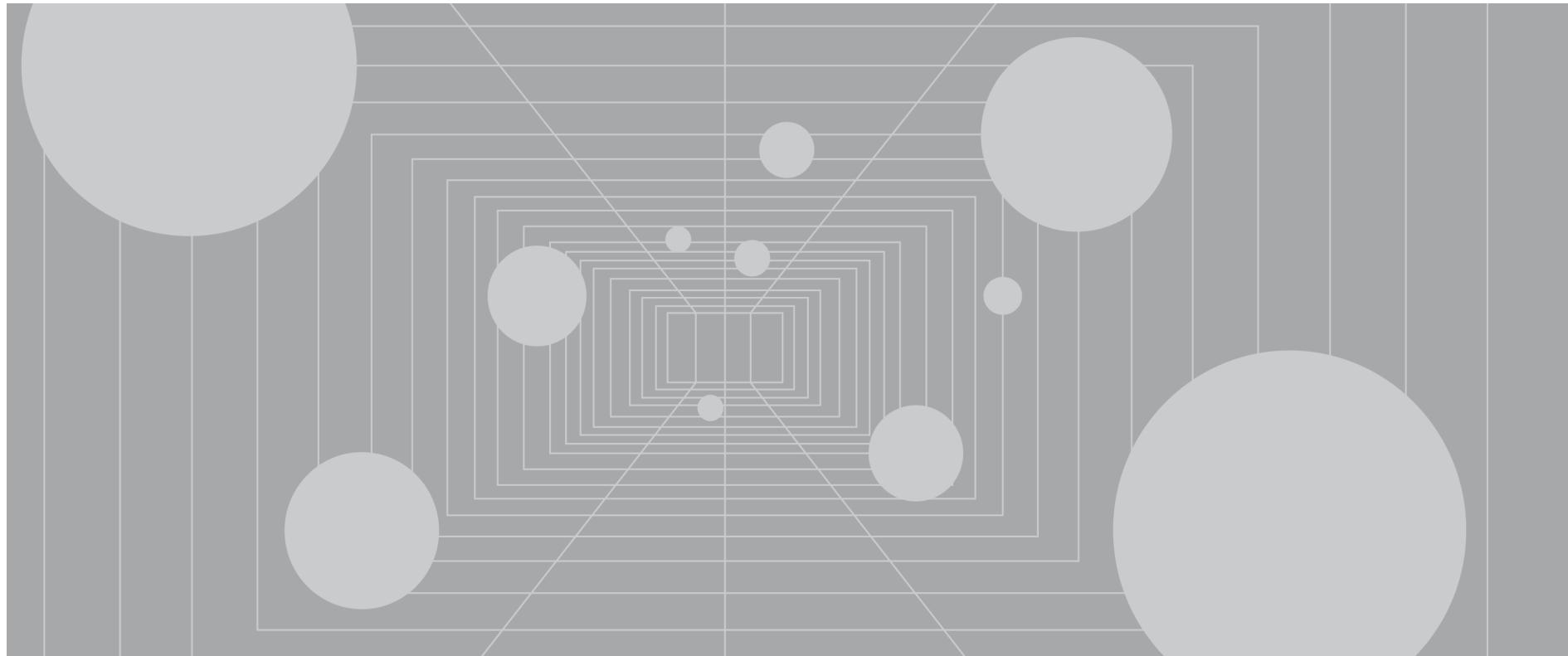


PRIVATE EQUITY

INDEX AND SELECTED BENCHMARK STATISTICS



CAMBRIDGE
ASSOCIATES

JUNE 30, 2020

PLEASE SEE NOTICE REGARDING UPCOMING DISTRIBUTION CHANGES ON PAGE 1.

AS OF JUNE 30, 2020

CHANGE IN AVAILABILITY – CAMBRIDGE ASSOCIATES’ PRIVATE INVESTMENTS BENCHMARKS

Effective February 1, 2021 many of the private investments benchmark reports historically available to download at cambridgeassociates.com (the “benchmark reports”) will no longer be distributed free of charge. Cambridge Associates will continue to distribute, for no fee, five reports with limited performance statistics (horizon returns only) and several specialty reports (the “new public reports”).

We have decided to make this change in response to our benchmark users’ demands for more and increasingly complex private investments data to be delivered in diverse media and via more channels. Cambridge Associates (CA) has decided to (1) adopt distribution and commercial policies that are more in line with other performance/index data providers, and (2) partner with IHS Markit, a world leader in critical information, analytics, and solutions, to leverage their global financial markets data and index distribution platform.

Cambridge Associates will continue to own the private investments benchmark data and be responsible for the collection of data, production of the benchmarks, and development, security, and confidentiality of the dataset. Consistent with the long-standing confidentiality agreements CA has with fund managers that participate in our benchmarks, IHS Markit will not have access to any benchmark constituent data—they will have access only to anonymous and aggregated data.

Cambridge Associates will continue to provide our benchmark data directly to several key market segments: (1) our clients, (2) fund managers that contribute their data to CA’s benchmark dataset, and (3) certain industry partners such as the Institutional Limited Partners Association (ILPA) and other industry coalitions. In addition, Refinitiv will continue to distribute CA’s benchmark data via their online application. However, with the exceptions of the market segments noted above, IHS Markit will become the exclusive distributor of CA’s benchmark data in PDF and digital-only formats to end users, analytics platforms, and redistributors.

We hope to make this transition as simple and seamless as possible for those who have adopted our private investments benchmarks. If you have further questions, please contact: PrivateBenchmarksChange@cambridgeassociates.com. We thank you for your continued support.

For more information regarding the Cambridge Associates and IHS Markit partnership, please visit
<https://ihsmarkit.com/products/cambridge-associates-private-investment-benchmarks.html>.

NOTE ON PRIVATE EQUITY CHANGES

AS OF JUNE 30, 2020

Beginning with Q1 2020, to best reflect the private equity market environment and fundraising trends, we have introduced an updated buyout fund capitalization matrix with updated classifications, which determines a fund's size category. The four buyout fund size categories are: Small Cap, Mid Cap, Large Cap, and Mega Cap. CA's new fund capitalization matrix will apply to vintage years beginning with 2005; classifications for previous vintage years will remain the same.

Please reach out to privatebenchmarks@cambridgeassociates.com with any questions.

DISCLAIMER

AS OF JUNE 30, 2020

DISCLAIMER

Our goal is to provide you with the most accurate and relevant performance information possible; as a result, Cambridge Associates' research organization continually monitors the constantly evolving private investments space and its fund managers. When we discern material changes in the structure of an asset class and/or a fund's investment strategy, it is in the interest of all users of our benchmark statistics that we implement the appropriate classification realignments.

In addition, Cambridge Associates is always working to grow our private investments performance database and ensure that our benchmarks are as representative as possible of investors' institutional-quality opportunity set. As a result we continually add funds to the database (both newly-raised funds and backfill funds) and occasionally we must remove funds that cease reporting. Our private investments performance database is dynamic and will reflect both classification adjustments and changes to the underlying pool of contributing funds. As a result, you may notice quarter to quarter changes in the results of some historical benchmark return analyses.

OVERVIEW

Cambridge Associates' Private Investments Database is one of the most robust collections of institutional quality private fund performance. It contains the historical performance records of over 2,100 fund managers and their over 8,100 funds. In addition, we capture the performance information (gross) of over 81,000 investments underlying our venture capital, growth equity, and buyout funds. This is one of the largest collections of portfolio-level performance information in the world and represents the investments of approximately 79% of these funds on a count basis and 87% on a total commitment basis. This fund and investment-level performance information is drawn from the quarterly and audited annual financial statements of the fund managers and each manager's reported performance numbers are independently recreated from the financial statements and verified by Cambridge Associates.

Institutional Quality Data

Cambridge Associates strives to include only institutional quality funds in our benchmarks. "Institutional quality" funds, in our definition, tend to meet the following criteria: closed-end funds, commingled funds that invest 3rd party capital (we exclude firms that invest off of their balance sheet, such as a bank's principal investing group or a corporate's venture capital arm), and fund vehicles. This institutional quality screen seeks to provide investors with performance data consistent with their investible opportunity set.

Sources of Benchmark Data

Our benchmark database utilizes the quarterly unaudited and annual audited fund financial statements produced by the fund managers (GPs) for their Limited Partners (LPs). These documents are provided to Cambridge Associates by the fund managers themselves. Unlike other data providers, Cambridge Associates does not use Freedom of Information Act (FOIA) requests, regulatory filings, manager surveys, or press "scrapings" to obtain information. Our goal is to have a complete historical record of the quarterly cash flows and net asset values for all funds in the benchmarks. We use a number of paths to encourage fund managers to submit their performance data to our database: our clients for whom we provide private investment performance reporting, our research organization's regular meetings with thousands of managers, our special projects designed to enhance existing benchmarks or launch new ones, our exclusive relationships with over ten globally-diverse fund manager associations, and finally, our exclusive relationships with Thomson Reuters and the Institutional Limited Partners Association (ILPA). By leveraging these varied sources and proprietary relationships, Cambridge Associates has constructed a rich and diversified benchmark data set.

Vintage Year Definition

Vintage year is defined as the legal inception date as noted in a fund's financial statement. This date can usually be found in the first note to the audited financial statements and is prior to the first close or capital call.

TIMING OF FINAL BENCHMARKS AND DATA EVOLUTION

AS OF JUNE 30, 2020

The Cambridge Associates' benchmarks are reported on a one-quarter lag from the end of the performance quarter due to the reporting time frame of private investments fund managers.

Published Data: When the vast majority of a benchmark group's (organized by asset class, e.g. Venture Capital or Real Estate) performance information is updated for a performance quarter, that benchmark is considered final and the data is "published" via the quarterly benchmark reports.

Changes to Data: After a benchmark group is published, any updates to historical data for these funds, which can include adding a fund and its performance history to the database ("backfills") and/or updating past information for an existing fund due to late-arriving, updated, or refined information, would be reflected when that group is published for the next performance quarter.

In addition, Cambridge Associates may change the classification of certain funds; this often driven by the evolution of private investments and the resulting need to introduce new benchmarks or refine our classification scheme. For example, as growth equity emerged as an asset class we reclassified certain venture capital and buyout funds accordingly.

Survivorship Bias: In order to track the performance of a fund in our benchmarks, we require the complete set of financial statements from the fund's inception to the most current reporting date. When an active fund stops providing financial statements, we reach out to the manager and make several attempts to encourage them to continue to submit their data. We may, during this communication period, roll forward the fund's last reported quarter's net asset value (NAV) for several quarters. When we are convinced that the manager will not resume reporting to us, the fund's entire performance history is removed from the database.

When fund managers stop reporting before their fund's return history is complete, an element of "survivorship bias" may be introduced to a performance database, which could skew the reported returns upwards if the funds dropping out had poorer returns than those funds that remained. Survivorship bias can affect all investment manager databases, including those for public stock managers and hedge funds. Compared to public stocks and hedge funds, however, the illiquid nature of private investments can actually help limit this survivorship effect. Whereas an underperforming stock manager may simply close up shop or drop out of databases as clients liquidate their positions and fire the manager, private investment partnerships owning illiquid assets continue to exist and require reporting to the limited partners, even if the original manager ceases to exist.

Over the last ten years the number of fund managers that stopped reporting to Cambridge Associates before liquidation represented an average of 0.7% (per year) of the total number of funds in the database during the respective year, and an average of 0.5% (per year) as a percentage of total NAV in the database during that respective year. During that same period the overall number of funds in our database increased by an average of 7% (per year). The performance of the small number of funds that have stopped reporting has been spread amongst all quartiles and has not been concentrated consistently in the poorer performing quartiles.

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PRIVATE EQUITY: FUND INDEX ANALYSIS



CAMBRIDGE
ASSOCIATES

PRIVATE EQUITY

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN

Net to Limited Partners

INDEX	1-QUARTER	YTD	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
PRIVATE EQUITY INDEX¹	10.18	0.48	7.64	12.63	12.12	14.15	12.43	11.29	13.19
BUYOUT INDEX¹	9.25	-1.55	5.77	11.38	11.79	14.17	12.29	11.36	12.95
GROWTH EQUITY INDEX¹	12.85	6.54	13.08	16.42	13.12	14.11	13.10	10.94	14.66
Bloomberg Barclays Capital Government/Credit Bond Index	3.71	7.21	10.02	5.87	4.74	4.13	4.50	5.30	5.46
Dow Jones Industrial Average Index	18.51	-8.43	-0.54	9.08	10.62	12.99	9.08	7.19	9.69
Dow Jones US Small Cap Index	25.61	-12.61	-6.87	3.08	4.14	10.75	7.75	7.59	9.38
Dow Jones US TopCap Index	21.42	-2.09	8.56	11.13	10.87	14.14	9.07	6.11	9.36
MSCI Emerging Markets Index (gross)	18.18	-9.67	-3.05	2.27	3.24	3.63	6.69	6.93	5.72
MSCI Europe Index (US\$) (net)	15.26	-12.78	-6.78	0.00	1.46	5.65	3.83	3.01	5.93
MSCI Europe Index (€) (net)	12.60	-12.84	-5.48	0.51	1.30	6.57	4.35	2.20	6.71
MSCI Pacific Index (net)	14.16	-9.01	-2.39	2.31	3.24	5.98	4.67	2.67	2.62
MSCI World Ex US Index (net)	15.34	-11.49	-5.42	0.84	2.01	5.43	4.10	2.98	4.68
MSCI World Index (net)	19.36	-5.77	2.84	6.70	6.90	9.95	6.55	4.32	6.76
Nasdaq Composite Index*	30.63	12.11	25.64	17.88	15.07	16.91	11.16	4.76	9.98
Russell 1000® Index	21.82	-2.81	7.48	10.64	10.47	13.97	8.91	6.10	9.41
Russell 2000® Index	25.42	-12.98	-6.63	2.01	4.29	10.50	7.01	6.69	8.16
S&P 500 Index	20.54	-3.08	7.51	10.73	10.73	13.99	8.83	5.91	9.27

The index is a horizon calculation based on data compiled from 2,296 private equity funds, including fully liquidated partnerships, formed between 1986 and 2019.

¹ Private indexes are pooled horizon internal rate of return (IRR) calculations, net of fees, expenses, and carried interest. The timing and magnitude of fund cash flows are integral to the IRR performance calculation. Public indexes are average annual compounded return (AACR) calculations which are time weighted measures over the specified time horizon, and are shown for reference and directional purposes only. Due to the fundamental differences between the two calculations, direct comparison of IRRs to AACRs is not recommended. For a more accurate means of comparing private investment performance relative to public alternatives, see the analyses in this document using CA Modified Public Market Equivalent (mPME). See Methodology section for more detail.

Sources: Cambridge Associates LLC, Bloomberg Barclays, Dow Jones Indices, Frank Russell Company, MSCI Inc., Standard & Poor's and Thomson Reuters Datastream.

MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets Indices are gross of dividend taxes. Total Returns for MSCI Developed Markets Indices are net of dividend taxes.

PRIVATE EQUITY

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

CA INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
PRIVATE EQUITY INDEX¹	7.64	12.63	12.12	14.15	12.43	11.29	13.19

MPME ANALYSIS ²							
MSCI EAFE Index (net)	-4.93	0.81	1.98	6.09	3.66	3.53	3.92
Value-Add (bps)	1,257	1,181	1,014	807	876	775	927
MSCI Europe Index (net)	-6.56	0.00	1.39	6.11	3.44	3.44	4.14
Value-Add (bps)	1,420	1,263	1,073	805	899	784	906
S&P 500 Index	7.62	10.87	10.63	14.80	9.32	7.76	8.74
Value-Add (bps)	1	176	149	-64	311	353	445
Russell 2000® Index	-6.28	2.24	4.34	12.14	7.92	7.83	8.27
Value-Add (bps)	1,392	1,038	778	201	451	346	492
Russell 3000® Index	6.67	10.20	9.92	14.64	9.30	7.88	8.81
Value-Add (bps)	96	243	219	-49	313	341	438
Constructed Index: MSCI World/MSCI All Country World Index ³ (gross)	2.84	6.83	6.97	10.22	6.88	6.05	6.62
Value-Add (bps)	480	580	515	393	555	524	657

The index is a horizon calculation based on data compiled from 2,296 private equity funds, including fully liquidated partnerships, formed between 1986 and 2019.

¹Pooled horizon return, net of fees, expenses, and carried interest.

²CA Modified Public Market Equivalent (mPME) replicates private investment performance under public market conditions. The public index's shares are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and mPME NAV is a function of mPME cash flows and public index returns. "Value-Add" shows (in basis points) the difference between the actual private investment return and the mPME calculated return. Refer to Methodology page for details.

³Constructed Index: MSCI World/MSCI All Country World Index: Data rom 1/1/1986 to 12/31/1987 represented by MSCI index gross total return. Data from 1/1/1988 to present represented by MSCI ACWI gross total return.

