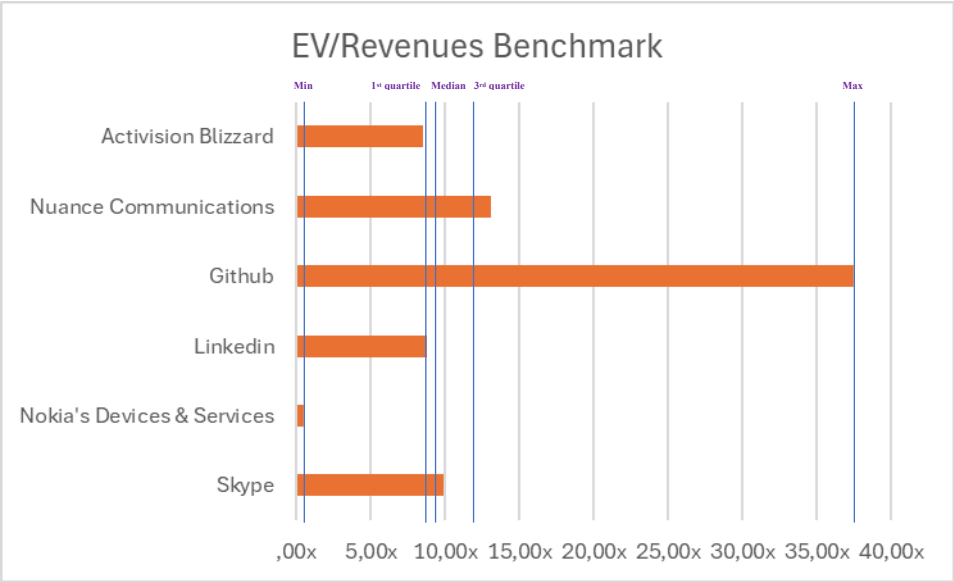

Figure 4: Microsoft acquisitions between 2010 and 2025, EV/Revenues benchmarking

To conclude the paragraph, this segment will serve to benchmark Skype and LinkedIn acquisitions across last 15 years Microsoft M&As.

Skype, which was bought for an EV/Revenues multiple of 9.90x, is sitting just above the median of 9.4x and well above the first quartile at 8.6x. This indicates that Microsoft placed a higher value on Skype compared to more than half of the other acquisitions in this dataset, likely because of its key role in communication and video conferencing. On the other hand, LinkedIn, acquired in 2016 for 8.80x, is just above the first quartile but below the median. This suggests that while LinkedIn's valuation was moderate compared to others, Microsoft still recognized its potential in professional networking, albeit with a more cautious pricing approach.

When it comes to Nokia's Devices & Services, acquired in 2014 for a mere 0.50x, it stands out as the most affordable acquisition in the dataset, hinting at either a distress sale or lower revenue expectations. In stark contrast, GitHub, which Microsoft acquired in 2018, boasts the highest multiple at 37.50x, hitting the maximum quartile value. This shows Microsoft's bold valuation of the open-source platform. Nuance Communications, valued at 13.10x, and Activision Blizzard at 8.50x, fall somewhere in the middle, reflecting a strategic but not overly aggressive valuation.

Both Skype and LinkedIn were valued above the lower quartile but are far from the extreme valuations like GitHub. Their positions suggest that Microsoft saw significant, yet measured, growth potential in these acquisitions, contrasting sharply with its more aggressive approach to GitHub and the heavily discounted Nokia deal.

However, the relative valuation of both acquisitions moves to the upper end of the right distribution tail if compared to software & IT comparable deals out of Microsoft M&A activity.

CHAPTER 3

DETERMINANTS OF THE CHOICE BETWEEN IPOS AND ACQUISITIONS

SUMMARY: 3.1 INFLUENCE OF THE INDUSTRY - 3.1.1 TECHNOLOGY SECTOR: SCALABILITY AND PUBLIC MARKET APPEAL - 3.1.2 BIOTECHNOLOGY AND HEALTHCARE: CAPITAL INTENSITY AND LONG-TERM VIABILITY - 3.1.3 FINANCIAL SERVICES AND FINTECH: ACQUISITIONS' DRIVEN - 3.1.4 RETAIL AND CONSUMER GOODS: STABILITY AND STRATEGIC FIT IN ACQUISITIONS - 3.1.5 INDUSTRIAL MANUFACTURING: CONSOLIDATION AND ACQUISITION PREFERENCES - 3.1.6 ENERGY AND NATURAL RESOURCES: RESOURCE CONSTRAINTS AND STRATEGIC ACQUISITIONS - 3.2 DEVELOPMENT STAGE AND FINANCIAL PERFORMANCE - 3.2.1 EARLY-STAGE STARTUPS (SEED TO SERIES A): HIGH RISK AND ACQUISITION-DRIVEN EXITS - 3.2.2 GROWTH-STAGE COMPANIES (SERIES B AND C): INCREASED M&A ACTIVITY AND EMERGING IPO PROSPECTS - 3.2.3 LATE-STAGE AND PRE-EXIT COMPANIES (SERIES D AND BEYOND): IPOS AS THE PREFERRED EXIT STRATEGY

3.1 Influence of the industry

The decision to go for an Initial Public Offering or an acquisition as an exit strategy in venture capital is significantly influenced by the specific factors of each industry. The dynamics within these sectors can greatly affect the financial feasibility, strategic attractiveness, and long-term sustainability of exit choices. Some industries are more inclined to pursue public listings due to their ability to scale, the capital they require, and the investor interest in high-growth opportunities. Meanwhile, other sectors may find acquisitions more appealing, often driven by the need for strategic consolidation and competitive pressures.

This chapter takes a closer look at how the characteristics of different industries dictate the exit paths for VC-backed companies in ideal market conditions, examining trends unique to each sector, cycles of innovation, regulatory conditions, and market structures.

Research has shown time and again that industries experiencing rapid growth and requiring significant capital may lean towards going public through IPOs. The potential for scalability, the innovative nature of these sectors, and the excitement from investors make public listings a compelling option. On the flip side, industries that are more consolidated and see a lot of strategic acquisitions, such as financial services, retail, and industrial manufacturing, tend to

favour mergers and acquisitions instead. In these scenarios, corporate buyers are usually on the lookout to acquire up-and-coming companies for their established market presence, operational efficiencies, or unique assets, which makes acquisitions a more appealing choice than entering the public market.

3.1.1 Technology Sector: Scalability and Public Market Appeal

According to Ewens & Malenko (2020), in the tech world, especially in areas like software-as-a-service (SaaS), cloud computing and artificial intelligence (AI), going public through an IPO has been the go-to exit strategy for venture-backed companies[167]. The unique scalability and network effects that tech firms possess make them super appealing to public investors who are on the lookout for companies with the potential for explosive growth. SaaS companies, in particular, enjoy the perks of steady recurring revenue and impressive profit margins.

Matter of fact, companies like Rubrik have reported significant increases in subscription sales, with Rubrik's subscription Annual Recurring Revenue (ARR) rising by 39% to $1.092 billion, while a typical strong gross PM for Saas businesses fluctuates around 70% of revenues[168]. Therefore, these impressive features make them a great fit for how public markets evaluate businesses. Similarly, cloud computing and AI companies thrive on constant innovation and vast market opportunities, driving investor interest in publicly traded tech firms. When these companies go public, they gain the financial backing needed to push forward with aggressive research and development, expand globally, and attract new customers, helping them stay competitive in our increasingly digital world.

But while IPOs are often the first choice for tech companies, strategic acquisitions are also a vital option for those with unique technologies that fit well with the goals of larger players. Many notable tech acquisitions have been motivated by the desire of major firms to integrate innovative solutions or new platforms into their existing operations. For instance, the

[167] Ewens, M., & Malenko, N., "Disclosure and VC-backed IPOs", The Review of Financial Studies, 33(6), 2451-2486 (2020)

[168] The reason behind steady ARR stems from business models centred upon subscriptions, that provides predictable revenue streams. Instead, the impressive profit margin is realized by ensuring low infrastructure costs. Sources:

1) Investor's Business Daily, "Data Security Vendor Pops On Fiscal 2026 Outlook, Bucks Malaise In Software Stocks." Investors.com, March 19, 2025, https://www.investors.com/news/technology/rubrik-stock-rbrk-rubrik-earnings-q42024/;

2) Fincome, "Analyzing Profitability in SaaS: A Comprehensive Guide," Fincome.co, March 19, 2025, https://www.fincome.co/blog/analyzing-profitability-saas-business-guide.

abovementioned Facebook's buyout of WhatsApp and Microsoft's acquisition of LinkedIn show how big tech companies absorb disruptive startups to bolster their market positions and fend off competition[169]. These deals offer an alternative to IPOs for venture-backed startups, especially when the buying company is ready to pay a premium that surpasses what they might expect in the public market.

