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Studying the U.S.-Based Portfolio Companies of U.S. Impact Investors

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Abstract

Recent years have seen a dramatic increase in the reliance on market-based solutions to social and environmental problems around the world (Barman 2016; Horvath and Powell 2020). The growth of impact investing is a vivid example of this trend and, although there have been efforts to understand the strategies and returns of impact investors (Gray et al. 2015; Kovner and Lerner 2015; Barber et al. 2021; Burton et al. 2021; Geczy et al. 2021), less attention has been given to systematically analyzing the companies that they fund. One important constraint has been data availability, as standard data sources do not typically identify impact portfolio companies ("IPCs"), or companies funded by impact investors. Even when identified, standard data sources contain only limited information on these companies, which are oftentimes privately held.

Our research agenda aims to fill this gap by facilitating the study of IPCs through a multi-dimensional approach. We draw upon an expansive database of 14,165 IPCs, compiled by the Project on Impact Investments ("Pii") at Harvard Business School ("HBS") (Burton et al. 2021). For the in-depth data collection effort on IPCs described in this paper, we screen this database for the 4,371 U.S.-based portfolio companies of 146 U.S.-based impact investors and 4 impact funds of private equity investors that have invested in at least one U.S. headquartered IPC. We then gather detailed information found in publicly filed documents for a carefully selected sample of 270 IPCs of which we interview 82. This paper describes our sampling methodology and research process. Ultimately, we hope our research will fill gaps in understanding whether and how IPCs achieve social and financial returns.

Introduction

Recent years have seen a dramatic increase in the reliance on markets and investments as potential solutions to social and environmental problems in the United States and around the world. Within the United States, charitable giving has continued to grow steadily, reaching approximately $449.6 billion in 2019 (Giving USA 2020). In addition, market-based solutions are now seen as attractive counterparts or, in some cases, alternatives to philanthropy (Barman 2016; Horvath and Powell 2020). This trend has manifested in the growth of corporate social responsibility (Carroll 1999), social entrepreneurship and social enterprise (Mair 2006; Dacin et al. 2011), as well as responsible investing (Sparkes 2002). In particular, the blurring boundary between markets and philanthropy has become evident in the global ascendance of "impact investing," an approach to investing whereby investors seek the dual aims of financial profit alongside positive social outcomes (Trelstad 2016; Andersen 2020; Hand et al. 2020). Champions tout impact investing as an opportunity to do well and do good simultaneously (Brest and Born 2013). Meanwhile, critics decry the encroachment of neoliberal corporate values into once sacred domains (Sandel 2012) and the continued consolidation of wealth under the guise of societal benefit (Giridharadas 2018). Whether champion or critic, there is much more to be learned about impact investing.

The idea of achieving social returns by deploying financial capital held by governments or philanthropic organizations has been around for decades. Within the U.S., it has been exemplified by program-related investments ("PRI"), pioneered by the Ford Foundation in 1968, as well as Community Development Financial Institutions ("CDFI"), which originated in the early 1970s. Yet, the practice of using privately held capital to create social impact has only burgeoned more recently. The Rockefeller Foundation was credited with coining the term "impact investing" in 2007 as well as helping to build a language and community around the dual goals of achieving financial returns and social benefits. Since then, impact investing has become increasingly standardized through the development of more precise definitions and metrics, and it has further attracted progressively more attention and capital (Clarkin and Cangioni 2016). As of the end of 2019, the full impact investing market across the globe encompassed an estimated $715 billion in assets under management, an increase from approximately $502 billion in 2018, and impact investors reported that the practice continued to grow steadily (Mudaliar and Dithrich 2019; Hand et al. 2020).[2]

Amidst the growth of impact investing, academic researchers have endeavored to characterize this emerging field by defining its boundaries (Höchstädter and Scheck 2015), documenting its evolution (Mair and Hehenberger 2013; Hannigan and Casasnovas 2020), and characterizing the types of impact investors as well as the kinds of impact investments they make (Sandberg et al. 2009). Impact investors encompass a wide range of actors, including wealthy individuals, family offices, foundations, diversified financial institutions, asset managers, CDFIs, development finance institutions, and pension funds. Yet, while many investors claim to be focused on impact, there is a great deal of handwringing and skepticism about who qualifies as an impact investor. Of particular concern is the ever-present threat of "green washing" or "impact washing" (Hand et al. 2020; Leijonhufvud and Locascio 2020) whereby investors claim to care about social impact but do little in reality.

Practitioners and academics agree that impact investing is characterized by seeking both financial returns and a non-financial, social or environmental impact. However, since non-financial impact can take diverse forms, standard setters in the impact investing ecosystem have advocated for more stringent criteria regarding who can be called an impact investor in order to maintain the integrity of the category. Both the Global Impact Investing Network ("GIIN") and the International Finance Corporation ("IFC") now include two additional criteria in their definition of impact investing, namely: 1) the intention of achieving a positive social or environmental goal and 2) the measurement

[2] The 2019 market size, estimated by Hand et al. (2020), includes a range of investor types across diverse asset classes that include both private and public markets.

of social or environmental outcomes (Gregory and Volk 2020; Hand et al. 2020). Despite such innovations, the category of impact investor remains largely self-defined as there is little transparency over how these criteria are evaluated in practice. A recent GIIN survey reveals that 66% of impact investors remain concerned about the presence of impact washing amongst their peers (Hand et al. 2020).

Literature Review

The difficulty of defining impact investors as a category complicates researchers' ability to distinguish and study the characteristics of the universe of impact investments and impact portfolio companies ("IPCs"), in which impact investors invest. Thus far, little academic research has been conducted on IPCs even though the social and environmental impact of such companies is central to the promise of impact investing. The literature on social enterprise and hybrid organizations often references impact investing as fertile ground for companies that seek societal benefit alongside market goals, but it has not yet developed a systematic framework for what characterizes this space (Battilana and Lee 2014; Lehner and Nicholls 2014).

Scholars instead tend to focus on specific categories of companies, such as microfinance organizations, public-private partnerships, fair trade organizations, and base of the pyramid markets (Battilana and Dorado 2010; Jay 2013; Santos et al. 2015; Battilana et al. 2017; Elango et al. 2019). Although some organizations within this research undoubtedly overlap with the impact investing domain, they only encompass part of its entirety. Additionally, existing studies on impact investments are predominantly qualitative in nature, allowing companies and investors to opt into the research, and typically encompassing a small sample size or a case study method (Glänzel and Scheuerle 2015; Agrawal and Hockerts 2019; Phillips and Johnson 2019).

The situation is further complicated by the diversity of strategies and goals within the space of impact investing. Impact investments may take the form of grant, debt, and equity investments and investors themselves may be targeting either market-rate or below-market returns. This variation reflects field origins in philanthropy and government-sponsored economic development. A recent GIIN impact investing survey reveals that private debt and public debt currently encompass the largest segments of capital invested; yet, private equity investing accounts for the third largest asset class and it is attracting increased attention as large private equity firms enter the market and raise billion dollar impact funds (Gregory and Volk 2020; Hand et al. 2020).

In response to the increased participation of private equity investors in the field of impact investing, scholars have worked to understand how these professionals operate and how their investment funds perform (Gray et al. 2015; Kovner and Lerner 2015; Barber et al. 2021; Burton et al. 2021; Geczy et al. 2021). However, this research continues to be impeded by a lack of comprehensive data on the financial outcomes of impact funds, as well as the management and legal practices that govern them. Moreover, studies on impact investing tend to focus on the level of investors and funds, while substantially less attention is paid to systematically analyzing the impact portfolio companies, in which private equity investors invest. This latter analysis is key to assessing if, when, and how impact investors achieve both social and financial returns. In addition, the study of IPCs allows for comparisons between these firms and traditional private-equity funded ventures.

Thus, a greater focus on studying portfolio companies funded by impact investors or IPCs holds the promise of improving our understanding of the practice, outcomes, and societal repercussions of impact investing. The study of IPCs will further contribute to the literatures on social enterprises and hybrid organizations as well as research that compares impact investing with traditional private equity investing. As with the study of impact investors and their funds, research into IPCs has been hindered by a lack of access to a comprehensive and representative sample of companies funded through impact investing. Past work has primarily focused on companies that self-identify as social enterprises, targeted case studies, as well as small samples drawn from grant programs or incubators

(Battilana and Lee 2014; Santos et al. 2015; Agrawal and Hockerts 2019). Although valuable, these approaches do not capture the entire spectrum of investments by impact investors. Expanding research into a more representative set of companies funded by impact investors is fundamental to shedding light on both the characteristics of IPCs and the overall outcomes of impact investing practices in terms of profit and social impact. Areas for future analysis include: how the funding and management of IPCs differs from conventional investment practices, whether their developmental trajectories are unique from non-impact funded companies, the types of business models IPCs undertake, the specific challenges for leaders of these businesses, as well as the degree and type of impact achieved through their work.

Our work

This paper describes our sampling methodology and research process for developing a rich database on a broadly representative sample of IPCs. Our work here builds on a previous effort to exhaustively catalog both impact investors and impact portfolio companies. The Project on Impact Investments ("Pii") at Harvard Business School ("HBS"), described in Burton et al. (2021), identified 445 impact investors, defined as having the explicit dual objective of generating social good and financial returns, and identified 14,165 IPCs that received funding from these investors.[3] By starting with this universe, we reduce the sampling bias prevalent in past research.

In order to maintain consistency across the legal and cultural context of the companies we analyze, we focus only on the 4,371 U.S.-based IPCs funded via equity investments from the 146 U.S.-based impact investors and the 4 impact funds investing in U.S.-based IPCs. We then take a multi-dimensional approach that combines quantitative sampling methods with the analysis of publicly filed

[3] The Pii database gathers a comprehensive overview of the impact investing universe by aggregating data from multiple financial databases and established industry resources, and, additionally, applying quality checks to verify the information gathered.

documents and qualitative interviewing to generate insight into a diverse sample of companies funded by impact investors.

We develop a study sampling frame of 270 IPCs and collect rich, detailed information for these companies through three methods:

1) **Gathering and analyzing company Certificates of Incorporation ("COI")**. COIs are the legal documents filed with a government entity that contain information about the name and purpose of the corporation, where it is located, and the number, types, and rights associated with shares of stock that the corporation is authorized to issue.

2) **Aggregating comprehensive archival research.** The trade and business press, company websites, and press releases all provide valuable information about company evolution. We combine COIs with information obtained from financial databases, news archives, and web archives in order to construct a detailed timeline of each company's development and a baseline set of descriptive variables.

3) **Conducting semi-structured interviews with company leadership for a subset of the sample.** We complement this document-based data collection with semi-structured interviews for a subset of the IPCs to further triangulate our research findings across sources. We choose to conduct semi-structured interviews in order to allow greater flexibility for pursuing research questions across a diverse set of companies as research on IPCs is still nascent (Edmondson and McManus 2007). When recruiting interview participants, we combine stratified sampling with purposive sampling to focus in on a subset of 141 companies. Purposive sampling, also known as theoretical sampling, is "a method by which units are selected to be in a sample by a deliberate method that is not random" (Shadish et al. 2002, p. 511) that is common in qualitative and case study research (Corbin and Strauss 2015). We specifically target IPCs where impact investors play a leading role in company leadership and financing.

Overview

Part 1 of this paper presents an overview of our sampling methodology and explains how we develop our study sampling frame and carefully draw a diverse sample of 270 IPCs for further study. In Part 2, we describe the process of collecting and analyzing company COIs. In Part 3, we outline the process of recruiting and conducting interviews with company leadership as well as its results in terms of response rates and participant characteristics. Finally, in Part 4, we report on the characteristics of the IPCs in our study and how they compare to those of U.S.-based IPCs of U.S.-based investors within the Pii database.

The data we compile promises to generate insights into research questions, such as the following: What are the characteristics of impact portfolio companies and how do they differ from the portfolio companies of conventional investors? What are the challenges impact portfolio companies experience across different sectors? Do IPCs differ in terms of structure, business model, or managerial practices from companies that have conventional investors? What is the relationship between the achievement of non-financial impact and financial profit within impact portfolio companies, meaning are they in tension or aligned and how does this differ across various categories of IPCs? What is the relationship between impact portfolio companies and their impact investors? How does the leadership of IPCs view impact investing? How do government policies and institutions influence the market landscape for IPCs across different sectors and geographies? While this document does not seek to answer these questions, it is our hope that the data described here provides solid grounding for subsequent research.

Part 1: Sampling Methodology

Within our sampling frame of IPCs for in-depth analysis, we seek both representativeness and theoretically meaningful variation across a population, large enough to allow for quantitative analysis. To construct our sampling frame, we sample from the Pii database in two ways:

1) Stratified Sample: we draw a stratified random sample of U.S. IPCs from impact investors, headquartered in the U.S. that exclusively invest in impact investments.
2) Fund-level Sample: we compile data on all the U.S. IPCs funded through the impact funds of large, traditional private equity firms that pursue both conventional and impact investing strategies in separate fund vehicles.

After a data verification process, we include all of the verified IPCs from the stratified and fund-level samples in our analysis of company COIs. For our pool of IPCs for interviews, we draw sub-samples across three rounds: Rounds 1 and 2 are drawn from the stratified sample and Round 3 is drawn from the fund-level sample. When constructing the sub-samples for these rounds, we rely on both random and theoretical sampling strategies, as detailed in Section 1.4. This is done in order to capture diverse segments of the impact investing universe and to focus more intensively on IPCs where impact investors play a leading role in company leadership and financing.

In the sections below, we provide greater detail on our stratified sample and fund-level sample as well the interview pool sampling strategies. Initially, we draw a total of 370 U.S. IPCs from the Pii database through the stratified and fund-level samples. After a detailed verification process, we include 270 for in-depth analysis within our study of company COIs. We further screen these companies to compile our pool for the interview-based study, which is nested within the larger set of 270 IPCs and consists of 141 IPCs. From the 141 IPCs in our interview pool, we ultimately recruit 82 companies for interviews. Our study sampling frame is summarized in Table 1 below.

Table 1
The Study Sampling Frame

	Study Sampling Frame			
	Stratified Sample		Fund-Level Sample	
	Round 1 Sub-sample	Round 2 Sub-sample	Round 3 Sub-sample	Total
Original Draw	90	180	100	370
Removed during data verification*	10	33	49	92
Cannot find COI	**2**	**5**	**1**	**8**
COI sample	**78**	**142**	**50**	**270**
Excluded during sampling process**	1	97	31	129
Interview Pool	**77**	**45**	**19**	**141**
Remove non-participants	36	16	7	59
Interview Participants	**41**	**29**	**12**	**82**
Interview Response rates	**53%**	**64%**	**63%**	**58%**

*We detail the methodology of the data verification process in Section 1.3 and Table 2 below.
**The sampling process for our interview pool will be discussed in detail in Section 1.4 below.

1.1 Stratified Sample Methodology

We begin by screening the database compiled by the Project on Impact Investments at HBS for U.S.-based portfolio companies, which are funded by U.S.-based impact investors exclusively investing in impact investments (Burton et al. 2021). A goal of our work is to understand whether IPCs emerge and evolve differently from traditional venture capital and private equity-backed firms. Thus, we focus on impact investors who were making equity investments as opposed to investors providing debt capital or making philanthropic contributions with no expectations of future returns.

From an initial population of 170 U.S.-based impact investors who are making direct equity investments in U.S. headquartered portfolio companies, we screen out investors that do not have at least one U.S. portfolio company. This leaves us with 147 impact investors and a total of 4,496 U.S. portfolio companies to sample from.[4] A strict random sample of the 4,496 U.S.-based portfolio companies of the 147 impact investors would result in a sample of many small companies, and relatively few IPCs funded by larger investors, who tend to make fewer, larger investments. Thus, to get variation across different types of impact investors and, at the same time, to capture the portfolio companies of larger, more prominent impact investors, we develop a stratified sampling framework. Through this method, we randomly draw portfolio companies from two categories of impact investors detailed below and oversample from the most experienced and sophisticated investors.