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AS OF JUNE 30, 2020

PRIVATE EQUITY

FUND INDEX DETAILS: ONE QUARTER HORIZON POOLED RETURN

Net to Limited Partners

QUARTER ENDING	HORIZON RETURN
1995 Q1	4.00
1995 Q2	4.00
1995 Q3	4.22
1995 Q4	9.92
1996 Q1	5.46
1996 Q2	6.77
1996 Q3	6.50
1996 Q4	8.73
1997 Q1	0.62
1997 Q2	10.33
1997 Q3	6.37
1997 Q4	9.00
1998 Q1	9.22
1998 Q2	5.50
1998 Q3	-5.12
1998 Q4	6.85
1999 Q1	3.32
1999 Q2	9.81
1999 Q3	4.09
1999 Q4	17.38
2000 Q1	11.62
2000 Q2	-0.78
2000 Q3	-0.69
2000 Q4	-5.03
2001 Q1	-6.13
2001 Q2	2.19

QUARTER ENDING	HORIZON RETURN
2001 Q3	-6.69
2001 Q4	-0.96
2002 Q1	-0.55
2002 Q2	-0.30
2002 Q3	-4.45
2002 Q4	1.38
2003 Q1	-0.09
2003 Q2	7.21
2003 Q3	4.58
2003 Q4	10.84
2004 Q1	2.68
2004 Q2	4.25
2004 Q3	3.10
2004 Q4	16.46
2005 Q1	0.93
2005 Q2	7.59
2005 Q3	6.82
2005 Q4	9.12
2006 Q1	6.40
2006 Q2	7.84
2006 Q3	3.70
2006 Q4	15.90
2007 Q1	5.18
2007 Q2	10.55
2007 Q3	3.20
2007 Q4	4.38

QUARTER ENDING	HORIZON RETURN
2008 Q1	-0.53
2008 Q2	-1.75
2008 Q3	-10.40
2008 Q4	-18.88
2009 Q1	-5.02
2009 Q2	6.90
2009 Q3	7.58
2009 Q4	7.23
2010 Q1	2.74
2010 Q2	0.24
2010 Q3	7.33
2010 Q4	9.27
2011 Q1	5.23
2011 Q2	5.29
2011 Q3	-6.47
2011 Q4	3.18
2012 Q1	6.33
2012 Q2	-0.70
2012 Q3	3.92
2012 Q4	4.22
2013 Q1	3.28
2013 Q2	2.66
2013 Q3	5.87
2013 Q4	7.51
2014 Q1	3.17
2014 Q2	4.88

QUARTER ENDING	HORIZON RETURN
2014 Q3	-0.46
2014 Q4	2.17
2015 Q1	1.42
2015 Q2	5.46
2015 Q3	-1.08
2015 Q4	2.64
2016 Q1	1.49
2016 Q2	2.63
2016 Q3	4.07
2016 Q4	2.72
2017 Q1	4.39
2017 Q2	6.07
2017 Q3	4.75
2017 Q4	5.55
2018 Q1	2.65
2018 Q2	4.14
2018 Q3	3.30
2018 Q4	-1.01
2019 Q1	4.90
2019 Q2	4.32
2019 Q3	1.29
2019 Q4	5.80
2020 Q1	-8.85
2020 Q2	10.18

AS OF JUNE 30, 2020

PRIVATE EQUITY

FUND INDEX DETAILS: HORIZON POOLED RETURN

Net to Limited Partners

MULTI-YEAR RETURNS			
YEARS	HORIZON RETURN (%)	YEARS	HORIZON RETURN (%)
1 Year	7.64	14 Years	11.25
2 Years	9.76	15 Years	12.43
3 Years	12.63	16 Years	13.38
4 Years	14.15	17 Years	13.98
5 Years	12.12	18 Years	13.45
6 Years	11.35	19 Years	12.33
7 Years	13.53	20 Years	11.29
8 Years	13.77	21 Years	12.06
9 Years	11.81	22 Years	12.18
10 Years	14.15	23 Years	12.62
11 Years	14.67	24 Years	12.91
12 Years	9.93	25 Years	13.19
13 Years	9.53		

ONE YEAR ROLLING RETURNS			
ONE YEAR ENDED	HORIZON RETURN (%)	ONE YEAR ENDED	HORIZON RETURN (%)
6/30/2020	7.64	6/30/2007	39.81
6/30/2019	11.89	6/30/2006	33.75
6/30/2018	18.24	6/30/2005	30.45
6/30/2017	18.26	6/30/2004	24.20
6/30/2016	5.60	6/30/2003	4.38
6/30/2015	8.46	6/30/2002	-8.24
6/30/2014	23.28	6/30/2001	-9.48
6/30/2013	14.89	6/30/2000	34.62
6/30/2012	1.86	6/30/1999	16.14
6/30/2011	29.96	6/30/1998	33.60
6/30/2010	18.57	6/30/1997	28.62
6/30/2009	-25.53	6/30/1996	28.91
6/30/2008	4.75		

PRIVATE EQUITY: FUND SINCE INCEPTION ANALYSIS



CAMBRIDGE
ASSOCIATES

PRIVATE EQUITY

AS OF JUNE 30, 2020

SINCE INCEPTION IRR & MULTIPLES BY FUND VINTAGE YEAR

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN (%)	ARITHMETIC MEAN (%)	MEDIAN (%)	EQUAL-WEIGHTED POOLED RETURN (%)	UPPER QUARTILE (%)	LOWER QUARTILE (%)	STANDARD DEVIATION (%)	DPI	RVPI	TVPI	NUMBER OF FUNDS
1995	21.04	14.82	10.93	16.99	26.98	-1.94	24.26	1.96	0.00	1.96	47
1996	11.18	9.47	8.38	9.31	13.85	-1.93	19.57	1.63	0.00	1.63	51
1997	9.33	9.85	9.48	9.74	15.91	1.04	19.50	1.59	0.00	1.59	83
1998	8.62	11.34	10.76	13.10	18.96	4.83	11.13	1.54	0.01	1.56	80
1999	15.07	13.31	12.14	12.98	21.97	4.08	15.40	1.90	0.01	1.90	75
2000	18.48	16.61	16.52	16.93	24.99	8.24	15.77	2.00	0.02	2.02	112
2001	23.98	20.54	18.31	20.95	31.63	11.49	17.69	2.16	0.01	2.17	45
2002	19.07	15.72	17.53	18.29	26.79	6.82	29.18	2.01	0.02	2.03	50
2003	16.48	17.39	14.46	17.62	27.10	6.84	17.56	1.83	0.01	1.84	49
2004	10.91	16.13	9.70	13.35	14.31	5.18	29.34	1.66	0.05	1.71	99
2005	7.38	8.42	7.95	9.73	14.34	1.70	13.24	1.46	0.05	1.51	148
2006	7.55	8.15	8.23	9.55	14.45	2.65	13.92	1.42	0.11	1.53	132
2007	10.89	7.98	9.26	9.33	14.46	2.79	13.80	1.45	0.23	1.68	167
2008	12.95	10.62	10.12	11.40	16.71	3.77	15.37	1.46	0.29	1.74	101
2009	17.05	14.31	12.59	15.59	22.57	7.58	12.64	1.35	0.84	2.19	51
2010	12.93	12.46	12.88	14.10	20.43	3.15	15.85	1.09	0.64	1.73	56
2011	13.97	13.08	12.95	13.97	17.88	7.03	10.86	0.98	0.70	1.69	99
2012	15.31	12.45	12.34	13.17	17.61	6.73	9.39	0.77	0.94	1.71	88
2013	14.63	13.40	13.35	15.06	19.72	7.80	10.98	0.50	1.10	1.60	90
2014	17.17	14.34	13.09	16.69	19.57	8.59	9.28	0.41	1.12	1.52	98
2015	14.12	10.69	11.08	14.21	19.28	4.42	16.78	0.17	1.18	1.35	101
2016	17.04	12.79	11.43	16.73	20.31	3.76	16.14	0.09	1.24	1.33	90
2017	7.45	3.67	5.20	10.17	15.29	-7.51	21.85	0.02	1.07	1.08	75
2018	10.19	-6.46	-6.93	-0.07	8.64	-25.97	49.02	0.01	1.07	1.08	86

AS OF JUNE 30, 2020

PRIVATE EQUITY

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)			
		CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)			MSCI EUROPE INDEX (NET)		CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)	MSCI EUROPE INDEX (NET)	CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)	MSCI EUROPE INDEX (NET)
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD						
1995	47	21.04	5.27	1,578	10.10	1,094	1.96	1.19	1.36	1.96	1.19	1.36	
1996	51	11.18	3.87	731	5.14	605	1.63	1.19	1.26	1.63	1.19	1.26	
1997	83	9.33	3.30	603	3.59	574	1.59	1.18	1.20	1.59	1.18	1.19	
1998	80	8.62	3.86	476	4.16	446	1.56	1.21	1.23	1.54	1.20	1.22	
1999	75	15.07	6.53	855	7.09	798	1.90	1.30	1.33	1.90	1.30	1.33	
2000	112	18.48	9.80	868	10.26	822	2.02	1.39	1.41	2.00	1.38	1.40	
2001	45	23.98	10.90	1,308	11.39	1,259	2.17	1.39	1.41	2.16	1.38	1.40	
2002	50	19.07	7.96	1,111	8.40	1,067	2.03	1.33	1.35	2.01	1.32	1.34	
2003	49	16.48	5.08	1,140	5.49	1,099	1.84	1.21	1.23	1.83	1.21	1.22	
2004	99	10.91	2.43	848	2.53	837	1.71	1.13	1.13	1.66	1.10	1.10	
2005	148	7.38	1.54	584	1.42	596	1.51	1.09	1.08	1.46	1.05	1.04	
2006	132	7.55	2.18	536	1.98	557	1.53	1.13	1.12	1.42	1.05	1.04	
2007	167	10.89	4.56	633	4.43	646	1.68	1.23	1.22	1.45	1.09	1.09	
2008	101	12.95	5.76	719	5.69	726	1.74	1.27	1.27	1.46	1.09	1.09	
2009	51	17.05	4.97	1,208	4.64	1,241	2.19	1.24	1.22	1.35	0.88	0.87	
2010	56	12.93	4.81	811	4.41	851	1.73	1.22	1.20	1.09	0.83	0.82	
2011	99	13.97	4.06	991	3.45	1,052	1.69	1.16	1.14	0.98	0.71	0.70	
2012	88	15.31	3.10	1,221	2.34	1,297	1.71	1.11	1.09	0.77	0.56	0.55	
2013	90	14.63	2.80	1,182	2.08	1,255	1.60	1.09	1.07	0.50	0.38	0.38	
2014	98	17.17	2.45	1,472	1.78	1,539	1.52	1.06	1.04	0.41	0.31	0.31	
2015	101	14.12	1.42	1,270	0.83	1,329	1.35	1.03	1.02	0.17	0.15	0.15	
2016	90	17.04	-0.12	1,716	-0.76	1,780	1.33	1.00	0.99	0.09	0.07	0.07	
2017	75	7.45	-1.29	874	-2.02	947	1.08	0.99	0.98	0.02	0.02	0.02	
2018	86	10.19	-0.81	1,100	-1.77	1,196	1.08	0.99	0.99	0.01	0.01	0.01	

Notes: Based on data compiled from 2,073 private equity funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mPME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mPME).

Sources: Cambridge Associates LLC, MSCI Inc., and Thomson Reuters Datastream.

MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets indexes are gross of dividend taxes. Total returns for MSCI Developed Markets indexes are net of dividend taxes.

AS OF JUNE 30, 2020

PRIVATE EQUITY

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)		
		CA BENCHMARK INDEX	S&P 500 INDEX		RUSSELL 2000® INDEX		CA BENCHMARK INDEX	S&P 500 INDEX	RUSSELL 2000® INDEX	CA BENCHMARK INDEX	S&P 500 INDEX	RUSSELL 2000® INDEX
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD	TVPI	MPME TVPI	MPME TVPI	DPI	MPME DPI
1995	47	21.04	13.12	793	8.23	1,281	1.96	1.45	1.32	1.96	1.45	1.32
1996	51	11.18	5.13	606	7.01	418	1.63	1.24	1.38	1.63	1.24	1.38
1997	83	9.33	1.68	766	7.16	217	1.59	1.09	1.41	1.59	1.08	1.41
1998	80	8.62	1.79	683	7.34	128	1.56	1.09	1.42	1.54	1.08	1.41
1999	75	15.07	2.93	1,214	8.30	677	1.90	1.13	1.39	1.90	1.12	1.38
2000	112	18.48	5.78	1,270	9.72	876	2.02	1.24	1.41	2.00	1.23	1.40
2001	45	23.98	7.43	1,655	10.04	1,394	2.17	1.31	1.41	2.16	1.30	1.40
2002	50	19.07	6.84	1,223	8.29	1,078	2.03	1.34	1.41	2.01	1.32	1.39
2003	49	16.48	6.05	1,043	6.58	990	1.84	1.31	1.34	1.83	1.29	1.32
2004	99	10.91	5.93	498	6.12	479	1.71	1.38	1.38	1.66	1.31	1.33
2005	148	7.38	6.91	47	7.01	37	1.51	1.51	1.50	1.46	1.42	1.43
2006	132	7.55	8.52	-98	8.31	-77	1.53	1.65	1.61	1.42	1.49	1.48
2007	167	10.89	12.02	-113	11.08	-19	1.68	1.77	1.66	1.45	1.51	1.46
2008	101	12.95	13.70	-76	12.32	63	1.74	1.81	1.67	1.46	1.47	1.41
2009	51	17.05	13.16	389	10.30	676	2.19	1.79	1.56	1.35	1.17	1.09
2010	56	12.93	12.95	-2	9.69	323	1.73	1.72	1.48	1.09	1.09	1.00
2011	99	13.97	12.14	182	8.27	569	1.69	1.58	1.36	0.98	0.89	0.83
2012	88	15.31	11.36	395	6.62	869	1.71	1.49	1.26	0.77	0.68	0.63
2013	90	14.63	11.14	349	5.40	923	1.60	1.43	1.19	0.50	0.46	0.42
2014	98	17.17	11.20	597	4.27	1,290	1.52	1.32	1.11	0.41	0.36	0.33
2015	101	14.12	10.95	317	2.20	1,192	1.35	1.26	1.05	0.17	0.17	0.15
2016	90	17.04	10.26	678	-0.14	1,718	1.33	1.19	1.00	0.09	0.08	0.07
2017	75	7.45	10.47	-302	-1.78	924	1.08	1.12	0.98	0.02	0.02	0.02
2018	86	10.19	12.07	-188	-0.23	1,042	1.08	1.09	1.00	0.01	0.01	0.01

Notes: Based on data compiled from 2,073 private equity funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mPME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mPME).

Sources: Cambridge Associates LLC, Frank Russell Company, Standard & Poor's, and Thomson Reuters Datastream.

AS OF JUNE 30, 2020

PRIVATE EQUITY

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)		
		CA BENCHMARK INDEX	RUSSELL 3000® INDEX		MSCI ALL COUNTRY WORLD INDEX (GROSS)		CA BENCHMARK INDEX	RUSSELL 3000® INDEX	MSCI ALL COUNTRY WORLD INDEX (GROSS)	CA BENCHMARK INDEX	RUSSELL 3000® INDEX	MSCI ALL COUNTRY WORLD INDEX (GROSS)
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD	TVPI	MPME TVPI	MPME TVPI	DPI	MPME DPI
1995	47	21.04	12.43	862	8.36	1,269	1.96	1.44	1.30	1.96	1.44	1.30
1996	51	11.18	5.48	570	4.55	663	1.63	1.26	1.22	1.63	1.26	1.22
1997	83	9.33	2.47	686	2.85	649	1.59	1.13	1.15	1.59	1.13	1.15
1998	80	8.62	2.56	606	3.26	535	1.56	1.14	1.18	1.54	1.12	1.17
1999	75	15.07	3.71	1,136	5.32	975	1.90	1.17	1.24	1.90	1.16	1.24
2000	112	18.48	6.46	1,202	8.55	993	2.02	1.27	1.36	2.00	1.26	1.34
2001	45	23.98	8.03	1,595	9.95	1,403	2.17	1.34	1.39	2.16	1.33	1.38
2002	50	19.07	7.28	1,179	8.20	1,087	2.03	1.37	1.38	2.01	1.34	1.36
2003	49	16.48	6.34	1,014	6.35	1,013	1.84	1.33	1.30	1.83	1.31	1.29
2004	99	10.91	6.13	478	4.80	611	1.71	1.39	1.28	1.66	1.33	1.23
2005	148	7.38	7.08	30	4.52	286	1.51	1.52	1.30	1.46	1.43	1.24
2006	132	7.55	8.64	-109	5.39	215	1.53	1.66	1.37	1.42	1.50	1.25
2007	167	10.89	12.03	-114	8.02	287	1.68	1.77	1.46	1.45	1.51	1.26
2008	101	12.95	13.66	-71	9.38	357	1.74	1.80	1.49	1.46	1.47	1.24
2009	51	17.05	12.88	417	8.88	818	2.19	1.76	1.48	1.35	1.16	1.00
2010	56	12.93	12.62	30	8.78	415	1.73	1.69	1.44	1.09	1.08	0.94
2011	99	13.97	11.73	223	8.31	565	1.69	1.56	1.37	0.98	0.88	0.80
2012	88	15.31	10.87	445	7.70	762	1.71	1.46	1.31	0.77	0.68	0.62
2013	90	14.63	10.59	404	7.66	697	1.60	1.40	1.28	0.50	0.45	0.42
2014	98	17.17	10.61	656	7.68	949	1.52	1.30	1.21	0.41	0.36	0.34
2015	101	14.12	10.28	383	7.17	695	1.35	1.25	1.17	0.17	0.17	0.16
2016	90	17.04	9.52	752	6.16	1,088	1.33	1.17	1.11	0.09	0.08	0.08
2017	75	7.45	9.74	-228	5.99	146	1.08	1.11	1.07	0.02	0.02	0.02
2018	86	10.19	11.57	-138	7.43	276	1.08	1.09	1.06	0.01	0.01	0.01

Notes: Based on data compiled from 2,073 private equity funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mPME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mPME).

Sources: Cambridge Associates LLC, Frank Russell Company, MSCI Inc., and Thomson Reuters Datastream.