3.1.2 Biotechnology and Healthcare: Capital Intensity and Long-Term Viability

In the world of biotechnology and healthcare, going public through an IPO is often seen as the preferred go-to exit strategy. This is largely due to the hefty capital needed for drug development and clinical trials (Hall & Lerner, 2010). The approval processes can be long and expensive, thanks to regulatory bodies like the U.S. Food and Drug Administration (FDA) and the European Medicines Agency (EMA), which require significant financial backing. By going public, biotech companies can tap into substantial capital pools necessary for research, testing, and bringing their products to market. Pisano (2006) adds that investors in the public market are usually more open to the high risks and lengthy timelines that come with biotech ventures, especially when there's a chance for groundbreaking medical advancements and blockbuster drugs[170].

While IPOs are attractive in this field, mergers and acquisitions also play a vital role in giving liquidity to venture capital investors. Big pharmaceutical companies often buy up biotech startups to refresh their drug pipelines and speed up the market entry of promising new therapies[171]. A notable example is Roche's acquisition of Genentech, that has been described in its dedicated chapter 2, which illustrates how biotech firms can evolve from venture-backed startups to corporate subsidiaries, benefiting from shared research, regulatory know-how, and extensive distribution networks. In many instances, these acquisitions offer venture capitalists

[169] Gompers, P., & Lerner, J. (2001). "The Venture Capital Revolution", Journal of Economic Perspectives, 15(2), 145-168.

[170] Pisano, G. P., "Science Business: The Promise, the Reality, and the Future of Biotech", Harvard Business Press. (2006).

[171] Pharmaceutical Technology. 2023. "Big Tech Meets Biotech: Recursion's AI Gold Rush in Pharma." Pharmaceutical Technology, July 10, 2023, https://www.pharmaceutical-technology.com/analyst-comment/big-tech-meets-biotech-recursion-ai-gold-rush-pharma/.

a quicker and more reliable return on their investments compared to the unpredictable nature of IPO valuations[172].

3.1.3 Financial Services and FinTech: Acquisitions' driven

The financial services landscape, especially in the fast-paced FinTech world, has been a blend of IPOs and acquisitions, with companies choosing different paths based on their business models and the regulatory landscape[173]. PayPal and Square, for instance, have successfully navigated the IPO route, tapping into the strong public interest in digital payment solutions and financial tech innovations. On the opposite side, many FinTech startups find themselves being scooped up by established banks and financial institutions eager to boost their digital capabilities (Lowry, 2003). Given the need for regulatory compliance and the hefty costs associated with scaling financial services, acquisitions often present a more sensible and less risky exit strategy. Established financial players are typically ready to pay a premium for FinTech startups that bring innovative technologies, a solid customer base, or valuable market access, assets that would take a lot of time and money to develop internally.

Regulatory factors also play a significant role in shaping exit strategies within FinTech. Going public means that firms have to deal with ongoing compliance and financial reporting, which can be a real turn-off for companies in heavily regulated environments[174]. Mergers and acquisitions, on the other hand, allow FinTech startups to pass on those regulatory headaches to the acquiring institutions that already have the necessary infrastructure and compliance know-how. So, while some FinTech firms manage to carve out their independence through IPOs, a good number are strategically acquired by larger financial entities looking to broaden their digital reach.

3.1.4 Retail and Consumer Goods: Stability and Strategic Fit in Acquisitions

The retail and consumer goods sector often leans towards acquisitions as the primary exit strategy for venture-backed companies, although IPOs are also a viable option for certain types of businesses. The retail industry is characterized by intense competition and often requires

[172] Hall, B. H., & Lerner, J., "The financing of R&D and innovation", Handbook of the Economics of Innovation, 1, 609-639 (2010)

[173] Ritter, J. R., & Welch, I. (2002). A Review of IPO Activity, Pricing, and Allocations. Journal of Finance, 57, 1795-1828.

[174] Lowry, M., Roni, ., "Determinants of IPO Timing: Evidence from the U.S. Market. Review of Financial Studies" 24(5): 1437-1479, (2011).

significant capital investments to expand operations, build brand loyalty, and achieve economies of scale. Because of the consolidation trends in the sector, many companies are attracted to mergers and acquisitions, which allow them to integrate new market segments, strengthen their supply chains, and expand their geographic reach[175].

For example, retail giants like Walmart, Target, and Amazon are known to frequently acquire smaller startups that offer unique products, technologies, or customer bases, allowing them to stay ahead in the competitive market. The acquisition of Whole Foods by Amazon is a prime example, where the larger company absorbed a unique market player to boost its position in the grocery sector and integrate more advanced logistics and e-commerce capabilities. The deal provided Whole Foods with resources to scale its operations and reach a broader audience while also aligning well with Amazon's broader strategy of increasing its market share in food retailing.[176]

However, IPOs in the retail space are not uncommon, especially for companies that have achieved significant scale and market recognition. For instance, companies like Warby Parker and Casper have taken the IPO route to access the capital needed for their next phase of growth and to solidify their positions in their respective markets. Investors are often eager to back retail companies that demonstrate high growth potential, strong brand recognition, and scalability, particularly when these businesses tap into changing consumer preferences and trends. In 2024, European IPOs saw a remarkable increase, jumping to €14.6 billion, which shows a renewed confidence in the public markets, especially for retail and consumer goods companies[177].

On another note, Mixue, the biggest bubble tea chain in China, successfully raised $444 million during its IPO in Hong Kong, with its shares skyrocketing by more than 47% on the very first day[178].

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[175] Bain & Company, “Retail M&A Report 2025: Global Industry Trends and Strategies”. Accessed March 20, 2025, https://www.bain.com/insights/retail-m-and-a-report-2025/

[176] Financial Times. 2025. “Amazon to Buy Whole Foods in $13.7bn Deal.” Financial Times. Accessed March 20, 2025, https://www.ft.com/content/b707b439-bbc5-32e4-b806-4a7fc8d180a2

[177] The Times. 2025. “European IPOs Bounce Back in Contrast to Moribund London Market.” The Times, March 15, 2025, https://www.thetimes.com/business-money/companies/article/european-ipos-bounce-back-in-contrast-to-moribund-london-market-plw2t78zs?msockid=17384d1dc0be60741bcc590dc107619e

[178] Reuters. 2025. “China Bubble Tea Chain Mixue Pops 47% on Debut as Hong Kong IPO Volumes Rebound.” Reuters, March 3, 2025. https://www.reuters.com/markets/deals/china-tea-drinks-mixue-shares-rise-nearly-30-hong-kong-trading-debut-2025-03-03/

3.1.5 Industrial Manufacturing: Consolidation and Acquisition Preferences

The industrial manufacturing sector has historically been more inclined to pursue acquisitions, even in ideal market conditions, rather than IPOs as an exit strategy for venture capital-backed companies. This is because industrial companies often operate in highly consolidated markets, where large corporations dominate the landscape and actively seek opportunities to acquire smaller players with innovative technologies, operational efficiencies, or market access. Acquisitions offer manufacturers the opportunity to grow quickly and access new capabilities without having to deal with the complexities and costs of public market entry.

For instance, General Electric (GE) and Siemens have been active acquirers in the industrial manufacturing sector, purchasing smaller firms to enhance their technological capabilities, improve operational efficiency, and expand their product portfolios[179]. The attraction of such acquisitions lies in the ability of larger companies to integrate the innovative solutions of smaller firms into their existing operations and capitalize on their established distribution networks.

While IPOs are less common in industrial manufacturing, they are still an option for companies that have achieved significant scale and operate in niche markets with high growth potential. For example, companies involved in automation, robotics, or 3D printing may find going public an attractive option due to the increasing interest in these industries and the potential for rapid expansion. However, the typical preference in the industrial sector remains for mergers and acquisitions, as the financial backing and operational synergies of larger firms can provide a faster and more secure path to growth[180].

