

Insights into the Private Capital Industry using the Private Capital Research Institute Database

Part 1: Data Sources and Overview of Private Capital Firms, Funds, and Portfolio Companies

This is the first article in a series of articles about the Private Capital Research Institute database. These articles are aimed to provide a brief overview of the research being done at the PCRI and the data that are being collected. For more specific details on the database (for instance, variable definitions and database structure), please refer to the PCRI Data User Manual available at www.privatecapitalresearchinstitute.org.

Introduction: The Private Capital Industry and the PCRI Mission

[Note: To avoid terminology confusion, we will refer to all forms of private equity as private capital.]

Within the financial services sector, the importance of private capital investments has increased significantly over the past ten years. The global private equity sector grew from \$870 billion a decade ago to \$3.8 trillion in mid-2014.¹ Private capital comes in many forms, including venture capital, buyout, and growth equity funds. It is characterized by funds raised largely from institutional investors (e.g. university endowments, public pension funds, and foundations) or high-net worth individuals. Private capital investments tend to differ from public market investments because of illiquidity and oversight. That is, private capital investments are generally four to ten years long and typically have intensive involvement by the investors in the companies.

One aspect of private capital is that it is indeed private. Traditionally, these investors have not had to make detailed disclosures to the United States Securities and Exchange Commission or other regulators. This has led to a shortage of highly reliable industry data and to

an unappealing setting where industry advocates make sweeping claims about the benefits and critics make broad charges on very shaky empirical foundations.

Some argue that private capital transactions are socially wasteful because they rely heavily on the favorable tax treatment of corporate debt or the unrealistic expectations of private capital investors.² Others hold that buy-out firms profit mainly by inducing senior executives of publicly traded firms to accept deals that go against the true interests of shareholders. These views imply that private capital transactions are unlikely to improve employment or performance.³ In contrast, other views hold that private capital transactions improve asset management and operating efficiency by concentrating ownership and by escaping from costly shareholder suits and burdensome regulations.⁴ Moreover, highly leveraged equity structures may focus managers on running the business efficiently. These latter views imply that private capital transactions improve performance.

Furthermore, there is another set of questions set around private capital performance. As private capital returns (net of fees) have apparently outperformed the S&P 500 (including dividends), public

¹ 2015 Preqin Global Private Equity Report, 2015.

² Fleischer, Victor, "Two and Twenty: Taxing Partnership Profits in Private Equity Funds," New York University Law Review, Volume 83, No. 1, April 2008

³ Nielsen, Richard P., "The Private Equity-Leveraged Buyout Form of Financial Capitalism: Ethical and Social Issues, and Potential

Reforms," *Business Ethics Quarterly* (2008), Volume 18, Issue 3, ISSN 1052-150X, p379-404.

⁴ Jensen, Michael, "[Eclipse of the Public Corporation](#)," *Harvard Business Review*, Sep-Oct 1989

pension funds have become increasingly reliant on private capital. Their enthusiasm for this asset class is understandable: pension funds are facing huge shortfalls in terms of their pension obligations that pose extraordinary challenges. For example, the 100 largest US public pension funds hold less than \$70 for every \$100 committed and had a total funding gap of \$1.3 trillion in 2014.⁵ This problem is critically important to America's long-run savings, and more broadly for the health of the global economy. But it is still unclear what the performance of private capital funds would be, once the added risk and illiquidity of these investments are corrected for.

The wide private capital knowledge gap fosters mistrust among practitioners, policy-makers, and the general public. Given the private nature of the industry, there is no single, authoritative data source for private capital data. Therefore, academic studies are highly dependent on specific data sources, making it very difficult to replicate or refute.

To address this knowledge gap, the Private Capital Research Institute (PCRI) was founded with the objective to provide a greater fact-based understanding of private capital's global impact. The PCRI has been working since 2010 to build a comprehensive research database on funds and transactions of private capital, to organize a community of scholars, to sponsor unbiased academic research on the nature and effects of private capital, and to disseminate the findings of this research to policy makers and the public at large.

Private Equity Industry Description Based on the PCRI Database

It is virtually impossible to pinpoint the exact size of the private equity industry or to verify completeness of any dataset. However, we believe that the PCRI universe is one of the most comprehensive and complete

databases on private capital funds and transactions. The unique feature of the PCRI database is that it draws from multiple data sources, including the private capital firms themselves, several commercial data vendors, private capital associations, limited partners, and PCRI's own research.