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PRIVATE EQUITY

AS OF JUNE 30, 2020

TOTAL VALUE TO PAID IN CAPITAL MULTIPLE (TVPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	1.96	1.75	1.57	2.18	0.89	47
1996	1.63	1.56	1.50	1.90	0.90	51
1997	1.59	1.56	1.62	1.95	1.03	83
1998	1.56	1.89	1.61	2.09	1.28	80
1999	1.90	1.79	1.57	2.22	1.15	75
2000	2.02	1.98	1.93	2.42	1.44	112
2001	2.17	1.99	1.95	2.42	1.51	45
2002	2.03	2.03	1.98	2.47	1.46	50
2003	1.84	1.87	1.77	2.18	1.41	49
2004	1.71	1.77	1.55	1.97	1.28	99
2005	1.51	1.64	1.52	1.99	1.10	148
2006	1.53	1.65	1.53	1.99	1.16	132
2007	1.68	1.60	1.53	1.92	1.17	167
2008	1.74	1.68	1.66	1.98	1.25	101
2009	2.19	2.00	1.82	2.47	1.42	51
2010	1.73	1.84	1.53	2.24	1.19	56
2011	1.69	1.74	1.61	1.95	1.31	99
2012	1.71	1.59	1.57	1.83	1.29	88
2013	1.60	1.63	1.47	1.90	1.26	90
2014	1.52	1.56	1.39	1.67	1.25	98
2015	1.35	1.33	1.25	1.51	1.09	101
2016	1.33	1.29	1.19	1.41	1.07	90
2017	1.08	1.08	1.06	1.18	0.92	75
2018	1.08	0.96	0.93	1.08	0.82	86

PRIVATE EQUITY

AS OF JUNE 30, 2020

DISTRIBUTION TO PAID IN CAPITAL MULTIPLE (DPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	1.96	1.75	1.57	2.18	0.89	47
1996	1.63	1.56	1.50	1.90	0.90	51
1997	1.59	1.56	1.62	1.95	1.03	83
1998	1.54	1.88	1.61	2.09	1.28	80
1999	1.90	1.78	1.57	2.20	1.15	75
2000	2.00	1.92	1.88	2.28	1.44	112
2001	2.16	1.98	1.94	2.42	1.51	45
2002	2.01	2.00	1.97	2.41	1.40	50
2003	1.83	1.85	1.76	2.15	1.25	49
2004	1.66	1.67	1.51	1.89	1.20	99
2005	1.46	1.57	1.42	1.98	1.01	148
2006	1.42	1.55	1.48	1.89	1.07	132
2007	1.45	1.35	1.37	1.73	0.89	167
2008	1.46	1.35	1.31	1.69	0.87	101
2009	1.35	1.37	1.17	1.84	0.80	51
2010	1.09	1.18	0.98	1.65	0.49	56
2011	0.98	1.00	0.98	1.26	0.43	99
2012	0.77	0.73	0.70	1.05	0.36	88
2013	0.50	0.57	0.46	0.82	0.13	90
2014	0.41	0.42	0.32	0.60	0.12	98
2015	0.17	0.21	0.12	0.34	0.01	101
2016	0.09	0.11	0.02	0.14	0.00	90
2017	0.02	0.05	0.00	0.01	0.00	75
2018	0.01	0.01	0.00	0.00	0.00	86

PRIVATE EQUITY

AS OF JUNE 30, 2020

RESIDUAL VALUE TO PAID IN CAPITAL MULTIPLE (RVPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	0.00	0.00	0.00	0.00	0.00	47
1996	0.00	0.00	0.00	0.00	0.00	51
1997	0.00	0.00	0.00	0.00	0.00	83
1998	0.01	0.01	0.00	0.00	0.00	80
1999	0.01	0.01	0.00	0.00	0.00	75
2000	0.02	0.05	0.00	0.01	0.00	112
2001	0.01	0.01	0.00	0.00	0.00	45
2002	0.02	0.03	0.00	0.01	0.00	50
2003	0.01	0.02	0.00	0.00	0.00	49
2004	0.05	0.10	0.01	0.07	0.00	99
2005	0.05	0.07	0.01	0.08	0.00	148
2006	0.11	0.11	0.05	0.14	0.00	132
2007	0.23	0.25	0.09	0.26	0.01	167
2008	0.29	0.34	0.21	0.46	0.07	101
2009	0.84	0.63	0.50	0.93	0.25	51
2010	0.64	0.66	0.60	0.84	0.43	56
2011	0.70	0.74	0.66	1.01	0.44	99
2012	0.94	0.86	0.87	1.02	0.66	88
2013	1.10	1.06	1.00	1.24	0.77	90
2014	1.12	1.14	1.06	1.26	0.85	98
2015	1.18	1.12	1.08	1.25	0.87	101
2016	1.24	1.19	1.13	1.30	0.99	90
2017	1.07	1.03	1.03	1.16	0.91	75
2018	1.07	0.95	0.93	1.08	0.82	86

US PRIVATE EQUITY: FUND INDEX ANALYSIS



CAMBRIDGE
ASSOCIATES

US PRIVATE EQUITY

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN

Net to Limited Partners

INDEX	1-QUARTER	YTD	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
US PRIVATE EQUITY INDEX¹	10.62	1.65	9.06	14.19	12.91	15.59	12.90	10.93	13.51
Bloomberg Barclays Capital Government/Credit Bond Index	3.71	7.21	10.02	5.87	4.74	4.13	4.50	5.30	5.46
Dow Jones Industrial Average Index	18.51	-8.43	-0.54	9.08	10.62	12.99	9.08	7.19	9.69
Dow Jones US Small Cap Index	25.61	-12.61	-6.87	3.08	4.14	10.75	7.75	7.59	9.38
Dow Jones US TopCap Index	21.42	-2.09	8.56	11.13	10.87	14.14	9.07	6.11	9.36
Nasdaq Composite Index*	30.63	12.11	25.64	17.88	15.07	16.91	11.16	4.76	9.98
Russell 1000® Index	21.82	-2.81	7.48	10.64	10.47	13.97	8.91	6.10	9.41
Russell 2000® Index	25.42	-12.98	-6.63	2.01	4.29	10.50	7.01	6.69	8.16
S&P 500 Index	20.54	-3.08	7.51	10.73	10.73	13.99	8.83	5.91	9.27
Wilshire 5000 Total Market Index	21.94	-3.30	6.78	10.13	10.27	13.74	8.86	6.23	9.30

The index is a horizon calculation based on data compiled from 1,209 US private equity funds, including fully liquidated partnerships, formed between 1986 and 2019.

¹ Private indexes are pooled horizon internal rate of return (IRR) calculations, net of fees, expenses, and carried interest. The timing and magnitude of fund cash flows are integral to the IRR performance calculation. Public indexes are average annual compounded return (AACR) calculations which are time weighted measures over the specified time horizon, and are shown for reference and directional purposes only. Due to the fundamental differences between the two calculations, direct comparison of IRRs to AACRs is not recommended. For a more accurate means of comparing private investment performance relative to public alternatives, see the analyses in this document using CA Modified Public Market Equivalent (mPME). See Methodology section for more detail.

Sources: Cambridge Associates LLC, Bloomberg Barclays, Dow Jones Indices, Frank Russell Company, Standard & Poor's and Thomson Reuters Datastream, and Wilshire Associates.

*Capital change only

US PRIVATE EQUITY

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

CA INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
US PRIVATE EQUITY INDEX¹	9.06	14.19	12.91	15.59	12.90	10.93	13.51

MPME ANALYSIS ²							
Russell 2000® Index	-6.22	2.19	4.37	12.28	7.71	7.61	8.17
Value-Add (bps)	1,528	1,200	854	331	519	333	534
Russell 2500™ Index	-4.31	4.28	5.45	13.34	8.55	8.55	9.39
Value-Add (bps)	1,337	992	746	225	435	238	412
Russell 3000® Index	6.72	10.19	9.99	14.77	9.05	7.44	8.62
Value-Add (bps)	234	401	292	82	385	350	489
Russell Midcap® Index	-1.92	5.96	6.77	14.09	9.07	8.91	9.85
Value-Add (bps)	1,098	823	613	150	384	202	366
S&P 500 Index	7.67	10.86	10.68	14.91	9.06	7.30	8.54
Value-Add (bps)	139	333	222	68	384	364	497
Constructed Index: MSCI World/MSCI All Country World Index ³ (gross)	2.88	6.82	7.05	10.36	6.79	5.80	6.52
Value-Add (bps)	618	738	586	523	611	513	699

The index is a horizon calculation based on data compiled from 1,209 US private equity funds, including fully liquidated partnerships, formed between 1986 and 2019.

¹Pooled horizon return, net of fees, expenses, and carried interest.

²CA Modified Public Market Equivalent (mPME) replicates private investment performance under public market conditions. The public index's shares are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and mPME NAV is a function of mPME cash flows and public index returns. "Value-Add" shows (in basis points) the difference between the actual private investment return and the mPME calculated return. Refer to Methodology page for details.

³Constructed Index: MSCI World/MSCI All Country World Index: Data rom 1/1/1986 to 12/31/1987 represented by MSCI index gross total return. Data from 1/1/1988 to present represented by MSCI ACWI gross total return.

Sources: Cambridge Associates LLC, Frank Russell Company, MSCI Inc., Standard & Poor's, and Thomson Reuters Datastream.

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AS OF JUNE 30, 2020

US PRIVATE EQUITY

FUND INDEX DETAILS: ONE QUARTER HORIZON POOLED RETURN

Net to Limited Partners

QUARTER ENDING	HORIZON RETURN
1995 Q1	3.91
1995 Q2	4.11
1995 Q3	4.37
1995 Q4	11.43
1996 Q1	6.21
1996 Q2	7.04
1996 Q3	6.78
1996 Q4	6.77
1997 Q1	0.87
1997 Q2	11.74
1997 Q3	7.41
1997 Q4	9.67
1998 Q1	10.80
1998 Q2	4.78
1998 Q3	-6.91
1998 Q4	8.33
1999 Q1	4.39
1999 Q2	10.68
1999 Q3	3.51
1999 Q4	19.50
2000 Q1	13.82
2000 Q2	-1.48
2000 Q3	-0.14
2000 Q4	-7.00
2001 Q1	-6.48
2001 Q2	3.11

QUARTER ENDING	HORIZON RETURN
2001 Q3	-9.03
2001 Q4	0.02
2002 Q1	-0.66
2002 Q2	-2.95
2002 Q3	-5.03
2002 Q4	-0.14
2003 Q1	-0.36
2003 Q2	7.18
2003 Q3	5.55
2003 Q4	9.61
2004 Q1	3.07
2004 Q2	3.46
2004 Q3	2.15
2004 Q4	15.15
2005 Q1	0.64
2005 Q2	8.32
2005 Q3	7.45
2005 Q4	7.90
2006 Q1	5.77
2006 Q2	3.54
2006 Q3	3.56
2006 Q4	12.55
2007 Q1	5.63
2007 Q2	7.78
2007 Q3	1.06
2007 Q4	2.83

QUARTER ENDING	HORIZON RETURN
2008 Q1	-2.66
2008 Q2	-0.25
2008 Q3	-6.73
2008 Q4	-16.71
2009 Q1	-3.68
2009 Q2	4.91
2009 Q3	6.43
2009 Q4	6.34
2010 Q1	4.92
2010 Q2	2.11
2010 Q3	4.84
2010 Q4	9.41
2011 Q1	5.27
2011 Q2	4.79
2011 Q3	-4.48
2011 Q4	4.99
2012 Q1	5.62
2012 Q2	0.24
2012 Q3	4.10
2012 Q4	3.81
2013 Q1	4.91
2013 Q2	3.50
2013 Q3	5.79
2013 Q4	7.58
2014 Q1	3.31
2014 Q2	4.94

QUARTER ENDING	HORIZON RETURN
2014 Q3	1.61
2014 Q4	3.26
2015 Q1	3.36
2015 Q2	4.56
2015 Q3	-0.27
2015 Q4	1.90
2016 Q1	0.45
2016 Q2	3.61
2016 Q3	3.99
2016 Q4	3.83
2017 Q1	4.23
2017 Q2	4.63
2017 Q3	4.26
2017 Q4	5.48
2018 Q1	3.16
2018 Q2	5.68
2018 Q3	4.05
2018 Q4	-1.23
2019 Q1	5.59
2019 Q2	4.61
2019 Q3	2.20
2019 Q4	5.01
2020 Q1	-8.15
2020 Q2	10.62

AS OF JUNE 30, 2020

US PRIVATE EQUITY

FUND INDEX DETAILS: HORIZON POOLED RETURN

Net to Limited Partners

MULTI-YEAR RETURNS			
YEARS	HORIZON RETURN (%)	YEARS	HORIZON RETURN (%)
1 Year	9.06	14 Years	12.05
2 Years	11.28	15 Years	12.90
3 Years	14.19	16 Years	13.77
4 Years	15.15	17 Years	14.36
5 Years	12.91	18 Years	13.59
6 Years	12.97	19 Years	12.11
7 Years	14.93	20 Years	10.93
8 Years	15.37	21 Years	11.93
9 Years	13.78	22 Years	12.10
10 Years	15.59	23 Years	12.71
11 Years	16.29	24 Years	13.08
12 Years	11.62	25 Years	13.51
13 Years	10.67		

ONE YEAR ROLLING RETURNS			
ONE YEAR ENDED	HORIZON RETURN (%)	ONE YEAR ENDED	HORIZON RETURN (%)
6/30/2020	9.06	6/30/2007	32.76
6/30/2019	13.50	6/30/2006	26.99
6/30/2018	19.88	6/30/2005	28.21
6/30/2017	17.72	6/30/2004	23.58
6/30/2016	5.65	6/30/2003	1.91
6/30/2015	13.21	6/30/2002	-12.17
6/30/2014	23.54	6/30/2001	-10.36
6/30/2013	17.36	6/30/2000	38.07
6/30/2012	6.20	6/30/1999	17.52
6/30/2011	26.60	6/30/1998	36.76
6/30/2010	21.17	6/30/1997	28.50
6/30/2009	-21.05	6/30/1996	32.13
6/30/2008	0.64		

US PRIVATE EQUITY: FUND SINCE INCEPTION ANALYSIS



CAMBRIDGE
ASSOCIATES

US PRIVATE EQUITY

AS OF JUNE 30, 2020

SINCE INCEPTION IRR & MULTIPLES BY FUND VINTAGE YEAR

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN (%)	ARITHMETIC MEAN (%)	MEDIAN (%)	EQUAL-WEIGHTED POOLED RETURN (%)	UPPER QUARTILE (%)	LOWER QUARTILE (%)	STANDARD DEVIATION (%)	DPI	RVPI	TVPI	NUMBER OF FUNDS
1995	21.52	18.24	13.57	21.62	32.50	-0.11	25.25	1.99	0.00	1.99	27
1996	10.40	8.06	6.73	8.02	12.55	-0.85	19.19	1.60	0.00	1.60	27
1997	7.39	6.93	7.06	5.96	12.78	-0.74	15.52	1.46	0.00	1.46	40
1998	7.17	9.90	9.65	10.35	14.68	3.92	10.03	1.44	0.01	1.45	47
1999	14.62	10.73	11.92	11.24	17.68	4.52	12.16	1.89	0.01	1.90	43
2000	15.06	13.48	13.78	13.33	21.90	7.48	12.55	1.82	0.02	1.84	67
2001	20.19	18.54	15.81	17.45	31.63	11.49	16.79	2.22	0.02	2.24	21
2002	15.89	11.77	15.68	14.77	23.39	5.86	26.65	1.93	0.04	1.97	24
2003	14.70	14.10	12.13	13.11	16.98	4.38	13.71	1.97	0.01	1.98	25
2004	10.14	10.23	9.93	10.29	12.64	7.41	7.08	1.66	0.04	1.70	54
2005	8.73	8.92	9.61	10.61	15.25	3.72	10.96	1.60	0.06	1.66	75
2006	8.84	11.65	11.69	11.39	16.65	7.01	14.43	1.53	0.14	1.67	58
2007	12.10	12.11	11.35	12.49	19.66	7.75	11.81	1.46	0.28	1.74	73
2008	15.95	16.99	15.20	16.25	23.53	10.03	10.66	1.62	0.28	1.90	47
2009	21.08	20.01	20.54	21.19	26.11	11.45	12.76	1.57	0.93	2.50	25
2010	21.88	24.32	20.42	23.60	24.11	15.84	17.43	1.77	0.70	2.47	19
2011	15.80	16.41	14.72	17.34	20.10	10.75	10.09	1.07	0.71	1.78	52
2012	16.68	15.94	15.27	16.48	21.98	8.94	9.38	0.69	1.03	1.72	37
2013	15.38	14.81	13.75	16.67	19.53	9.36	11.31	0.55	1.12	1.67	49
2014	18.21	15.92	15.23	17.51	22.15	8.77	9.63	0.42	1.14	1.56	58
2015	14.63	13.86	11.27	15.62	21.79	6.98	11.89	0.18	1.17	1.35	61
2016	18.09	15.58	12.33	19.05	25.68	6.26	18.35	0.10	1.28	1.38	47
2017	6.53	5.44	5.20	11.97	16.45	-7.11	19.89	0.03	1.05	1.07	45
2018	16.72	-2.15	-4.63	4.67	11.70	-21.04	33.05	0.01	1.12	1.13	50

AS OF JUNE 30, 2020

US PRIVATE EQUITY

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)			
		CA BENCHMARK INDEX	RUSSELL 2000® INDEX			RUSSELL 2500™ INDEX		CA BENCHMARK INDEX	RUSSELL 2000® INDEX	RUSSELL 2500™ INDEX	CA BENCHMARK INDEX	RUSSELL 2000® INDEX	RUSSELL 2500™ INDEX
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD						
1995	27	21.52	8.26	1,326		10.85	1,067	1.99	1.33	1.45	1.99	1.33	1.45
1996	27	10.40	6.86	354		8.91	149	1.60	1.39	1.53	1.60	1.39	1.53
1997	40	7.39	7.34	5		9.11	-172	1.46	1.44	1.57	1.46	1.44	1.57
1998	47	7.17	7.38	-21		8.91	-174	1.45	1.44	1.55	1.44	1.43	1.53
1999	43	14.62	8.28	634		9.41	521	1.90	1.39	1.46	1.89	1.39	1.45
2000	67	15.06	9.35	572		10.24	482	1.84	1.42	1.48	1.82	1.41	1.46
2001	21	20.19	8.63	1,156		9.51	1,068	2.24	1.44	1.50	2.22	1.43	1.49
2002	24	15.89	8.13	776		9.07	683	1.97	1.46	1.52	1.93	1.42	1.48
2003	25	14.70	6.21	849		7.06	765	1.98	1.37	1.43	1.97	1.35	1.41
2004	54	10.14	6.05	409		6.91	324	1.70	1.40	1.47	1.66	1.36	1.42
2005	75	8.73	7.24	149		8.08	65	1.66	1.54	1.62	1.60	1.47	1.54
2006	58	8.84	7.87	97		8.63	21	1.67	1.58	1.65	1.53	1.45	1.51
2007	73	12.10	11.11	99		11.93	17	1.74	1.63	1.69	1.46	1.39	1.44
2008	47	15.95	12.48	346		13.28	267	1.90	1.61	1.66	1.62	1.42	1.45
2009	25	21.08	10.45	1,062		11.12	996	2.50	1.52	1.56	1.57	1.11	1.12
2010	19	21.88	10.67	1,121		11.22	1,066	2.47	1.51	1.55	1.77	1.21	1.23
2011	52	15.80	8.34	746		9.00	680	1.78	1.35	1.38	1.07	0.86	0.87
2012	37	16.68	5.95	1,073		6.85	983	1.72	1.21	1.25	0.69	0.55	0.55
2013	49	15.38	5.53	985		6.50	888	1.67	1.20	1.24	0.55	0.46	0.47
2014	58	18.21	4.30	1,392		5.62	1,259	1.56	1.11	1.15	0.42	0.34	0.34
2015	61	14.63	2.13	1,250		4.02	1,061	1.35	1.05	1.09	0.18	0.16	0.16
2016	47	18.09	0.50	1,759		2.76	1,533	1.38	1.01	1.05	0.10	0.08	0.08
2017	45	6.53	-1.96	849		0.67	585	1.07	0.98	1.01	0.03	0.02	0.02
2018	50	16.72	-0.93	1,765		1.59	1,513	1.13	0.99	1.01	0.01	0.01	0.01

Notes: Based on data compiled from 1,071 US private equity funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mpME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mpME).