3.1.6 Energy and Natural Resources: Resource Constraints and Strategic Acquisitions

The energy and natural resources sector are showing a trend that's quite similar to what we see in industrial manufacturing: companies here often lean towards acquisitions instead of going public with IPOs. This is particularly true for energy firms, especially those in the oil and gas arena, where they grapple with hefty capital costs and a maze of regulatory challenges[181]. By opting for acquisitions, these companies can tap into the resources, expertise, and infrastructure

[179] Gaughan, P. A. (2010), "Mergers, Acquisitions, and Corporate Restructurings", Wiley (2010).

[180] Hwang, K., & Frank, L., "The Influence of Industry on Mergers and Acquisitions in the Retail Sector", Journal of Retailing, 91(3), 525-535 (2015).

[181] Jovanovic, B., & Rousseau, P. L., "The Q-Theory of Mergers and Acquisitions: Evidence from the Energy Sector", Journal of Financial Economics, 89(2), 229-252 (2008).

they need to tackle these hurdles, all while sidestepping the lengthy and costly process of an IPO.

Take big players like ExxonMobil and Chevron, for instance. They frequently scoop up smaller companies to gain access to new reserves, adopt cutting-edge exploration technologies, or strengthen their market foothold. A prime example is ExxonMobil's acquisition of XTO Energy, which was all about enhancing its footprint in the natural gas sector and leveraging advanced drilling technologies to operate more efficiently in a fast-evolving energy landscape.

The unpredictable nature of commodity prices, along with regulatory challenges and the long timelines needed to bring new energy projects to life, make an IPO a less attractive option in this sector. Hall & Lerner (2010) suggest the theory according to which investors in energy companies generally prefer the stability and operational benefits that come with acquisitions, where the financial clout and resources of larger firms help mitigate risks[182]. That said, for companies venturing into emerging energy sectors like renewable energy or energy storage, IPOs can still be a tempting route, especially with the rising interest from investors in clean energy opportunities[183].

3.2 Development Stage and Financial Performance

The stage of development and the financial performance of a venture-backed company are crucial in determining its exit strategy. Whether a company opts for an Initial Public Offering or M&As is largely shaped by its financial health, market presence, and operational reliability. The choice between going public and being acquired depends on various factors, such as revenue growth and profitability, measured through Revenues and EBITDA margins, scalability and the confidence of investors. Companies at different stages encounter distinct performance challenges and opportunities, which venture capitalists need to consider when deciding the best time and approach to exit their investment.

[182] Hall, B. H., & Lerner, J., "The financing of R&D and innovation", Handbook of the Economics of Innovation, 1, 609-639 (2010)

[183] Kaiser, M., & Smith, J., "Renewable Energy Mergers and Acquisitions: Strategic Directions and Financial Considerations", Energy Economics, 58, 93-104 (2016).

3.2.1 Early-Stage Startups (Seed to Series A): High Risk and Acquisition-Driven Exits

Early-stage startups, typically in the seed to Series A funding stages, are all about developing their products, validating their market, and dealing with high burn rates. At this point, these companies usually miss revenues, profitability, or even a solid business model. Because of these challenges, it's pretty rare for early-stage startups to have a financial and operational stability needed to go public. For those in the seed stage, venture capital funding mainly goes towards research and development, figuring out product-market fit, and snagging those first customers. At this stage, these firms are heavily reliant on outside funding to keep things running, and unfortunately, many startups end up failing due to a lack of capital before they can move on to the next phase[184]. As shown in the extract beneath, picking a sample of 6,908 seed companies, in 2022 only 12% of them have gotten to the following round[185].

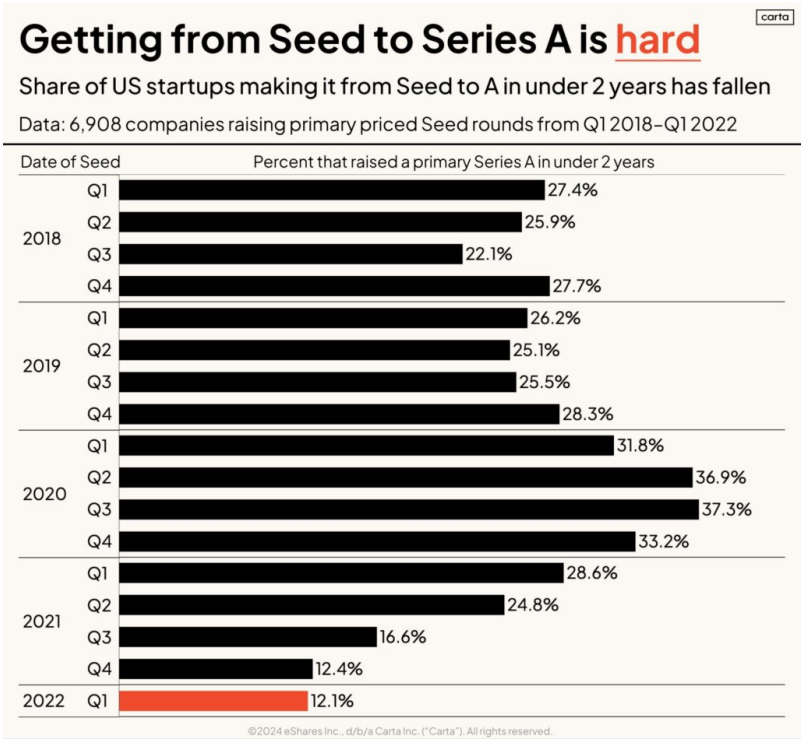

Figure 5: The end of excesses and taking longer to raise the A? Source: Peter Walker's LinkedIn page

Even for those that successfully progress to Series A, the focus remains on scaling operations rather than financial stability.

[184] Gompers, P., Lerner, J., "The Venture Capital Cycle", Cambridge: MIT Press, (2021).

[185] The VC Factory. "Startup Valuation: Everything You Need to Know (2024 Edition)." *The VC Factory*. Accessed March 22, 2025. https://thevcfactory.com/startup-valuation/#aioseo-series-c-valuations.

Since IPOs are generally not viable at this stage, acquisitions represent the predominant exit route for early-stage companies. Large corporations, particularly in the technology and healthcare sectors, frequently acquire early-stage startups to gain access to innovative technologies, talent, or market share[186].

A lot of these acquisitions happen as "acquihires," where the company buying the startup mainly takes on its team and intellectual property instead of letting it keep running on its own. This trend is especially prevalent in fields like artificial intelligence, biotechnology, and fintech, where early-stage startups are busy creating groundbreaking innovations that larger companies would rather absorb than compete with.

Take Google's purchase of DeepMind back in 2014 as a prime example. At that time, DeepMind hadn't really started making significant revenue, yet it was snapped up for over $400 million because of its AI expertise, which fit perfectly with Google's long-term vision[187]. You can see similar trends in the biotech world, where big pharmaceutical companies often buy up small biotech firms that have promising drug pipelines, even before those products get the green light from regulators.

3.2.2 Growth-Stage Companies (Series B and C): Increased M&A Activity and Emerging IPO Prospects

As companies mature into the Series B and Series C stages, they begin to demonstrate stronger financial performance, increased revenue streams, and more stable operational structures. These companies have generally refined their business models, established key customer relationships, and secured significant market traction. Despite these advancements, many still operate at a loss as they prioritize aggressive growth over profitability[188].

At this stage, acquisitions continue to be the dominant exit strategy, although some high-growth companies may begin to consider an IPO. Many venture-backed firms are acquired by strategic

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[186] Bayar, Onur, and Thomas J. Chemmanur. 2012. IPOs versus Acquisitions and the Valuation Premium Puzzle: A Theory of Exit Choice by Entrepreneurs and Venture Capitalists. Journal of Financial and Quantitative Analysis 47(1): 175-212.

[187] Rushe, Dominic. "Google to Buy Artificial Intelligence Company DeepMind." Reuters, January 27, 2014. https://www.reuters.com/article/technology/google-to-buy-artificial-intelligence-company-deepmind-idUSL2N0L102A/.

[188] Ritter, J. R., & Welch, I., “A Review of IPO Activity, Pricing, and Allocations”, Journal of Finance, 57, 1795-1828 (2002).

buyers looking to consolidate market share, expand their product portfolios, or eliminate competition.