Two readily available metrics of the experience and sophistication of an investor include: the number of investments made and the size of the investment fund. Interestingly, as we document in Appendix I, these are not necessarily correlated. Some very large impact funds are just beginning to make investments and thus have very few portfolio companies. On the other hand, some small impact funds have chosen to spread their investments across a large number of portfolio companies, giving the impact investor broad experience, but representing little of the overall impact investment dollars.

[4] Our sampling work proceeded in parallel with the development and verification of the Pii database (Burton et al. 2021). As a result, there are some minor differences in the number of impact investors and impact portfolio companies included in our sampling methodology for this paper and the final number of impact investors and IPCs in the Pii database. For the stratified sampling methodology detailed in Appendix I, we included 147 U.S.-based impact investors and their 4,496 U.S.-based IPCs, while the final Pii database includes 146 U.S.-based impact investors and 4 impact funds of private equity investors that have invested in at least one U.S. headquartered IPC. In total, the number of U.S.-based IPCs in the Pii database is 4,371. Any companies drawn during our study's stratified sampling process that were later removed from the Pii database were similarly removed from our study sampling frame as part of the data verification process. These changes are detailed in Tables 2 through 5 of Part 1.

Impact investors also vary in geographic focus. Some large and experienced impact investors have made only a few U.S.-based investments, but are widely regarded as leading global impact investors.

Thus, our stratified sampling frame classifies investors in two ways: 1) in quartiles according to the number of investments impact investors have made, a classification that captures variation in deal experience, and 2) in quartiles according to investor size in terms of assets under management ("AUM"), a classification that captures variation in economic impact. We then randomly draw our sample in batches of 30 IPCs where one-third (10 companies) drawn are stratified across the number of impact investor portfolio companies and two-thirds (20 companies) drawn are stratified across investor AUM. We verify that these draws provide us with a reasonably representative sample of the underlying population by comparing 100 draws of 30 companies to our entire population (See Table A.7 in Appendix I). We ultimately make 9 draws of 30 IPCs for a total stratified sample of 270 potential IPCs for our in-depth analysis. We choose to limit our stratified sample to 270 IPCs in order to enable rigorous, qualitative analysis across all the companies drawn within the timeframe and budget allotted for our research. For further details on our stratification methodology, see Appendix I.

1.2 Fund-Level Sample Methodology

As a second, complementary sampling strategy, we focus on U.S.-based IPCs that are funded through the impact funds of large, traditional private equity firms that pursue both conventional and impact investing strategies in separate fund vehicles. These funds are of interest due to their large size and significant economic impact, which often eclipses that of smaller, investment firms who specifically focus on impact investing. They are also of interest because their investment teams draw on talent from "non-impact" staff and, therefore, may choose different kinds of investments or govern their investments differently. Thus, we hypothesize that the IPCs of large, private equity firms will have characteristics, distinct from the IPCs of investors that exclusively invest in impact investments. We then construct a fund-level sample that represents this distinct population of IPCs.

We begin with the 13 traditional private equity firms with impact funds identified in the Pii database (Burton et al. 2021). Within this database, the research team relied on multiple sources to identify the companies that were funded through the specific impact funds of these investors. This presents an advantage over financial databases, which are often incomplete and may link portfolio companies to investors at the firm level as opposed to the fund level. From the 13 private equity investors with impact funds in the Pii database, we identify 4 that have invested in at least one U.S.-headquartered IPC at the time of our data collection. Within the Pii database, these 4 investors are linked to a total of 100 U.S.-based IPCs. Rather than sample, we include all of these 100 IPCs in our study.

1.3 Verifying our Sampling Frame

Next, we review the 270 IPCs drawn through the stratified sample and the 100 IPCs drawn from the fund-level sample through a detailed data verification process. During this process, we check for duplicates and verify, through additional background research, that each of the IPCs has indeed received an investment from at least one U.S.-based impact investor or impact fund. Finally, we request company COIs across the entirety of the study sampling frame to make sure these vital company documents can be located. Ultimately, the data verification process leads to the removal of 100 companies from our sampling frame for the following reasons: duplication, mismatches to impact investors, company removed from the original Pii database, companies identified as part of roll-ups, and the inability to locate the company COI. Below, we provide further details on the reasons for IPC removal as well as how the data verification process is reflected across our stratified sample and fund-level samples.

From the original stratified sample of 270 companies, we remove 50 IPCs for the following reasons: 1) eight companies removed as duplicates,[5] 2) thirteen companies removed as mismatches in the Pii database,[6] 3) twenty-two companies removed as part of the verification process of the overall Pii database, and 4) seven companies removed because their COIs could not be found. Thus, the stratified sample contributes 220 IPCs to our study sampling frame.

From the initial 100 companies included from the fund-level sample, we remove 50 IPCs for the following reasons: 1) nine companies removed as duplicates,[7] 2) fourteen companies removed as mismatches,[8] 3) twenty-six companies removed because they were considered roll-ups (merged into or acquired by another IPC of an impact investor), [9] and 4) one company removed because its COI could not be found. In total, the fund-level sample contributes 50 companies to our sampling frame for analysis.

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[5] Duplicates in the stratified sample are companies that appear in our sample more than once for the following reasons: our method of sampling with replacement, multiple impact investors in the Pii database invested in the company, and the firm underwent a name change.

[6] These mismatches arise for two reasons: 1) the financial database where the company-investor link was found had an incorrect investor listed as an investor in the company. For example, a database such as Capital IQ, PitchBook, or Preqin included the portfolio company under a list of companies funded by an impact investor, but we later discovered through additional background research that this listing was incorrect and the impact investor never invested in this company, or 2) when searching for the impact portfolio company in a financial database, our researchers initially identified a company with a name, very similar to that of the impact portfolio company, but which we later discovered was an incorrect match.

[7] Duplicates in the fund-level sample are companies with a unique name that, after conducting additional background research, we discovered are the same company.

[8] The mismatches in the fund-level sample are companies that financial databases incorrectly list as receiving funding from the impact funds of large private equity investors instead of one of their conventional funds. We discovered these mismatches through background research and they were further brought to our attention by the private equity investors through whom we recruited interview participants for our study.

[9] In the financial databases used to compile the Pii database, impact investors are listed as investors in both the companies they acquire as well as the companies acquired through roll-ups (a private equity acquisition strategy where companies are merged into existing portfolio companies of the private equity firm). In our sample, we retain the original IPC, acquired by the impact investor, but remove the companies acquired through roll-ups.

Thus, the total number of IPCs included in our final sample is 270, that is, 220 companies from the stratified sample and 50 companies from the fund-level sample. Additional information on the characteristics of these companies as well as how they compare to the universe of U.S.-based IPCs in the Pii database is found in Part 4 of this paper. The details of the sample and verification process are summarized in Table 2 below.

Table 2
The Stratified Sample and Fund-Level Sample

	Stratified Sample		Fund-Level Sample		Total	
	IPCs dropped	IPCs remaining	IPCs dropped	IPCs remaining	IPCs dropped	IPCs remaining
Original Draw		270		100		370
Duplicates	8	262	9	91	17	353
Mismatches	13	249	14	77	27	326
Companies removed from Pii database	22	227	0	77	22	304
Companies removed as roll-ups	0	227	26	51	26	278
Unable to find COI	7	220	1	50	8	270
Final Sample		220		50		270

We include all 270 verified IPCs in our sample for the analysis of company COIs, a process which we describe in Part 2. Meanwhile, for our interview study, we select a sub-sample of 141 IPCs through criteria detailed in Section 1.4 below. As part of the interview process, to be discussed in Part 3, we gather information about the operation, evolution, and outcomes of companies funded by impact investors.

1.4 Interview Pool Methodology

For the interview pool, we construct sub-samples of IPCs across three separate rounds in order to capture diverse segments of the impact investing universe. In Round 1, we rely on our stratified sampling methodology, described in Section 1.1 above, to capture a reasonably representative sample of IPCs from across the universe of companies in the Pii database. For Round 2, we rely on theoretical sampling, an approach commonly used in qualitative and case study research (Corbin and Strauss 2015).[10] In our case, we theoretically sample IPCs in order to focus more intensively on those where impact investors played a leading role in company leadership and financing. Finally, because we hypothesize that impact portfolio companies of the fund-level sample will be different from the companies funded through investors that solely focus on impact investing strategies, Round 3 centers on companies drawn from the fund-level sample. Note that all three rounds of sub-samples are nested within the larger stratified and fund-level samples for which we obtain COIs and can be statistically weighted to reflect the known universe of IPCs.

1.4.1 Interview Pool: Round 1 Sub-Sample

For our Round 1 sub-sample of companies, we include all of the IPCs from the first three draws of 30 companies from the stratified sample (i.e. draws one through three), which contribute a total of 90 IPCs.[11] We choose this first strategy in order to include a reasonably representative sample of companies from across the universe of impact investments in the Pii database. Out of the 90 companies drawn, the data verification process (described in Section 1.3 above) results in the exclusion

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[10] A principle of theoretical sampling is to acknowledge known sources of variation across a population of cases and to deliberately include cases that represent this variation (Trost 1986). In some studies, researchers seek the most extreme outlier cases. In other studies, researchers try to identify typical or average cases. The ultimate goal of theoretical sampling is to build a set of cases that represent a plausible range of variation and allow for logic-based inferences about a broader phenomenon. A recommended technique is to interview sequentially and add cases that substantively contribute to the relevant variation until such a time when additional cases cease to yield additional insight – a point known as saturation (Small 2009).

[11] In the larger, stratified sample compiled for this study and described in previous sections, we include 9 draws of 30 IPCs each, which result in a total of 270 companies pre-verification.

of 12 companies for the following reasons: 1) one company removed as a duplicate, 2) three companies removed as mismatches in the Pii database, 3) six companies removed as part of the verification process of the overall, Pii database, and 4) two companies removed because their COIs could not be found. In addition, we exclude one company identified as a "real asset" without relevant contacts for interviews.[12] In total, the Round 1 sub-sample of the interview pool includes 77 impact portfolio companies. This information is summarized in Table 3 below.

Table 3
Round 1 Sub-Sample

	IPCs Dropped	IPCs Remaining
Original Draw from Stratified Sample		**90**
Duplicates	1	89
Mismatches	3	86
Companies removed from Pii database	6	80
Cannot find COI	2	78
COI Sample		**78**
Real Assets	1	77
Interview Pool		**77**

From the initial round of background research and interviews with company leaders, we learn that firms vary greatly in terms of whether their mission or leadership intends to achieve any sort of social impact. There are a number of instances where the interviewees do not deem their company to be focused on achieving a non-financial, social benefit and, in some cases, interviewees do not recall the impact investor through which we identify them. In effect, we realize that impact investors are sometimes playing quite minor roles in and may be contributing a small amount of the total invested

[12] We are interested in interviewing the leadership of companies, funded by impact investors. Real assets are, therefore, not relevant to this part of the study.

capital towards the IPCs in our sample. As a result, we decide to develop a more targeted approach to identifying IPCs for the Round 2 sub-sample of our interview pool.

1.4.2 Interview Pool: Round 2 Sub-Sample

From our first round of interviews, we learn that not all IPCs intentionally work towards the dual mission of social and financial returns and that their leadership is not always aware that the IPC has obtained financing from impact investors. Since understanding how IPCs navigate a dual mission is an important research goal, we decide to focus our interview pool more explicitly on IPCs where impact played an important role. Thus, for the Round 2 sub-sample, we select only those IPCs where impact investors play a more dominant role in company financing and, in some cases, company leadership. Thus, we screen the final six draws of 30 companies from the stratified sample (i.e. draws four through nine, which originally contribute 180 unverified IPCs to the sampling frame) for "impact markers." We define IPCs with impact markers as: 1) companies that have an impact investor on their board, 2) companies that have an impact investor with a majority holding, and/or 3) companies invested in by multiple impact investors from the Pii database. We hypothesize that companies with these impact markers are more likely to integrate achieving social impact as a core part of their business model, since impact investors play a more significant role in the funding structure or leadership of these companies.

From the original 180 IPCs, the data verification process described in Section 1.3 removes 38 companies for the following reasons: 1) seven companies removed as duplicates, 2) ten companies removed as mismatches in the Pii database, 3) sixteen companies removed as part of the verification process of the overall, Pii database, and 4) five companies removed because their COIs could not be found. Next, we identify 45 companies that have at least one impact marker and remove the 97 that do not from the interview pool. In total, the Round 2 sub-sample yields 45 IPCs for our interview pool. This information is summarized in Table 4 below.

Table 4
Round 2 Sub-Sample

	IPCs Dropped	IPCs Remaining
Original Draw from Stratified Sample		**180**
Duplicates	7	173
Mismatches	10	163
Companies removed from Pii database	16	147
Cannot find COI	5	142
COI Sample		**142**
No impact marker*	97	45
Interview Pool		**45**

*Note that we can retroactively apply the same screen to our Round 1 Companies to allow for an analytic comparison of companies with and without impact markers.

1.4.3 Interview Pool: Round 3 Sub-Sample

In our Round 3 sub-sample for the interview pool, we focus on IPCs funded through the impact funds of large, traditional private equity firms that pursue both conventional and impact investing strategies in separate fund vehicles. First, we draw a random sample of 30 portfolio companies from the 100 IPCs in our original fund-level sample. In order to increase the number of traditional private equity investors represented in the Round 3 sub-sample, we add two portfolio companies of an impact investor in the fund-level sample that is not included in the random draw of 30 companies. In total, the initial Round 3 sub-sample drawn for the interview pool includes 32 portfolio companies from across the impact funds of four traditional private equity investors. We hypothesize that these impact portfolio companies will be different from the companies funded through investors that solely focus on impact investing strategies since the large, private equity investors will play a more central role in managing them. As such, we treat the IPCs in the Round 3 sub-sample of our interview pool as a theoretical comparison set.

The data verification process results in the exclusion of 13 companies from the Round 3 sub-sample for the following reasons: 1) two removed as duplicates, 2) seven removed as database mismatches, 3) three companies removed because they were considered roll-ups (merged into or acquired by another IPC of an impact investor), and 4) one company removed because its COI could not be found. In total, the Round 3 sub-sample contributes 19 companies to our interview pool. This information is summarized in Table 5 below.

Table 5
Round 3 Sub-Sample

	IPCs Dropped	IPCs Remaining
Original Draw of Fund-Level Sample*		**100**
Round 3 Sub-Sample**		**32**
Duplicates	2	30
Mismatches	7	23
Companies removed as roll-ups	3	20
Cannot find COI	1	19
Interview Pool		**19**

* Includes 50 companies that were ultimately removed during the data verification process.
** These companies were drawn prior to the data verification process. Thus, we report the companies removed during data verification as they are nested within the original Round 3 sub-sample draw for the interview pool.

1.4.4 Summary of Interview Pool Sub-Samples across Rounds

The sampling strategies, rationale, and response rates across the three rounds of sub-samples drawn for the interview pool are summarized in Table 6 below.

Table 6
Interview Pool Sampling

	Methodology	Rationale	Interview Pool	Interview Participants	Response Rate
Round 1 Sub-Sample	Stratified Sample	Reasonably representative sample of IPCs that captures heterogeneity across impact investors	77	41	53%
Round 2 Sub-Sample	Stratified Sample screened for impact markers	Theoretical sample of IPCs with impact markers, which we theorize as more likely to integrate impact into business model	45	29	64%
Round 3 Sub-Sample	Random draw from Fund-level Sample	Diverse sample of IPCs of impact funds of large private equity firms, which we theorize as distinct from IPCs of impact-exclusive investors drawn in the stratified sample	19	12	63%
Interview Pool Total			**141**	**82**	**58%**

As Table 6 reveals, we achieve a reasonable response rate and yield a final interview sample of 82 firms. In Part 3 below, we provide detailed information on the recruitment and data collection processes for interviews as well as response rates and interview participant characteristics. In Part 4, we share company-level summary information for the interview sample as well as the COI sample.

Part 2: Analyzing Certificates of Incorporation

A limitation of financial databases is that they do not always accurately identify funders, corporate structure, and financing rounds. We are able to get some of these missing data from publicly available certificates of incorporation. In addition, an advantage of collecting company COIs is with respect to sample selection bias – since these filings are legally required, firms cannot choose to be excluded from our data collection. Thus, as part of this study, we collect and analyze the COIs for the 270 IPCs in our sampling frame. In addition, we aim to create an online library of IPC COIs as well as a coded database of these documents in order to further the study of impact investing.