Sources: Cambridge Associates LLC, Frank Russell Company, and Thomson Reuters Datastream.

AS OF JUNE 30, 2020

US PRIVATE EQUITY

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)			
		CA BENCHMARK INDEX	RUSSELL 3000® INDEX			RUSSELL MIDCAP® INDEX	CA BENCHMARK INDEX	RUSSELL 3000® INDEX	RUSSELL MIDCAP® INDEX	CA BENCHMARK INDEX	RUSSELL 3000® INDEX	RUSSELL MIDCAP® INDEX	
			IRR	MPME IRR	VALUE-ADD	MPME IRR							
1995	27	21.52	12.37	914		12.35	917	1.99	1.45	1.51	1.99	1.45	1.51
1996	27	10.40	5.00	540		9.13	127	1.60	1.25	1.54	1.60	1.25	1.54
1997	40	7.39	2.49	490		8.57	-118	1.46	1.13	1.54	1.46	1.13	1.54
1998	47	7.17	2.74	443		8.43	-126	1.45	1.16	1.53	1.44	1.14	1.51
1999	43	14.62	3.76	1,086		9.35	527	1.90	1.17	1.46	1.89	1.16	1.46
2000	67	15.06	6.34	872		10.50	456	1.84	1.29	1.50	1.82	1.27	1.48
2001	21	20.19	7.40	1,280		10.15	1,004	2.24	1.39	1.54	2.22	1.37	1.53
2002	24	15.89	7.19	870		9.71	618	1.97	1.41	1.57	1.93	1.36	1.52
2003	25	14.70	5.84	887		7.46	725	1.98	1.35	1.45	1.97	1.33	1.44
2004	54	10.14	6.00	414		7.18	297	1.70	1.40	1.49	1.66	1.35	1.44
2005	75	8.73	7.34	139		8.29	44	1.66	1.56	1.64	1.60	1.47	1.56
2006	58	8.84	8.17	66		8.81	3	1.67	1.63	1.67	1.53	1.46	1.52
2007	73	12.10	12.18	-8		12.40	-31	1.74	1.75	1.74	1.46	1.44	1.47
2008	47	15.95	13.67	227		13.83	212	1.90	1.72	1.70	1.62	1.47	1.48
2009	25	21.08	12.96	812		11.86	921	2.50	1.70	1.61	1.57	1.18	1.15
2010	19	21.88	13.05	883		11.92	997	2.47	1.68	1.59	1.77	1.29	1.25
2011	52	15.80	11.76	404		9.89	591	1.78	1.54	1.43	1.07	0.92	0.89
2012	37	16.68	10.68	600		7.86	882	1.72	1.42	1.29	0.69	0.59	0.56
2013	49	15.38	10.54	484		7.58	780	1.67	1.42	1.28	0.55	0.50	0.47
2014	58	18.21	10.55	766		6.96	1,125	1.56	1.29	1.18	0.42	0.36	0.34
2015	61	14.63	10.29	434		5.98	865	1.35	1.24	1.13	0.18	0.17	0.17
2016	47	18.09	9.81	828		5.14	1,295	1.38	1.20	1.10	0.10	0.09	0.09
2017	45	6.53	9.55	-302		3.58	294	1.07	1.11	1.04	0.03	0.03	0.03
2018	50	16.72	11.20	552		3.91	1,281	1.13	1.09	1.03	0.01	0.01	0.01

Notes: Based on data compiled from 1,071 US private equity funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mPME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mPME).

Sources: Cambridge Associates LLC, Frank Russell Company, and Thomson Reuters Datastream.

AS OF JUNE 30, 2020

US PRIVATE EQUITY

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)		
		CA BENCHMARK INDEX	S&P 500 INDEX		MSCI ALL COUNTRY WORLD INDEX (GROSS)		CA BENCHMARK INDEX	S&P 500 INDEX	MSCI ALL COUNTRY WORLD INDEX (GROSS)	CA BENCHMARK INDEX	S&P 500 INDEX	MSCI ALL COUNTRY WORLD INDEX (GROSS)
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD	TVPI	MPME TVPI	MPME TVPI	DPI	MPME DPI
1995	27	21.52	13.04	848	8.35	1,317	1.99	1.46	1.30	1.99	1.46	1.30
1996	27	10.40	4.60	580	4.20	620	1.60	1.23	1.22	1.60	1.23	1.22
1997	40	7.39	1.66	573	3.12	426	1.46	1.09	1.17	1.46	1.09	1.17
1998	47	7.17	1.99	518	3.38	379	1.45	1.11	1.19	1.44	1.09	1.18
1999	43	14.62	2.99	1,163	5.49	913	1.90	1.13	1.26	1.89	1.13	1.25
2000	67	15.06	5.71	935	8.19	687	1.84	1.26	1.37	1.82	1.24	1.35
2001	21	20.19	6.93	1,326	8.48	1,171	2.24	1.36	1.41	2.22	1.35	1.40
2002	24	15.89	6.76	913	7.98	791	1.97	1.38	1.42	1.93	1.34	1.38
2003	25	14.70	5.54	917	5.64	906	1.98	1.33	1.31	1.97	1.31	1.29
2004	54	10.14	5.79	435	4.62	552	1.70	1.39	1.28	1.66	1.33	1.24
2005	75	8.73	7.17	156	4.68	405	1.66	1.55	1.32	1.60	1.45	1.26
2006	58	8.84	8.06	78	5.05	379	1.67	1.62	1.34	1.53	1.45	1.22
2007	73	12.10	12.18	-8	8.19	390	1.74	1.75	1.45	1.46	1.44	1.22
2008	47	15.95	13.70	224	9.43	651	1.90	1.72	1.45	1.62	1.47	1.25
2009	25	21.08	13.24	784	8.95	1,212	2.50	1.72	1.44	1.57	1.19	1.02
2010	19	21.88	13.33	855	9.14	1,274	2.47	1.70	1.44	1.77	1.30	1.12
2011	52	15.80	12.18	362	8.36	744	1.78	1.56	1.36	1.07	0.93	0.83
2012	37	16.68	11.21	547	7.67	901	1.72	1.44	1.29	0.69	0.59	0.55
2013	49	15.38	11.10	429	7.61	777	1.67	1.44	1.29	0.55	0.51	0.47
2014	58	18.21	11.14	707	7.60	1,061	1.56	1.31	1.20	0.42	0.36	0.34
2015	61	14.63	10.95	368	7.19	744	1.35	1.26	1.16	0.18	0.17	0.17
2016	47	18.09	10.54	755	6.55	1,153	1.38	1.21	1.13	0.10	0.09	0.09
2017	45	6.53	10.30	-377	5.83	69	1.07	1.12	1.07	0.03	0.03	0.03
2018	50	16.72	11.70	501	6.98	974	1.13	1.09	1.05	0.01	0.01	0.01

Notes: Based on data compiled from 1,071 US private equity funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mpME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mpME).

Sources: Cambridge Associates LLC, MSCI Inc., Standard & Poor's, and Thomson Reuters Datastream.

MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets indexes are gross of dividend taxes. Total returns for MSCI Developed Markets indexes are net of dividend taxes.

US PRIVATE EQUITY

AS OF JUNE 30, 2020

TOTAL VALUE TO PAID IN CAPITAL MULTIPLE (TVPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	1.99	1.94	1.81	2.29	1.00	27
1996	1.60	1.44	1.26	1.85	0.96	27
1997	1.46	1.34	1.40	1.71	0.92	40
1998	1.45	1.64	1.50	1.99	1.27	47
1999	1.90	1.69	1.54	2.19	1.23	43
2000	1.84	1.85	1.78	2.22	1.35	67
2001	2.24	1.89	1.94	2.25	1.49	21
2002	1.97	1.91	1.97	2.43	1.36	24
2003	1.98	1.74	1.74	2.04	1.37	25
2004	1.70	1.71	1.63	1.94	1.42	54
2005	1.66	1.76	1.66	2.25	1.25	75
2006	1.67	1.80	1.71	2.19	1.41	58
2007	1.74	1.83	1.76	2.15	1.37	73
2008	1.90	1.96	1.79	2.27	1.59	47
2009	2.50	2.29	2.29	2.55	1.77	25
2010	2.47	2.62	2.32	2.64	1.93	19
2011	1.78	1.92	1.80	2.01	1.54	52
2012	1.72	1.70	1.61	1.93	1.38	37
2013	1.67	1.71	1.53	1.95	1.30	49
2014	1.56	1.62	1.43	1.81	1.28	58
2015	1.35	1.37	1.25	1.56	1.14	61
2016	1.38	1.33	1.24	1.50	1.10	47
2017	1.07	1.10	1.06	1.18	0.93	45
2018	1.13	0.98	0.96	1.09	0.85	50

US PRIVATE EQUITY

AS OF JUNE 30, 2020

DISTRIBUTION TO PAID IN CAPITAL MULTIPLE (DPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	1.99	1.94	1.81	2.29	1.00	27
1996	1.60	1.44	1.26	1.85	0.96	27
1997	1.46	1.34	1.40	1.71	0.90	40
1998	1.44	1.63	1.50	1.93	1.27	47
1999	1.89	1.68	1.54	2.11	1.23	43
2000	1.82	1.77	1.77	2.21	1.35	67
2001	2.22	1.87	1.91	2.19	1.49	21
2002	1.93	1.86	1.97	2.40	1.34	24
2003	1.97	1.70	1.74	2.04	1.18	25
2004	1.66	1.65	1.54	1.86	1.38	54
2005	1.60	1.69	1.61	2.15	1.15	75
2006	1.53	1.66	1.60	1.98	1.31	58
2007	1.46	1.57	1.51	2.02	1.21	73
2008	1.62	1.66	1.58	2.04	1.28	47
2009	1.57	1.72	1.73	2.12	1.15	25
2010	1.77	1.90	1.71	2.12	1.16	19
2011	1.07	1.22	1.07	1.42	0.63	52
2012	0.69	0.87	0.78	1.21	0.45	37
2013	0.55	0.58	0.48	0.78	0.12	49
2014	0.42	0.47	0.38	0.67	0.15	58
2015	0.18	0.22	0.13	0.35	0.03	61
2016	0.10	0.14	0.04	0.17	0.00	47
2017	0.03	0.08	0.00	0.04	0.00	45
2018	0.01	0.01	0.00	0.00	0.00	50

US PRIVATE EQUITY

AS OF JUNE 30, 2020

RESIDUAL VALUE TO PAID IN CAPITAL MULTIPLE (RVPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	0.00	0.00	0.00	0.00	0.00	27
1996	0.00	0.00	0.00	0.00	0.00	27
1997	0.00	0.00	0.00	0.00	0.00	40
1998	0.01	0.01	0.00	0.00	0.00	47
1999	0.01	0.01	0.00	0.00	0.00	43
2000	0.02	0.08	0.00	0.01	0.00	67
2001	0.02	0.02	0.00	0.01	0.00	21
2002	0.04	0.05	0.00	0.05	0.00	24
2003	0.01	0.04	0.00	0.01	0.00	25
2004	0.04	0.06	0.01	0.07	0.00	54
2005	0.06	0.08	0.02	0.09	0.00	75
2006	0.14	0.13	0.07	0.20	0.01	58
2007	0.28	0.25	0.13	0.28	0.04	73
2008	0.28	0.29	0.20	0.37	0.08	47
2009	0.93	0.57	0.52	0.92	0.31	25
2010	0.70	0.72	0.75	0.93	0.41	19
2011	0.71	0.70	0.64	0.98	0.43	52
2012	1.03	0.84	0.90	1.04	0.67	37
2013	1.12	1.13	1.06	1.27	0.80	49
2014	1.14	1.15	1.11	1.30	0.87	58
2015	1.17	1.16	1.12	1.23	0.97	61
2016	1.28	1.20	1.17	1.36	1.00	47
2017	1.05	1.03	1.03	1.14	0.91	45
2018	1.12	0.97	0.96	1.08	0.85	50

EX US PRIVATE EQUITY: FUND INDEX ANALYSIS



CAMBRIDGE
ASSOCIATES

EX US PRIVATE EQUITY

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN

Net to Limited Partners

INDEX	1-QUARTER	YTD	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
EX US PRIVATE EQUITY INDEX¹	9.48	-1.38	5.38	10.22	10.89	12.06	11.61	12.06	12.57
Bloomberg Barclays Capital Government/Credit Bond Index	3.71	7.21	10.02	5.87	4.74	4.13	4.50	5.30	5.46
Dow Jones Industrial Average Index	18.51	-8.43	-0.54	9.08	10.62	12.99	9.08	7.19	9.69
Dow Jones US Small Cap Index	25.61	-12.61	-6.87	3.08	4.14	10.75	7.75	7.59	9.38
Dow Jones US TopCap Index	21.42	-2.09	8.56	11.13	10.87	14.14	9.07	6.11	9.36
MSCI Emerging Markets Index (gross)	18.18	-9.67	-3.05	2.27	3.24	3.63	6.69	6.93	5.72
MSCI Europe Index (US\$) (net)	15.26	-12.78	-6.78	0.00	1.46	5.65	3.83	3.01	5.93
MSCI Europe Index (€) (net)	12.60	-12.84	-5.48	0.51	1.30	6.57	4.35	2.20	6.71
MSCI Pacific Index (net)	14.16	-9.01	-2.39	2.31	3.24	5.98	4.67	2.67	2.62
MSCI World Ex US Index (net)	15.34	-11.49	-5.42	0.84	2.01	5.43	4.10	2.98	4.68
MSCI World Index (net)	19.36	-5.77	2.84	6.70	6.90	9.95	6.55	4.32	6.76
Nasdaq Composite Index*	30.63	12.11	25.64	17.88	15.07	16.91	11.16	4.76	9.98
Russell 1000® Index	21.82	-2.81	7.48	10.64	10.47	13.97	8.91	6.10	9.41
Russell 2000® Index	25.42	-12.98	-6.63	2.01	4.29	10.50	7.01	6.69	8.16
S&P 500 Index	20.54	-3.08	7.51	10.73	10.73	13.99	8.83	5.91	9.27

The index is a horizon calculation based on data compiled from 1,087 Ex US private equity funds, including fully liquidated partnerships, formed between 1987 and 2019.

¹ Private indexes are pooled horizon internal rate of return (IRR) calculations, net of fees, expenses, and carried interest. The timing and magnitude of fund cash flows are integral to the IRR performance calculation. Public indexes are average annual compounded return (AACR) calculations which are time weighted measures over the specified time horizon, and are shown for reference and directional purposes only. Due to the fundamental differences between the two calculations, direct comparison of IRRs to AACRs is not recommended. For a more accurate means of comparing private investment performance relative to public alternatives, see the analyses in this document using CA Modified Public Market Equivalent (mPME). See Methodology section for more detail.

Sources: Cambridge Associates LLC, Bloomberg Barclays, Dow Jones Indices, Frank Russell Company, MSCI Inc., Standard & Poor's and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets Indices are gross of dividend taxes. Total Returns for MSCI Developed Markets Indices are net of dividend taxes.