Statistical evidence suggests that companies exiting through acquisitions at this stage command higher valuation multiples compared to early-stage acquisitions. In Q1 2024, the median for Series B primary rounds was $120M, so 3x Series A median valuation, while Series C rounds rose to $200 million, marking a 50% increase from the previous quarter[189].

These premiums reflect the reduced risk and increased scalability of these firms, making them more attractive to acquirers.

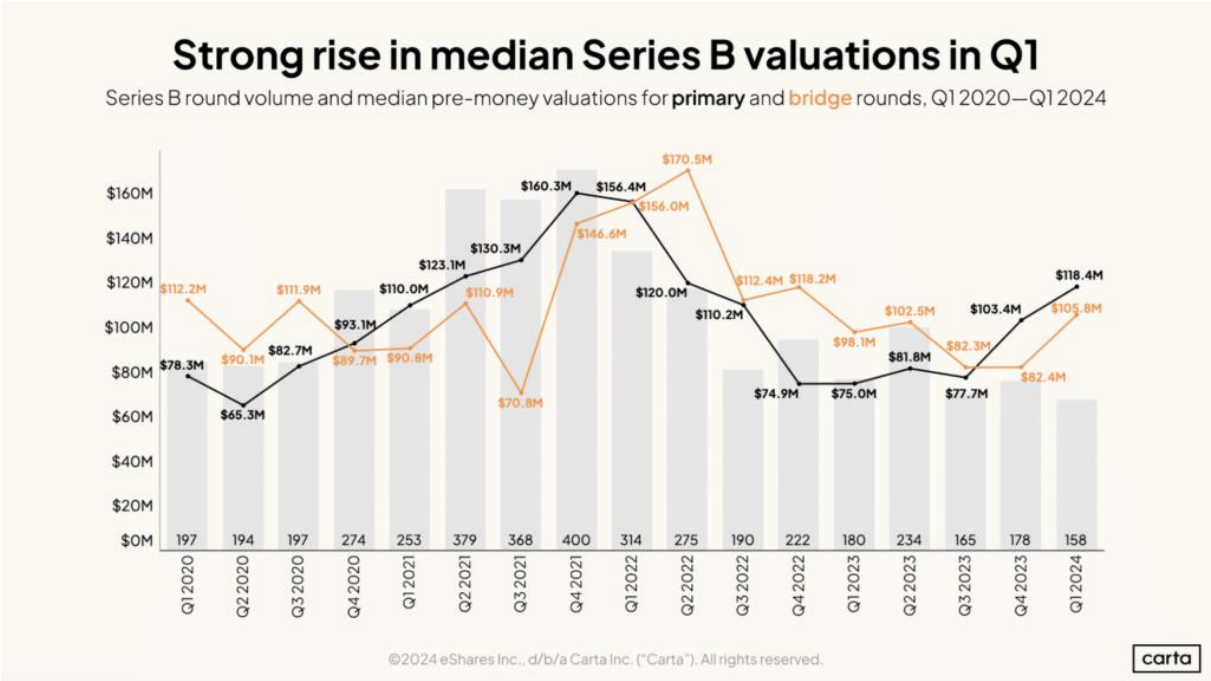

Figure 6: The median valuation for primary Series B rounds surged by 33% between Q3 and Q4 2023, followed by an additional 15% rise in Q1 2024. Source: https://thevcfactory.com/startup-valuation/#aioseo-series-c-valuations

Despite the continued dominance of M&A, IPOs start to become a viable exit option for select companies at this stage. Firms with strong financial performance and scalable business models, particularly in the technology and healthcare sectors, may choose to go public as a means of accessing capital for further expansion[190]. However, the IPO route is still limited to a small

[189] The VC Factory. "Startup Valuation: Everything You Need to Know (2024 Edition)." *The VC Factory*. Accessed March 22, 2025. https://thevcfactory.com/startup-valuation/#aioseo-series-c-valuations.

[190] Lowry, M., Roni, ., "Determinants of IPO Timing: Evidence from the U.S. Market. Review of Financial Studies" 24(5): 1437-1479, (2011).

subset of companies, as public markets favour businesses with consistent revenue growth, clear profitability projections, and substantial market share.

A notable example of a successful IPO at this stage is Pinterest's public listing in 2019. The company had raised multiple rounds of venture capital and demonstrated solid user growth and revenue streams before going public at a valuation of $12.7 billion. Despite operating at a loss at the time of its IPO, its strong brand recognition and scalability justified its public market debut. However, for every Pinterest that successfully transitions to public markets, many other growth-stage companies opt for acquisitions due to the regulatory burdens and market volatility associated with IPOs[191].

3.2.3 Late-Stage and Pre-Exit Companies (Series D and Beyond): IPOs as the Preferred Exit Strategy

For companies that have progressed to the Series D and later funding rounds, the decision to exit through an IPO becomes significantly more attractive. These firms have typically achieved large-scale operations, substantial revenue growth, and a clear pathway to profitability[192]. Late-stage startups often have annual revenues exceeding $100 million, and some may already be cash flow positive. Given their financial maturity, IPOs are often the preferred exit strategy, as they provide access to significant capital while allowing early investors to liquidate their holdings at high valuations.

A prime example of a successful late-stage IPO is Snowflake's public offering in 2020, which raised $3.4 billion and became the largest software IPO in history[193]. At the time of its IPO, Snowflake had exceeded $250 million in annual revenues and had demonstrated robust growth potential, making it an attractive investment for public market participants. Similarly, Airbnb's IPO in 2020, which raised $3.5 billion, showcased how companies with strong market positions and established revenue streams can achieve exceptional valuations in public markets.

Despite the attractiveness of IPOs, some late-stage companies still opt for acquisitions, particularly in consolidating industries. In cases where market conditions are unfavourable for

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[191] Ewens, M., Nanda, R., and Rhodes-Kropf, M. "Cost of Experimentation and the Evolution of Venture Capital." Journal of Financial Economics 128 (2018).

[192] Hall, B. H., & Lerner, J., "The financing of R&D and innovation", Handbook of the Economics of Innovation, 1, 609-639 (2010).

[193] Gornall, W., and Strebulaev, I., "Public Market Valuations of Private Startups", Review of Financial Studies 33(5): 1912-1950 (2021).

public listings, or where strategic buyers offer premium valuations, venture capitalists may prefer to exit via an M&A transaction[194]. A prominent example is GitHub's acquisition by Microsoft for $7.5 billion in 2018 (see chapter 2.2.3 of this thesis), despite the former being in a position to go public. The deal provided immediate liquidity to investors while enabling GitHub to maintain its core mission under Microsoft's leadership.

[194] Bradford, A., and Chilton, A. "Competition Law Around the World from 1889 to 2010: The Competition Law Index." Journal of Competition Law and Economics 14 (2018).

CHAPTER 4

EMPIRICAL ANALYSIS

SUMMARY: 4.1 OBJECTIVES OF THE ANALYSIS - 4.2 DATA COLLECTION – 4.3 METHODOLOGY - 4.4 RESULTS AND DISCUSSION - 4.4.1 FULL MODEL - 4.4.2 TESTING THE ROBUSTNESS OF THE MODEL – 4.5 LIMITATIONS OF THE STUDY

4.1 Objectives of the Analysis

This chapter dives into the empirical side of the thesis, focusing on the main factors that sway the decision between Initial Public Offerings and acquisitions as exit strategies for companies backed by venture capital. The analysis will be functional to evaluate how industry sector, timing, development stage, geography, revenue streams, macroeconomic conditions and market trends affect the likelihood of an exit route being pursued with respect to the other.
To support this analysis, we gathered a dataset of 403 venture-backed exits occurred between 2010 and 2025. I then applied descriptive statistical analysis to spot distribution trends and used a logistic regression model to measure the connection between the influencing factors and the chosen exit strategy. The outcome variable is binary, distinguishing between IPOs (1) and acquisitions (0). The results from the regression provide insights on the chances of opting for an IPO based on different firm-level and market-level circumstances.