A certificate of incorporation, also known as the articles of incorporation or company charter, is a legal document filed with a government entity that brings a corporation into existence. It is essentially a license for a company to form a corporation. In addition, the COI secures the newly formed corporation with the rights and advantages associated with being an incorporated entity. In the U.S., state governments are responsible for overseeing corporations. As a result, COIs are filed in the state where the corporation is legally incorporated and are considered to be part of the public record.

COIs represent an invaluable resource to researchers of corporate financing and governance. They include basic information on the corporate entity, including its name and purpose, its geographic location, as well as the name and address of at least one individual associated with the corporation. In addition, COIs contain data on financing, such as: the number and types of shares of stock that the corporation is authorized to issue, the rights associated with each class or series of stock ownership, information on deal structure (i.e., the capital structure and key terms), and, finally, important valuation data. Although this information is filed at founding, it can be changed, amended, or updated over time with supplemental filings. For example, whenever a corporation receives additional private capital funding, an amended COI is filed with the state in which it is registered.

Thus, the advantages of collecting company COIs are multiple. Firstly, these documents provide an archive of important financing and governance related characteristics at founding and may track changes over time. Such data, including information on deal structure as well as important valuation data, cannot be readily accessed through financial databases or news archives. Second, because these filings are legally required, firms cannot choose to be excluded from data collection and, therefore, selection bias is minimized. Our effort to study IPCs includes the collection and analysis of COIs across our sampling frame of 270 IPCs as well as the creation of an online library and coded database of these documents. Through this work, we hope to enable more researchers to better understand and further explore the nature of impact investing.

2.1 COIs in the Literature

Researchers have used the information found in COIs or related agreements to explore questions around capital structure, corporate governance issues, and the contractual terms of private capital investments. These studies, however, are often grounded in limited, proprietary data sets, making them difficult to replicate and evaluate. Below, we provide a summary of research in this field and discuss how our collection of IPC COIs aims to eliminate the selection bias often present in past research.

Academic studies that use COI and proprietary data offer important insights into venture capital ("VC") investing practices, which cannot be readily analyzed by using the information available in financial databases. One of the pioneering academic papers to explore topics using COIs is Kaplan and Stromberg (2003), which examined 213 VC investments in 119 portfolio companies by 14 VC firms and provided an empirical analysis of the contracts used. To obtain the data for this study, the researchers created a proprietary dataset by asking 14 VC firms to provide detailed information on their portfolio companies. This information included financing terms, the firms' equity ownership, and contingencies for future financing. By examining the actual contracts between VCs and their portfolio companies, the authors concluded that VC financings allow investors to separately allocate cash flow rights, board rights, voting rights, liquidation rights, and other control rights. Two concerns, acknowledged by the authors, were that the firms willing to share their data were necessarily not representative of the universe of venture firms and that they may have selected non-representative transactions to share.

Other researchers have used companies that conduct private market research to gain access to the necessary financial and legal data for their studies. For instance, Bengtsson (2011) used a selected sample of COIs for 182 firms, which were collected by VC Experts, a commercial data vendor that collects data on a contractual basis. After an analysis of VC contracts, the author finds that restrictive covenants are commonplace within them, with 92% of all contracts including at least one such covenant. Meanwhile, Chernenko, Lerner, and Zeng (2017) study the implications of mutual funds making private investments in firms, an activity that has historically been done only by VC firms and family offices. Similarly, they use VC Experts data, focusing on 99 unicorn firms, that is, private firms valued at over $1 billion. By exploring mutual fund investments into unicorns, the authors explore the effect of the financing source (mutual funds vs. venture capital funds) on contract terms and corporate governance.

While researchers have been able to negotiate for access to company COIs directly through investors themselves as well as through companies such as VC Experts, this process may prove protracted, expensive, and limited in scope. Moreover, these methods cannot ensure that the data collected will be representative of the population or processes studied. Given the substantial access problems associated with COI collection through secondary sources, we believe there is a significant opportunity to create a resource that is broadly available to academics studying impact investing by collecting the COIs of IPCs directly.

2.2 Collecting Certificates of Incorporation

The process of accessing COIs varies by state. Some states make this document available online while others require a written request and the payment of a fee in order to obtain a copy.[13] In addition, while COIs are publicly available, the costs to obtain these documents are often quite high. For example, in some locations, a request for COIs must be done in person and the charge is $1.00-2.00 per page. Below, we describe the process we follow to obtain these documents and how we plan to make them available to researchers.

Rather than requesting only the most recent restated COI documents, we request a complete set of COIs for each funding date/portfolio company pair for the 270 impact portfolio companies in our sampling frame. The advantage of this approach is that it provides a complete overview of the firms' financing histories. To begin the process of obtaining COIs, we prepare a list of corporation names and investment dates and determine where each corporation is incorporated or registered. This is ascertained by going to the state website for any state in which a corporation maintains a business location. Once we identify the state in which the corporation is registered, we go to that state's website for business incorporations in order to identify the steps necessary to acquire the company's COI. In most states, the Corporation Division of the Secretary of State's office handles business incorporations and related filings. In a handful of states, business registrations are handled by a different state agency. The U.S. Small Business Administration maintains a list of state business registrars to help find the appropriate state agency.

The vast majority of the companies in our database are registered in Delaware. For corporations registered in Delaware, orders are submitted via on an online request form for each

[13] Terry Masters, "How to Obtain a Copy of a Certificate of Incorporation," Legalzoom, http://info.legalzoom.com/obtain-copy-certificate-incorporation-20258.html

company registered in the state and there is a fee to obtain a copy of the requested document. In other cases, such as California, orders similarly require a processing fee, but they must be submitted by mail. Finally, in still other cases, such as Massachusetts, COIs for certain types of corporations are available for delivery by email. More information on the process and costs related to ordering company COIs can be found in Appendix II.

2.3 Analyzing and Sharing Certificates of Incorporation

Part of our effort to promote the study of IPCs is the creation of an accessible, online COI library and a coded database of the important information contained in the COI documents. The COI library and database are intended for the exclusive use of academics, rather than for lawyers, bankers, and others, who typically purchase these documents through the states or one of the services that collects them for commercial purposes. The COIs we collect are public documents and, therefore, can be redistributed. Delaware and other states already make these data available to a number of commercial entities, who resell them to law firms and investment banks.

The impact investing COI online library will be made available to all academic researchers with a credible research agenda. The document library will be hosted on the SmartRoom platform, which allows users to securely access documents without being able to download them or take screen shots. Another advantage of SmartRoom is that it uses a web-based search engine to allow users to search documents by referencing a file number, state of incorporation, date, type of document, as well as key words within the documents themselves. In addition, we have devised a way for researchers to search for metadata such as company industry, company location, and company year founded through the platform.

Through a collaboration with the Stanford Graduate School of Business ("GSB"), we are also working to code the important terms and conditions of the COI documents of the IPCs in our sampling frame (see Exhibit A.2 in Appendix II for a list of the data variables that are being coded).

After the completion of this coding process, we will make the COI coded database available to approved researchers. This database will be stored and accessed on the National Opinion Research Center ("NORC") data platform at the University of Chicago. The NORC allows us to create a secure platform where researchers can examine their questions without downloading the data.

Researchers interested in using either the COI library or the coded database will be required to submit a short research proposal. Approval will be determined by members of the Pii research team on the basis of transparent eligibility criteria. For access to our library on SmartRoom, approved researchers will be given a user name and password for access. For access to our coded database, approved researchers will be required to sign a data user agreement and will be given a short training session on how to access the NORC data platform. The COI library will be available for researchers in the summer of 2021. We do not yet have a date for the availability of the COI coded database.

Part 3: Interviewing Impact Portfolio Companies

We seek to expand upon existing literature on impact investing and social entrepreneurship by studying a large sample of IPCs that are reasonably representative of impact investments in the Pii database. We attempt to recruit the leadership of the 141 IPCs in our interview pool for semi-structured interviews in order to better understand the operation, evolution, and outcomes of companies funded by impact investors.[14] Ultimately, we recruit 82 IPCs as interview participants. Below, we provide an overview of the recruitment process as well as its outcomes in terms of response rates and interview participant characteristics.[15] For more detailed information on our recruitment process, background research, and interview techniques, see Appendix III.

3.1 Interview Process

We first recruit the participants in our study through two methods: 1) direct recruitment of IPC leadership and 2) initially contacting private equity firms that invested in the IPC. For the Round 1 and Round 2 sub-samples, we directly contact the leadership of IPCs to explain the study and recruit them for participation. Meanwhile, for the Round 3 sub-sample, we initially contact large private equity investors, from whom we sample more than two companies, and notify them that we will be conducting interviews with the leadership of their portfolio companies. After contacting the large

[14] Our interview study was approved by the Harvard University Committee on the Use of Human Subjects, which serves as the Institutional Review Board for the Cambridge and Allston campuses at Harvard University.

[15] The recruitment and interview process took place over the course of five months from July through December 2020. The core interview team consisted of four Master's-level lead interviewers, two undergraduate research assistants, a Ph.D.-level research coordinator, and a principal investigator. Although four Master's-level lead interviewers supported the project over the course of five months, the number of interviewers working at the same time was two on average. Prior to conducting interviews, interviewers completed the CITI Training for Social & Behavioral Research Investigators and attended a day-long orientation that covered the project's background, logistical topics, research methods, interview techniques, research and recruitment process, and data security.

private equity investors, we reach out to the leadership of their portfolio companies, which were drawn for the Round 3 sub-sample.[16]

Once an interviewee agrees to participate, research staff carry out background research on the participant's company in order to collect all publicly available, relevant information on the operations and evolution of the IPC. Such research supplements data already collected on the companies in our interview pool within the Project on Impact Investments database (Burton et al. 2021). The background research focuses on topics relevant to the interview protocol, such as: business description and strategy, company leadership and founding story, competitive environment and partnerships, investment history, as well as government policies relevant to the business. A consolidated interview protocol across all participants can be found in Exhibit A.8 of Appendix III.

After completing background research on an IPC, we work to expand upon this publicly available data through semi-structured interviews. During interviews, researchers once again ask participants for information in a manner that is guided by an interview protocol. They cover topics such as: founding story, company mission, business model, approach to impact, company evolution, ecosystem participation, challenges and successes, as well as eventual exit or plans for an exit. Interviews are semi-structured, meaning they address questions listed in an interview protocol, designed for a specific interviewee-type (see Exhibit A.8 in Appendix III). However, interviewers can change the order of interview questions, adjust follow-up questions based on responses, and skip interview questions if they are deemed irrelevant to the company or if they are already answered

[16] We choose to first contact investors in the Round 3 sub-sample in order to maintain a good relationship with the large private equity firms sampled for the study and to ultimately recruit them for interviews. This method has the benefit of allowing investors to identify mismatches in the Pii database, such as cases where portfolio companies were incorrectly linked to impact funds. However, it also has the disadvantage of presenting an opportunity for investors to request for specific companies to be removed from the interview pool.

through background research. This inductive, qualitative approach to data collection has the advantage of effectively engaging with interviewees, tailoring interviews to unique company situations, and uncovering unexpected themes. A disadvantage is that we do not systematically gather comparable information across the full set of interviewed companies. However, we are confident that our rich interview data will enable future researchers to develop structured interview or survey questions.

3.2 Interview Response Rate and Participant Characteristics

In total, we conduct 124 interviews across 82 companies. As Table 7 reveals, we have a strong response rate across the interview pool, with 58.2% of the firms that we contact willing to participate in the interviews. In terms of differences across rounds, our response rate improves from the Round 1 to the Round 2 sub-samples as we add screening criteria to target IPCs with impact investors playing a more prominent role in company financing or leadership. We have a similarly high rate of response in the Round 3 sub-sample, for which we approach investors first and then recruit their portfolio companies. However, this latter recruitment process also leads to the exclusion of a few companies at the request of impact investors, thus resulting in a more skewed participant representation across the Round 3 sub-sample.

The research team conducts two or more interviews across 25.5% of companies, with a similar rate of second interviews across all sub-samples. Second interviews are useful for the following reasons: 1) they present an alternative perspective on company events from a different employee role, 2) they allow research staff to follow up on questions that are not addressed during the first interview, and 3) they provide an opportunity to consider the alignment of interviewee responses across multiple participants.

Table 7
IPC Response Rate and Interview Count across 3 Sub-Sample Rounds

Sub-sample	Interview Pool	Interview Participants	Response Rate (%)	Recruited for 2+ Interviews	Recruited for 2+ Interviews (%)	Interview Count
Round 1	77	41	53.2%	20	26.0%	66
Round 2	45	29	64.4%	12	26.7%	42
Round 3	19	12	63.2%	4	21.1%	16
Total	**141**	**82**	**58.2%**	**36**	**25.5%**	**124**

As Figures 1 and 2 below reveal, interviews are primarily conducted with executive-level or "C-suite" managers of IPCs. The most common business title amongst participants is Founder, which represents 49% of all interviewees. The second most common business title amongst participants is Chief Executive Officer ("CEO"), a position held by 43% of all interviewees. Participants may have multiple business titles, such as "Founder and CEO."

Figure 1
Participant Types across All Sub-Sample Rounds

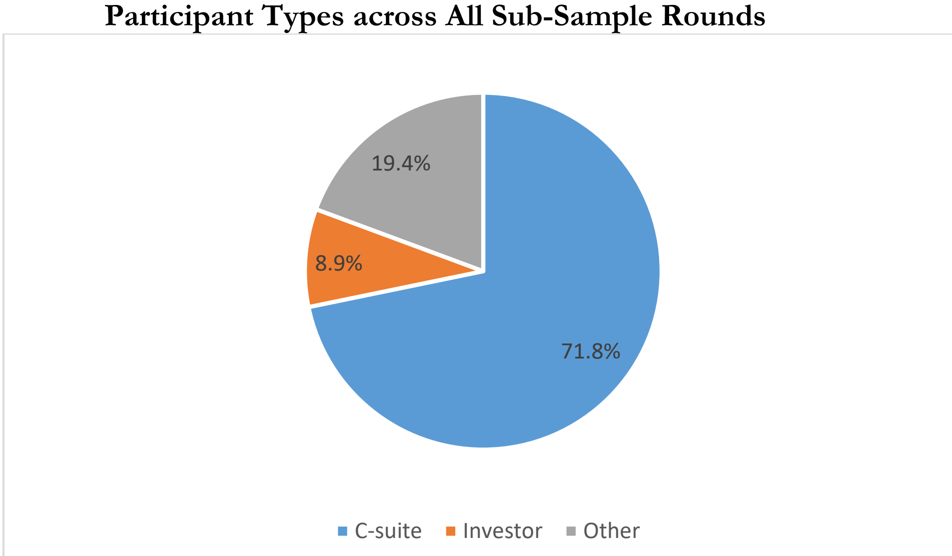

Figure 2
Business Titles of Interview Participants across All Sub-Sample Rounds*

*Percentages will not add up to 100% because individuals could hold more than one business title at the company.

3.3 Business Status of IPCs in Interview Pool and Interview Participants

Our interview pool includes companies across a range of business statuses, including IPCs that are privately held as well as those that have been acquired or merged, have undergone an initial public offering ("IPO"), or have gone out of business. [17] The representation of companies across these business statuses varies within the interview pool and, as one might expect, we have different levels of success in recruiting companies across different business statuses into the study. A majority of the

[17] For more information on how we categorize the companies in our interview pool according to their most current business status, see Appendix IV.

IPCs in our interview pool or 60.3% of the total are on-going, privately held corporations with active investor relationships. The second highest percentage of companies across business status includes those that have been merged or acquired, totaling 24.1% of the interview pool. Meanwhile, 13.5% of companies in the interview pool are no longer in business and 2.1% have undergone an IPO.