In this article, we focus on a description of our data sources and provide a summary overview of the data on private capital firms, funds, and portfolio companies. In particular, we focus on buyouts, growth equity, and venture capital investing. In the future, the PCRI would like to include information on angel investments and sovereign wealth funds. We already have an agreement in place with Tufts University to receive sovereign wealth fund data and are currently working to incorporate this new data.

PCRI Data Sources

Data Collection from Private Capital Firms

A large part of the vision of the PCRI has always been to focus on obtaining data from the private capital firms themselves. It might be plausibly wondered why private equity firms would be willing to share data with the PCRI when commercial databases have struggled to get data from these institutions. The PCRI success in being able to access data from these investors has been based on three factors.

First, the PCRI places constraints on the use of the data. The PCRI is designed to be a project run by academics and for academics. There is the understanding that academic research is widely perceived as bringing fact-based transparency that will help diminish the existing knowledge gap in the industry. Therefore, the PCRI database would be used exclusively for academic research, rather than for any commercial purpose.

⁵ Rebecca A. Sielman, "Milliman 2014 Public Pension Funding Study," November 2014

Second, the PCRI has designed a protocol that would simultaneously allow academics to undertake high quality research, while protecting the confidentiality of the data being provided by the private capital firms. The PCRI data is hosted at the National Opinion Research Center (NORC) at the University of Chicago. The NORC provides secure research systems to academics, the private sector, and government agencies. For example, the NORC currently hosts highly sensitive Medicare and Medicaid claims data (including inpatient and outpatient records) for use in analyses of health care system efficacy. The PCRI databases are anonymized; only PCRI research staff have access to identified data. PCRI researchers are able to access PCRI databases only through special computers with disabled USB ports and no screen capture. Furthermore, the PCRI is employing a methodology whereby academics can undertake detailed cross-tabulated and regression analyses but not download or view individual data entries. Essentially the academics can upload queries and download results without “touching” the individual data entries. Finally, software program log files would provide a paper trail of activity and would be monitored.

Lastly, the success of the PCRI in generating participation in the private equity community has to do with the fact that the industry itself is under much greater scrutiny. In particular, in the aftermath of the financial crisis, there has been much greater attention to institutions such as hedge funds and private capital groups that traditionally were exempt from most regulatory oversight in the United States and Europe. As a result of these pressures, industry leaders have increasingly appreciated the need for high quality independent research. A number of institutional investors have also actively encouraged and lobbied private capital firms to collaborate with the PCRI.

Gathering information from the private equity firms has its own limitations. Even if every active group chose to participate, there would still be a number of

groups that have gone out of business. As a result, we are complementing the data that we gather from the private capital firms with data from commercial sources.

To date, the PCRI has signed agreements and received data from several dozen private capital firms. The data from these private capital firms represent over 250 funds and over 4,725 portfolio companies. In addition, the PCRI has data provided by the City of Zurich Pension Fund which includes fund data and cash flow information on approximately 150 private capital funds.

Data collection from other sources

Four major data vendors/private capital associations contribute to the PCRI database: the Emerging Markets Private Equity Association (EMPEA), NYPPEX FUNDSIQ (“NYPPEX”), Thomson Reuters, and unquote. Below is a brief description of these organizations.

Emerging Markets Private Equity Association (EMPEA):

EMPEA is an independent, non-profit global industry association for private capital in emerging markets. EMPEA has over 300 member firms, comprising institutional investors, fund managers and industry advisors, who together manage more than US\$1 trillion of assets and have offices in more than 100 countries across the globe. EMPEA’s proprietary database of funds and investments is built from the ongoing support of its members, publicly available information, trade publications, and communication with industry participants and regional and local venture capital associations.⁶

NYPPEX FundsIQ:

NYPPEX is a global securities firm specializing in secondary private market advisory, trading, credit facilities, principal investments and research for illiquid asset classes. The company provides access to private market liquidity for interests in private

⁶ EMPEA Annual Fundraising and Investment Review, Emerging Markets Private Equity Association, April 2011

partnerships (e.g. buyout, venture, natural resources, real estate, hedge funds etc.), unregistered equity and debt related securities in private companies and their respective derivative instruments⁷. NYPPEX collects detailed fund cash flow data from a variety of sources including public FOIA reports.