4.2 Data Collection & Analysis

The dataset consists of 403 VC-exits[195] involving venture capital-backed companies from January 2010 to April 2025 across main world financial markets. The sample was constructed using Orbis dataset. Each observation includes the following attributes:

- Exit type
- Industry type (NAICS 2017 definition)
- Timing

[195] Both total and partial

- Geography
- Revenues ($USD Million)

Although the theoretical framework of this thesis (refer to Chapter 3.2) thoroughly examines how a startup's development stage affects its exit strategy, I chose not to include this variable in the empirical analysis due to several limitations. The primary concern was that the data source did not consistently provide reliable or standardized details on the funding rounds or maturity stages (Seed, Series A, Series B, etc.) for every observation in the dataset. Including such inconsistent or poorly populated variables would have introduced skewness and increased the risk of omitted variable bias, which would have undermined the model's statistical validity.

4.3 Methodology

In this section, the logistic regression model is introduced as a primary econometric tool employed for the purpose of the empirical analysis, which is the examination of the determinants in venture capital-backed firms' exit strategies.
Specifically, the model is employed to predict the probability of a portfolio company exiting through an IPO as opposed to an acquisition.
Since the dependent variable is binary - where 1 represents an IPO and 0 signifies an acquisition – a logistic regression stands out as the best analytical method to use.
This model helps us understand how the binary outcome relates to various explanatory factors. These factors include firm-specific and industry-specific features that are believed to impact the exit strategy that venture capitalists opt for.
The model can be expressed as follows:

$$\boldsymbol{Pr(Y = 1 \mid X) = \frac{1}{1 + e^{-(\beta_0 + \sum_{i=1}^{k} \beta_i x_i)}}}$$

Where:

- $\boldsymbol{Pr(Y=1 \mid X)}$ is the probability that the firm exits via IPO given predictors $\boldsymbol{X}$
- $\boldsymbol{\beta_0}$ is the intercept
- $\boldsymbol{\beta_i}$ are the coefficients for each independent variable $\boldsymbol{X_i}$, including:
    - Industry sector: Categorical but converted to dummy variables per each sector. "Retail" is

- Timing: Deal finalization year
- Geographical location: Target venture-backed exit's country, categorical but converted to dummy variables per each region.
- Revenue level (US M$): Continuous variable indicating the performance of the firm
- Deal Value (US M$): Continuous variable indicating the deal size

- $\sum_{i=1}^{k} \boldsymbol{\beta_i x_i}$) represents the linear combination of the explanatory variables, and
- $\boldsymbol{k}$ is the number of independent variables in the model

The model estimates the log-odds of the outcome as a linear function of the independent variables. The output of the logistic function is a probability bounded between 0 and 1, representing the predicted likelihood of an IPO exit given a specific combination of characteristics and market conditions.

The intercept $\boldsymbol{\beta_0}$ captures the baseline log-odds of the outcome (e.g., IPO) of a U.S.-based retail startup. It provides the starting point of the model before any effects from the predictors are applied.

To capture the categorical variables "Industry" and "Geography", one-hot encoding is provided. Having regard to the former predictor, if the firm is in the technology sector, the corresponding dummy variable equals 1; otherwise, it equals 0.

$$\boldsymbol{Industry_{one-hot\ encoding}} = \begin{cases} \mathbf{(1,0,0,0,0,0,0)\ if\ "Technology"} \\ \mathbf{(0,1,0,0,0,0,0)\ if\ "Biotech"} \\ \vdots \\ \mathbf{(0,0,0,0,0,0,1)\ if\ "Energy"} \end{cases}$$

Or equally,

$$\boldsymbol{X_{industry}} \in \{\boldsymbol{e_1}, \boldsymbol{e_2}, \ldots \boldsymbol{e_7}\}$$

Where each $\boldsymbol{e_i}$ is a standard basis vector in $\mathbf{R^7}$ indicating the presence of the $\boldsymbol{i^{th}}$ category.

Which means that, "Industry" is encoded using a 7-dimensional one-hot vector, where each vector contains a single 1 indicating the active category and 0s elsewhere. Similar assumption applies to the independent and categorical variable "Geography".

For both categories, respectively, one category has been omitted to avoid multicollinearity – or the dummy variable trap. Specifically, the omitted variables concern:

- Industry: "Retail"
- Geography: "US".

Their significance is reflected in the intercept, which shows the log-odds of an IPO for a U.S.-based Retail exit, as outlined beforehand.

The model also includes continuous and integer variables.

The continuous variable "Revenues" has been interpreted in log basis, given the highly skewed distribution of firm revenue from seed to late (series C & D) startups, which is functional to normalize the effects on the scale, reducing the impact of outliers while enabling a percentage-based interpretation of the operating effect on IPO likelihood: a standardized approach to econometrics.

Therefore, we can express the exponential $\boldsymbol{z = -(\beta_0 + \sum_{i=1}^{k} \beta_i x_i)}$ in its long form as:

$$\boldsymbol{Pr(Y = 1 \mid X) = \frac{1}{1 + e^{z}}}$$

Where:

$$\boldsymbol{z = -(\beta_0 + \beta_1.Technology + \beta_2.Biotech\&Health + \beta_3.Financial\ Services + \beta_4.Manufacturing + \beta_5.Energy + \beta_6.Timing + \beta_7.U.K. + \beta_8.E.U. + \beta_9.Japan + \beta_{10}.China + \beta_{11}.India + + \beta_{12}.log(Revenues) + \beta_{13}.Deal\ Value)}$$

Here is provided a table with summarized variables of the logistic model employed.

Variable	Type	Description
Exit Type	Binary (dependent)	1=IPO 0=Acquisition
Intercept	Constant	Log-odds of an IPO for a U.S based Retail company
Industry	Categorical – one hot encoding	Sector of the firm at exit. Retail omitted as baseline
Timing	Integer	Year of exit occurrence (2020 to 2024)
Geography	Categorical – one hot encoding	US, U.K., E.U., Japan, China, India US dropped as baseline
Revenue	Continuous (log)	Pre-deal target operating revenue

Deal value	Continuous	Deal Size

4.4 Results and Discussion

4.4.1 Full Model

- Dependent Variable: IPO (1 = IPO, 0 = M&A)
- Baseline Category: U.S.-based Retail firms
- Observations: 403
- Df Model: 6
- Pseudo R^2: 0.348
- Model significance (LLR p-value): 2.80e-26

Explanation: The logistic regression model explains IPO vs. M&A exit outcomes across 403 deals, using U.S.-based retail firms as the reference group. The model shows a strong fit (Pseudo $R^2 = 0.348$) and is highly statistically significant (LLR p = 2.80e-26), confirming that key industry, geographic, and financial variables contribute meaningfully to explaining exit strategy choices.

Model summary at α=0.05 (significance level)

Variable	Coeff.	z	P-value	Significant?	Interpretation
Intercept	5.402	5.870	0.000	Yes	Baseline: U.S. Retail firm
Technology	-1.393	-2.243	0.025	Yes	Less likely to IPO than Retail
Biotech & Healthcare	0.408	0.443	0.658	No	Not significant

Financial Services	-1.797	-2.134	0.033	Yes	Significantly less likely to IPO vs. Retail
Manufacturing	-0.654	-1.074	0.283	No	Not significant
Energy	0.913	0.913	0.361	No	Not significant
U.K.	0.183	0.263	0.793	No	No difference vs. U.S.
E.U.	-2.149	-4.357	0.000	Yes	Much less likely to IPO than U.S.
JP (Japan)	2.169	2.022	0.043	Yes	More likely to IPO than U.S.
CN (China)	-3.292	-6.701	0.000	Yes	Much less likely to IPO than U.S.
IN (India)	0.119	0.197	0.844	No	Not significant
Log_revenue	-0.544	-5.160	0.000	Yes	More revenue → less likely to IPO
Deal Value (m USD)	0.000	0.925	0.355	No	Not significant

Source: My analysis, Jupyter Notebook Inc.

Variables with p-values lower than the 0.05 threshold are deemed statistically significant, suggesting that we can dismiss the null hypothesis which posits that their influence on IPO likelihood is non-existent. Variables that are not statistically significant may still be included in the model if they fulfil theoretical or structural roles, such as preserving the industry factor.

Significant Predictors ($p < 0.05$):

Technology Sector *($\beta = -1.393$, $p = 0.025$):* Companies within the technology sector show a statistically significant decrease in the likelihood of pursuing an IPO when compared to those in retail. This trend may indicate a greater inclination towards mergers and acquisitions, potentially driven by strategic acquisition motivations or fluctuations in capital markets.