We are the most successful in recruiting privately held companies into the study, garnering a 67.1% response rate that increases their representation to 69.5% of all interview participants. Meanwhile, we are able to recruit a little over half of IPCs that have been acquired or merged into the study with a 52.9% response rate that leads to a 22% representation amongst interview participants. For these firms, we attempt to trace company evolution from founding until the time of the merger or acquisition. Finally, we are less successful in recruiting firms that are no longer in business into the study, yielding a 36.8% response rate, and unsuccessful in recruiting publicly held firms. IPCs that are no longer in business represent 13.5% of the original interview pool, but only 8.5% of the final participating set. Meanwhile, the three publicly held firms in the sample are unwilling to participate in the study, perhaps because they are well past their relationships with their initial investors. The details on the business status of the IPCs in our interview pool and amongst interview participants are summarized in Table 8 below.

Table 8
Business Status of Interview Pool and Interview Participants

Business Status	Interview Pool	Interview Pool (%)	Interview Participants	Interview Participants (%)	Response Rate (%)
Acquired/Merged	34	24.1%	18	22.0%	52.9%
Out of Business	19	13.5%	7	8.5%	36.8%
Privately Held	85	60.3%	57	69.5%	67.1%
Publicly Held	3	2.1%	0	0%	0.0%
Grand Total	**141**	**100%**	**82**	**100%**	**58.2%**

Part 4: IPC Characteristics

Our goal is to gather rich and detailed data on a reasonably representative sample of IPCs in the United States. The strategy of focusing on IPCs, as opposed to impact investment funds, offers a new perspective on impact investing. It provides an opportunity to better understand if, when, and how private sector firms are able to achieve both social and financial returns. In addition, this strategy sheds light on how impact investors finance and govern their portfolio companies. Such in-depth information on IPCs enables a deeper analysis of social enterprise and social entrepreneurship and lays the groundwork for comparisons to traditional private-equity funded ventures.

The information and insights uncovered through our in-depth study will be of even greater value to the extent that they can be generalized to a broader universe of IPCs. In this section we report on three basic, firm-level characteristics: industry, headquarters location, and founding year in order to examine the representativeness of our various subsamples. We report distributions for each of the firm-level characteristics for four groups. In the first column, we report on the population of the 4,371 U.S.-based IPCs of 146 U.S.-based impact investors and 4 impact funds investing in U.S.-based IPCs, which were identified in the Pii database (Burton et al. 2021).[18] In the second column, we report on the 270 IPCs in the COI sample. In the third column, we report on the 141 IPCs in the interview pool, which is nested within the COI sample. Finally, in the fourth column, we describe the characteristics of the 82 IPCs that participated in interviews.

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[18] Note that while we have complete information for these characteristics for our three sub-samples, we have some missing information at the Pii database population level. Since the population sample sizes in the first column vary across the tables, we report the overall 'n' at the top of the column in each table.

4.1 Industry

We begin by describing the distribution of IPCs by industry for the four groups of interest. The industry categories we use are derived from the Global Industry Classification Standard (GICS®), a four-tiered, hierarchical industry classification system developed by MSCI and S&P Dow Jones Indices.[19] We have industry information at the GICS sectoral level for 4,198 of the 4,371 U.S. based IPCs in the Pii database. We see in Table 9 below that we have IPCs across all industry categories within our four groups. Moreover, we see strong consistency in the industry distributions across the groups. For instance, the information technology sector consistently accounts for nearly 30% of all of the portfolio companies and the other distributions are comparable.

Table 9
Industry Distributions

Industry	U.S.-U.S. Pii (%) (n=4,198)	COI Sample (%)	Interview Pool (%)	Interview Participants (%)
Communication services	9.7%	7.4%	9.2%	13.4%
Consumer discretionary	10.7%	10.4%	10.6%	12.2%
Consumer staples	6.5%	8.5%	7.1%	2.4%
Energy	1.1%	1.9%	0.7%	1.2%
Financials	4.6%	4.1%	4.3%	4.9%
Health care	16.1%	17.8%	19.1%	19.5%
Industrials	14.5%	13.0%	9.9%	9.8%
Information technology	29.8%	29.3%	29.8%	29.3%
Materials	4.5%	5.6%	6.4%	3.7%
Real Estate	1.3%	1.1%	1.4%	1.2%
Utilities	1.2%	1.1%	1.4%	2.4%
Total	**100%**	**100%**	**100.0%**	**100.0%**

[19] The four, hierarchical tiers of the GICS are the following, ordered from highest to lowest tier: sector, industry group, industry, and sub-industry. For more details on the GICS, see https://www.msci.com/gics.

4.2 Headquarters Location

We have the headquarters location information for 4,081 of the 4,371 U.S.-based IPCs in the Pii population. As Table 10 below demonstrates, 37 states in addition to the District of Columbia and Puerto Rico are represented in the population of U.S.-based IPCs within the Pii database.[20] Although most states are represented within this population, IPC headquarters are not evenly distributed across U.S. geography. The first column in Table 10 shows that the highest concentration or 27.8% of U.S.-based IPCs in the Pii universe are headquartered in California. Our sub-samples similarly reflect this clustering with over 32% of the companies in the COI and interview samples being located in this state. The higher concentration of companies in states such as California, New York, and Massachusetts is well established in studies of VC-backed startups. Our distributions of IPCs in the subsamples for New York and Massachusetts are comparable to the Pii universe.

The proportional differences between our sampling frame and the Pii universe of U.S.-based IPCs are not statistically significant for most locations. However, the relatively small size of our sub-samples means that we do have some exceptions to this trend. One surprise is the number of IPCs headquartered in Colorado. Colorado is the fourth most popular domicile of U.S.-based IPCs in the Pii universe, but unfortunately this state is under-represented in our COI sub-sample and absent from our interview samples. In contrast, Puerto Rico is overrepresented in the latter study samples.

[20] The following states are not represented among the U.S.-based IPC population drawn from the Pii database: Alaska, Delaware, Hawaii, Idaho, Iowa, Mississippi, Montana, Nebraska, North Dakota, Oklahoma, South Dakota, West Virginia, and Wyoming.

Table 10
Headquarters Location Distributions by State*

State	U.S.-U.S. Pii (%) (n=4,081)	COI Sample (%)	Interview Pool (%)	Interview Participants (%)
AL	0.8%	0.4%	0.7%	1.2%
AR	0.8%	0.4%	0.7%	1.2%
AZ	1.0%	0.4%	0.0%	0.0%
CA	27.8%	32.6%	34.8%	35.4%
CO	5.5%	2.6%	1.4%	0.0%
CT	1.8%	3.0%	3.5%	4.9%
DC	2.6%	2.2%	2.8%	3.7%
FL	2.2%	1.5%	2.1%	1.2%
GA	2.0%	1.9%	1.4%	2.4%
IL	3.4%	1.9%	1.4%	1.2%
IN	0.7%	0.4%	0.0%	0.0%
KS	0.4%	0.4%	0.0%	0.0%
KY	0.8%	1.1%	0.7%	0.0%
LA	2.6%	2.2%	1.4%	0.0%
MA	6.2%	5.9%	5.7%	6.1%
MD	2.2%	1.9%	2.1%	2.4%
ME	2.7%	2.6%	2.8%	3.7%
MI	1.0%	0.4%	0.0%	0.0%
MN	1.2%	1.5%	1.4%	1.2%
MO	1.9%	1.5%	2.8%	2.4%
NC	1.2%	0.7%	0.7%	1.2%
NH	0.5%	0.7%	0.0%	0.0%
NJ	1.5%	3.0%	2.8%	3.7%
NM	0.5%	0.7%	0.7%	0.0%
NV	0.6%	0.4%	0.7%	0.0%
NY	10.4%	9.6%	9.2%	9.8%
OH	2.1%	2.2%	0.7%	1.2%
OR	1.4%	1.9%	1.4%	0.0%
PA	2.4%	1.1%	2.1%	2.4%
PR	0.1%	0.4%	0.7%	1.2%
RI	0.1%	0.4%	0.7%	0.0%
SC	0.4%	1.5%	0.0%	0.0%
TN	1.3%	2.2%	0.7%	0.0%
TX	4.2%	3.3%	5.0%	3.7%
UT	1.1%	0.4%	0.7%	0.0%
VA	1.5%	3.0%	2.8%	3.7%
VT	0.5%	0.4%	0.0%	0.0%
WA	1.9%	2.2%	2.1%	2.4%
WI	0.6%	1.5%	2.8%	3.7%
Total	**100.0%**	**100%**	**100%**	**100.0%**

*For the purpose of clarity, we include DC and PR as states within this table.

4.3 Year Founded

In Table 11 below, we report the distribution of founding years in five-year increment categories for each of the four groups of interest. We have founding year information for 3,906 of the 4,371 U.S.-based IPCs in the Pii population. Since impact investing is a relatively young field, it is not surprising that the modal category across all of the groups is the period from 2010-2014 and that more than half of the IPCs are founded post-2004. There are no statistically significant differences in the distributions when comparing the sample groups to the Pii population of U.S.-based IPCs. Firms of varying ages are also represented across all of the sub-samples. However, while the COI sample distribution tracks the Pii population closely, the interview pool and interview participants skew towards younger firms. This is demonstrated most clearly by significant differences in the average IPC year founded, which is 2007 within the interview pool and 2008 amongst interview participants, as compared to 2004 in the Pii universe of U.S.-based IPCs and the COI sample.

Table 11
Year Founded Distributions

Year Founded	U.S.-U.S. Pii (%) (n=3,906)	COI Sample (%)	Interview Pool (%)	Interview Participants (%)
Before 1990	9.1%	10.0%	6.4%	4.9%
1990-1994	4.2%	2.6%	1.4%	0.0%
1995-1999	10.3%	10.7%	9.2%	6.1%
2000-2004	12.6%	11.5%	12.1%	8.5%
2005-2009	18.1%	19.3%	23.4%	24.4%
2010-2014	30.9%	30.0%	32.6%	37.8%
2015-2019	14.8%	15.9%	14.9%	18.3%
Total	100%	100%	100%	100%
Average Year Founded	**2004**	**2004**	**2007**	**2008**

4.4 Conclusion

Tables 9, 10, and 11 demonstrate that we achieve our goal of studying and interviewing the full range of IPCs across a number of relevant firm characteristics, such as: industry, location of headquarters, and year founded. In order to further verify whether our sub-samples are representative, we conduct chi-square tests, comparing the distributions of each sub-sample to the Pii universe and report the p-values in Table 12 below.

Table 12
P-Value Results from Chi-Square Tests Comparing Sub-sample Distributions to the Pii Universe of U.S.-Based IPCs

Firm Characteristic	U.S.-U.S. Pii to COI Sample Comparison	U.S.-U.S. Pii to Interview Pool Comparison	U.S.-U.S. Pii to Interview Participants Comparison
Industry	0.8186	0.9316	0.7761
State	0.3208	0.3662	0.1361
Year Founded	0.8529	0.4014	0.0834

These chi-square tests demonstrate at the 95% confidence level that there are no statistically significant differences when comparing our sub-samples to the Pii population. We continue to see evidence that our interview sample skews younger than the population and note that we would reject the null hypothesis that this sample represents the broader distribution at the 90% confidence level. However, we have overall confidence that our samples are broadly representative. Furthermore, it is our hope and intention that the interview and COI data will serve as a foundation for future research and, ultimately, will yield invaluable insight into how IPCs are formed, financed, managed, and governed.

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Appendices

Appendix I: Stratified Sampling

In this appendix, we explain our methodology to sample U.S. impact investors and their U.S. portfolio companies in order to best capture the heterogeneity in both these investors and the portfolio companies that they own. To start, we sample portfolio companies of under-consideration impact investors as defined in Section 5.1 of the technical paper entitled *The Project on Impact Investments' Impact Investment Database*.[21] We use a stratified sampling strategy to sample from the portfolio companies of the 211[22] under-consideration U.S. impact investors, as defined by location of headquarters, which focus exclusively on impact. Specifically, we focus on investors making equity investments as opposed to investors providing debt capital or making philanthropic contributions with no expectations of future returns. Our sampling process is described in detail below.

The Data

We begin with the 211 U.S. impact investors that focus exclusively on impact investing. This by design excludes the impact investment funds sponsored by traditional private equity investors. We will have a separate sampling strategy for these funds. For the representative sample, we focus our study on U.S.-based private equity investors, both profit and non-profit, making direct equity investments. We exclude impact investors solely engaged in debt financing and/or grant-making. We also exclude impact investors who have a "fund of funds" investing model. Next, we drop impact investors that do not have at least one U.S. portfolio company. This results in a total of 147 such

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[21] A copy of this working paper is available at the online Harvard Business School Working Papers Collection: https://www.hbs.edu/faculty/Pages/item.aspx?num=58145

[22] Includes one large impact investor, which we later conclude should be excluded from consideration because its investment strategy did not adhere to our guidelines for impact investing. Note that in the Burton et al. (2021) technical paper, this large impact investor is properly categorized as excluded from consideration.

investors for this sampling. Table A.1 provides a breakdown of these impact investors. The top two highlighted rows are the final 147 impact investors we consider for use in this first sampling. In total, the 147 impact investors for this sampling invest in a total of 4,496[23] U.S. portfolio companies.

Table A.1
Breakdown of 147 Impact investors that have at least one U.S. portfolio company

	Under Consideration							
	Profit				Non-Profit			
	Market	Concessionary	No Return	N/A	Market	Concessionary	No Return	N/A
Equity	83*	12	13	1	5	5	5	0
Hybrid	5	1	5	0	2	6	3	1
Non-equity	6	0	4	1	2	17	4	3
N/A	0	0	0	0	0	2	2	0
Total	94*	13	22	2	9	30	14	4

*Includes one large impact investor which we later conclude should be excluded from consideration.

The top two lines of Table A.2 provide a breakdown of the 4,496 portfolio companies that are used in our sampling.

Table A.2
Breakdown of U.S. Portfolio Companies of the 147 U.S. Impact Investors

	Under Consideration							
	Profit				Non-Profit			
	Market	Concessionary	No Return	N/A	Market	Concessionary	No Return	N/A
Equity	2,803*	91	288	25	118	40	586	0
Hybrid	52	1	284	0	14	148	35	11
Non-equity	31	0	3	0	43	679	121	3
N/A	0	0	0	0	0	2	2	0
Total	2,886*	92	575	25	175	869	744	14

*Includes 225 portfolio companies of one large impact investor which we later conclude should be excluded from consideration.

23 Includes 225 portfolio companies of one large impact investor which we later conclude should be excluded from consideration.

In this sample, the range of U.S.-based portfolio companies per impact investor is 1 - 447 with an average of 31. The distribution is highly skewed, with a small number of impact investors making many investments and a large number of impact investors investing in only a handful of portfolio companies.

Categorizing Impact Investors

A strict random sample of the 4,496 U.S.-based portfolio companies of the 147 U.S.-based impact investors would have resulted in many small firms and relatively few firms from larger investors. Thus, to get variation across different types of impact investors in our portfolio company interview sample and, at the same time, to capture the portfolio companies of the leading investors, we develop a stratified sampling framework where we draw portfolio companies from different categories of impact investors and oversample from the most experienced and sophisticated investors.

Two readily available metrics of the experience and sophistication of an investor include: the number of investments made and the size of the investment fund. Interestingly, as we document below, these are not necessarily correlated. Some very large impact funds are just beginning to make investments; thus, they have very few portfolio companies. On the other hand, some small impact funds have chosen to spread their investments across a large number of portfolio companies, giving the impact investor broad experience, but representing little of the overall impact investment dollars. Impact investors also vary in geographic focus. Some large and experienced impact investors have made only a few U.S.-based investments, but are widely regarded as leading impact investors.

To understand the variation among impact investors, we first categorize the impact investors according to two different criteria: 1) Number of U.S.-based portfolio company investments[24] ("Rank 1"), and 2) Value of assets under management ("Rank 2").

Gathering the number of U.S.-based portfolio companies for each impact investor was part of our initial database development described in Burton et al. (2021). The assets under management ("AUM") for each impact investor were hand collected from financial databases (See Table A.3 for the sources of AUM).