Thomson Reuters: Thomson Reuters is a leading source of financial and economic information for businesses and professionals. According to its website, Thomson Reuters is an originator, consolidator and value add re-distributor of security and financial instrument data with hundreds of sources and partners. Though various acquisitions, Thomson Reuter’s private capital database includes data from two former private capital data providers: Venture Economics and the Securities Data Company.

unquote: *unquote*, a division of Incisive Media, is a leading European private equity specialist and information source that has been researching the markets for over 20 years. *unquote* is a provider of information on deals, funds and exits - fully verifying the information directly with the private equity deal-doers, fund managers, institutional investors, and advisory communities. As it notes, “with data from over 35,000 private equity investments stretching back to 1990, it is the longest-running and most comprehensive European database available.”⁸

The bulk of *unquote*’s data is derived from the Alternative Assets Division of Incisive Media which has been collecting in-depth, verified data on European PE investments since it was formed (originally as Initiative Europe Ltd) in mid-1988. According to *unquote*’s

website direct contact between its editors/researchers and private equity deal-doers, advisers, fundraisers and institutional investors is at the heart of its research methodology. This strong relationship and direct contact has enabled them to build a high-quality flow of information in its databases.

Data Cleaning Process

At the PCRI, we work to combine our numerous data sources. The first step involves curating each dataset into a standard format. During this step, we are very careful to ensure that variables are consistently defined across the various data sources. Next, we perform the daunting task of matching names of private capital firms, funds, and portfolio companies across the various sources. We have devised a special algorithm that facilitates the process and ensures a high degree of accuracy. However, in the end, we are still required to do a lot of manual matching and checking for accuracy.

Once this process is complete, we consolidate the information into one dataset. We have a thorough process that looks for inconsistencies across the various databases and a process to ensure that only the highest quality data is included. Finally, our last step involves researching missing information, often from additional sources. In some instances, we infer information from our existing database to try to increase completeness. For instance, we often determine fund geographic focus by examining the composition of portfolio companies within a fund.

PCRI Merged Database: Data Description

⁷ NYPPEX website: <http://nyppe.com/>

⁸ UNQUOTE website, <http://www.unquote.com/static/private-equity-insight>, Sept. 2014

Private Capital Firms

Private Capital firms include buyout firms, venture capital firms, and other (growth equity firms, fund of funds, mezzanine, real estate, and other). As mentioned before, we eventually would like to include angel investors as well as government entities doing private capital investing. The data are quite sparse in the years before 1980, reflecting the limitations of data sources and the modest earlier activity.

Table 1 provides the following number of private capital firms from each data source, prior to combining the four major commercial databases and eliminating duplicates. Thomson Reuters is our largest source, with almost double the number of private capital firms than the other sources.

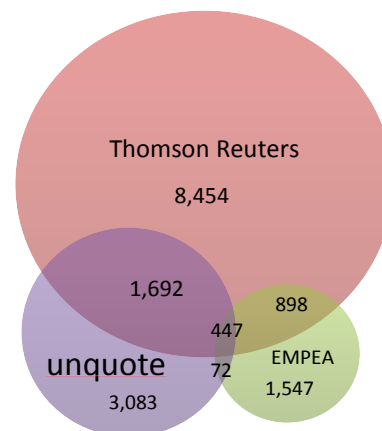
Table 1

Vendor	Number of Distinct Private Capital Firms
EMPEA	2,964
NYPPEX	6,100
Thomson Reuters	11,491
Unquote	5,291
PCRI Unique	17,633

By combining the four sources and using a process that matches identical entities and eliminates duplicates to include only the best, most complete data items, we find that the overlap of private capital firms in the four databases is roughly 32 percent. After eliminating duplicates, the PCRI combined dataset contains 17,633 *unique* private capital firms. The majority of the overlap in the data is between the NYPPEX and Thomson Reuters data sets. Thus, if we do not include the NYPPEX database in this analysis, the number of unique private capital firms is 16,190 with an

overlap of just 18%. The Venn diagram below (Chart 1) displays the overlap between EMPEA, Thomson Reuters, and unquote.