Financial Services *(β = -1.797, p = 0.033*): Organizations in the financial services sector are notably less inclined to seek IPOs than retail, aligning with the ongoing trend of consolidation through acquisitions in this industry.

E.U. *(β = -2.149, p = 0.000)*: Firms based in the European Union are significantly less likely to undertake public offerings compared to their U.S. counterparts. This disparity may be attributed to structural challenges, less advantageous capital market conditions, or a more robust M&A environment.

Japan *(β = +2.169, p = 0.043)*: Japanese companies exhibit a statistically significant positive correlation with IPO exits, indicating relatively favourable conditions in their capital markets.

China *(β = -3.292, p = 0.000)*: Chinese firms are markedly less likely to opt for IPOs than U.S. counterparts, a trend that may be influenced by regulatory challenges, geopolitical risks, or limitations within the domestic capital market.

Log_Revenue *(β = -0.544, p = 0.000)*: The log-transformed pre-deal operating revenue shows a significant negative relationship with the probability of an IPO, suggesting that larger firms, in terms of revenue, tend to favour M&A exits. This unexpected preference may stem from market bias and anomalies in the selected timeframe (that will be discussed in Chapter 4.5 "Limitations of the Study"), as well as the strategic appeal of acquisitions or the challenges of scaling IPOs at higher revenue levels.

Insignificant Predictors (p ≥ 0.05):

Due to the limited size of the sample, industry categories for Biotech & Healthcare, Manufacturing and Energy did not show statistically significant relationships with the likelihood of pursuing an IPO. Geographic categories for the U.K., India also did not yield statistically significant results.

It is noteworthy that while the coefficient for Deal Value is positive, it does not achieve statistical significance, indicating an absence of a clear linear relationship with the exit strategy after accounting for other factors.

4.4.2 Testing the Robustness of the Model

To test the robustness of the empirical analysis, a reduced model was developed utilizing only the statistically significant variables ($p < 0.05$). Model fit remained robust (Pseudo $R^2 = 0.330$), indicating strong explanatory power with a more parsimonious specification.
This approach aimed to assess the model's parsimony and the reliability of the primary predictors. The findings from the simplified model were consistent in both magnitude and direction, thereby validating the key factors identified in the comprehensive model.

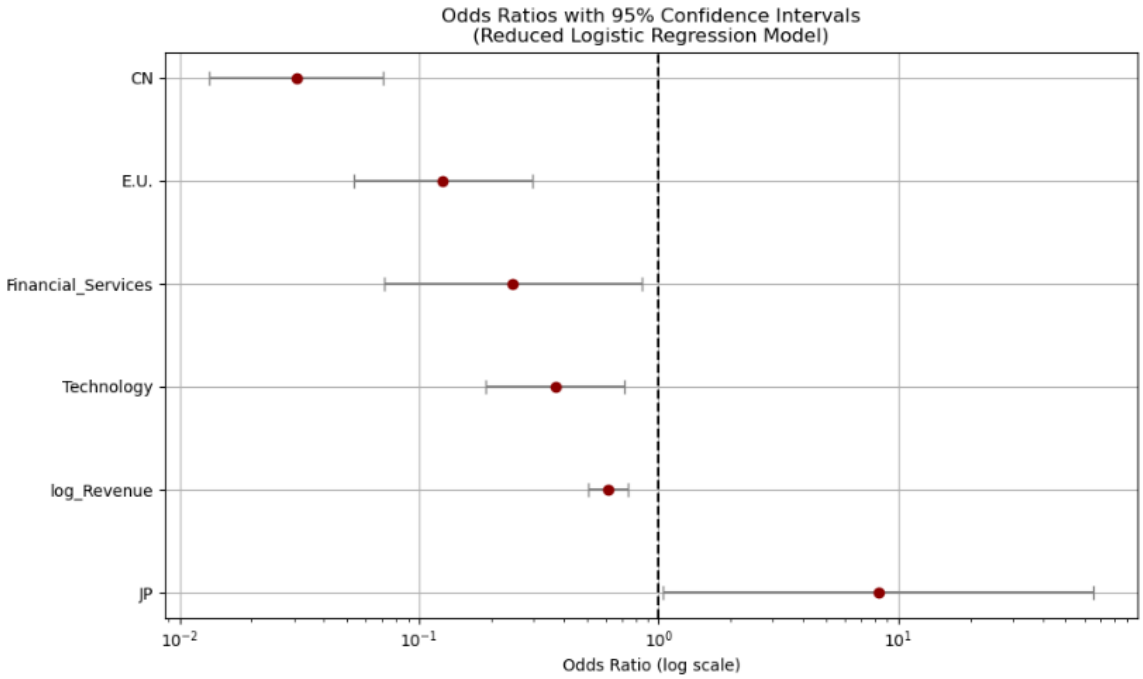
Reduced model summary at α=0.05 (significance level)

- Dependent Variable: IPO (1 = IPO, 0 = M&A)
- Baseline Category: U.S.-based Retail firms
- Observations: 403
- Df Model: 6
- Pseudo R^2: 0.330
- Model significance (LLR p-value): 1.90e-28

Variable	Coefficient	p-value	Significant?	Interpretation
Intercept	4.893	0.000	Yes	U.S. Retail firm baseline
Technology	-0.996	0.003	Yes	Less likely to IPO
Financial Services	-1.402	0.027	Yes	Much less likely to IPO
E.U.	-2.077	0.000	Yes	Strongly prefer M&A
JP (Japan)	2.110	0.046	Yes	More likely to IPO
CN (China)	-3.484	0.000	Yes	Very unlikely to IPO

Log_Revenue	-0.486	0.000	Yes	More revenue → more M&A

An odd-ratio chart for the customized reduced model is now presented with statistically significant predictors, to show the impact of each remaining variable on the likelihood of IPO vs M&As.



Explanation: This plot showcases the odds ratios along with their 95% confidence intervals for the variables featured in the streamlined logistic regression model. Essentially, odds ratios illustrate how a one-unit change in each predictor influences the chances of a venture-backed company opting for an IPO instead of an M&A, while keeping all other variables constant.

Key Points:

- An odds ratio greater than 1 means that the variable boosts the chances of an IPO. The sole variable falling into this scenario is Japan.
- An odds ratio less than 1 indicates that the variable reduces the chances of an IPO. That is the case of China, European Union., Financial services, Technology and Log_Revenue predictors.

- If a confidence interval crosses 1, it suggests that the effect isn't statistically significant at the 95% level.
- The vertical black line at 1 serves as the "no effect" benchmark.

By concentrating on statistically significant predictors - like Technology, Financial Services, and log_revenue - the reduced model offers a clearer and more understandable view of what influences IPO outcomes. By leaving out non-significant sectors such as Biotech & Healthcare or geographic factors like India and the UK, we can avoid misleading interpretations and better highlight where the real predictive power lies.

4.5 Limitations of the Study

The analysis offers important insights into exit strategies within venture-backed industries; however, several limitations should be recognized.

Firstly, we have to state chapter 4 inherently provides a comparative analysis of U.S. retail exits relative to other regions and sectors by treating it as the baseline group in the logistic regression. As such, the results shall be understood as comparative deviations from the baseline rather than as absolute probabilities for each startup profile. Despite providing insights on the directional effects, this framework may limit the ability to directly infer which startup types are most likely to exit via IPO or M&A in absolute terms.

Secondly, the prevalence of M&A exits over defined time horizons, as in 2024, may be indicative of transient market conditions - such as recessions or global financial crises, fluctuations in the IPO market, and heightened investor risk aversion - rather than reflecting inherent preferences within specific sectors. This situation could lead to a discrepancy between the empirical data and the ideal exit strategies typically preferred by venture capitalists, as in the Technology sector, where Initial Public Offerings are generally regarded as the most favourable outcome. The classification of sectors also poses difficulties, as startups increasingly adopt hybrid business models that challenge conventional industry classifications.

While the model demonstrates predictive value, its explanatory power is bounded by the assumption of logistic regression and the unique traits of the firms in the sample. Since venture capital exits occur in fast-changing, often unpredictable environments, future models may benefit from using time-series methods or scenario-based simulations to better handle unexpected events.

Lastly, issues related to data availability and transparency, particularly regarding private M&A transactions, might lead to underreporting or an incomplete depiction of the overall exit landscape.