EX US PRIVATE EQUITY

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

CA INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
EX US PRIVATE EQUITY INDEX¹	5.38	10.22	10.89	12.06	11.61	12.06	12.57

MPME ANALYSIS ²							
MSCI EAFE Index (net)	-5.00	0.84	1.88	5.95	3.66	3.65	3.90
Value-Add (bps)	1,038	937	900	611	796	840	867
MSCI Europe Index (net)	-6.64	0.02	1.29	5.93	3.41	3.52	3.91
Value-Add (bps)	1,202	1,020	960	612	820	854	866
S&P 500 Index	7.56	10.88	10.55	14.64	9.68	8.49	9.05
Value-Add (bps)	-218	-66	34	-258	194	356	352
Constructed Index: Global Financial Data Emerging Markets/MSCI Emerging Markets (gross) ³	-2.80	2.39	3.08	3.54	5.39	6.40	6.42
Value-Add (bps)	818	783	781	852	623	565	616
Constructed Index: MSCI World/MSCI All Country World Index ⁴ (gross)	2.77	6.84	6.85	10.04	6.98	6.42	6.77
Value-Add (bps)	261	337	404	202	464	564	580

The index is a horizon calculation based on data compiled from 1,087 Ex US private equity funds, including fully liquidated partnerships, formed between 1987 and 2019.

¹ Pooled horizon return, net of fees, expenses, and carried interest.

² CA Modified Public Market Equivalent (mPME) replicates private investment performance under public market conditions. The public index's shares are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and mPME NAV is a function of mPME cash flows and public index returns. "Value-Add" shows (in basis points) the difference between the actual private investment return and the mPME calculated return. Refer to Methodology page for details.

³ Constructed MSCI EM Index: Data from 1/1/1986 to 12/31/1987 represented by GFD Emerging Markets price return. Data from 1/1/1988 to present represented by MSCI Emerging Markets total return gross.

⁴ Constructed Index: MSCI World/MSCI All Country World Index: Data from 1/1/1986 to 12/31/1987 represented by MSCI index gross total return. Data from 1/1/1988 to present represented by MSCI ACWI gross total return.

Sources: Cambridge Associates LLC, Global Financial Data, Inc., MSCI Inc., Standard & Poor's, and Thomson Reuters Datastream.

MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets indexes are gross of dividend taxes. Total returns for MSCI Developed Markets indexes are net of dividend taxes.

AS OF JUNE 30, 2020

EX US PRIVATE EQUITY

FUND INDEX DETAILS: ONE QUARTER HORIZON POOLED RETURN

Net to Limited Partners

QUARTER ENDING	HORIZON RETURN
1995 Q1	4.59
1995 Q2	3.32
1995 Q3	3.35
1995 Q4	0.98
1996 Q1	1.06
1996 Q2	5.16
1996 Q3	4.87
1996 Q4	19.50
1997 Q1	-0.52
1997 Q2	4.32
1997 Q3	1.79
1997 Q4	5.97
1998 Q1	2.38
1998 Q2	8.69
1998 Q3	2.14
1998 Q4	1.78
1999 Q1	-0.31
1999 Q2	6.75
1999 Q3	6.15
1999 Q4	10.50
2000 Q1	4.45
2000 Q2	1.66
2000 Q3	-2.50
2000 Q4	1.38
2001 Q1	-5.08
2001 Q2	-0.54

QUARTER ENDING	HORIZON RETURN
2001 Q3	0.33
2001 Q4	-3.61
2002 Q1	-0.23
2002 Q2	6.98
2002 Q3	-2.99
2002 Q4	5.08
2003 Q1	0.53
2003 Q2	7.28
2003 Q3	2.47
2003 Q4	13.54
2004 Q1	1.87
2004 Q2	5.86
2004 Q3	5.01
2004 Q4	18.94
2005 Q1	1.46
2005 Q2	6.27
2005 Q3	5.66
2005 Q4	11.51
2006 Q1	7.61
2006 Q2	16.04
2006 Q3	3.92
2006 Q4	21.68
2007 Q1	4.47
2007 Q2	15.09
2007 Q3	6.60
2007 Q4	6.78

QUARTER ENDING	HORIZON RETURN
2008 Q1	2.66
2008 Q2	-3.86
2008 Q3	-15.59
2008 Q4	-22.21
2009 Q1	-7.21
2009 Q2	10.23
2009 Q3	9.37
2009 Q4	8.57
2010 Q1	-0.43
2010 Q2	-2.63
2010 Q3	11.31
2010 Q4	9.07
2011 Q1	5.18
2011 Q2	5.98
2011 Q3	-9.24
2011 Q4	0.50
2012 Q1	7.43
2012 Q2	-2.09
2012 Q3	3.65
2012 Q4	4.80
2013 Q1	1.05
2013 Q2	1.48
2013 Q3	5.99
2013 Q4	7.40
2014 Q1	2.99
2014 Q2	4.80

QUARTER ENDING	HORIZON RETURN
2014 Q3	-3.15
2014 Q4	0.69
2015 Q1	-1.28
2015 Q2	6.77
2015 Q3	-2.25
2015 Q4	3.73
2016 Q1	3.02
2016 Q2	1.21
2016 Q3	4.18
2016 Q4	1.05
2017 Q1	4.64
2017 Q2	8.31
2017 Q3	5.49
2017 Q4	5.65
2018 Q1	1.90
2018 Q2	1.84
2018 Q3	2.11
2018 Q4	-0.65
2019 Q1	3.83
2019 Q2	3.86
2019 Q3	-0.17
2019 Q4	7.08
2020 Q1	-9.96
2020 Q2	9.48

AS OF JUNE 30, 2020

EX US PRIVATE EQUITY

FUND INDEX DETAILS: HORIZON POOLED RETURN

Net to Limited Partners

MULTI-YEAR RETURNS			
YEARS	HORIZON RETURN (%)	YEARS	HORIZON RETURN (%)
1 Year	5.38	14 Years	9.97
2 Years	7.38	15 Years	11.61
3 Years	10.22	16 Years	12.70
4 Years	12.59	17 Years	13.31
5 Years	10.89	18 Years	13.18
6 Years	9.03	19 Years	12.80
7 Years	11.52	20 Years	12.06
8 Years	11.50	21 Years	12.36
9 Years	9.10	22 Years	12.33
10 Years	12.06	23 Years	12.44
11 Years	12.32	24 Years	12.58
12 Years	7.57	25 Years	12.57
13 Years	7.82		

ONE YEAR ROLLING RETURNS			
ONE YEAR ENDED	HORIZON RETURN (%)	ONE YEAR ENDED	HORIZON RETURN (%)
6/30/2020	5.38	6/30/2007	52.08
6/30/2019	9.40	6/30/2006	46.73
6/30/2018	15.79	6/30/2005	34.85
6/30/2017	19.07	6/30/2004	25.51
6/30/2016	5.53	6/30/2003	10.48
6/30/2015	2.31	6/30/2002	3.41
6/30/2014	22.93	6/30/2001	-6.66
6/30/2013	11.41	6/30/2000	23.45
6/30/2012	-4.15	6/30/1999	11.09
6/30/2011	35.14	6/30/1998	20.66
6/30/2010	14.57	6/30/1997	29.24
6/30/2009	-31.77	6/30/1996	11.11
6/30/2008	11.40		

EX US PRIVATE EQUITY: FUND SINCE INCEPTION ANALYSIS



CAMBRIDGE
ASSOCIATES

AS OF JUNE 30, 2020

EX US PRIVATE EQUITY

SINCE INCEPTION IRR & MULTIPLES BY FUND VINTAGE YEAR

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN (%)	ARITHMETIC MEAN (%)	MEDIAN (%)	EQUAL-WEIGHTED POOLED RETURN (%)	UPPER QUARTILE (%)	LOWER QUARTILE (%)	STANDARD DEVIATION (%)	DPI	RVPI	TVPI	NUMBER OF FUNDS
1995	19.32	10.19	6.04	11.05	14.53	-3.02	22.67	1.88	0.00	1.88	20
1996	15.24	11.06	10.25	10.63	16.70	-2.53	20.28	1.76	0.00	1.76	24
1997	11.83	12.51	11.06	13.07	18.88	4.81	22.37	1.77	0.00	1.77	43
1998	14.40	13.39	14.11	16.36	20.91	6.28	12.40	2.03	0.01	2.03	33
1999	15.87	16.77	16.02	15.40	22.95	3.31	18.56	1.90	0.00	1.91	32
2000	26.28	21.28	19.39	22.16	35.31	9.23	18.83	2.45	0.01	2.47	45
2001	28.70	22.29	20.55	23.15	31.55	11.49	18.62	2.08	0.00	2.09	24
2002	22.90	19.35	20.08	21.15	32.25	11.76	31.40	2.09	0.01	2.10	26
2003	19.56	20.83	17.58	22.37	33.31	10.78	20.58	1.69	0.00	1.70	24
2004	12.84	23.36	8.90	18.49	27.75	2.77	42.23	1.65	0.08	1.73	45
2005	5.54	7.91	7.37	8.67	13.06	-0.96	15.29	1.30	0.04	1.34	73
2006	5.70	5.40	5.67	8.15	12.41	-0.67	12.96	1.29	0.08	1.37	74
2007	9.23	4.77	6.26	6.84	11.14	-1.35	14.42	1.43	0.16	1.59	94
2008	9.70	5.07	6.30	7.21	11.42	3.05	16.72	1.27	0.30	1.56	54
2009	9.36	8.82	7.80	10.38	14.54	1.98	9.97	0.94	0.68	1.62	26
2010	9.08	6.37	6.31	8.06	13.80	1.91	10.95	0.86	0.62	1.48	37
2011	10.33	9.40	9.63	9.94	14.25	2.70	10.59	0.81	0.69	1.50	47
2012	14.18	9.91	10.95	10.95	14.81	3.94	8.63	0.85	0.84	1.70	51
2013	13.89	11.72	11.19	13.00	19.79	4.52	10.46	0.46	1.08	1.54	41
2014	14.87	12.04	11.56	15.23	15.39	7.87	8.34	0.38	1.06	1.44	40
2015	13.02	5.85	10.01	12.23	14.63	-1.53	21.55	0.15	1.19	1.34	40
2016	15.37	9.73	9.57	14.22	17.60	2.54	12.83	0.07	1.19	1.26	43
2017	9.15	1.02	5.00	6.87	14.37	-7.99	24.63	0.00	1.09	1.10	30
2018	-1.13	-12.46	-10.94	-7.10	-1.12	-35.82	65.14	0.00	0.99	0.99	36

AS OF JUNE 30, 2020

EX US PRIVATE EQUITY

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)			
		CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)			MSCI EUROPE INDEX (NET)		CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)	MSCI EUROPE INDEX (NET)	CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)	MSCI EUROPE INDEX (NET)
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD						
1995	20	19.32	5.30	1,402		10.63	869	1.88	1.18	1.34	1.88	1.17	1.34
1996	24	15.24	5.37	987		7.48	776	1.76	1.21	1.29	1.76	1.21	1.29
1997	43	11.83	2.75	907		2.93	890	1.77	1.14	1.15	1.77	1.14	1.15
1998	33	14.40	3.75	1,065		4.04	1,036	2.03	1.18	1.19	2.03	1.17	1.19
1999	32	15.87	6.15	972		6.75	911	1.91	1.27	1.30	1.90	1.27	1.30
2000	45	26.28	10.99	1,529		11.45	1,483	2.47	1.40	1.42	2.45	1.39	1.41
2001	24	28.70	13.93	1,477		14.36	1,434	2.09	1.41	1.42	2.08	1.41	1.42
2002	26	22.90	8.29	1,461		8.71	1,419	2.10	1.31	1.32	2.09	1.30	1.32
2003	24	19.56	6.12	1,343		6.71	1,285	1.70	1.22	1.24	1.69	1.22	1.23
2004	45	12.84	2.93	991		3.06	978	1.73	1.14	1.15	1.65	1.09	1.10
2005	73	5.54	1.38	417		1.26	429	1.34	1.08	1.07	1.30	1.04	1.03
2006	74	5.70	2.59	311		2.40	330	1.37	1.16	1.14	1.29	1.08	1.07
2007	94	9.23	4.41	482		4.29	494	1.59	1.24	1.23	1.43	1.15	1.14
2008	54	9.70	5.65	405		5.57	414	1.56	1.30	1.29	1.27	1.05	1.05
2009	26	9.36	4.78	458		4.46	490	1.62	1.27	1.25	0.94	0.79	0.79
2010	37	9.08	4.56	452		4.15	493	1.48	1.21	1.19	0.86	0.74	0.73
2011	47	10.33	3.94	639		3.33	700	1.50	1.17	1.14	0.81	0.63	0.62
2012	51	14.18	3.24	1,094		2.48	1,170	1.70	1.13	1.10	0.85	0.62	0.61
2013	41	13.89	2.76	1,113		2.03	1,185	1.54	1.09	1.07	0.46	0.35	0.35
2014	40	14.87	2.64	1,224		2.04	1,284	1.44	1.07	1.05	0.38	0.30	0.30
2015	40	13.02	1.38	1,165		0.76	1,226	1.34	1.03	1.02	0.15	0.13	0.13
2016	43	15.37	-1.02	1,639		-1.77	1,714	1.26	0.98	0.97	0.07	0.06	0.06
2017	30	9.15	-1.11	1,027		-1.87	1,102	1.10	0.99	0.98	0.00	0.00	0.00
2018	36	-1.13	0.25	-138		-0.52	-61	0.99	1.00	1.00	0.00	0.00	0.00

Notes: Based on data compiled from 1,002 Ex US private equity funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

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mPME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mPME).

Sources: Cambridge Associates LLC, MSCI, Inc., and Thomson Returns Datastream.

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AS OF JUNE 30, 2020

EX US PRIVATE EQUITY

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)		
		CA BENCHMARK INDEX	S&P 500 INDEX		MSCI EMERGING MARKETS INDEX (GROSS)		CA BENCHMARK INDEX	S&P 500 INDEX	MSCI EMERGING MARKETS INDEX (GROSS)	CA BENCHMARK INDEX	S&P 500 INDEX	MSCI EMERGING MARKETS INDEX (GROSS)
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD	TVPI	MPME TVPI	MPME TVPI	DPI	MPME DPI
1995	20	19.32	13.56	576	2.02	1,730	1.88	1.42	1.08	1.88	1.42	1.08
1996	24	15.24	8.51	673	6.87	837	1.76	1.30	1.34	1.76	1.30	1.34
1997	43	11.83	1.82	1,001	9.54	228	1.77	1.09	1.60	1.77	1.09	1.60
1998	33	14.40	1.15	1,325	12.40	200	2.03	1.05	1.75	2.03	1.05	1.74
1999	32	15.87	2.85	1,302	15.05	82	1.91	1.12	1.85	1.90	1.12	1.85
2000	45	26.28	5.88	2,041	21.81	447	2.47	1.22	1.98	2.45	1.20	1.97
2001	24	28.70	8.06	2,064	26.14	257	2.09	1.25	1.89	2.08	1.25	1.89
2002	26	22.90	6.90	1,600	18.20	470	2.10	1.31	1.72	2.09	1.30	1.71
2003	24	19.56	6.70	1,286	14.69	487	1.70	1.30	1.53	1.69	1.29	1.52
2004	45	12.84	6.20	664	8.46	438	1.73	1.37	1.42	1.65	1.27	1.36
2005	73	5.54	6.60	-106	4.19	136	1.34	1.46	1.24	1.30	1.38	1.20
2006	74	5.70	9.13	-344	2.74	296	1.37	1.69	1.16	1.29	1.54	1.08
2007	94	9.23	11.80	-258	2.51	672	1.59	1.79	1.13	1.43	1.62	1.04
2008	54	9.70	13.69	-399	3.26	644	1.56	1.91	1.16	1.27	1.45	0.94
2009	26	9.36	13.00	-365	2.76	659	1.62	1.94	1.15	0.94	1.10	0.71
2010	37	9.08	12.78	-370	3.09	599	1.48	1.73	1.14	0.86	0.96	0.68
2011	47	10.33	12.07	-174	3.62	671	1.50	1.62	1.16	0.81	0.80	0.61
2012	51	14.18	11.48	270	3.66	1,052	1.70	1.53	1.15	0.85	0.78	0.62
2013	41	13.89	11.17	271	4.48	941	1.54	1.42	1.15	0.46	0.42	0.37
2014	40	14.87	11.32	355	4.42	1,045	1.44	1.32	1.12	0.38	0.35	0.31
2015	40	13.02	10.93	210	2.83	1,019	1.34	1.28	1.07	0.15	0.15	0.14
2016	43	15.37	9.83	554	0.31	1,506	1.26	1.16	1.00	0.07	0.07	0.06
2017	30	9.15	10.79	-164	0.57	858	1.10	1.11	1.01	0.00	0.00	0.00
2018	36	-1.13	12.68	-1,381	2.73	-386	0.99	1.10	1.02	0.00	0.00	0.00

Notes: Based on data compiled from 1,002 Ex US private equity funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mPME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mPME).

Sources: Cambridge Associates LLC, MSCI, Inc., and Thomson Returns Datastream.

MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets indexes are gross of dividend taxes. Total returns for MSCI Developed Markets indexes are net of dividend taxes.