Chart 1
Overlap of Private Capital Firms in PCRI Database



In 2013, the Private Equity Growth Capital Council reported 2,800 private equity firms were headquartered in the US, investing in buyout, growth equity, infrastructure, and energy funds.⁹ By comparison, the PCRI database has recorded 1,600 private capital firms in the US in 2013 that are investing in solely buyouts. The National Venture Capital Association reported 874 US venture capital firms were in existence in 2013 with 1,331 VC funds and \$192.9 billion under management.¹⁰ The PCRI database contains 2,082 US venture capital firms that are currently still seeking investments. Some of the differences between our database and the reports can be explained by different firm-type classifications (for example, it is challenging to distinguish growth equity firms), as well as the fact that the PCRI is missing firm type for about 30% of our data. We are currently researching this data item and plan to have an update in our next version.

⁹ Private Equity Growth Capital Council 2013 Annual Report, 2013.

¹⁰ National Venture Capital Association 2014 Yearbook, 2014

In our database, the information available on private capital firm includes *year founded*, *status of the firm (seeking to invest or inactive)*, *location of the firm (country, region)*, and *type of private capital firm (buyout, VC, or other)*. Table 2 below indicates the completeness of our data. Three of the five variables are over 75% complete and we continue to research the missing information.

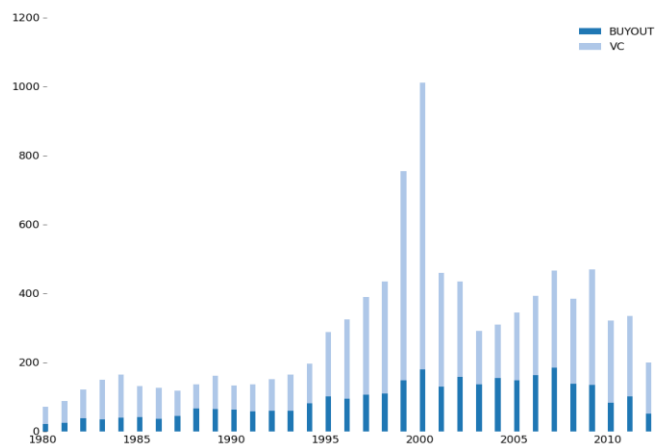
Table 2

Variable	% Complete as of June 2015
year_founded	76%
gp_status	67%
gp_type	69%
loc_country	79%
loc_region	79%

Chart 2 shows the number of private capital firms by year founded. The total in this chart represents 12,308 private capital firms, 75% of the total. Again, 25% were eliminated because of missing year-founded information.

Chart 2

Number of Private Capital Firms By Year Founded



Furthermore, we breakdown our private capital firms by decade and by type. In Table 3, we see that the number of venture capital firms founded outnumbers the number of buyout firms by a ratio of 2-to-1. Over time, this pattern has been pretty consistent.

Table 3

gp_type	'80-89	90-99	'00-09	'10-14	Total
BUYOUT	32%	28%	32%	27%	31%
OTHER	4%	5%	4%	2%	4%
VC	64%	67%	64%	71%	65%

In Table 4, we provide a breakdown of private capital firms by location, split by year founded. Our database clearly has a global representation of private capital firms. It is evident that over time, the percentage of firms in the US has fallen, as new firms have opened outside of the US. Asia has seen the most growth,

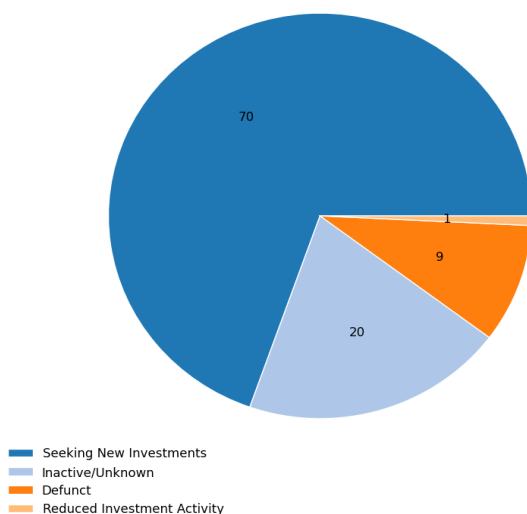
growing from 8% in the 1980's to 27% of all firms in recent periods. Lastly, Chart 3 provides a breakdown of the private capital firms by status. Approximately 70% of the firms in our database are still active in private capital investing. The remaining 30% are either unknown, defunct, or reducing their investment activities.