Table A.3
Assets under Management Data Sources

Source	Count	%
PitchBook	89	60.3%
Preqin	14	9.6%
ImpactAssets	10	6.9%
Capital IQ	4	2.7%
Crunchbase	2	1.4%
Other (including news articles, sec forms, official website)	28	19.2%
Total	147	100%

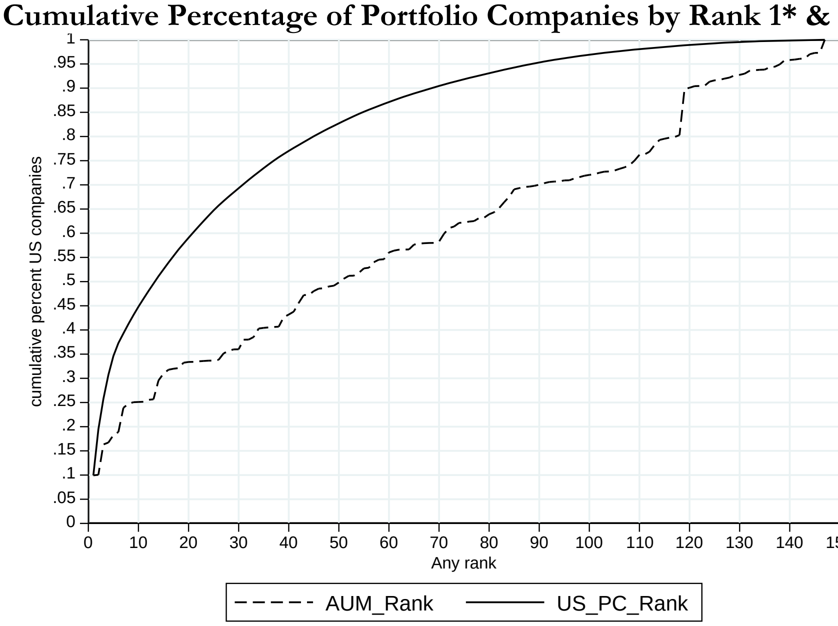
PitchBook was the best and most accurate source for AUM, providing 60% of the information, but was incomplete. We searched other databases to fill in missing information. Almost 20% of the impact investors were missing from all databases, so we expanded our search to additional

24 We also examined a global rank based on total number of portfolio companies, U.S. and non-U.S. We find that there is a strong positive relationship between the global rank of impact investors and the U.S.-only rank (by portfolio companies), indicated by a clustering around the 45 degree mark, suggesting that either of these experience-based ranks could be used to create stratified sampling buckets. Given our initial focus on U.S.-based firms and given the number of outliers in the U.S. rank, exhibited by a comparatively high number of plots above the cluster-line, we believe that using the U.S.-only rank would provide a slightly better segmentation than the global rank for this stage of sampling as compared to using global rank, which is a less direct way of determining sampling buckets.

sources. For a small number of impact investors (less than 7%), we had to estimate an AUM number based on an average investment amount and the number of portfolio companies.

In Figure A.1, we compare the cumulative sum of U.S.-based portfolio companies based on the two ranks. In the figure, the solid line represents Rank 1 (based on number of portfolio companies) and the dotted line represents Rank 2 (based on AUM). The solid line indicates that the 20 highest ranked impact investors with the most U.S. portfolio companies account for more than half of all of the U.S.-based portfolio companies. On the other hand, the bottom 50 impact investors ranked by number of portfolio companies account for less than 5% of the portfolio companies. There is a slight trend in that the impact investors with the highest AUM have more portfolio companies as indicated by the dotted line. The top 20 impact investors ranked in terms of AUM account for about a third of the U.S.-based portfolio companies. The bottom 50 impact investors ranked by AUM also account for about a third of the portfolio companies.

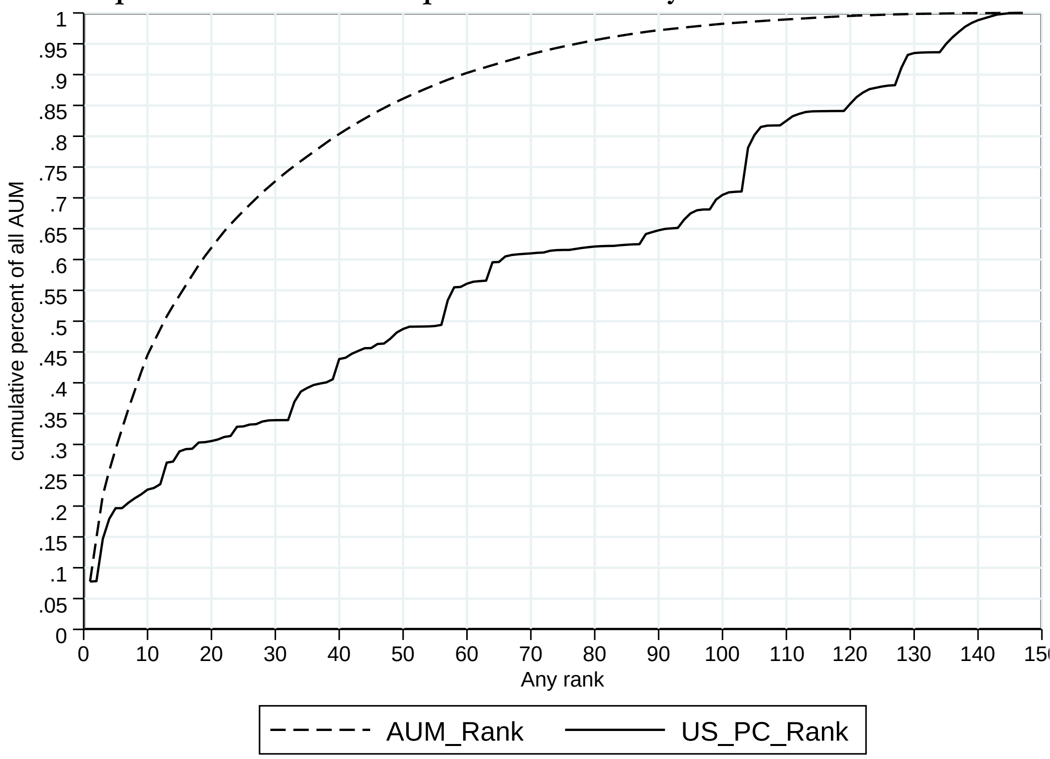
Figure A.1
Comparison of Cumulative Percentage of Portfolio Companies by Rank 1* & Rank 2**



*Rank 1 (rank based on number of U.S. portfolio companies invested) is represented by the solid line.
**Rank 2 (rank based on AUM) is represented by the dotted line.

Similarly, we examine how investment dollars are allocated by looking at the cumulative percentage of total AUM by the two ranks in Figure A.2. The dotted line (Rank 2) indicates that the top ten largest impact investors based on AUM size have 45% of the investment dollars. However, based on Rank 1, the top ten impact investors with the most U.S. portfolio companies have less than 25% of the AUM, indicating that these firms are making many small-sized investments.

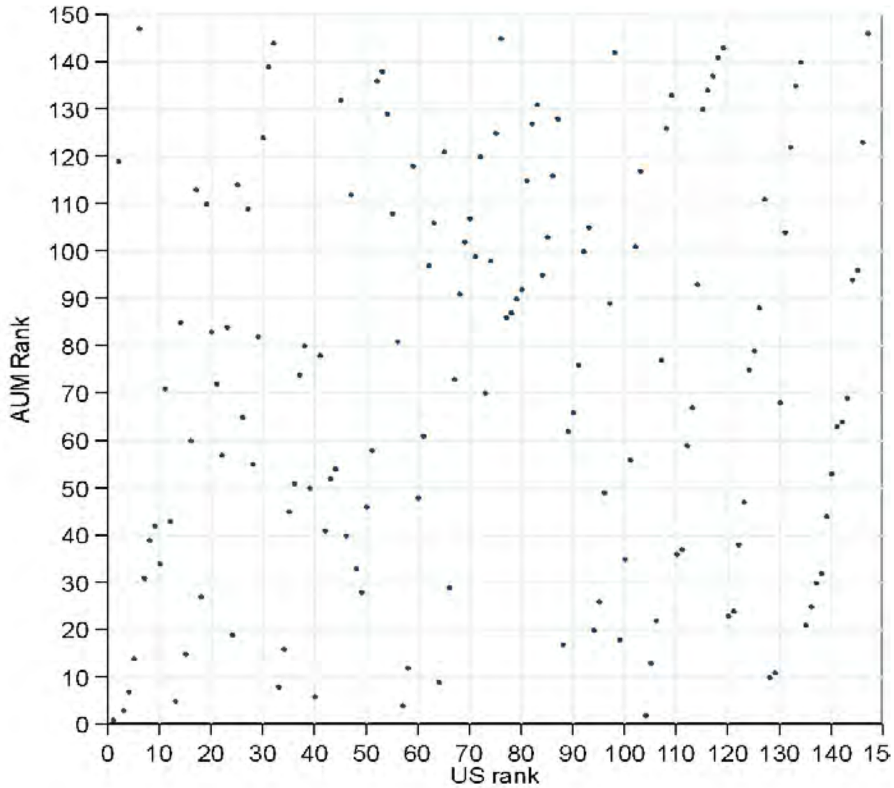
Figure A.2
Comparison of Cumulative percent of AUM by Rank 1* and Rank 2**



*Rank 1 (rank based on number of U.S. portfolio companies invested) is represented by the solid line.
**Rank 2 (rank based on AUM) is represented by the dotted line.

We find that there is very little correlation between the two ranks. The correlation measures around 0.14525. In Figure A.3, we provide a plot between the two ranks.

Figure A.3
Correlation between Rank 1* and Rank 2**



*Rank 1 is based on number of U.S. portfolio companies invested.
**Rank 2 is based on AUM.

Sampling Buckets

The lack of meaningful correlation between Rank 1 (number of U.S. portfolio companies rank) and Rank 2 (AUM rank) suggests that to truly capture the heterogeneity within the sampling of the portfolio company universe, we need to stratify our sample based on the rankings from both the number of U.S.-portfolio companies invested and total AUM. After considering the distribution of Rank 1 and Rank 2 and looking for natural cut-points, we decided to stratify each distribution into four "buckets."

First, we stratify the impact investors based on Rank 1 (rank by number of portfolio companies), while considering the distribution of this ranking based on AUM. Thus, to determine the cut points for each bucket, we try to make relatively even quartiles based on AUM. See Table A.5 for the different sampling buckets. For instance, Bucket 1 contains the highest-ranking impact investors that have more than 75 U.S. impact portfolio companies. This represents 10 impact investors with 2,015 portfolio companies. By design, the total AUM represented by this group is $7,592mm and is roughly 25% of the total AUM of all the impact investors. Bucket 4 contains the lowest-ranking impact investors that have between 1-5 portfolio companies. This bucket has 44 impact investors with a total of 121 portfolio companies. Again, this group contains approximately 25% of the total AUM of all the impact investors.

Table A.4
Buckets based on Rank 1 (Number of U.S. portfolio companies)*

Bucket	Number of U.S. PC per investor	Number of investors in Bucket	Total U.S. portfolio companies in Bucket	Total AUM of Bucket (in US$ mm)	AUM/PC (in US$ mm)	Number of U.S. PCs selected for one sampling draw	% of Total PC
1	>=75	10	2,015	7,592	3.8	4	45%
2	25-75	37	1,634	7,930	4.9	3	36%
3	6-24	56	726	8,262	11.4	2	16%
4	1-5	44	121	9,694	80.1	1	3%
Total		147	4,496	33,478	7.4	10	100%

*Note that this stratification includes one large impact investor which we later exclude from consideration. Including this large impact investor in this stratification does not alter the cut points. This large impact investor is in Bucket 1 and removing it does not alter the number of investors or portfolio companies in the other buckets.

Similarly, we stratify the impact investors based on Rank 2 (AUM), while considering the distribution of this rank based on number of U.S. portfolio companies. Table A.5 below provides the different sampling buckets. In this case, we try to make relatively even quartiles based on the number of U.S. portfolio company investments. For instance, the top bucket contains the highest-ranking impact investors based on AUM that have over US$1 billion in AUM. This bucket contains 9 impact investors that have in total US$13.97 billion in AUM. The number of portfolio companies in this top bucket is 1,127, which is by design roughly 25% of all the total portfolio companies of the impact investors.

Table A.5
Buckets based on Rank 2 (AUM)

Bucket	AUM Cutoff points	Number of impact investors in Bucket	Total US PCs in Bucket	Total AUM of Bucket (in US$ mm)	AUM/PC (in US$ mm)	Number of U.S. PCs selected for one sampling draw	% of Total AUM
1	> =1,000	9	1,127	13,968	12.4	8	42%
2	200-999	35	997	13,775	13.8	8	41%
3	25-199	60	1,148	5,249	4.6	3	16%
4	0-24	43	1,224	486	0.4	1	1%
Total		147	4,496	33,478	7.4	20	100%

Sampling

We sample with replacement in batches of 30, taking one-third (10 portfolio companies) based on Table A.4 (Number of Portfolio Company Ranking) and two-thirds (20 portfolio companies) based on Table A.5 (AUM ranking). Using Table A.4 to determine the number of portfolio companies to draw in each bucket, we roughly base this amount on the percentage of portfolio companies in that bucket.[25] For example, Bucket 1 has 45% of the total portfolio companies, so we draw 45% of our sample from this bucket, which is 4 portfolio companies out of 10. Similarly, using Table A.5 to determine the number of portfolio companies to draw in each bucket, we base this amount on the percentage of total AUM in that bucket. For example, Bucket 1 has 42% of the total AUM, so we draw 42% of our sample from this bucket, which is 8 portfolio companies out of 20.

To ensure that our strategy provides us with a representative sample, we draw 100 random samples of 30 portfolio companies using this weighted stratifying methodology and compare the results to the composition of our entire population of US portfolio companies of U.S.-based impact

[25] Our sampling excludes the portfolio companies of one small impact investor because the impact investor was originally classified as a Fund and was excluded. We do not believe this materially alters the results as this impact investor falls in Bucket 3 and only has 11 U.S. portfolio companies.

investors. Tables A.6 and A.7 show that our dual sampling strategy provides a reasonably representative sample of the underlying population based on year founded and industry breakdown. In Table A.6, the average age of our random sample of for-profit impact investors is 2003, which is comparable for the entire U.S. portfolio company sample. In Table A.7, we find that our sample's industry breakdown roughly matches that of the underlying population. One point of note is that our strategy slightly under-samples non-profit impact investors.

Table A.6
Comparison of Year Founded between
Population and Stratified Sample of Portfolio Companies

Year Founded	Population Portfolio Companies*		Stratified Sampling (AUM+PC Count) x 100	
	Profit	Non-Profit	Profit	Non-Profit
min	1843	1812	1848	1812
p1	1926	1916	1926	1902
p5	1982	1982	1983	1957
p10	1991	1995	1991	1986
p25	1999	2006	1999	2003
p50	2007	2011	2006	2011
p75	2012	2014	2012	2013
p90	2015	2015	2015	2015
p95	2016	2016	2016	2016
p99	2018	2017	2017	2017
max	2019	2019	2019	2017
mean	2003.2	2006.1	2002.9	2003.0
Total	**3,242**	**809**	**2,347**	**312**
N			**23.47**	**3.12**

*U.S. Portfolio companies of under-consideration U.S. impact investors that make equity/hybrid investments.