AS OF JUNE 30, 2020

EX US PRIVATE EQUITY

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)			TOTAL VALUE TO PAID IN (TVPI)		DISTRIBUTIONS TO PAID IN (DPI)	
		CA BENCHMARK INDEX	MSCI ALL COUNTRYWORLD INDEX (GROSS)		CA BENCHMARK INDEX	MSCI ALL COUNTRYWORLD INDEX (GROSS)		CA BENCHMARK INDEX
			IRR	MPME IRR		TVPI	MPME TVPI	
1995	20	19.32	8.47	1,085	1.88	1.27	1.88	1.27
1996	24	15.24	6.71	853	1.76	1.25	1.76	1.25
1997	43	11.83	2.57	926	1.77	1.13	1.77	1.13
1998	33	14.40	2.91	1,149	2.03	1.14	2.03	1.13
1999	32	15.87	5.07	1,080	1.91	1.23	1.90	1.22
2000	45	26.28	9.19	1,709	2.47	1.34	2.45	1.33
2001	24	28.70	11.90	1,681	2.09	1.36	2.08	1.36
2002	26	22.90	8.36	1,454	2.10	1.34	2.09	1.34
2003	24	19.56	7.17	1,239	1.70	1.29	1.69	1.28
2004	45	12.84	5.17	767	1.73	1.28	1.65	1.21
2005	73	5.54	4.31	123	1.34	1.27	1.30	1.21
2006	74	5.70	5.84	-14	1.37	1.39	1.29	1.28
2007	94	9.23	7.79	144	1.59	1.46	1.43	1.34
2008	54	9.70	9.31	39	1.56	1.55	1.27	1.21
2009	26	9.36	8.72	64	1.62	1.56	0.94	0.92
2010	37	9.08	8.62	46	1.48	1.45	0.86	0.83
2011	47	10.33	8.20	213	1.50	1.39	0.81	0.71
2012	51	14.18	7.72	646	1.70	1.33	0.85	0.70
2013	41	13.89	7.71	618	1.54	1.27	0.46	0.39
2014	40	14.87	7.86	701	1.44	1.21	0.38	0.33
2015	40	13.02	7.12	591	1.34	1.18	0.15	0.14
2016	43	15.37	5.55	982	1.26	1.09	0.07	0.06
2017	30	9.15	6.29	286	1.10	1.07	0.00	0.00
2018	36	-1.13	8.20	-933	0.99	1.07	0.00	0.00

Notes: Based on data compiled from 1,002 Ex US private equity funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mpME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mpME).

Sources: Cambridge Associates LLC, MSCI, Inc., and Thomson Returns Datastream.

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EX US PRIVATE EQUITY

AS OF JUNE 30, 2020

TOTAL VALUE TO PAID IN CAPITAL MULTIPLE (TVPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	1.88	1.50	1.21	1.92	0.87	20
1996	1.76	1.69	1.59	2.02	0.85	24
1997	1.77	1.77	1.80	2.09	1.24	43
1998	2.03	2.24	1.74	2.22	1.48	33
1999	1.91	1.91	1.87	2.27	1.13	32
2000	2.47	2.17	2.00	2.84	1.60	45
2001	2.09	2.09	2.09	2.60	1.62	24
2002	2.10	2.15	1.99	2.44	1.52	26
2003	1.70	2.01	1.86	2.47	1.52	24
2004	1.73	1.83	1.48	2.15	1.10	45
2005	1.34	1.51	1.46	1.80	0.93	73
2006	1.37	1.54	1.38	1.72	0.99	74
2007	1.59	1.42	1.43	1.70	0.93	94
2008	1.56	1.45	1.36	1.80	1.12	54
2009	1.62	1.73	1.50	1.90	1.11	26
2010	1.48	1.43	1.28	1.64	1.07	37
2011	1.50	1.54	1.39	1.79	1.13	47
2012	1.70	1.51	1.46	1.75	1.20	51
2013	1.54	1.52	1.43	1.80	1.14	41
2014	1.44	1.47	1.31	1.49	1.19	40
2015	1.34	1.27	1.21	1.43	0.96	40
2016	1.26	1.25	1.15	1.36	1.06	43
2017	1.10	1.04	1.06	1.19	0.91	30
2018	0.99	0.92	0.92	0.99	0.72	36

EX US PRIVATE EQUITY

AS OF JUNE 30, 2020

DISTRIBUTION TO PAID IN CAPITAL MULTIPLE (DPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	1.88	1.50	1.21	1.92	0.87	20
1996	1.76	1.69	1.59	2.00	0.85	24
1997	1.77	1.76	1.80	2.09	1.24	43
1998	2.03	2.23	1.74	2.22	1.48	33
1999	1.90	1.91	1.87	2.27	1.12	32
2000	2.45	2.16	2.00	2.82	1.60	45
2001	2.08	2.08	2.09	2.59	1.62	24
2002	2.09	2.13	1.99	2.43	1.52	26
2003	1.69	2.00	1.86	2.47	1.52	24
2004	1.65	1.70	1.47	1.93	1.05	45
2005	1.30	1.45	1.36	1.79	0.86	73
2006	1.29	1.46	1.35	1.66	0.83	74
2007	1.43	1.18	1.20	1.50	0.73	94
2008	1.27	1.08	1.02	1.46	0.63	54
2009	0.94	1.04	0.91	1.34	0.59	26
2010	0.86	0.81	0.66	1.25	0.32	37
2011	0.81	0.75	0.61	1.14	0.30	47
2012	0.85	0.63	0.64	1.03	0.33	51
2013	0.46	0.56	0.40	0.84	0.13	41
2014	0.38	0.35	0.28	0.49	0.11	40
2015	0.15	0.20	0.09	0.30	0.00	40
2016	0.07	0.08	0.01	0.12	0.00	43
2017	0.00	0.01	0.00	0.00	0.00	30
2018	0.00	0.00	0.00	0.00	0.00	36

EX US PRIVATE EQUITY

AS OF JUNE 30, 2020

RESIDUAL VALUE TO PAID IN CAPITAL MULTIPLE (RVPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	0.00	0.00	0.00	0.00	0.00	20
1996	0.00	0.00	0.00	0.00	0.00	24
1997	0.00	0.00	0.00	0.00	0.00	43
1998	0.01	0.01	0.00	0.00	0.00	33
1999	0.00	0.00	0.00	0.00	0.00	32
2000	0.01	0.01	0.00	0.00	0.00	45
2001	0.00	0.01	0.00	0.00	0.00	24
2002	0.01	0.02	0.00	0.00	0.00	26
2003	0.00	0.01	0.00	0.00	0.00	24
2004	0.08	0.14	0.01	0.06	0.00	45
2005	0.04	0.06	0.01	0.05	0.00	73
2006	0.08	0.08	0.03	0.10	0.00	74
2007	0.16	0.24	0.06	0.25	0.01	94
2008	0.30	0.37	0.29	0.50	0.08	54
2009	0.68	0.69	0.44	0.91	0.19	26
2010	0.62	0.63	0.57	0.77	0.43	37
2011	0.69	0.79	0.66	1.04	0.48	47
2012	0.84	0.88	0.77	1.00	0.67	51
2013	1.08	0.96	0.93	1.17	0.72	41
2014	1.06	1.12	1.03	1.20	0.85	40
2015	1.19	1.07	0.95	1.29	0.86	40
2016	1.19	1.17	1.09	1.27	0.94	43
2017	1.09	1.03	1.06	1.16	0.91	30
2018	0.99	0.91	0.92	0.99	0.72	36

BUYOUT: FUND INDEX ANALYSIS



CAMBRIDGE
ASSOCIATES

BUYOUT

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN

Net to Limited Partners

INDEX	1-QUARTER	YTD	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
BUYOUT INDEX¹	9.25	-1.55	5.77	11.38	11.79	14.17	12.29	11.36	12.95
Bloomberg Barclays Capital Government/Credit Bond Index	3.71	7.21	10.02	5.87	4.74	4.13	4.50	5.30	5.46
Dow Jones Industrial Average Index	18.51	-8.43	-0.54	9.08	10.62	12.99	9.08	7.19	9.69
Dow Jones US Small Cap Index	25.61	-12.61	-6.87	3.08	4.14	10.75	7.75	7.59	9.38
Dow Jones US TopCap Index	21.42	-2.09	8.56	11.13	10.87	14.14	9.07	6.11	9.36
MSCI Emerging Markets Index (gross)	18.18	-9.67	-3.05	2.27	3.24	3.63	6.69	6.93	5.72
MSCI Europe Index (US\$) (net)	15.26	-12.78	-6.78	0.00	1.46	5.65	3.83	3.01	5.93
MSCI Europe Index (€) (net)	12.60	-12.84	-5.48	0.51	1.30	6.57	4.35	2.20	6.71
MSCI Pacific Index (net)	14.16	-9.01	-2.39	2.31	3.24	5.98	4.67	2.67	2.62
MSCI World Ex US Index (net)	15.34	-11.49	-5.42	0.84	2.01	5.43	4.10	2.98	4.68
MSCI World Index (net)	19.36	-5.77	2.84	6.70	6.90	9.95	6.55	4.32	6.76
Nasdaq Composite Index*	30.63	12.11	25.64	17.88	15.07	16.91	11.16	4.76	9.98
Russell 1000® Index	21.82	-2.81	7.48	10.64	10.47	13.97	8.91	6.10	9.41
Russell 2000® Index	25.42	-12.98	-6.63	2.01	4.29	10.50	7.01	6.69	8.16
S&P 500 Index	20.54	-3.08	7.51	10.73	10.73	13.99	8.83	5.91	9.27

The index is a horizon calculation based on data compiled from 1,650 buyout funds, including fully liquidated partnerships, formed between 1986 and 2019.

¹ Private indexes are pooled horizon internal rate of return (IRR) calculations, net of fees, expenses, and carried interest. The timing and magnitude of fund cash flows are integral to the IRR performance calculation. Public indexes are average annual compounded return (AACR) calculations which are time weighted measures over the specified time horizon, and are shown for reference and directional purposes only. Due to the fundamental differences between the two calculations, direct comparison of IRRs to AACRs is not recommended. For a more accurate means of comparing private investment performance relative to public alternatives, see the analyses in this document using CA Modified Public Market Equivalent (mPME). See Methodology section for more detail.

Sources: Cambridge Associates LLC, Bloomberg Barclays, Dow Jones Indices, Frank Russell Company, MSCI Inc., Standard & Poor's and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets Indices are gross of dividend taxes. Total Returns for MSCI Developed Markets Indices are net of dividend taxes.

BUYOUT

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

CA INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
BUYOUT INDEX¹	5.77	11.38	11.79	14.17	12.29	11.36	12.95
MPME ANALYSIS²							
MSCI EAFE Index (net)	-4.90	0.86	1.95	6.33	3.69	3.54	3.94
Value-Add (bps)	1,068	1,052	984	784	860	782	902
MSCI Europe Index (net)	-6.54	0.04	1.36	6.40	3.49	3.47	4.19
Value-Add (bps)	1,231	1,135	1,044	777	880	789	876
S&P 500 Index	7.67	10.91	10.59	15.01	9.20	7.59	8.60
Value-Add (bps)	-190	47	120	-84	309	377	435
Russell 2000® Index	-6.22	2.35	4.35	12.55	7.97	7.87	8.32
Value-Add (bps)	1,199	904	745	162	432	350	463
Russell 3000® Index	6.73	10.25	9.88	14.88	9.20	7.73	8.69
Value-Add (bps)	-96	113	191	-71	309	364	426
Constructed Index: MSCI World/MSCI All Country World Index ³ (gross)	2.88	6.88	6.92	10.40	6.82	5.95	6.54
Value-Add (bps)	289	450	487	377	547	541	641

The index is a horizon calculation based on data compiled from 1,650 buyout funds, including fully liquidated partnerships, formed between 1986 and 2019.

¹Pooled horizon return, net of fees, expenses, and carried interest.

²CA Modified Public Market Equivalent (mPME) replicates private investment performance under public market conditions. The public index's shares are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and mPME NAV is a function of mPME cash flows and public index returns. "Value-Add" shows (in basis points) the difference between the actual private investment return and the mPME calculated return. Refer to Methodology page for details.

³Constructed Index: MSCI World/MSCI All Country World Index: Data rom 1/1/1986 to 12/31/1987 represented by MSCI index gross total return. Data from 1/1/1988 to present represented by MSCI ACWI gross total return.

Sources: Cambridge Associates LLC, Frank Russell Company, MSCI Inc., Standard & Poor's, and Thomson Reuters Datastream.

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AS OF JUNE 30, 2020

BUYOUT

FUND INDEX DETAILS: ONE QUARTER HORIZON POOLED RETURN

Net to Limited Partners

QUARTER ENDING	HORIZON RETURN
1995 Q1	3.45
1995 Q2	3.71
1995 Q3	3.89
1995 Q4	10.20
1996 Q1	5.32
1996 Q2	6.33
1996 Q3	6.61
1996 Q4	9.40
1997 Q1	0.53
1997 Q2	8.68
1997 Q3	5.77
1997 Q4	10.91
1998 Q1	8.74
1998 Q2	7.08
1998 Q3	-5.03
1998 Q4	6.79
1999 Q1	2.64
1999 Q2	9.05
1999 Q3	3.64
1999 Q4	11.49
2000 Q1	10.29
2000 Q2	-1.47
2000 Q3	-2.34
2000 Q4	-4.54
2001 Q1	-5.47
2001 Q2	2.18

QUARTER ENDING	HORIZON RETURN
2001 Q3	-5.93
2001 Q4	-1.54
2002 Q1	-0.21
2002 Q2	0.39
2002 Q3	-3.73
2002 Q4	1.74
2003 Q1	0.42
2003 Q2	7.33
2003 Q3	4.36
2003 Q4	11.38
2004 Q1	2.44
2004 Q2	4.74
2004 Q3	3.45
2004 Q4	17.33
2005 Q1	0.83
2005 Q2	7.59
2005 Q3	6.64
2005 Q4	9.90
2006 Q1	6.17
2006 Q2	8.91
2006 Q3	3.50
2006 Q4	16.62
2007 Q1	4.75
2007 Q2	10.53
2007 Q3	3.03
2007 Q4	3.83

QUARTER ENDING	HORIZON RETURN
2008 Q1	0.17
2008 Q2	-1.91
2008 Q3	-11.00
2008 Q4	-19.46
2009 Q1	-5.31
2009 Q2	6.67
2009 Q3	7.72
2009 Q4	7.42
2010 Q1	2.41
2010 Q2	0.25
2010 Q3	7.51
2010 Q4	9.05
2011 Q1	5.49
2011 Q2	5.47
2011 Q3	-6.64
2011 Q4	3.10
2012 Q1	6.36
2012 Q2	-0.58
2012 Q3	4.09
2012 Q4	4.35
2013 Q1	3.36
2013 Q2	2.81
2013 Q3	5.83
2013 Q4	7.28
2014 Q1	3.14
2014 Q2	4.95

QUARTER ENDING	HORIZON RETURN
2014 Q3	-0.88
2014 Q4	2.37
2015 Q1	1.05
2015 Q2	5.40
2015 Q3	-0.64
2015 Q4	2.46
2016 Q1	1.93
2016 Q2	2.89
2016 Q3	4.09
2016 Q4	2.86
2017 Q1	4.43
2017 Q2	6.64
2017 Q3	4.80
2017 Q4	5.71
2018 Q1	2.21
2018 Q2	3.66
2018 Q3	3.28
2018 Q4	-1.45
2019 Q4	4.46
2019 Q2	4.13
2019 Q3	1.39
2019 Q4	6.02
2020 Q1	-9.96
2020 Q2	9.25

AS OF JUNE 30, 2020

BUYOUT

FUND INDEX DETAILS: HORIZON POOLED RETURN

Net to Limited Partners

MULTI-YEAR RETURNS			
YEARS	HORIZON RETURN (%)	YEARS	HORIZON RETURN (%)
1 Year	5.77	14 Years	10.94
2 Years	8.22	15 Years	12.29
3 Years	11.38	16 Years	13.37
4 Years	13.50	17 Years	14.04
5 Years	11.79	18 Years	13.59
6 Years	10.89	19 Years	12.48
7 Years	13.25	20 Years	11.36
8 Years	13.67	21 Years	11.83
9 Years	11.57	22 Years	11.90
10 Years	14.17	23 Years	12.40
11 Years	14.71	24 Years	12.68
12 Years	9.53	25 Years	12.95
13 Years	9.13		

ONE YEAR ROLLING RETURNS			
ONE YEAR ENDED	HORIZON RETURN (%)	ONE YEAR ENDED	HORIZON RETURN (%)
6/30/2020	5.77	6/30/2007	39.77
6/30/2019	10.70	6/30/2006	35.49
6/30/2018	17.47	6/30/2005	31.77
6/30/2017	19.07	6/30/2004	24.84
6/30/2016	6.57	6/30/2003	6.22
6/30/2015	7.69	6/30/2002	-7.10
6/30/2014	23.04	6/30/2001	-9.85
6/30/2013	15.49	6/30/2000	24.83
6/30/2012	1.71	6/30/1999	14.49
6/30/2011	30.47	6/30/1998	36.67
6/30/2010	18.57	6/30/1997	27.52
6/30/2009	-26.90	6/30/1996	28.14
6/30/2008	4.64		