Table 4

Private Capital Firms by Location of Company Headquarters Split by year founded					
REGIONS	1980-89	1990-99	2000-09	2010-Present	Total
AFRICA	0.3%	1.3%	1.7%	1.0%	1.3%
ASIA	8.0%	10.4%	18.2%	27.6%	15.3%
EURASIA	0.0%	0.6%	1.0%	2.3%	0.9%
EUROPE	22.0%	24.5%	27.1%	22.0%	25.2%
MIDDLE EAST	1.0%	2.4%	2.7%	1.9%	2.3%
MULTIGEOGRAPHY	0.1%	0.0%	0.2%	0.2%	0.1%
NORTH AMERICA	4.1%	5.6%	5.5%	4.6%	5.2%
OCEANIA	1.2%	2.2%	1.9%	0.9%	1.8%
SOUTH AMERICA	0.5%	1.1%	1.7%	1.7%	1.4%
UNITED STATES	62.9%	51.8%	40.1%	37.9%	46.5%

Chart 3

Private Capital Firms by Status



Private Capital Funds

Private Capital Fund Classifications

We create five categories to classify private capital funds: Buyout, Venture Capital (VC), Growth Equity, Secondary, and Other. These classifications are based on classifications determined by the original data sources as well as PCRI's own research and deduction based on the associated investments and portfolio companies. Note, these categories were also used to generally categorize private capital firms.

Buyout Fund category includes firms primarily undertaking these type of transactions: Acquisition Finance, Acquisition for Expansion, Acquisition, Corporate Carve Out, Industrial Holding Investment, LBO, Pending Acquisition, PIPE, Secondary Buyouts (defined as a buyout of a buyout investment by another private capital firm), Generalist, Multi-Stage, Balanced Stage, Core, Energy, and Turnaround.

Venture Capital category includes firms primarily undertaking these type of transactions: Early Stage, Seed, Start-up, VC Partnership, and Venture Capital.

Growth Equity category includes firms primarily undertaking these type of transactions: Expansion/Growth and Later Stage investments. The Growth Equity category lies somewhat in between the Buyout and Venture Capital categories. This category is intended to capture investments that are expansion opportunities in more mature companies.

Secondaries category includes firms primarily undertaking these type of transactions: Limited Partnership (LP) Interest and Secondary Purchase. This category only includes sales of an LP investment to another LP and does not include a sale to another Buyout or VC Fund.

Other category includes firms primarily undertaking these type of transactions: Bridge Loan¹¹, Direct, Mezzanine, Open Market Purchase, Other, Project/Infrastructure, Real estate, and Debt Investment, Co-investment/Annex, Microfinance, Fund of Funds, Hedge Fund, Mutual Funds, Quoted, Pre-IPO, Value-added, and Opportunistic.

Private Capital Fund Coverage

As before, in addition to the data we obtain from the private capital firms themselves, we obtain information on funds from our four large data sources. Before combining the four major data sources and eliminating duplicates, we find that each data source contains the following number of unique private capital funds. See Table 5 on the next page. NYPPEX and Thomson Reuters provide the majority of the private

capital funds with more than five times the number of funds as EMPEA or unquote.

The overlap between the databases is approximately 26% of the combined PCRI fund data. In total, the combined dataset results in 33,193 unique private capital funds. Again, the majority of the overlap is between NYPPEX and Thomson Reuters data sets. If we do not include NYPPEX in our analysis, the number of

¹¹ Bridge loans are also used by Venture Capitalists, but we currently do not have a way to distinguish those that are used

by VCs. A future project would be to look size of the firm that receives the capital.

unique private equity funds is 26,834 with an overlap of 2,220, or less than 8% of the PCRI fund database.

Table 5

Data Source	Number of Distinct Private Capital funds
EMPEA	3,411
NYPPEX	15,750
Thomson Reuters	22,989
UnQuote	2,654
Unique PCRI Funds	33,193

Information on funds includes fund vintage year, industry focus, geographic focus (country and region), location of fund’s headquarters (region and state, if applicable), and fund type (buyout, VC, growth, etc).

The completeness of these variables is in Table 6 below. We have over 90% completeness on fund vintage year, fund type, and fund state. We are currently working to improve industry classification and geographic focus completeness. For simplicity, we base industry focus of funds and industry of portfolio companies on the 17 National Venture Capital Association (NVCA) industry categories¹². The NVCA industry categories are as follows: Biotechnology, Business Products and Services, Computer Software, Computer and Peripherals, Consumer Products and Services, Electronics/Instrumentation, Financial Services, Healthcare Services, Industrial/Energy, IT Services, Media/Entertainment, Medical Devices and Equipment, Networking and Equipment, Other, Retailing/Distribution, Semiconductors, and Telecommunications. We include as well a multi-sector industry that includes companies that are in multiple industries. To see the definition of these industries, please refer to the NVCA 2014 yearbook. In many cases, we are given either the Standard Industry Classification

code (SIC), General Industry Classification codes (GIC - developed by Morgan Stanley’s MSCI and Standard & Poor’s), or a written business description. We then create mapping between all three of these methods into the 18 industry categories.