Table A.7
Comparison of Industries between Population and Stratified Sample

Industry Sector	Population Portfolio Companies*				Stratified Sampling (AUM+PC count) x 100			
	Profit		Non-Profit		Profit		Non-Profit	
	Count	%	Count	%	Ave. per draw	%	Ave. Per Draw	%
Communication services	330	9.4%	73	7.6%	2.36	9.0%	0.24	6.2%
Consumer discretionary	347	9.6%	90	9.3%	2.03	7.8%	0.43	11.1%
Consumer staples	221	6.1%	49	4.9%	1.51	5.8%	0.22	5.7%
Energy	36	1.1%	10	1.0%	0.41	1.6%	0.03	0.8%
Financials	144	4.1%	51	5.4%	1.27	4.9%	0.26	6.7%
Health care	669	18.7%	184	18.8%	5.34	20.4%	0.64	16.5%
Industrials	469	12.8%	142	15.1%	3.31	12.7%	0.44	11.3%
Information technology	972	27.9%	258	27.6%	7.22	27.6%	0.99	25.5%
Materials	143	4.0%	39	4.0%	1.01	3.9%	0.2	5.2%
Real estate	51	1.4%	5	0.5%	0.44	1.7%	0.04	1.0%
Utilities	43	1.2%	6	0.6%	0.46	1.8%	0.01	0.3%
Missing	130	3.7%	45	5.1%	0.76	2.9%	0.38	9.8%
Total	**3,544**	**100.0%**	**952**	**100.0%**	**26**	**100.0%**	**4**	**100.0%**

*U.S. Portfolio companies of under-consideration U.S. impact investors that make equity/hybrid investments.

Appendix II: Collecting and Analyzing COIs

Process and Cost of Ordering Company COIs

To begin the process of obtaining COIs, we prepare a list of corporation names and investment dates and determine where each corporation is incorporated and registered. This is ascertained by going to the state website for any state in which a corporation maintains a business location. Once we determine in which state a corporation is registered, we go to that state's website for business incorporations and begin the COI request process. In most states, the Corporation Division of the Secretary of State's office handles business incorporations and related filings. In a handful of states, business registrations are handled by a different state agency. The U.S. Small Business Administration maintains a list of state business registrars to help find the appropriate state agency. We are currently not aware of any limitations on the total number of COIs we are able to obtain. There may be limitations as to the number that can be requested per day per person.

The process and cost of obtaining COIs varies across states. The vast majority of companies in our database are registered in Delaware and their COI orders are submitted via on an online request form for each company registered in the state. Delaware charges $10 for the first page of the COI and $1 for each additional page. We estimate the average cost per COI to be $60. In the case of Delaware, a hard copy of a COI typically arrives within 10 days of filing a request. California accepts orders by mail, requiring requestors to fill out a paper form. Copies are sent when completed. The cost is $1 for the first page and $.50 for each additional page. Processing takes 10-12 business days, not including shipping. For an unusually large order, arrangements can be made in advance, but the work is still performed on a first-come, first-served basis. For some other states like Massachusetts, COIs are available online. Thus, we would be able to access the business entity database for those states. Within this database, we would enter the name of a corporation in the search field, pull up the corporation's public information, and be able to download a copy.

Exhibit A.1: Data Coded from Certificate of Incorporation*

Files
Company ID
Company Name
Previous Names
Type of document
Number of Pages
Number of Securities
COI Date
Original Date of Incorporation

Securities
Security Name
Company
COI Date
Security ID
Security Type
Original Issue Price
Conversion Price
Dividend Rate
Cumulative Dividends
Compounding Dividends
Liquidation Priority
Liquidation Value
Liquidation Multiple
Deemed Conversion
Participation
Participation cap present
Participation cap present
Participation Cap Value
Participation Cap Multiple
Votes per share
Votes on as Converted Basis
Pay to Play
Class gets extra shares or payout in IPO in some cases
RatchetLvl
Special Case?
Extra Payout Text
Anti-dilution
Low IPO Triggers Anti-dilution
Special Terms Anti-dilution
Redemption
Redemption Multiple
Redemption Value
Fair Market Value Redemption
Earliest Redemption Date
Years to Earliest Redemption

Board of Directors Seats
BoD Total
BoD Composition
Conditional BoD Composition
BoD Roles Mentions Specific People or Companies
BoD Roles Mention Non-voting Director or Board Observer
BoD Members have Differential Voting Rights
BoD Special Terms
BoD Contains Other Special Terms

Protective Provisions
Class with Voting Rights
Number of Outstanding Shares Necessary to make Protective Provisions Rights valid
Percent of Outstanding Shares Necessary to make Protective Provisions Rights valid
Percent of Approval Necessary to Waive Protective Provisions
Page Number of Provision
Full Text of Provision

*Based on sample data provided by Stanford Graduate School of Business

Appendix III: Interviews and Background Research Process

This appendix describes our in-depth qualitative interview process, including: recruiting interview participants, carrying out background research, conducting interviews, tracking participation, and maintaining data confidentiality. We recruit the participants in our study through two methods: 1) for Rounds 1 and 2, direct recruitment of IPC leadership, and 2) for Round 3, first contacting private equity firms that invested in the IPC and then contacting company leadership. In both cases, we follow a participant recruitment process that was approved by the Committee on the Use of Human Subjects ("CUHS"), which serves as the Institutional Review Board for the Cambridge and Allston campuses at Harvard University.

Rounds 1 and 2 Recruitment of Interview Participants

In order to recruit participants for our Rounds 1 and 2 sub-samples, we first identify leaders of IPCs and their contact information through four sources: the company website, LinkedIn, Nexis Uni, and PitchBook. Specifically, we aim to identify prospective participants from the following categories of company leadership: chief executive officer, chief financial officer, chief operating officer, founder, impact executive, and president. Our rationale is that company leaders in these roles would give us the most insight into company history and operations over the course of the company's existence. For the initial wave of participant recruitment, we identify two leaders per company for outreach in all cases except those where only one company employee was listed in our sources. If we cannot identify two company employees in our categories of interest, we target leaders who hold positions of greatest responsibility and who have the longest term of employment at the company.

After identifying relevant company leadership, research staff first contact prospective participants through a recruitment email that describes our research study, team, as well as the conditions and process for participating (details in Exhibit A.2 below).

Exhibit A.2: First Recruitment Email

Dear [Name],

I would like to invite you to be part of a research study on business and social impact, led by Professors Shawn Cole and Josh Lerner at Harvard Business School. Our project is dedicated to studying companies and investors that generate social benefit alongside financial profit. Through this research, we are contributing to the development of knowledge and best practices in "doing well by doing good."

Currently, our research team is interviewing [founders and executives at companies that have received financing from impact investors {OR} investors at impact-focused companies]. **Could we arrange a video or phone call to talk about your experiences as a [company founder, CEO, CFO, investor, or other] at [name of company]?** Our conversation will touch upon company history, strategies for achieving profit and impact, as well as your own goals as a leader [in the space of impact investing {OR} of a business that generates social benefit]. The interview will last about **45 minutes** and can be scheduled at your convenience. It will be unpaid and completely voluntary, meaning you can end it at any point. Additionally, the names of the companies and the interviewees will be kept confidential and we will only report on aggregate patterns and trends.

We hope you will agree to speak with us. Your participation will help advance knowledge on the role of business in achieving social impact. At the end of the study, we will share our research and findings with participants. If you have any questions, please feel free to reach out to me or contact Professor Shawn Cole (scole@hbs.edu, +1-617-495-6525).

Thank you for your consideration and I look forward to speaking with you soon!

Sincerely,

Name

Contact information

www.hbs.edu/impact-investments

We further attach a personalized letter of invitation from the study's principal investigators to this email (details in Exhibit A.3 below).

Exhibit A.3: Letter Attachment

HARVARD | BUSINESS | SCHOOL

SHAWN COLE
JOHN G. MCLEAN PROFESSOR OF BUSINESS ADMINISTRATION
JOSH LERNER
JACOB H. SCHIFF PROFESSOR OF INVESTMENT BANKING

Dear [Name],

We are pleased to invite you to participate in a research study at the Project on Impact Investments at Harvard Business School, where we are dedicated to expanding knowledge on impact investing and building the infrastructure for others to do so as well.

Currently, we are conducting research interviews with companies and investors that generate social benefits alongside financial profit. Our goal is to learn about the challenges and strategies for combining these dual aims from innovative leaders like you. Ultimately, we will analyze these interviews for patterns across different types of companies in order to chart obstacles and solutions common to the growing space of impact investing.

We believe this work will contribute to a better understanding of how business can contribute to societal benefit. Since this is a research study, all interviews will be kept confidential. At the end of the study, we will share our research findings with participants.

We hope that you will join our research study and help us build knowledge and best practices in "doing well by doing good." Please don't hesitate to reach out to Shawn Cole (scole@hbs.edu, +1-617-495-6525) if you have any questions.

Sincerely,

Shawn Cole

Josh Lerner

SOLDIERS FIELD | BOSTON, MA 02163 | Ph 617.495.6525 | impactinvestments@hbs.edu | GEORGE F. BAKER FOUNDATION

If no response is received after one week, research staff send a follow-up email, which provides additional details on the definition of social impact within our study and includes the name of the impact investor that invested in the company (details in Exhibit A.4 below).

Exhibit A.4: Second Recruitment Email

Dear [contact name],

I hope you are doing well.

I wanted to follow-up on my email below and see if you might be available for an interview for a research study, being conducted at Harvard Business School?

For more context, we understand that [company name] may not overtly pursue "social impact". However, our study is defining "impact investing" in a wider sense and is researching the portfolio companies of investors that further both social benefit and financial profit in a variety of ways. One such investor is [name investor], which invested in your company.

We continue to be very interested in learning about [company name] and hope you will agree to speak with us. Let me know your thoughts and possible availability to speak in the coming weeks.

Kind regards,

[Name]

[Contact Information]

If no response is received after an additional week, research staff attempt to call the prospective participant by phone as a final mode of outreach (details in Exhibit A.5 below).

Exhibit A.5: Recruitment Phone Script

Hello [name]. I am calling on behalf of Professors Shawn Cole and Josh Lerner at Harvard Business School. We're conducting a research study on companies and investors that generate social benefit alongside financial profit and we're hoping to hear from innovative leaders like you. Would it be possible to arrange a video or phone call to talk about your experiences as an [investor, company founder, CEO, CFO, or other] at [name of company].

The interview would last for about 45 minutes and we can schedule an appointment for any time convenient to you. I'm also happy to share additional information about our research by email.

If research staff are able to reach prospective participants by phone, this is considered to be the final outreach attempt and no further outreach is conducted to this participant. However, phone numbers are often unavailable or incorrect in the sources that we use for recruitment and, consequently, they rarely reach participants. Thus, research staff often send a third and final outreach email subsequent to any phone call attempt, using the second outreach email template.

If study staff receive an expression of interest in the study from prospective participants, they respond to this message by sending any additional information requested and, upon continued interest, by scheduling an interview to be conducted online. When scheduling an interview, research staff typically provide a list of times of availability to prospective participants and allow them to schedule the interview according to their needs. After respondents signal their availability, research staff send them a Zoom invitation for a one hour meeting. Finally, once prospective participants accept the meeting invitation, study staff email a link to an informed consent form with the request that respondents read through this information prior to the interview (details in Exhibit A.6 below).

Exhibit A.6: Informed Consent Form

Study Title: Project on Impact Investments

Researcher: Shawn Cole

Key Information

The following is a short summary of this study to help you decide whether or not to be a part of this study. More detailed information is listed later on in this form.

Why am I being invited to take part in a research study?
We invite you to take part in a research study because you are a founder, executive, or investor in a company that generates social benefit alongside financial profit.

What should I know about a research study?

- Someone will explain this research study to you.
- Whether or not you take part is up to you.
- Your participation is completely voluntary.
- You can choose not to take part.
- You can agree to take part and later change your mind.
- Your decision will not be held against you.
- Your refusal to participate will not result in any consequences or any loss of benefits that you are otherwise entitled to receive.
- You can ask all the questions you want before you decide.

Why is this research being done?
The purpose of the Project on Impact Investments is to expand knowledge on impact investing and building the infrastructure for others to do so as well. The goal of our research interviews is to learn about the challenges and strategies of companies that generate social benefits alongside financial profit.

How long will the research last and what will I need to do?
We expect that you will be in this research study for 45 minutes. You will be asked to participate in an interview that addresses company history and business practices.

Is there any way being in this study could be bad for me?
This study holds the risk of the release of the information you provide to interviewers in the chance of a data breach. Study staff have taken several steps to minimize this risk. More detailed information about the study procedures can be found under ***"What can I expect if I take part in this research"***

Will being in this study help me in any way?
We cannot promise any benefits to you or others from your taking part in this research.

Detailed Information

The following is more detailed information about this study in addition to the information listed above.

What is the purpose of this research?

Impact investing has become a central, rapidly expanding part of the investment landscape in the United States and across the world. Yet, many questions remain surrounding this practice and its effects. The purpose of the Project on Impact Investments is to study the work of impact companies in the United States through the perspectives of the professionals at the forefront of social impact entrepreneurship. As part of this research, we are holding interviews with founders, executives, and investors within around 200 companies that are funded through impact investing. Your participation will help advance knowledge on impact investing and will contribute to the overall development of industry best practices.

How long will I take part in this research?
We expect that you will be in this research study for 45 minutes.

What can I expect if I take part in this research?
If you agree to participate in this study, you will be contacted by a study staff member in order to schedule a video or phone interview at a time convenient to you. Study staff include researchers from Harvard University and Cornell University. The interview will last around 45 minutes. It will be unpaid and your participation will be voluntary.

The interview will address topics, such as: company history, partners and competitors, strategies for achieving profit and impact, investment outcomes, as well as your own goals and experiences in the space of impact investing. You will be asked for your consent to audio record the interview. After the completion of interview, you will have a chance to express interest in a second, follow-up interview that would address the same topics discussed in the initial interview in greater detail.

What happens if I say yes, but I change my mind later?
You can leave the research at any time and it will not be held against you.

Is there any way being in this study could be bad for me? (Detailed Risks)
There are some risks you might experience from being in this study. They are economic risks in the case of a data breach of the information you provide. The risks associated with participating are minimal since we will not be asking for sensitive information and we will take careful precaution to maintain the confidentiality of your data.

If I take part in this research, how will my privacy be protected? What happens to the information you collect?

Efforts will be made to limit the use and disclosure of your Personal Information, including research study records, to people who have a need to review this information. We cannot promise complete secrecy. Organizations that may inspect and copy your information include the IRB and other representatives of this organization. In addition, we are sharing study data with our academic collaborator at Cornell University.

If identifiers are removed from your identifiable private information or identifiable samples that are collected during this research, that information or those samples could be used for future research studies or distributed to another investigator for future research studies without your additional informed consent.

Who can I talk to?

If you have questions, concerns, or complaints, or think the research has hurt you, talk to the research team at:

- Shawn Cole, Principal Investigator
  Email: scole@hbs.edu | Telephone: (617) 495-6525
- Christina Jarymowycz, Study Coordinator
  Email: cjarymowycz@hbs.edu | Telephone: (617) 998-1320

This research has been reviewed and approved by the Harvard University Area Institutional Review Board ("IRB"). You may talk to them at (617) 496-2847 or cuhs@harvard.edu if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get information or provide input about this research.

If prospective participants indicate that they are not interested in taking part in the study, research staff respond with a note of thanks and cease outreach to this employee. If the company leadership requests that their company be excluded from the interview study, research staff cease outreach to all company employees. In some cases, prospective participants respond with a message stating that their company is not deliberately creating social or environmental impact and, thus, they do not believe that their participation would be useful. In such cases, research staff respond by explaining that our study is using a broad definition of impact and is interested in companies that have been funded by impact investors at any point of their existence.[26] After this response, research staff comply with respondents' request to either participate or be excluded from the interview study. Finally, if research staff receive no response after three outreach attempts as outlined above, they cease further outreach to the prospective participant.

After the first wave of outreach to companies is exhausted, research staff identify companies where we fail to recruit two participants for interviews. Although the team's goal is to recruit two interview participants per company, a second interview could be deemed not to be a priority for the following reasons: 1) there is only one employee with sufficient experience and standing at the company to be able to answer our interview questions, and 2) the first interview yields a sufficient amount of information on the company for the purpose of the study. In addition, researchers prioritize companies that intentionally integrate social or environmental goals into their business model. Thus, for a subset of companies, we start the recruitment process over with two, new contacts per company. Once again, we aim to recruit company leaders who hold positions of greatest responsibility and who have the longest term of employment at the company. For smaller companies, we are often unable to identify as many target participants as for larger companies, since there are fewer employees at these

[26] We use the same definition of impact investors as within the "Project on Impact Investments' Impact Investment Database" working paper, which defines "impact investors to be investors with the explicit dual objective of generating social good and financial returns" (Burton et al. 2021). Meanwhile, impact investments and impact portfolio companies are defined as companies that receive funding through impact investors.

organizations. In addition, employees of companies that have gone out of business as well as those that have undergone an IPO tend to be more difficult to recruit.