CHAPTER 5

CHALLENGES AND UNCERTAINTIES IN PREDICTING STARTUP EXIT ROUTES

SUMMARY: 5.1 MAJOR EVENTS RESHAPING VENTURE CAPITAL EXIT ROUTES – 5.1.1 THE DOT COM CRASH (2000-2002) - 5.1.2 THE GLOBAL FINANCIAL CRISIS (2008-2009) - 5.1.3 THE COVID PANDEMIC (2020) - 5.1.4 THE TECH VALUATION CORRECTION (2022-2023)

5.1 Major Events Reshaping Venture Capital Exit Routes

As outlined in chapter 4.5 “Limitation of the Study”, one boundary in predicting how startups will exit is the ever-changing and often unpredictable nature of market conditions. While factors such as sectorial affiliation, financial performance and maturity play a significant role, they cannot fully depict the complete picture when it comes to real-world outcomes. External shocks like financial crises, economic downturns, and specific industry collapses, have historically thrown exit markets into disarray, altering the landscape for IPOs and mergers and acquisitions. Building on the historical evolution of venture capital outlined in chapter 1.2, this section serves as a natural continuation by outlining how major external events have redefined exit dynamics over time: the dot-com crash (2000–2002), the global financial crisis (2008–2009), the COVID-19 pandemic (2020), and the tech valuation correction (2022–2023).
By diving into these events, we demonstrate how external factors can challenge the reliability of traditional predictive models and stress the importance of adaptable exit strategies.

5.1.1 The Dot Com Crash (2000-2002)

Retrieving the dedicated passage, the late 1990s experienced an extraordinary rise in venture capital investment, primarily spurred by the internet's commercialization and a "get big fast" strategy that many startups embraced. This surge of speculative enthusiasm allowed startups to secure substantial funding rounds, often prioritizing swift market expansion over making a profit. The dot-com boom reached its zenith with several high-profile IPOs, and Netscape's 1995 offering played a pivotal role in igniting a series of follow-on investments and skyrocketing valuations in the tech sector.

In 1999, a massive speculation in IPO activity was registered, with 446 companies going public, raising approximately $35 billion on the first day of trading[196], which means companies would have captured that amount if IPO prices had met market demand. This huge sign of underpricing has been outlined as “money left on the table” in this dissertation (see chapter 2.1.1 Literature Review of Benefits and Risks of IPOs), a sign of overheated market momentum.

However, the foundations of this growth were lacking a reflection on financial fundamentals: startups chased aggressive growth without a viable business model, depending on market momentum instead of focusing on sustainable revenue generation. By the 2000s, signs of overvaluation were hard to ignore, and the Federal Reserve’s interest rate hikes caused a sharp correction. The NASDAQ Composite Index, which was heavily tilted towards technology stocks, dropped by almost 78% from March 2000 to October 2002.

The IPO trend followed the same path: despite 333 companies raising $26.7 billion in 2000, in the following year, the landscape had changed dramatically, with the number of IPOs dropping to just 78 and raising only $2.97 billion in the first day of trading. This shift clearly showed a significant contraction in the public markets and a huge correction in stock market pricing[197].

This IPO slowdown directly affected ventures both in their M&A and IPO activity. The broad market downturn that began in March 2000 put a damper on demand for new offerings for most of the spring. During the second quarter of the year, only 39 venture-backed companies went public, compared to 68 such companies in the first quarter, raising $3.1 billion in proceeds, compared to the previous quarter's $7.3 billion.

The downturn in the IPO market has pushed many startups to seek alternative exit routes.

M&As have become a more common option, despite often happening at reduced valuations. However, as the bubble burst, deals volume and numbers declined further.

In 2000 Q2, 73 companies were purchased for a grand total of $22.4 billion, down from 99 company acquisitions that totalled $43.87 billion in the Q1[198].

What resulted from such tumult was that exit strategies that once relied on favourable market conditions quickly became unfeasible.

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[196] Frontline, "*Thinking About Statistics*" PBS. Accessed April 26, 2025. https://www.pbs.org/wgbh/pages/frontline/shows/dotcon/thinking/stats.html.

[197] ibid 196.

[198] Glasner, J., "*Net Riches Shrinking for VCs."* Wired Business, July 18, 2000. https://www.wired.com/2000/07/net-riches-shrinking-for-vcs/.

The dot-com crash served as a stark reminder of how vulnerable startup exits can be to sudden market shifts. It highlighted the fact that even with solid financial backing and a strong position in the sector, success isn't guaranteed when faced with widespread instability.

5.1.2 The Global Financial Crisis (2008-2009)

The global financial crisis of 2008–2009 was one of the most significant upheavals in the startup exit markets ever experienced in recent history. As discussed in Chapter 1.2, the downfall of Lehman Brothers and the subsequent credit freeze sparked a wave of risk aversion throughout financial markets, which hit venture capital funding and exit opportunities hard. IPO activity, which had already started to slow down in 2007, nearly came to a standstill in 2008. The number of venture-backed IPOs in the United States plummeted from 86 in 2007 to a mere 6 in 2008, an astonishing drop of over 90%[199]. Consequently, the total capital raised through IPOs also took a hit, and the few companies that did manage to go public often had to do so at significantly reduced valuations.

M&A activity took a notable hit during this period as well. Many big companies, facing their own liquidity issues and plummeting stock prices, stepped back from making acquisitions.

As outlined in the 2009 M&A report brought by WilmerHale, the M&A market for venture-backed companies saw a 29% decrease in deal volume, from 457 deals in 2007 to 325 deals in 2008.

Total deal value plummeted 54%, from $50.9 billion in 2007 to $23.5 billion in 2008[200].

This downfall persisted in 2009, as in Q1 only 56 venture-backed M&A transactions took place, down from 106 in Q1 2008. The total value of these deals was $645 million, a stark contrast to the $4.5 billion reported in the same quarter the previous year[201].

Venture-backed that had previously relied on IPOs or strategic sales for returns were completely stranded, often having to settle for unfavourable financing terms or indefinitely postpone their exit strategies.

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[199] National Venture Capital Association, "*2009 NVCA Yearbook"*, Arlington, VA: NVCA (2009).

[200] WilmerHale, "*M&A Report 2009: Navigating a New Environment*", Boston: Wilmer Cutler Pickering Hale and Dorr LLP (2009). https://www.wilmerhale.com/media/files/wilmerhale_shared_content/files/editorial/publication/2009_ma_report.pdf.

[201] Arrington, M., "*Another Dry Quarter for Venture Exits*", TechCrunch, April 1, 2009. https://techcrunch.com/2009/04/01/another-dry-quarter-for-venture-exits/.

After the crisis, investor behaviour was fundamentally transformed again, with a newfound focus on capital efficiency, sustainable growth, and financial resilience. These lessons have remained influential in shaping venture capital strategies well beyond the stabilization of the markets.

5.1.3 The COVID Pandemic (2020)

The COVID-19 pandemic hit in early 2020, sending shockwaves through global financial markets and changing the landscape for startup exits.

At first, the uncertainty brought on by the pandemic caused a significant drop in both IPOs and M&A deals. In the first half of 2020, global IPO activity plummeted by nearly 40% compared to the same time in 2019[202].

However, unlike previous global crises, the recovery was surprisingly quick, particularly in sectors that thrived due to pandemic-related changes. As outlined in the dedicated chapter, technology and healthcare companies spearheaded a remarkable comeback, with a record number of IPOs in the latter half of 2020, featuring high-profile listings like Airbnb and DoorDash. Meanwhile, M&A activity bounced back rapidly, as deals scaled by 18% and their value increased 94% in the same period[203].

The last six months saw the prevalence of the use of special-purpose acquisition companies (SPACs) to pool investor capital for acquisition opportunities in a highly active IPO market. In 2020, SPACs raised about $70 billion in capital and accounted for more than half of all US IPOs. PE firms have been key players in the recent SPAC boom, finding them a useful alternative source of capital. More SPAC activity is expected in 2021, especially involving assets such as electric vehicle charging infrastructure, power storage, and healthcare technology[204].

This reversal illustrated how sector-specific dynamics and rapid market adaptation could mitigate broader macroeconomic shocks, creating both new exit opportunities and strategic challenges for venture-backed startups.

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[202] Ernst & Young, "*Global IPO Trends: Q2 2020*", London: EY Global Limited (2020).