Table 6

Variable	% Complete as of June 2015
vintage_year	91
industry (nvca)	61
fund_type	90
geo_focus_country	75
geo_focus_region	75
location_state	100
location_country	68
location_region	68

Chart 4 displays a breakdown of the number of funds by vintage year and by fund type – including both buyout and venture capital funds. Table 7 provides a breakdown of the funds for all five fund categories over time. It is interesting to see that the number of growth equity funds as a percentage has increased over the past few decades. Furthermore, Charts 5 and 6 give an indication of where the funds are located and what industries are being funded. The majority of the funds are located in the United States, followed by Europe. Industrial/Energy (energy management, oil/gas, plastics, machinery, chemicals) is the majority industry, followed by IT services (data processing, ecommerce technology, ecommerce services, internet security and transaction services, computer training services). In each case, we treat individual funds and transactions equally, not weighting the observations by size.

¹² National Venture Capital Association 2014 Yearbook

Chart 4

Number of Funds by Vintage Year

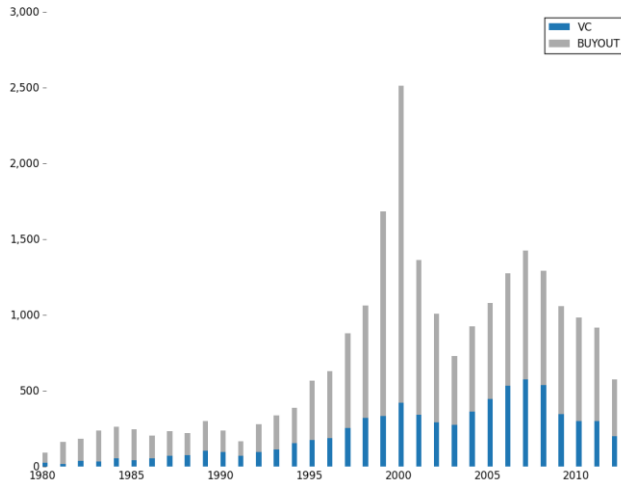


Chart 5

Fund Breakdown by Region (%)

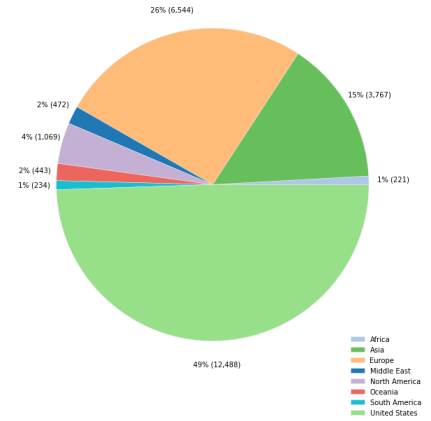


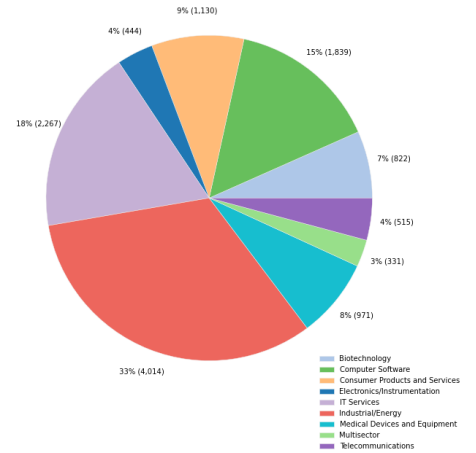
Table 7

Breakdown of Funds by Investment Type
Split by vintage year

Fund Type	1980-89	1990-99	2000-09	2010-Present	Total
BUYOUT	19.0%	26.0%	27.3%	26.4%	26.1%
GROWTH EQUITY	0.9%	0.7%	1.9%	8.5%	2.3%
OTHER	21.5%	9.4%	14.2%	11.9%	13.4%
SECOND	0.1%	0.4%	0.3%	0.2%	0.3%
VC	58.6%	63.6%	56.3%	53.0%	57.9%

Chart 6

Fund Breakdown by Industry (%)



Portfolio Companies

The PCRI database covers over 110,000 unique portfolio companies for the time period 1980-2013. Information on portfolio companies include company year founded, location (country, region, state, if applicable), company status (public, private, subsidiary, defunct as of the status date), and industry. Table 8 shows the completeness of these variables. Location and industry variables are over 90% complete. Company year founded is 67% and is currently being researched.