BUYOUT: FUND SINCE INCEPTION ANALYSIS



CAMBRIDGE
ASSOCIATES

BUYOUT

AS OF JUNE 30, 2020

SINCE INCEPTION IRR & MULTIPLES BY FUND VINTAGE YEAR

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN (%)	ARITHMETIC MEAN (%)	MEDIAN (%)	EQUAL-WEIGHTED POOLED RETURN (%)	UPPER QUARTILE (%)	LOWER QUARTILE (%)	STANDARD DEVIATION (%)	DPI	RVPI	TVPI	NUMBER OF FUNDS
1995	15.96	14.08	11.42	14.78	21.24	-0.26	21.35	1.75	0.00	1.75	36
1996	11.36	10.24	8.49	9.16	13.02	-1.17	21.66	1.63	0.00	1.63	38
1997	9.04	8.28	8.35	8.36	14.44	0.64	18.80	1.57	0.00	1.57	71
1998	8.32	11.87	11.66	13.64	19.87	5.77	11.41	1.54	0.01	1.55	67
1999	16.53	14.52	12.45	14.28	22.65	5.56	15.20	1.96	0.00	1.96	63
2000	20.91	19.82	18.96	20.60	28.88	10.65	15.94	2.09	0.02	2.11	84
2001	26.53	23.37	21.80	24.01	32.44	12.60	17.29	2.14	0.01	2.16	38
2002	19.21	14.35	18.14	18.03	28.52	7.36	28.84	2.01	0.02	2.04	43
2003	16.48	16.44	14.24	16.39	26.81	4.67	17.50	1.83	0.01	1.83	42
2004	11.09	13.48	9.87	13.41	14.08	7.26	16.39	1.68	0.05	1.73	79
2005	6.51	7.37	7.84	8.21	13.37	1.86	11.62	1.40	0.04	1.45	112
2006	7.53	8.46	9.04	9.06	14.64	2.91	14.63	1.42	0.11	1.53	103
2007	11.09	9.45	10.14	10.07	15.60	5.03	13.75	1.44	0.23	1.66	118
2008	13.47	12.00	12.18	13.04	17.74	7.85	17.54	1.49	0.24	1.73	67
2009	17.91	16.44	18.22	17.93	23.55	7.90	14.09	1.43	0.73	2.16	33
2010	12.19	11.34	13.03	15.01	20.27	-1.14	14.43	1.10	0.53	1.63	30
2011	14.09	13.62	13.35	14.10	18.84	7.43	11.48	0.96	0.70	1.65	65
2012	15.83	14.15	13.74	14.68	18.59	8.36	8.84	0.79	0.93	1.72	58
2013	13.57	13.25	13.41	15.50	19.34	7.69	10.43	0.49	1.02	1.51	54
2014	16.24	13.54	13.03	15.21	18.80	8.37	8.35	0.39	1.06	1.45	63
2015	11.01	7.65	9.46	10.41	14.87	3.11	17.70	0.14	1.12	1.26	65
2016	15.09	9.54	8.69	12.08	15.52	2.27	16.03	0.07	1.21	1.28	56
2017	4.21	1.00	2.83	7.90	11.35	-8.92	23.00	0.01	1.03	1.04	52
2018	13.79	-6.91	-16.45	-0.90	7.65	-31.57	62.85	0.00	1.09	1.10	48

BUYOUT

AS OF JUNE 30, 2020

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)			
		CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)			MSCI EUROPE INDEX (NET)		CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)	MSCI EUROPE INDEX (NET)	CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)	MSCI EUROPE INDEX (NET)
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD						
1995	36	15.96	4.57	1,138	8.94	701	1.75	1.18	1.35	1.75	1.18	1.35	
1996	38	11.36	3.86	750	5.14	622	1.63	1.19	1.26	1.63	1.19	1.26	
1997	71	9.04	3.29	575	3.59	545	1.57	1.18	1.20	1.57	1.18	1.20	
1998	67	8.32	4.17	415	4.48	384	1.55	1.23	1.25	1.54	1.22	1.24	
1999	63	16.53	6.87	966	7.43	910	1.96	1.31	1.33	1.96	1.30	1.33	
2000	84	20.91	10.35	1,056	10.82	1,008	2.11	1.39	1.41	2.09	1.38	1.40	
2001	38	26.53	11.46	1,506	11.97	1,456	2.16	1.37	1.39	2.14	1.37	1.38	
2002	43	19.21	7.83	1,138	8.27	1,094	2.04	1.33	1.34	2.01	1.31	1.33	
2003	42	16.48	5.13	1,135	5.55	1,093	1.83	1.22	1.23	1.83	1.21	1.23	
2004	79	11.09	2.41	867	2.52	856	1.73	1.13	1.13	1.68	1.10	1.10	
2005	112	6.51	1.61	490	1.47	504	1.45	1.10	1.09	1.40	1.06	1.05	
2006	103	7.53	2.17	536	1.97	556	1.53	1.13	1.12	1.42	1.05	1.04	
2007	118	11.09	4.59	650	4.45	664	1.66	1.23	1.22	1.44	1.08	1.08	
2008	67	13.47	5.87	760	5.82	765	1.73	1.26	1.26	1.49	1.10	1.10	
2009	33	17.91	5.00	1,291	4.62	1,329	2.16	1.22	1.20	1.43	0.90	0.89	
2010	30	12.19	4.84	736	4.41	778	1.63	1.21	1.19	1.10	0.86	0.85	
2011	65	14.09	4.04	1,005	3.43	1,066	1.65	1.15	1.13	0.96	0.70	0.69	
2012	58	15.83	3.16	1,267	2.40	1,343	1.72	1.11	1.09	0.79	0.57	0.56	
2013	54	13.57	2.79	1,079	2.08	1,149	1.51	1.09	1.07	0.49	0.38	0.38	
2014	63	16.24	2.25	1,399	1.58	1,465	1.45	1.05	1.04	0.39	0.31	0.31	
2015	65	11.01	1.31	970	0.73	1,028	1.26	1.03	1.02	0.14	0.13	0.13	
2016	56	15.09	-0.16	1,525	-0.82	1,591	1.28	1.00	0.99	0.07	0.06	0.06	
2017	52	4.21	-1.07	527	-1.83	604	1.04	0.99	0.98	0.01	0.01	0.01	
2018	48	13.79	-0.22	1,402	-1.26	1,505	1.10	1.00	0.99	0.00	0.00	0.00	

Notes: Based on data compiled from 1,485 buyout funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mpMPE Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mpMPE).

Sources: Cambridge Associates LLC, MSCI Inc., and Thomson Reuters Datastream.

MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets indexes are gross of dividend taxes. Total returns for MSCI Developed Markets indexes are net of dividend taxes.

AS OF JUNE 30, 2020

BUYOUT

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)			
		CA BENCHMARK INDEX	S&P 500 INDEX			RUSSELL 2000® INDEX		CA BENCHMARK INDEX	S&P 500 INDEX	RUSSELL 2000® INDEX	CA BENCHMARK INDEX	S&P 500 INDEX	RUSSELL 2000® INDEX
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD						
1995	36	15.96	11.32	463	7.80	816	1.75	1.43	1.34	1.75	1.43	1.34	
1996	38	11.36	5.20	616	7.00	436	1.63	1.25	1.38	1.63	1.25	1.38	
1997	71	9.04	1.67	737	7.14	190	1.57	1.09	1.42	1.57	1.09	1.42	
1998	67	8.32	2.07	626	7.47	86	1.55	1.11	1.45	1.54	1.10	1.43	
1999	63	16.53	3.17	1,336	8.49	805	1.96	1.14	1.39	1.96	1.13	1.38	
2000	84	20.91	6.00	1,490	10.18	1,072	2.11	1.24	1.40	2.09	1.22	1.39	
2001	38	26.53	7.65	1,888	10.44	1,608	2.16	1.29	1.38	2.14	1.28	1.38	
2002	43	19.21	6.84	1,238	8.23	1,098	2.04	1.34	1.41	2.01	1.32	1.39	
2003	42	16.48	6.05	1,043	6.56	992	1.83	1.31	1.33	1.83	1.30	1.32	
2004	79	11.09	5.92	517	6.13	496	1.73	1.38	1.38	1.68	1.31	1.33	
2005	112	6.51	7.12	-61	7.21	-71	1.45	1.53	1.52	1.40	1.45	1.46	
2006	103	7.53	8.49	-96	8.31	-78	1.53	1.65	1.60	1.42	1.49	1.48	
2007	118	11.09	12.08	-100	11.10	-1	1.66	1.74	1.64	1.44	1.48	1.43	
2008	67	13.47	13.79	-32	12.52	95	1.73	1.76	1.64	1.49	1.48	1.42	
2009	33	17.91	13.13	478	10.38	753	2.16	1.72	1.52	1.43	1.18	1.10	
2010	30	12.19	12.94	-75	9.73	246	1.63	1.67	1.46	1.10	1.12	1.04	
2011	65	14.09	12.12	197	8.27	582	1.65	1.55	1.34	0.96	0.87	0.81	
2012	58	15.83	11.40	442	6.71	912	1.72	1.48	1.25	0.79	0.70	0.64	
2013	54	13.57	11.16	241	5.23	834	1.51	1.41	1.17	0.49	0.45	0.42	
2014	63	16.24	11.15	508	3.95	1,229	1.45	1.29	1.09	0.39	0.35	0.33	
2015	65	11.01	10.95	6	2.07	894	1.26	1.26	1.04	0.14	0.14	0.13	
2016	56	15.09	10.26	483	-0.15	1,525	1.28	1.19	1.00	0.07	0.07	0.06	
2017	52	4.21	10.86	-665	-1.33	553	1.04	1.11	0.99	0.01	0.01	0.01	
2018	48	13.79	13.09	70	0.97	1,282	1.10	1.09	1.01	0.00	0.01	0.00	

Notes: Based on data compiled from 1,485 buyout funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mPME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mPME).

Sources: Cambridge Associates LLC, Frank Russell Company, Standard & Poor's, and Thomson Reuters Datastream.

BUYOUT

AS OF JUNE 30, 2020

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)		
		CA BENCHMARK INDEX	RUSSELL 3000® INDEX		MSCI ALL COUNTRY WORLD INDEX (GROSS)		CA BENCHMARK INDEX	RUSSELL 3000® INDEX	MSCI ALL COUNTRY WORLD INDEX (GROSS)	CA BENCHMARK INDEX	RUSSELL 3000® INDEX	MSCI ALL COUNTRY WORLD INDEX (GROSS)
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD	TVPI	MPME TVPI	MPME TVPI	DPI	MPME DPI
1995	36	15.96	10.79	517	7.23	873	1.75	1.42	1.28	1.75	1.42	1.28
1996	38	11.36	5.54	582	4.58	678	1.63	1.27	1.23	1.63	1.27	1.23
1997	71	9.04	2.46	658	2.84	620	1.57	1.13	1.15	1.57	1.13	1.15
1998	67	8.32	2.83	550	3.56	476	1.55	1.16	1.20	1.54	1.14	1.19
1999	63	16.53	3.94	1,259	5.63	1,090	1.96	1.17	1.25	1.96	1.17	1.25
2000	84	20.91	6.71	1,419	8.94	1,196	2.11	1.27	1.35	2.09	1.25	1.34
2001	38	26.53	8.27	1,825	10.35	1,617	2.16	1.31	1.37	2.14	1.31	1.36
2002	43	19.21	7.27	1,194	8.14	1,108	2.04	1.36	1.37	2.01	1.34	1.36
2003	42	16.48	6.34	1,014	6.38	1,010	1.83	1.33	1.30	1.83	1.31	1.29
2004	79	11.09	6.12	497	4.79	630	1.73	1.39	1.28	1.68	1.33	1.23
2005	112	6.51	7.29	-78	4.61	190	1.45	1.54	1.31	1.40	1.47	1.25
2006	103	7.53	8.61	-108	5.37	216	1.53	1.65	1.36	1.42	1.50	1.25
2007	118	11.09	12.09	-100	8.06	303	1.66	1.74	1.44	1.44	1.48	1.24
2008	67	13.47	13.76	-29	9.46	401	1.73	1.75	1.47	1.49	1.47	1.25
2009	33	17.91	12.86	505	8.91	900	2.16	1.70	1.44	1.43	1.17	1.02
2010	30	12.19	12.61	-42	8.78	341	1.63	1.65	1.42	1.10	1.11	0.97
2011	65	14.09	11.72	237	8.30	579	1.65	1.52	1.35	0.96	0.86	0.78
2012	58	15.83	10.92	491	7.75	808	1.72	1.46	1.31	0.79	0.69	0.63
2013	54	13.57	10.60	297	7.69	588	1.51	1.38	1.26	0.49	0.45	0.42
2014	63	16.24	10.55	568	7.58	866	1.45	1.27	1.19	0.39	0.35	0.33
2015	65	11.01	10.29	72	7.13	388	1.26	1.24	1.16	0.14	0.14	0.14
2016	56	15.09	9.53	556	6.16	893	1.28	1.17	1.11	0.07	0.07	0.06
2017	52	4.21	10.17	-596	6.36	-215	1.04	1.11	1.07	0.01	0.01	0.01
2018	48	13.79	12.70	109	8.35	545	1.10	1.09	1.06	0.00	0.01	0.01

Notes: Based on data compiled from 1,485 buyout funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mpME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mpME).

Sources: Cambridge Associates LLC, Frank Russell Company, MSCI Inc., and Thomson Reuters Datastream.

MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets indexes are gross of dividend taxes. Total returns for MSCI Developed Markets indexes are net of dividend taxes.

BUYOUT

AS OF JUNE 30, 2020

TOTAL VALUE TO PAID IN CAPITAL MULTIPLE (TVPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	1.75	1.67	1.58	2.15	0.99	36
1996	1.63	1.49	1.51	1.80	0.94	38
1997	1.57	1.46	1.50	1.91	1.02	71
1998	1.55	1.97	1.62	2.20	1.38	67
1999	1.96	1.83	1.64	2.23	1.29	63
2000	2.11	2.16	2.05	2.66	1.62	84
2001	2.16	2.09	2.00	2.52	1.65	38
2002	2.04	1.96	1.97	2.39	1.47	43
2003	1.83	1.81	1.76	2.16	1.29	42
2004	1.73	1.77	1.62	1.97	1.37	79
2005	1.45	1.52	1.51	1.85	1.10	112
2006	1.53	1.59	1.60	2.00	1.18	103
2007	1.66	1.59	1.57	1.98	1.30	118
2008	1.73	1.71	1.69	1.97	1.35	67
2009	2.16	2.02	1.91	2.54	1.49	33
2010	1.63	1.84	1.58	2.18	0.95	30
2011	1.65	1.68	1.55	1.87	1.32	65
2012	1.72	1.64	1.60	1.87	1.35	58
2013	1.51	1.59	1.45	1.72	1.23	54
2014	1.45	1.45	1.35	1.56	1.22	63
2015	1.26	1.22	1.21	1.32	1.07	65
2016	1.28	1.20	1.15	1.31	1.05	56
2017	1.04	1.04	1.03	1.16	0.91	52
2018	1.10	0.96	0.89	1.08	0.76	48

BUYOUT

AS OF JUNE 30, 2020

DISTRIBUTION TO PAID IN CAPITAL MULTIPLE (DPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	1.75	1.67	1.58	2.15	0.99	36
1996	1.63	1.49	1.51	1.80	0.94	38
1997	1.57	1.46	1.50	1.91	1.02	71
1998	1.54	1.96	1.61	2.20	1.38	67
1999	1.96	1.82	1.63	2.23	1.28	63
2000	2.09	2.09	2.00	2.58	1.62	84
2001	2.14	2.08	2.00	2.51	1.65	38
2002	2.01	1.93	1.97	2.39	1.43	43
2003	1.83	1.78	1.74	2.13	1.20	42
2004	1.68	1.70	1.53	1.92	1.33	79
2005	1.40	1.47	1.41	1.81	1.01	112
2006	1.42	1.49	1.50	1.93	1.08	103
2007	1.44	1.42	1.43	1.79	1.11	118
2008	1.49	1.46	1.41	1.76	1.13	67
2009	1.43	1.61	1.44	2.12	0.88	33
2010	1.10	1.26	1.00	1.61	0.40	30
2011	0.96	1.00	1.02	1.24	0.56	65
2012	0.79	0.83	0.77	1.15	0.42	58
2013	0.49	0.61	0.49	0.85	0.23	54
2014	0.39	0.41	0.35	0.61	0.10	63
2015	0.14	0.21	0.09	0.35	0.01	65
2016	0.07	0.08	0.01	0.14	0.00	56
2017	0.01	0.05	0.00	0.01	0.00	52
2018	0.00	0.01	0.00	0.00	0.00	48

BUYOUT

AS OF JUNE 30, 2020

RESIDUAL VALUE TO PAID IN CAPITAL MULTIPLE (RVPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	0.00	0.00	0.00	0.00	0.00	36
1996	0.00	0.00	0.00	0.00	0.00	38
1997	0.00	0.00	0.00	0.00	0.00	71
1998	0.01	0.01	0.00	0.00	0.00	67
1999	0.00	0.01	0.00	0.00	0.00	63
2000	0.02	0.07	0.00	0.01	0.00	84
2001	0.01	0.01	0.00	0.00	0.00	38
2002	0.02	0.04	0.00	0.01	0.00	43
2003	0.01	0.02	0.00	0.00	0.00	42
2004	0.05	0.07	0.01	0.06	0.00	79
2005	0.04	0.05	0.01	0.06	0.00	112
2006	0.11	0.10	0.05	0.12	0.00	103
2007	0.23	0.18	0.06	0.23	0.01	118
2008	0.24	0.26	0.20	0.38	0.03	67
2009	0.73	0.41	0.37	0.51	0.15	33
2010	0.53	0.58	0.53	0.74	0.38	30
2011	0.70	0.67	0.61	0.92	0.38	65
2012	0.93	0.81	0.80	1.00	0.63	58
2013	1.02	0.98	0.97	1.14	0.74	54
2014	1.06	1.04	1.00	1.22	0.84	63
2015	1.12	1.01	1.02	1.19	0.86	65
2016	1.21	1.11	1.09	1.23	0.95	56
2017	1.03	0.99	1.00	1.13	0.88	52
2018	1.09	0.95	0.87	1.08	0.76	48

US BUYOUT: FUND INDEX ANALYSIS



CAMBRIDGE
ASSOCIATES

US BUYOUT

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN

Net to Limited Partners

INDEX	1-QUARTER	YTD	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
US BUYOUT INDEX¹	9.86	0.32	7.88	12.69	12.14	15.34	12.66	10.86	12.82
US BUYOUT SMALL CAP INDEX¹	5.92	-2.04	4.27	13.53	13.63	16.08	13.99	12.77	12.83
US BUYOUT MID CAP INDEX¹	6.65	-1.83	6.74	12.29	11.77	13.84	12.99	10.80	15.11
US BUYOUT LARGE CAP INDEX¹	9.72	0.85	9.77	14.02	12.43	14.91	13.12	10.51	14.54
US BUYOUT MEGA CAP INDEX¹	11.41	1.01	7.90	11.99	11.83	15.91	12.15	10.79	11.49
Bloomberg Barclays Capital Government/Credit Bond Index	3.71	7.21	10.02	5.87	4.74	4.13	4.50	5.30	5.46
Dow Jones Industrial Average Index	18.51	-8.43	-0.54	9.08	10.62	12.99	9.08	7.19	9.69
Dow Jones US Small Cap Index	25.61	-12.61	-6.87	3.08	4.14	10.75	7.75	7.59	9.38
Dow Jones US TopCap Index	21.42	-2.09	8.56	11.13	10.87	14.14	9.07	6.11	9.36
Nasdaq Composite Index*	30.63	12.11	25.64	17.88	15.07	16.91	11.16	4.76	9.98
Russell 1000® Index	21.82	-2.81	7.48	10.64	10.47	13.97	8.91	6.10	9.41
Russell 2000® Index	25.42	-12.98	-6.63	2.01	4.29	10.50	7.01	6.69	8.16
S&P 500 Index	20.54	-3.08	7.51	10.73	10.73	13.99	8.83	5.91	9.27
Wilshire 5000 Total Market Index	21.94	-3.30	6.78	10.13	10.27	13.74	8.86	6.23	9.30

The index is a horizon calculation based on data compiled from 914 US buyout funds, including fully liquidated partnerships, formed between 1986 and 2019.