Finally, after exhausting recruitment to company contacts, we recruit investors at a subset of sampled companies in order to pilot investor-level research. For this investor interview pilot, we target smaller impact investors, who invested in a company that we have successfully recruited for an interview. When recruiting investors, we first identify the name of the individual who led the investment into the IPC in our sample or the individual who had served on its board of directors. We are often able to identify the relevant investment professional by searching PitchBook, LinkedIn, or Google. After identifying the target employee at the investment firm, we initiate the same outreach process used to recruit company leaders and rely upon the first recruitment email and letter attachment found in Exhibits A.2 and A.3 above.

Round 3 Recruitment of Interview Participants

For our Rounds 1 and 2 sub-samples, recruitment of interview participants begins at the company level, while for the Round 3 sub-sample, recruitment is initiated at the impact investor level. The decision to reach out to investors first is made in order to maintain a good relationship with these investors and to have the option to subsequently recruit them for participation in the study. Thus, for the Round 3 sub-sample, research staff initiate recruitment by emailing long-held professional contacts at large private equity investors, from whom we sampled more than two companies. In the recruitment email, detailed in Exhibit A.7 below, we notify these contacts that we will be conducting interviews with the leadership of their impact portfolio companies.

Exhibit A.7: Investor Recruitment Email

Dear [Insert Name of Investor Contact Here],

I hope that you and your family are safe and well. I know that our discussion around [insert previous collaboration with investor] is still ongoing and we are excited to continue that conversation. We wanted to post you on another research study being conducted at Harvard Business School, led by Professors Shawn Cole and Josh Lerner.

Currently, our research team is interviewing founders and executives at companies that have received financing from impact investors. Through a sampling methodology, we have selected several companies which have received investments from your funds. We deeply respect your role as a controlling investor providing expertise and assistance to the management teams and so we did not want to reach out to such firms without your knowledge. Importantly, we also hope to speak with the person at your firm who was most involved in the investment -- perhaps a board member or board observer?

Our process is to arrange video or phone calls and conduct a structured interview. Participation will be unpaid and completely voluntary, meaning interviewees will be able to end the interview at any point. Additionally, per the research rules at Harvard, names of the companies and the interviewees will be kept strictly confidential and we will only report on aggregate patterns and trends.

Below are the portfolio companies that we have selected. We would greatly value any suggestions on whom to contact regarding these investments

[Insert a Table: Company Name, Investor Representative]

Thank you very much.

Very Best,

Name

Contact information

In the recruitment email to investors, research staff further explain the purpose of our research study and the research process. In addition, we include a list of portfolio companies that we sample from amongst the firm's impact investments. If the study team's investor contacts do not respond to the initial email informing them of the study after three weeks, research staff follow up with a second email asking if they have received the initial email. If no response is received after the second email, study staff plan to follow up a third and final time, however, this is unnecessary as all investors respond after the first two emails.

In the case that investor contacts offer no objection to recruiting their portfolio companies for participation in the study, we initiate outreach to the leadership of portfolio companies using the same recruitment process that is used for the Rounds 1 and 2 sub-samples. In the case that investor contacts object to the inclusion of their portfolio companies in our study, we do not conduct outreach to the leadership of such companies.

Interview Protocol

Across all interviews, we focus our questions on those detailed in the consolidated interview protocol, found in Exhibit A.8 below. Since our interviews are semi-structured, interviewers are free to adjust this protocol to the needs of each individual IPC and participant.

Exhibit A.8: Consolidated Interview Protocol

INTERVIEW PROTOCOLS – CONSOLIDATED VERSION

Note: Best practice is to gather Information from multiple informants for each firm. Our goal should be a minimum of two informants per firm, and more when possible.

Proposed Informants:

- Investor (ideally an investor who is/was a board member).
- Founder (who may or may not still be with the company)
- Current Top Executive (CEO/President/Executive Director)
- Vice President or other executive directly connected to the work or product that generates social impact (e.g. Chief Technology Officer for product firms; Program Officer for social service firms)
- A Professional employee (CFO?) responsible for Finance/Investor relations

INTRODUCTION, CONSENT, AND AUDIO-RECORDING [ALL PARTICIPANTS]:

Thank you for agreeing to speak with me about your experiences at an impact-focused company.

Have you had a chance to read through the document describing our research study? Do you have any questions before we start the interview?

Do you mind if I record the interview?

I. BACKGROUND [ALL PARTICIPANTS]

INVESTOR:

I'd like to begin with a bit of background about how you approach impact investing.

Investing Philosophy and Experience

What do you look for in an impact investment? What are the most important criteria you consider?

How long have you been doing this? What brought you to it?

Does your firm (or do you) have a particular focus or interest area?

Initial Involvement

For our research, we've randomly sampled a set of firms, so we hope you won't mind if we focus attention on a specific investment that you are (or were) involved with - NAME OF FIRM.

How did you initially get involved with the firm?

How did it fit in your portfolio at the time of the initial investment?

What attracted you to this particular opportunity?

What reservations, if any, did you have?

FOUNDER:

Catalyst

I'd like to begin with a bit of background information about the firm's earliest days.

What was the impetus for forming a company?

When did it occur?

What problem(s) were you trying to solve? What led you to these problems?

Did you have a solution developed or in mind at the time of founding?

CEO:

I'd like to begin by learning a bit about your career and how you got to this company.

Can you briefly describe the path that brought you to this role?

What most excited you about this firm when you were deciding to join? Do you recall having any reservations or concerns?
Can you describe what the firm looked like at the time when you took over? What was the strategy? How successful was the firm up until this point? What did you see as your key priorities as leader?

IMPACT EXECUTIVE OR PROFESSIONAL EMPLOYEE:

First I'd like to talk a little bit about your experiences prior to coming to this firm and your particular role in the firm today. I want to get a general sense of the social impact mission of the firm. And then I'd like to spend the bulk of the time understanding what you are doing and how you know whether it's working. We are particularly interested in how you are hope to achieve your social impact and what, if anything, you are doing to assess or measure social impact.

Can you briefly describe the path that brought you to this role?
What most excited you about this firm when you were deciding to join? Do you recall having any reservations or concerns?
What is your current role and what are your responsibilities.
How does your work fit into the broader organization?
Who do you report to? How large is your team? What other people or units within the firm do you need to work with?

II. Focal Company [investor only]

Founding team membership

Who would you consider to be part of the founding team? How did the people come together? What roles did each person play and for how long?
Did any of the founding team members have experience founding a company before starting this one?
What kinds of expertise did team members have?
How were responsibilities allocated among team members?
From your perspective as an investor and board member was there a clear leader? Were there obvious skill gaps?

Investment Goals and Oversight

Prior to your investment, how had the firm been financed?
What were the intended purposes for the money that you invested?
How involved were you in the organization during the first year of your investment?
Who were the other key stakeholders/advisors? How much consensus was there about what the organization was trying to achieve and how to go about it?

II. Founding Conditions [founder only]

I'd like to turn to the founding conditions of the firm. We are interested in the early process of building the company and the people who were involved.

Legal form

How did you decide what legal form the firm should take? Did you try (or consider) different alternatives? What led you to your current legal form?

Founding team membership

Who would you consider to be part of the founding team? How did the people come together? What roles did each person play and for how long?

Did any of the founding team members have experience founding a company before starting this one?
What kinds of expertise did team members have?
How were responsibilities allocated among team members?
How has your role evolved over time?
How important was social mission in attracting founding team members?

Investors

We are interested in how you financed the firm. We are particularly interested in the financing process and your initial approach to identifying and working with investors.
How did you initially finance the firm?
When did you first seek external investors? Why? What was the process that led you to your current investors?

Advisors/Supporters

We are interested in the people who were important early "friends" to the firm -- people who were not actively working day-to-day, but provided key resources early on.
Who, if anyone, was an important early supporter or champion? How were they involved and how did they help?

II. Executive Team and Board Membership [CEO only]

We are interested in the leadership team and how you worked together.
Who were your direct reports initially and what were they doing? How did you work as a group?
Did you make any changes to the top management team during your tenure?
Can you describe your board -- how big? how active? Changes over time?
Who are other important stakeholders?
What about your investors?

III. Strategy [all participants]

INVESTOR:

Strategy

What was the firm's strategy for achieving profits? Did this evolve or change? When & why?
How did the firm intend to achieve social impact? Did this evolve or change? When & why?
Have there been instances when the social impact goals and financial return goals were in tension or incompatible?

Competition

Now I'd like to learn more about the problem space and competitive environment and company's initial strategy.
What was the competitive situation at the time of your investment? Who else was working in this area? What were they doing? Why did you see an opportunity for this firm, given the existing landscape?
What was most promising about this firm?
Were you aware of anyone similar -- perhaps in a different region or with a slightly different problem focus?

Expectations

What were your expectations about where the firm should grow in terms of size, revenue, scale, etc.? Did these changed over time? If so, why?

Approach to Social Impact
How did you measure or assess the firm's social impact? Did you have targets such as number of people served, land conserved, pollution reduced, etc.?
How did you monitor this impact? Who was responsible & how frequently did you assess?
Change and evolution
If you were telling the story of this firm, what were the biggest ups and downs?
Were there key hires -- or hiring mistakes?
Were there major strategic pivots?
Were there external events -- positive or negative -- that affected the firm?
Exit
How did you/do you hope to exit from this investment? Do you consider it to be a success?
How important was impact in the exit? Was it important from the buyers perspective? Did founders/owners or you do anything to "preserve" impact nature of firm upon sale to non-impact investors?

FOUNDER:

Now I'd like to learn more about the problem space and competitive environment and company's strategy.
Competition
What did the competitive landscape look like when you first formed the company?
Who else was working in this area? What were they doing? Why, from your perspective, was there an opportunity?
Did you have any competitors? Was anyone trying to do anything similar?
Were you aware of anyone similar -- perhaps in a different region or with a slightly different problem focus?
Who were your labor market competitors? Were you vying for the same employees or volunteers with other organizations?
Core competence
What did you envision would be your firm's source of competitive advantage?
How would your firm be different from others who were working on the same problem?
Plans
Did you develop a business plan?
Did you start out with goals about where the firm would be in terms of size, revenue, scale, etc. at various points down the road?
Did you have a specific geographic or substantive focus initially? Did you have expansion ambitions? Have these changed over time?
Was there a limit, a point beyond which you did not want to grow?
Did you consider alternative growth models such as networks/alliances/franchises?
Implications of Strategy
At the time of founding and during the first year, what was the single most important issue/challenge facing the firm?

CEO:

Now I'd like to learn more about the problem space and competitive environment and company's strategy.
Competition
What does the competitive landscape look like?

Who else is working in this area? What are they doing? Did you have any direct competitors? Are you aware of anyone similar -- perhaps in a different region or with a slightly different problem focus?
Who are your labor market competitors? Do you compete for the same employees or volunteers with other organizations? Which ones?

Core competence

What is your firm's source of competitive advantage?
How is your firm different from others who were working on the same problem?

Business model

Does your business model depend on relationships/partnerships with other organizations? If so, who, how and why?
Do you connect to or depend on any government entities?
Which, if any, of your inter-organizational relationships have been particularly important to your ability to be successful?

Plans and Aspirations

What are your goals about where the firm should be in terms of size, revenue, scale, etc. in the next year? Five years?
Did you have a specific geographic/substantive focus? Do you have expansion ambitions? Is there a limit, a point beyond which you do not want to grow?
Do you ever consider alternative growth models such as networks/alliances/franchises?
What is the single biggest challenge facing the firm today?

IMPACT EXECUTIVE OR PROFESSIONAL EMPLOYEE:

Firm Description

What is the firm's strategy?
From your perspective, how successful is the firm?

Competition

What does the competitive situation look like?
Who else is working in this area? What are they doing? Did you have any direct competitors? Are you aware of anyone similar -- perhaps in a different region or with a slightly different problem focus?
Who are your labor market competitors? Do you compete for the same employees or volunteers with other organizations? Which ones?

Social Impact

How did you intend to measure or assess your impact? Did you have targets such as number of people served, land conserved, pollution reduced, etc.?
How did you monitor this impact? Who was responsible and how frequently did you try to assess?
Who were your key stakeholders? How did you communicate your social impact to them?

IV. Organizational Design [Founder and CEO only]

FOUNDER:

Organizational Blueprint

Did the founding team have a clear notion for what the organization would look like? Was there model or blueprint? Where did that come from?
Did the founders have a model in mind for how the employment relationship should be managed? Was explicit attention given to personnel issues?

Was someone initially given responsibility for this domain?
Did you have ideas about how to coordinate people's efforts?
Did you set out to create a particular kind of organizational culture?

Approach to Social Impact

How did you intend to measure or assess your impact? Did you have targets such as number of people served, land conserved, pollution reduced, etc.?
How did you monitor this impact? Who was responsible & how frequently did you assess?
Who were your key stakeholders? How did you communicate your social impact to them?
To what extent did you intend for your model/approach to be scaleable/replicable?

Ecosystem Participation

Did your initial plans depend on relationships/partnerships with other organizations? If so, who, how and why?
Did you connect to or depend on any government entities?
Did you connect to or participate in any social entrepreneurship/social innovation/social impact networks or groups?
Which, if any, of your inter-organizational relationships have been particularly important to your ability to be successful?

CEO:

Organizational Blueprint

Do you have a leadership philosophy? What kind of an organization are you trying to build? Is the current culture of the firm consistent with what you want? Why or why not?
How are you thinking about employment and jobs? Do you rely on contractors or freelancers? Do you have interns or volunteers? How many employees do you have? Are people mostly full-time or part-time? How do the pay and benefits that you are offering compare to what is otherwise available in this labor market?

Approach to Social Impact

How do you measure or assess your impact? Do you have targets such as number of people served, land conserved, pollution reduced, etc.?
How do you monitor this impact? Who was responsible & how frequently did you assess?
Who are your key impact stakeholders? How did you communicate your social impact to them?
Do you connect to or participate in any social entrepreneurship/social innovation/social impact networks or groups? Why or why not?

FOLLOW-UP INTERVIEW QUESTION [ALL PARTICIPANTS]:

Thank you for this fascinating interview. As we continue our research, there may be some topics that require clarification or additional information. Would you be interested in potentially participating in a follow-up interview in the future? It would address similar topics to the ones discussed today but request greater detail.

Background Research Process

Parallel to the recruitment of interview participants and prior to conducting interviews, study staff conduct background research on the IPCs in the interview pool in order to collect publicly available, relevant information on company operations and evolution. Such research focuses on topics relevant to the interview protocol (see Exhibit A.8 above), including: business strategy, company leadership, competitive environment, ecosystem participation, founding story, government policies relevant to the business, investment history, major developments and setbacks, partnerships, social impact, and others.

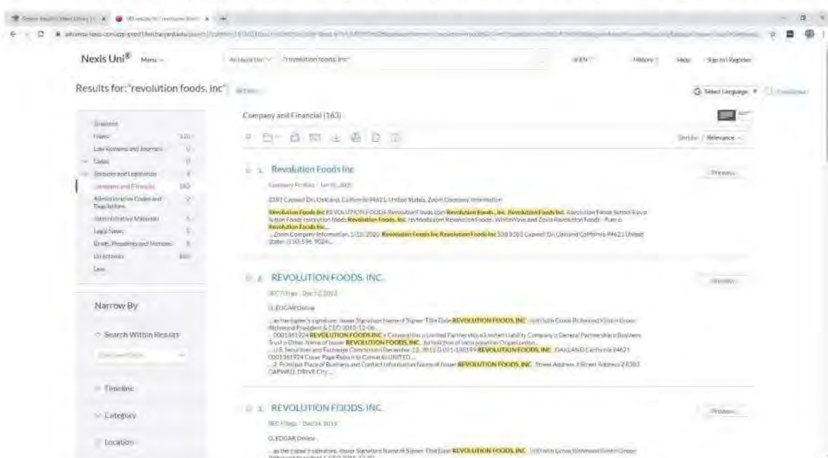
During the background research process, study staff begin with a search for the company name on one of the following two databases: Factiva and Nexis Uni. These databases provide similar search results and research staff decide on which to use based upon their own ability to access these resources as well as their own preference in user interface. Research staff are provided with recommendations on how to most effectively conduct searches in these databases and how to filter results (details in Exhibit A.9 below).