Table 8

Variable	% Complete as of June 2015
year_founded	67
Industry (nvca)	94
company_status	58
status_date	58
loc_state	98
loc_country	95
loc_region	95

Table 9 provides a breakdown of the portfolio companies by industry. Not surprisingly, over time, computer software grew as a percentage of total portfolio companies, whereas the industrial/energy sector percentage fell over time. Table 10 gives a breakdown of the portfolio companies by location. The pattern has been relatively consistent over the past three decades, with almost 50% of portfolio companies located in the US and North America.

Table 9

Companies by Industry, Split by Year Founded					
NVCA	1980-89	1990-99	2000-09	2010-Present	Total
Biotechnology	3%	5%	8%	6%	6%
Business Products and Services	6%	4%	3%	3%	4%
Computer Software	7%	10%	12%	19%	11%
Computers and Peripherals	2%	1%	1%	1%	1%
Consumer Products and Services	7%	5%	4%	6%	5%
Electronics/Instrumentation	2%	1%	2%	1%	2%
Financial Services	4%	4%	4%	3%	4%
Healthcare Services	2%	2%	1%	1%	2%
IT Services	3%	4%	5%	12%	5%
Industrial/Energy	20%	11%	13%	10%	13%
Media/Entertainment	4%	5%	6%	9%	5%
Medical Devices and Equipment	2%	3%	4%	3%	3%
Multi-Sector	28%	33%	27%	19%	29%
Networking and Equipment	1%	1%	1%	0%	1%
Other	1%	0%	1%	0%	1%
Retailing/Distribution	3%	2%	2%	4%	2%
Semiconductors	1%	2%	3%	1%	2%
Telecommunications	2%	5%	4%	2%	4%

Table 10

Companies by Region, Split by Year Founded				
REGIONS	1980-89	1990-99	2000-09	2010-Present
AFRICA	0.6%	0.6%	0.5%	0.1%
ASIA	11.5%	13.5%	14.9%	10.3%
EURASIA	0.1%	0.5%	0.5%	2.2%
EUROPE	31.2%	25.8%	30.3%	32.5%
MIDDLE EAST	0.9%	1.4%	1.8%	1.9%
MULTIGEOPGRAPHY	0.0%	0.0%	0.0%	0.0%
NORTH AMERICA (ex US)	7.3%	4.9%	3.7%	2.8%
OCEANIA	2.5%	1.5%	1.2%	0.6%
SOUTH AMERICA	0.7%	0.8%	0.7%	0.6%
UNITED STATES	45.2%	51.1%	46.4%	49.0%

Fund Cash Flow Data

The PCRI obtains fund cash flow data from commercial data sources, primarily NYPPEX, as well as directly from private capital firms. The PCRI database has cash flow data for over 5,500 funds. The cash flows we receive typically represent the cash flow amounts for a particular fund for an *individual* limited partner. Consequently, we scale up an individual LP's cash flows to infer the fund's total cash flows. In order to undertake this adjustment, we need to have an LP's commitment as a percentage of the entire fund. We are left with roughly 3,300 funds with cash flow data: either the LP committed amount is missing or the total fund amount is missing in the others. The PCRI is currently researching these missing values.

The average reported LP commitment is approximately 16 percent of a fund, reflecting the tendency of larger institutions to report these data. Chart 7 provides a trend of average LP commitments over time. The average commitment increased throughout the 1990's but has steadily come back down to around 15 percent.

The PCRI fund cash flows are calculated on a quarterly basis. Net cash-in figures are net of capital calls, fees, and carry that are paid to the general partners. Net cash-out includes dividends and distributions. Chart 8 below provides the number of funds with cash flows by vintage year and by fund type.