[203] Again, no information is provided on VC asset sales/M&A activity, however we deduct it followed the general decreasing trend.
PricewaterhouseCoopers "*Global M&A Industry Trends: 2021 Outlook"*. London: PwC, January 2021. https://www.pwc.com/gx/en/news-room/press-releases/2021/global-m-and-a-industry-trends-jan-2021.html.

[204] Although this information is not necessarily linked with the focus of the dissertation, it serves to understand the context of the flourishment of new exiting strategies from atypical and unique market opportunities, ibid. 203

5.1.4 The Tech Valuation Correction (2022-2023)

After the post-pandemic surge, the tech industry experienced a major valuation correction that kicked off in late 2021 and really picked up steam through 2022 and 2023.

A mix of ongoing inflation, climbing interest rates, and a reassessment of growth-focused assets played a big role in this downturn. The Nasdaq Composite Index took a hit, dropping about 33% in 2022, which was its worst annual performance since 2008. The index finished the year at 10,466, a significant drop from its opening figure of 15,645[205]. In parallel, Tesla and Apple got hit pretty hard, with shares of these large-cap firms falling more than 12% and 3%, respectively[206].

This correction had serious consequences for venture-backed exit strategies, starting from venture funding falling to $248.4B in 2023, the lowest since 2017[207].

Meanwhile, the number of VC-backed IPOs in the U.S. declined from 157 in 2021 to a mere 20 in 2022, marking the lowest annual count since 2009. The total IPO proceeds raised by VC-backed companies in the U.S. plummeted from $60.1 billion in 2021 to just $1.6 billion in 2022. The median size of these offerings shrank by 70%, going from $176.0 million in 2021 to $52.3 million in 2022[208]. At the same time, M&A activity involving VC-backed firms fell by 26%, dropping from 1,594 deals in 2021 to 1,174 in 2022[209].

Not only did the volume of deals decrease but the quality of exits too. Down rounds, where startups raised funds at lower valuations than before, became more common, signalling weakened bargaining power for founders[210]. Also, many firms turned to secondary sales, structured exits, or mergers under heavily discounted terms to secure liquidity[211].

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[205] Nasdaq, *"Stocks Close Out 2022 With Worst Losses Since 2008*" Nasdaq, December 30, 2022. https://www.nasdaq.com/articles/stocks-close-out-2022-with-worst-losses-since-2008.

[206] ibid. 205

[207] CB Insights, "*State of Venture 2022 Report*" CB Insights (2023).

[208] The whole passage is taken from: WilmerHale and Dorr LLP, "*2023 IPO Report*", Boston: WilmerHale (2023). https://www.wilmerhale.com/media/files/shared_content/editorial/publications/documents/2023-wilmerhale-ipo-report.pdf.

[209] ibid. 207

[210] PitchBook and NVCA, "*PitchBook-NVCA Venture Monitor: 2022 Annual Report,* PitchBook Data, Inc. and National Venture Capital Association (2023).

[211] Silicon Valley Bank, "*State of the Markets Report 2022*", SVB Financial Group (2022).

During this period, investor priorities shifted noticeably. As public market conditions deteriorated and liquidity tightened, venture capital investors placed greater emphasis on capital efficiency, sustainable revenue growth, and cash preservation.
As needed to withstand market illiquidity and thus, to survive, startups increasingly had to extend their cash runways, reduce burn rates, and pursue profitability as a strategic objective rather than prioritize aggressive expansion[212].

In this chapter, we explored key events such as the dot-com crash, the global financial crisis, the COVID-19 pandemic, and the recent tech valuation correction. These unprecedented cases clearly illustrate how external shocks can significantly affect the exit strategies of startups. Even in the rare situation of strong internal fundamentals, startups' chances for IPOs and mergers can be at risk due to sudden shifts in market sentiment, liquidity, and the overall economic landscape. This historical evidence reinforces an important point we made earlier: while empirical models are beneficial, they can't fully encapsulate the unpredictability of real-world exit scenarios. For venture-backed companies and their investors, maintaining a flexible and adaptive exit planning strategy is essential in today's ever-changing environment.

[212] JPMorgan Chase & Co., "*Does Your Startup Have Enough Runway to Survive?*" JPMorgan Insights, accessed April 27, 2025, https://www.jpmorgan.com/insights/business-planning/does-your-startup-have-enough-runway-to-survive.

CONCLUSIONS

I. Summary of Key Findings

This thesis aimed to understand how venture capital funds can successfully implement exit strategies from their investment portfolio composed of startups, especially focusing on IPOs and mergers or acquisitions, while also considering the internal and external factors that can sway these outcomes.

The study kicked off by laying down the conceptual groundwork of venture capital, taking a closer look at its historical evolution and key institutional characteristics.

The analysis underscored that exit planning is a crucial part of the VC lifecycle, seen from both the investor's needs for liquidity and the startups' goal of achieving long-term growth or strategic integration.

Through a thorough literature review, the thesis offered a comprehensive comparison of IPOs and M&As, detailing the risks and benefits tied to each option. IPOs were shown to bring in substantial capital and boost visibility but imply increased regulatory hurdles and market risks. On the flip side, M&A exits tend to be executed more swiftly and can provide a higher degree of certainty in returns, especially in volatile market conditions.

In Chapter 4, the empirical investigation utilized a logistic regression model to evaluate the chances of IPO exits based on a dataset of global startups. The analysis pinpointed several key predictors of choosing an IPO, particularly highlighting sector affiliation and geographic location. Startups in the technology and financial services sectors were found to have a higher likelihood of staying private, as were those based in regions like the European Union and China (contrariwise to Japanese startups), compared to a baseline group of U.S. retail startups. Additionally, the financial performance, measured by operating revenues, emerged as an important factor, surprisingly indicating that larger and more financially stable firms are in a better position to succeed with IPOs.

However, the study also acknowledged important limitations. The model relies on a binary logistic regression framework and uses U.S. retail startups as the reference group, which inherently limits the generalizability of the results across other sectors and geographies. Additionally, several variables included in the initial model, such as Biotech & Healthcare, Manufacturing, and some regional indicators, were found to be statistically insignificant, probably justified by the limited size of the sample.

These imperfections were addressed by estimating a reduced version of the model, excluding the insignificant predictors to improve interpretability and robustness.

The decision to restrict final recommendations and discussions to only statistically significant variables reflects a commitment to empirical rigor and prevents overgeneralization.
Still, the broader analysis recognizes that startup exits are shaped by a complex interaction of measurable and unobservable factors: a point that motivated the inclusion of historical event analysis in Chapter 5.

II. Future Research Directions

While this study has provided important insights into the determinants of startup exit strategies, it also opens several roads for further research.
First, a more detailed analysis of geographic influences could bring up meaningful results. Because this thesis was limited to treating countries and economic regions as broad categorical variables, further studies could incorporate more granular indicators such as regulatory environments, capital market maturity, or investor protection laws to better explain location-specific differences in exit outcomes. Moreover, since the logistic regression model used here relies on a comparative framework (with U.S. retail startups as the baseline), future research could adopt alternative baselines or explore absolute likelihood models to generalize findings across a wider range of startup archetypes.
Another promising direction involves extending the analysis into the post-exit phase: while this thesis focuses on predicting the likelihood of specific exit routes, what happens afterward is not treated. Evaluating the long-term performance and sustainability of venture-backed firms following an IPO or acquisition, in terms of profitability, market share, or survival rate, could offer insights into the strategic consequences of each exit choice.
In addition, integrating qualitative variables could add a new layer of explanatory power. For instance, behavioural traits of founders and investors, board dynamics, or cultural attitudes toward risk may influence exit timing and route selection in ways that cannot be captured through financial metrics alone. Such variables could be explored through interviews, surveys, or case study methods.
Finally, the rising prominence of non-traditional exit paths, including secondary sales, SPAC mergers, or token-based exits in blockchain startups, suggests the need for updated frameworks that capture the full spectrum of modern liquidity strategies. Future empirical models might be designed to compare not only IPOs and M&As but also these newer mechanisms, reflecting the evolving nature of the venture capital ecosystem in the fourth industrial revolution age.

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Source: Statista. 2023. “Median Time from Initial Venture Capital Investment to Exit in the United States from 2005 to 2023.” Statista. Accessed February 26, 2025, url: https://www.statista.com/statistics/320793/median-time-venture-capital-exit-usa

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