Exhibit A.9: Database Search Recommendations*

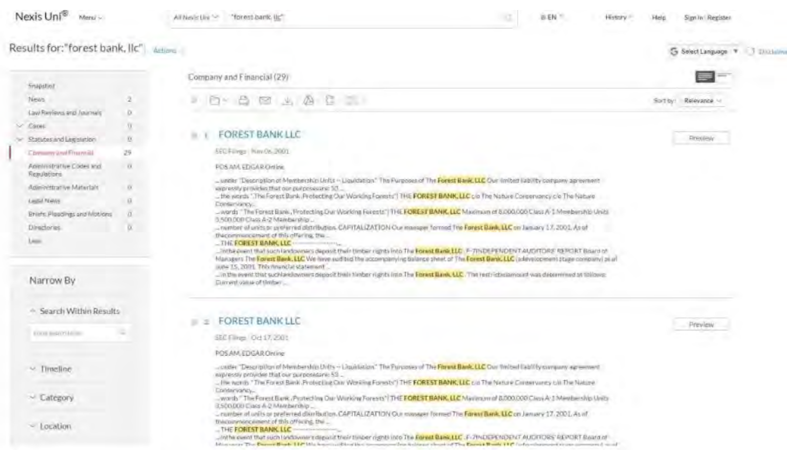
<u>SEARCH 1: Company and Financial Documents</u>

- Access LexisNexis Academic Database
- In main search box on home page, enter name of target firm as seen below for the example, UrbanSitter.

  - If target firm has a two part name, you many need to use quotations around name in search as in "Revolution Foods."
  - TAKE NOTE: Some company names are not as unique as UrbanSitter. For example, the company "Revolution Foods" is similar in name to many others, including Hot Revolution Foods, Sweet Revolution Foods, etc... In such cases, after an initial search that yields too many irrelevant results to parse through, it makes sense to include the suffix (Inc in the case of this company) in the search for companies and financial sources as seen below:

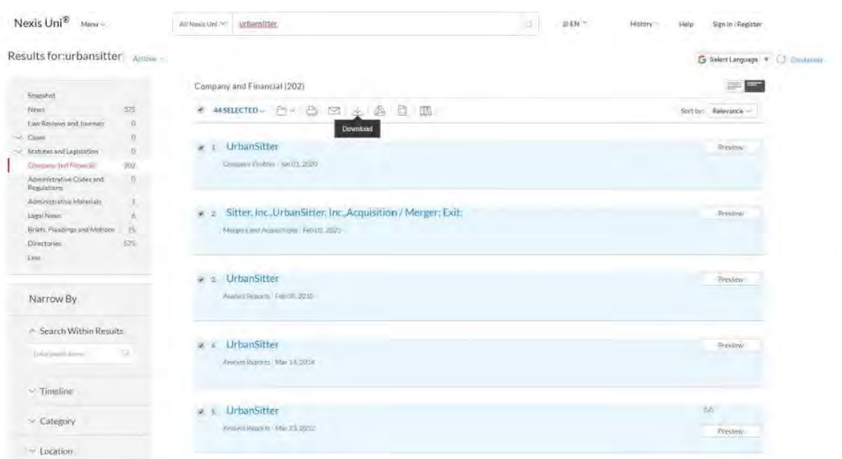


  - A similar case is "Forest Bank LLC" for which the results are shown below:



In results, apply company and financial filter and find all results that contain target firm name in heading. These will be the most relevant documents.

- In the example below, the search is automatically sorted by relevance and we can easily see that UrbanSitter has 44 results in the "Company and Financial" category that contain the company name in the headline/title of the source.

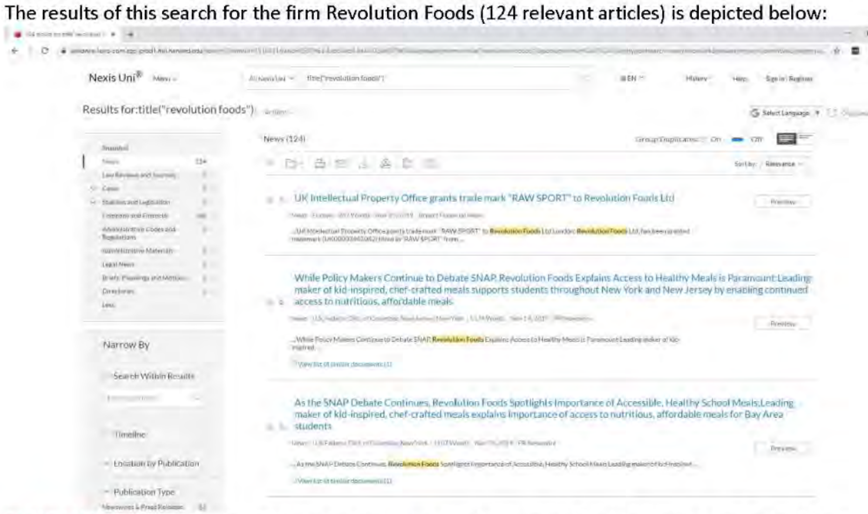


If this search does not yield many results, you may want to look through all the documents, not just the ones with the company name in the title.

If this is an older company, repeat steps for any previous names of target firm and identify documents that are relevant to our study.

SEARCH 2: News Sources

- Access LexisNexis Academic Database
- Search for target company name in quotations and without any suffixes and identify relevant results in the “News” category.
- If this search yields too many articles, search for the company name in the title of articles only, without any suffixes such as ltd, llc, inc. For instance, in the case of Revolution Foods, Inc, search **title(“revolution foods”).** We are excluding the suffixes for this search because many blogs or news stories may not contain them. We are also narrowing the results by title search in order to identify news sources that specifically focus on our company.
- Click on the “Group duplicates” bar to the top right of the search results.
- The results of this search for the firm Revolution Foods (124 relevant articles) is depicted below:



- PLEASE NOTE: If this search still turns up too many results, you can further narrow your search by type of publication or source in any way you find relevant.
- BEWARE: In the results, we can see that the first result is for Revolution Foods Ltd, which is not our target firm. When identifying relevant news stories, make sure that they are related to the firm in our study and not another company of a similar name.
- If this is an older company, repeat steps for any previous names of target firm and identify documents that are relevant to our study.

* The company examples used in Exhibit A.9 do not correspond with the companies recruited for the interview pool.

Research staff are instructed to identify at least 15 articles per company and to search for articles that span the list of topics, addressed in the interview protocol (see Exhibit A.8 above). In the case of smaller companies or companies that went out of business, Factiva and Nexis Uni often yield few results. Moreover, these databases frequently exclude informative, yet less formal types of sources, such as blogs, podcasts, social media posts, and videos. For these reasons, if Factiva and Nexis Uni yield unsatisfactory results, research staff are advised to use the following, additional search strategies:

- Search the news or blog sections on the company website in order to find articles or blog entries that are not found in academic databases.
- Conduct a Google search for the company name in quotations and founder or CEO name in quotations in order to find articles on the founding story or interviews with founders or CEOs in video or audio format.
- Search for the company name in quotations on YouTube in order to find conference presentations or vlogs with the company leadership.
- Search social media related to the company or the company leadership, such as Twitter or Facebook in order to find posts about the company's progress or links to articles and interviews related to the company.

The final step in the background research process is uploading all identified articles onto our custom research management application on Quickbase. Through this platform, we are able to share background research on companies across the team in an organized fashion. The Quickbase platform further allows us to construct chronologically ordered timelines of events that are linked to each company in the interview sample. Interviewers are instructed to read through these timelines prior to conducting interviews with IPC leadership.

Interview Process

During participant recruitment, interviews are typically scheduled for one hour. In a few cases, interviewees request shorter interviews and research staff accommodate such requests. Each interview involves one lead interviewer and a secondary interviewer. Prior to each interview, the lead interviewer prepares an interview protocol, tailored to the specific interview at hand, and both the lead and secondary interviewers read through the background research on the company. Interviews are semi-structured, meaning they address questions listed in an interview protocol, designed for a specific interviewee-type, however, interviewers are allowed to change the order of interview questions, adjust follow-up questions based on responses, and skip interview questions if they are deemed irrelevant to the company or if they are already answered through background research. For this reason, prior to interviews, the lead interviewer and secondary interviewer meet for around 15 minutes to discuss the interview topics to be covered and any questions that arise on the company or participant during background research. Such meetings are important for the alignment of interview goals across the team.

At the start of interviews, interviewers spend around ten minutes on introductions, building rapport, and answering participant questions on the study. In addition, participants are asked if they agree to be audio-recorded, and all but three interviewees agree to this request. Audio-recordings are conducted either on Zoom or by using a local recording software, such as the NowSmart Sound Recorder. During the course of the interview, the lead interviewer typically asks the research questions, while the secondary interviewer takes detailed notes on the interview and offers suggestions to the lead interviewer either through Slack or the Zoom private chat box. Finally, in the case that researchers are interested in a second company interview, interviewers ask whether participants could connect us with another employee at their company so that we can include multiple leaders' perspectives in our study. This request is made either at the end of interviews or within thank you notes that follow interviews.

Following each interview's completion, the lead and secondary interviewers meet for 15-30 minutes to de-brief on the interview, guided by the de-brief form detailed in Exhibit A.10 below.

Exhibit A.10: De-brief Form

1. What are some impressions, "aha" moments, or reflections from the interview?
2. What are some takeaways on the topic of Impact?
3. Do these takeaways challenge or align with patterns we've been seeing in other cases?
4. What new or remaining questions or concerns do you have for follow-up research?

De-briefings are an important step in the research process for several reasons: 1) they enable the alignment of research goals across the team, 2) they allow research staff to capture immediate reactions to interviews, 3) they present an opportunity to start the preliminary analysis of interview data, 4) they are a place where researchers can mark any important questions or areas for follow-up in future interviews or background research, and 5) they aid in team decisions over whether additional interviews should be pursued for the company.

Tracking and Coordinating Recruitment

Throughout the recruitment and interview processes, both contact information and recruitment progress are tracked across the team through a customized application created on Quickbase.[27] First, all company contacts are uploaded to Quickbase and linked to company entries. In total, 496 contacts are identified across the companies in the interview sample. After each significant recruitment activity, an activity linked to both the company and its contacts is created in Quickbase. These activities are tracked at the company level, allowing the research team to document data such as: who is recruited, how many recruitment emails or calls are placed, and when such outreach is conducted. In addition, a Quickbase report is generated that automatically lists scheduled interviews

[27] Quickbase is a low-code platform that allows users to design custom applications for cross-team collaboration.

in calendar form. Thus, research staff are able to see all scheduled interviews for the weeks ahead on the homepage of the Quickbase platform.[28] In addition to tracking participant outreach on QuickBase, the study coordinator is cc-ed on outreach emails and, in this way, maintains a record of all study communications.

Maintaining Confidentiality in Data Sharing

Throughout the interview study, we maintain participant confidentiality according to the standards set by the CUHS, which oversees all research at Harvard University and ensures that ethical standards are met. The data management process includes: 1) recording interviews locally on computers, 2) storing interview recordings and transcripts on encrypted computers only accessible to researchers approved by the CUHS, 3) coding the names of interview audio files and transcripts, and 3) storing any de-identified files in a separate, secure folder on encrypted computers only accessible to researchers approved by the CUHS.

During interviews, we audio-record interviews locally and store audio recordings and interview transcripts on encrypted computers. When using Zoom to audio-record interviews, we initially record both audio and video locally onto the computers of the researchers conducting interviews, since solely recording audio is not an option for this software at the time of the study. Once the Zoom interview is complete, audio recordings as well as interview transcripts are transferred to a Harvard Managed Dropbox and researchers without verified, encrypted computers permanently delete these documents from their computers. Meanwhile, all researchers permanently delete any video recordings of interviews from their computers.

We store interview audio-recordings and interview transcriptions containing identifiable information in a Harvard Managed Dropbox folder created specifically for any files with identifiable

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[28] During the study, 1798 activities were tracked across all rounds.

information. The crosswalk document that links identifiable information is also stored in this folder. Any de-identified and coded research files are stored in a separate, Harvard Managed Dropbox folder created specifically for de-identified and coded files. All Harvard researchers approved by the CUHS for this project can access these Dropbox folders on their work computers, which are encrypted and meet the Harvard IT department's security requirements. Study team members without Harvard work computers are required to verify that their computers are encrypted before they can store any study data on them. Study team members are not allowed to store interview data on non-encrypted computers. If interviews are conducted by team members whose computers are not encrypted, all audio-recordings and transcripts of these interviews are transferred to an encrypted device and deleted from non-encrypted computers immediately after the interview.

Appendix IV: Business Status

When determining the current business status of the companies in our interview pool, we are primarily interested in distinguishing whether each company is still operating as a privately held company or whether it underwent an acquisition, went public, or went out of business. Thus, in order to generate the most updated and accurate depiction of this business status, we initially compile company status information for all 141 companies in our interview pool from Capital IQ and PitchBook. We choose to use the Capital IQ "Company Status" category and the PitchBook "Ownership Status" category because these categories include the information of interest and are organized alongside similar criteria. Table A.8 below summarizes the chosen categories across databases.

Table A.8
Company and Ownership Status Categories in Capital IQ and PitchBook

Capital IQ Company Status	PitchBook Ownership Status
• Acquired • Operating • Operating Subsidiary • Out of Business	• Acquired/Merged • Acquired/Merged (Operating Subsidiary) • Out of Business • Privately Held (backing) • Privately Held (no backing) • Publicly Held

After comparing the data across these categories, we find that Capital IQ and PitchBook are not perfectly aligned in their categorization of the companies in our interview pool. In order to resolve contradictions in these databases and to compile the most updated and accurate information, we develop a business status category that relies on both our interview responses and background research. The final category, which we term "Pii Business Status," is based on the criteria summarized in Table A.9 below.

Table A.9
Criteria for Pii Business Status Category

Pii Business Status	**Criteria**
Acquired	Criteria 1: Interviewee mentions acquisition OR Criteria 2: Background research provides evidence of acquisition in the form of a news story or press release
Out of Business	Criteria 1: Interviewee mentions company went out of business OR Criteria 2: Background research provides evidence of company dissolution in the form of a news story or press release OR Criteria 3: No evidence of company activity online for past 2 years AND company general email OR website inactive
Privately Held	Criteria 1: Interviewee mentions business still operating as a privately held company OR Criteria 2: No evidence of company dissolution, acquisition, or IPO in background research AND company website active
Publicly Held	Criteria 1: Background research provides evidence that company is publicly held through news releases or company filings

Ultimately, 109 out of 141 companies or 77% of the interview sample are categorized similarly across the Capital IQ, PitchBook, and Pii categories, following the rules summarized in Table A.10 below. For the remaining 32 companies, we assume the Pii Business Status category to be the most updated and accurate as of the time of paper publication. In total, the Pii Business Status category reported in this paper aligns with the Capital IQ Company Status category across 80% of the interview pool. Meanwhile, the alignment of the Pii Business Status category with the PitchBook Ownership Status category is present across 94% of the interview pool. Ultimately, only 4 companies or 3% of the interview pool represents a Pii Business Status that is unique from both the Capital IQ and PitchBook equivalent categories, as described in Table A.10 below.

Table A.10
Mapping of Business Status Categories across Capital IQ, PitchBook, and Pii

Pii Business Status	**Capital IQ Company Status**	**PitchBook Ownership Status**
Acquired/Merged	Acquired Operating Subsidiary	Acquired/Merged Acquired/Merged (Operating Subsidiary)
Out of Business	Out of Business	Out of Business
Privately Held	Operating	Privately Held (backing) Privately Held (no backing)
Publicly Held	Operating	Publicly Held