Chart 7

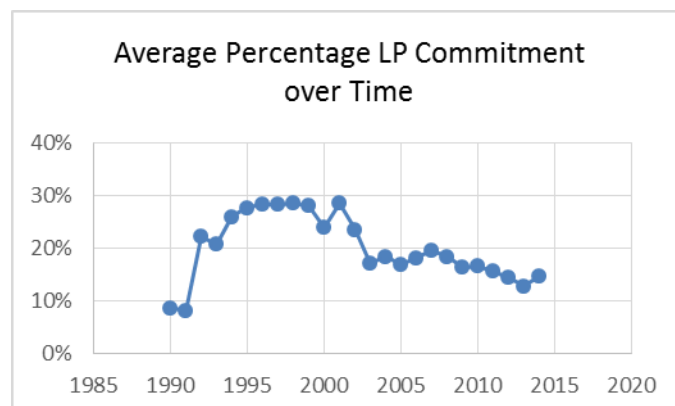
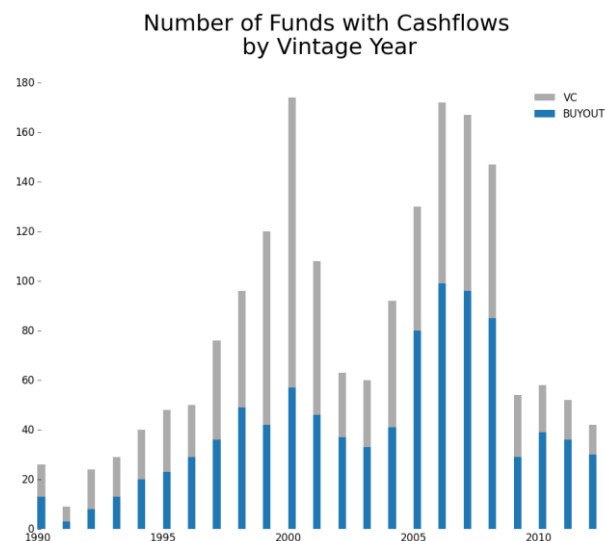


Chart 8



Completeness and Accuracy of Fund Cash Flows

In a comparison of the PCRI database and some other existing databases¹³, we find that the PCRI has more funds cash flow data than several top data providers. Table 11 below provides a comparison of PCRI number of funds with cash flow data by vintage year against the number of funds provided by Preqin, Cambridge Associates, and Thomson Venture Economics.

Table 11

Comparison of Data Sources: Total number of funds with Buyout and VC Funds with Cash flow by Vintage Year				
Vintage Year	PCRI (Total)	TVE	Preqin	Cambridge Associates
1980	6	2	2	0
1981	11	23	6	9
1982	10	29	8	11
1983	14	64	11	28
1984	17	71	16	32
1985	18	53	20	25
1986	20	53	22	38
1987	34	88	24	44
1988	24	58	29	38
1989	30	77	38	51
1990	31	31	25	19
1991	19	23	19	25
1992	36	43	32	30
1993	43	62	39	56
1994	46	65	44	55
1995	67	72	41	56
1996	79	62	43	66
1997	92	103	65	112
1998	126	131	76	119
1999	157	151	88	155
2000	194	173	119	213
2001	160	84	69	65
2002	95	35	50	57
2003	90	28	41	53
2004	140	42	59	111
2005	223	43	82	101
2006	263	61	96	106
2007	313	42	88	97
2008	262	28	64	72

The majority of our cash flow data is sourced from a data provider that obtains its cash flow information from the Freedom of Information Act (FOIA) reports. There are some researchers who call into question the accuracy of self-reported cash flows from FOIA reports. To analyze the accuracy of the FOIA cash flows, we do a comparison of the cash flow data obtained from FOIA reports and the cash flow data we obtain directly from private capital firms. We examine the levels and patterns of both sets of cash flows and find that while the timing of cash flows is not exactly the same, the levels and pattern of the cash flow is quite similar. On average, the FOIA cash flows are within 5-10 percent of the private capital firm's cumulative cash flow figures.

Conclusion

The PCRI private capital database is perhaps one of the most comprehensive databases available to academic researchers. Our unique database combines data from multiple sources including data directly from private capital firms. The PCRI database continues to improve as we obtain more data from private capital firms and find new data sources through government filings. Our future articles will focus on investments, exits, and performance.

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¹³ Comparison to Preqin, Cambridge Associates, and TVE. Data is obtained from Harris, Jenkinson, and Stucke (Dec 2010), "A White Paper on Private Equity Data and Research", UAI Foundation Consortium