¹ Private indexes are pooled horizon internal rate of return (IRR) calculations, net of fees, expenses, and carried interest. The timing and magnitude of fund cash flows are integral to the IRR performance calculation. Public indexes are average annual compounded return (AACR) calculations which are time weighted measures over the specified time horizon, and are shown for reference and directional purposes only. Due to the fundamental differences between the two calculations, direct comparison of IRRs to AACRs is not recommended. For a more accurate means of comparing private investment performance relative to public alternatives, see the analyses in this document using CA Modified Public Market Equivalent (mPME). See Methodology section for more detail.

Sources: Cambridge Associates LLC, Bloomberg Barclays, Dow Jones Indices, Frank Russell Company, Standard & Poor's and Thomson Reuters Datastream, and Wilshire Associates.

*Capital change only

US BUYOUT

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

CA INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
US BUYOUT INDEX¹	7.88	12.69	12.14	15.34	12.66	10.86	12.82
MPME ANALYSIS²							
Russell 2000® Index	-6.14	2.26	4.38	12.58	7.73	7.59	8.18
Value-Add (bps)	1,402	1,042	776	276	493	327	465
Russell 2500™ Index	-4.23	4.34	5.45	13.62	8.56	8.52	9.41
Value-Add (bps)	1,211	835	669	172	410	233	341
Russell 3000® Index	6.79	10.22	9.96	14.94	8.96	7.24	8.48
Value-Add (bps)	109	247	218	40	370	362	435
Russell Midcap® Index	-1.85	6.00	6.76	14.35	9.05	8.85	9.84
Value-Add (bps)	973	669	538	99	360	201	298
S&P 500 Index	7.73	10.89	10.66	15.07	8.96	7.08	8.38
Value-Add (bps)	15	180	148	27	370	377	444
Constructed Index: MSCI World/MSCI All Country World Index ³ (gross)	2.94	6.85	7.02	10.49	6.74	5.66	6.41
Value-Add (bps)	493	584	513	485	592	519	642

The index is a horizon calculation based on data compiled from 914 US buyout funds, including fully liquidated partnerships, formed between 1986 and 2019.

¹Pooled horizon return, net of fees, expenses, and carried interest.

²CA Modified Public Market Equivalent (mPME) replicates private investment performance under public market conditions. The public index's shares are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and mPME NAV is a function of mPME cash flows and public index returns. "Value-Add" shows (in basis points) the difference between the actual private investment return and the mPME calculated return. Refer to Methodology page for details.

³Constructed Index: MSCI World/MSCI All Country World Index: Data rom 1/1/1986 to 12/31/1987 represented by MSCI index gross total return. Data from 1/1/1988 to present represented by MSCI ACWI gross total return.

Sources: Cambridge Associates LLC, Frank Russell Company, MSCI Inc., Standard & Poor's, and Thomson Reuters Datastream.

MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets indexes are gross of dividend taxes. Total returns for MSCI Developed Markets indexes are net of dividend taxes.

AS OF JUNE 30, 2020

US BUYOUT

FUND INDEX DETAILS: ONE QUARTER HORIZON POOLED RETURN

Net to Limited Partners

QUARTER ENDING	HORIZON RETURN
1995 Q1	3.15
1995 Q2	3.66
1995 Q3	3.89
1995 Q4	11.28
1996 Q1	5.92
1996 Q2	6.30
1996 Q3	6.70
1996 Q4	7.16
1997 Q1	1.00
1997 Q2	9.28
1997 Q3	6.31
1997 Q4	11.13
1998 Q1	10.12
1998 Q2	5.99
1998 Q3	-6.93
1998 Q4	8.43
1999 Q1	3.52
1999 Q2	9.78
1999 Q3	2.55
1999 Q4	11.84
2000 Q1	12.27
2000 Q2	-2.67
2000 Q3	-2.35
2000 Q4	-6.88
2001 Q1	-5.40
2001 Q2	3.07

QUARTER ENDING	HORIZON RETURN
2001 Q3	-8.34
2001 Q4	-0.53
2002 Q1	-0.03
2002 Q2	-2.58
2002 Q3	-4.48
2002 Q4	-0.04
2003 Q1	0.13
2003 Q2	7.27
2003 Q3	5.54
2003 Q4	9.93
2004 Q1	3.01
2004 Q2	3.77
2004 Q3	2.53
2004 Q4	15.89
2005 Q1	0.78
2005 Q2	8.32
2005 Q3	7.29
2005 Q4	8.79
2006 Q1	5.47
2006 Q2	4.13
2006 Q3	3.43
2006 Q4	13.28
2007 Q1	5.39
2007 Q2	7.58
2007 Q3	0.63
2007 Q4	2.58

QUARTER ENDING	HORIZON RETURN
2008 Q1	-2.50
2008 Q2	-0.32
2008 Q3	-7.24
2008 Q4	-17.31
2009 Q1	-3.69
2009 Q2	4.73
2009 Q3	6.65
2009 Q4	6.78
2010 Q1	5.00
2010 Q2	2.29
2010 Q3	4.90
2010 Q4	9.18
2011 Q1	5.46
2011 Q2	4.73
2011 Q3	-4.68
2011 Q4	4.77
2012 Q1	5.52
2012 Q2	0.31
2012 Q3	4.14
2012 Q4	3.94
2013 Q1	5.14
2013 Q2	3.53
2013 Q3	5.34
2013 Q4	7.42
2014 Q1	3.32
2014 Q2	4.95

QUARTER ENDING	HORIZON RETURN
2014 Q3	1.65
2014 Q4	3.64
2015 Q1	3.41
2015 Q2	4.46
2015 Q3	-0.09
2015 Q4	1.94
2016 Q1	0.48
2016 Q2	3.86
2016 Q3	3.70
2016 Q4	4.09
2017 Q1	4.17
2017 Q2	4.66
2017 Q3	4.08
2017 Q4	5.73
2018 Q1	2.50
2018 Q2	5.20
2018 Q3	3.86
2018 Q4	-1.68
2019 Q1	5.26
2019 Q2	3.60
2019 Q3	2.51
2019 Q4	4.93
2020 Q1	-8.76
2020 Q2	9.86

AS OF JUNE 30, 2020

US BUYOUT

FUND INDEX DETAILS: HORIZON POOLED RETURN

Net to Limited Partners

MULTI-YEAR RETURNS			
YEARS	HORIZON RETURN (%)	YEARS	HORIZON RETURN (%)
1 Year	7.88	14 Years	11.69
2 Years	9.61	15 Years	12.66
3 Years	12.69	16 Years	13.64
4 Years	14.05	17 Years	14.31
5 Years	12.14	18 Years	13.60
6 Years	12.45	19 Years	12.13
7 Years	14.47	20 Years	10.86
8 Years	15.11	21 Years	11.38
9 Years	13.41	22 Years	11.50
10 Years	15.34	23 Years	12.12
11 Years	16.24	24 Years	12.43
12 Years	11.24	25 Years	12.82
13 Years	10.25		

ONE YEAR ROLLING RETURNS			
ONE YEAR ENDED	HORIZON RETURN (%)	ONE YEAR ENDED	HORIZON RETURN (%)
6/30/2020	7.88	6/30/2007	32.85
6/30/2019	11.34	6/30/2006	28.21
6/30/2018	18.65	6/30/2005	29.72
6/30/2017	17.64	6/30/2004	24.24
6/30/2016	6.15	6/30/2003	3.25
6/30/2015	13.61	6/30/2002	-11.12
6/30/2014	22.83	6/30/2001	-11.20
6/30/2013	17.83	6/30/2000	24.61
6/30/2012	5.70	6/30/1999	15.57
6/30/2011	26.56	6/30/1998	37.95
6/30/2010	22.22	6/30/1997	26.24
6/30/2009	-22.18	6/30/1996	30.10
6/30/2008	0.10		

US BUYOUT: FUND SINCE INCEPTION ANALYSIS



CAMBRIDGE
ASSOCIATES

US BUYOUT

AS OF JUNE 30, 2020

SINCE INCEPTION IRR & MULTIPLES BY FUND VINTAGE YEAR

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN (%)	ARITHMETIC MEAN (%)	MEDIAN (%)	EQUAL-WEIGHTED POOLED RETURN (%)	UPPER QUARTILE (%)	LOWER QUARTILE (%)	STANDARD DEVIATION (%)	DPI	RVPI	TVPI	NUMBER OF FUNDS
1995	13.47	12.48	10.93	12.71	25.79	-1.27	19.08	1.66	0.00	1.66	23
1996	10.22	8.51	6.06	8.25	11.81	0.21	20.50	1.60	0.00	1.60	22
1997	7.06	6.21	6.92	5.35	12.46	-0.79	15.04	1.44	0.00	1.44	39
1998	6.48	10.12	9.65	10.37	14.68	5.13	10.50	1.40	0.02	1.41	39
1999	16.07	11.99	12.02	12.36	19.16	7.40	11.78	1.96	0.01	1.97	36
2000	16.80	15.92	15.64	15.76	23.08	10.03	11.44	1.89	0.02	1.91	52
2001	23.27	20.70	19.39	19.92	31.70	11.57	16.63	2.20	0.03	2.23	18
2002	16.30	11.62	16.22	15.40	27.67	4.83	29.22	1.94	0.04	1.98	20
2003	14.75	12.62	12.13	12.52	16.28	3.75	11.07	1.98	0.01	1.99	23
2004	10.50	10.36	9.93	10.36	12.81	7.48	7.11	1.69	0.04	1.72	48
2005	7.83	7.84	7.96	9.23	13.84	3.13	10.32	1.54	0.05	1.60	55
2006	9.10	12.45	12.19	12.06	17.40	7.55	15.30	1.56	0.14	1.70	50
2007	12.19	12.62	12.97	12.55	16.91	9.02	11.03	1.41	0.30	1.70	56
2008	15.37	17.75	15.32	16.77	22.24	10.75	10.47	1.58	0.25	1.83	37
2009	21.77	22.66	23.26	24.85	26.90	14.04	13.49	1.59	0.89	2.48	18
2010	21.84	21.53	19.44	24.36	23.20	15.61	9.79	1.75	0.64	2.39	12
2011	15.65	16.22	14.68	16.56	19.43	10.44	10.48	0.99	0.74	1.73	36
2012	17.24	17.10	15.94	17.71	23.21	9.76	9.41	0.70	1.04	1.74	29
2013	13.28	14.07	13.52	16.22	18.53	9.24	9.26	0.50	1.01	1.51	31
2014	17.57	15.16	14.91	17.06	21.26	8.65	8.74	0.40	1.09	1.49	37
2015	11.99	10.94	9.79	12.09	15.31	4.91	11.28	0.13	1.15	1.29	42
2016	16.72	11.75	10.26	14.70	16.19	2.93	19.77	0.07	1.28	1.35	28
2017	2.36	3.17	3.24	10.04	11.77	-7.56	20.05	0.02	1.01	1.03	32
2018	23.67	-1.53	-8.00	6.91	12.40	-23.29	38.80	0.01	1.17	1.18	28

AS OF JUNE 30, 2020

US BUYOUT

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)			
		CA BENCHMARK INDEX	RUSSELL 2000® INDEX			RUSSELL 2500™ INDEX		CA BENCHMARK INDEX	RUSSELL 2000® INDEX	RUSSELL 2500™ INDEX	CA BENCHMARK INDEX	RUSSELL 2000® INDEX	RUSSELL 2500™ INDEX
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD						
1995	23	13.47	7.68	579	10.16	332	1.66	1.36	1.50	1.66	1.36	1.50	
1996	22	10.22	6.83	339	8.87	135	1.60	1.39	1.54	1.60	1.39	1.54	
1997	39	7.06	7.29	-23	9.05	-198	1.44	1.45	1.58	1.44	1.44	1.57	
1998	39	6.48	7.58	-110	9.07	-259	1.41	1.48	1.60	1.40	1.46	1.57	
1999	36	16.07	8.46	761	9.57	651	1.97	1.39	1.46	1.96	1.39	1.45	
2000	52	16.80	9.72	708	10.60	620	1.91	1.42	1.47	1.89	1.41	1.45	
2001	18	23.27	8.71	1,456	9.57	1,370	2.23	1.40	1.45	2.20	1.39	1.44	
2002	20	16.30	8.01	829	8.94	737	1.98	1.44	1.51	1.94	1.41	1.47	
2003	23	14.75	6.17	858	7.01	774	1.99	1.36	1.43	1.98	1.35	1.41	
2004	48	10.50	6.04	446	6.89	361	1.72	1.39	1.46	1.69	1.35	1.42	
2005	55	7.83	7.55	28	8.40	-57	1.60	1.58	1.67	1.54	1.52	1.59	
2006	50	9.10	7.84	126	8.60	50	1.70	1.58	1.65	1.56	1.45	1.51	
2007	56	12.19	11.02	117	11.84	35	1.70	1.60	1.66	1.41	1.33	1.37	
2008	37	15.37	12.52	285	13.30	207	1.83	1.60	1.65	1.58	1.40	1.44	
2009	18	21.77	10.40	1,137	11.05	1,072	2.48	1.49	1.53	1.59	1.08	1.09	
2010	12	21.84	10.43	1,141	10.94	1,090	2.39	1.49	1.52	1.75	1.19	1.21	
2011	36	15.65	8.24	741	8.90	675	1.73	1.32	1.36	0.99	0.81	0.82	
2012	29	17.24	5.92	1,132	6.82	1,042	1.74	1.21	1.24	0.70	0.55	0.56	
2013	31	13.28	5.21	807	6.26	703	1.51	1.17	1.21	0.50	0.43	0.44	
2014	37	17.57	3.93	1,364	5.37	1,220	1.49	1.09	1.13	0.40	0.33	0.33	
2015	42	11.99	2.08	990	4.00	799	1.29	1.05	1.09	0.13	0.12	0.12	
2016	28	16.72	0.63	1,609	2.86	1,385	1.35	1.01	1.05	0.07	0.06	0.06	
2017	32	2.36	-1.66	402	0.94	142	1.03	0.98	1.01	0.02	0.02	0.02	
2018	28	23.67	-0.29	2,396	2.25	2,142	1.18	1.00	1.02	0.01	0.01	0.01	

Notes: Based on data compiled from 811 US buyout funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mpME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mpME).

Sources: Cambridge Associates LLC, Frank Russell Company, and Thomson Reuters Datastream.

AS OF JUNE 30, 2020

US BUYOUT

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)		
		CA BENCHMARK INDEX	RUSSELL 3000® INDEX			RUSSELL MIDCAP® INDEX	CA BENCHMARK INDEX	RUSSELL 3000® INDEX	RUSSELL MIDCAP® INDEX	CA BENCHMARK INDEX	RUSSELL 3000® INDEX	RUSSELL MIDCAP® INDEX
			IRR	MPME IRR	VALUE-ADD	MPME IRR						
1995	23	13.47	10.09	338	11.28	220	1.66	1.42	1.55	1.66	1.42	1.55
1996	22	10.22	4.94	528	9.07	115	1.60	1.25	1.55	1.60	1.25	1.55
1997	39	7.06	2.44	462	8.52	-145	1.44	1.13	1.54	1.44	1.13	1.54
1998	39	6.48	3.15	333	8.65	-217	1.41	1.19	1.58	1.40	1.16	1.55
1999	36	16.07	4.02	1,205	9.53	654	1.97	1.18	1.46	1.96	1.17	1.45
2000	52	16.80	6.60	1,020	10.83	597	1.91	1.29	1.49	1.89	1.27	1.47
2001	18	23.27	7.55	1,572	10.18	1,309	2.23	1.35	1.48	2.20	1.34	1.47
2002	20	16.30	7.16	915	9.58	672	1.98	1.40	1.55	1.94	1.36	1.51
2003	23	14.75	5.79	896	7.41	734	1.99	1.34	1.45	1.98	1.33	1.44
2004	48	10.50	5.98	452	7.16	334	1.72	1.39	1.48	1.69	1.35	1.44
2005	55	7.83	7.68	15	8.63	-79	1.60	1.61	1.69	1.54	1.52	1.62
2006	50	9.10	8.14	97	8.77	33	1.70	1.62	1.67	1.56	1.46	1.52
2007	56	12.19	12.18	1	12.34	-15	1.70	1.72	1.70	1.41	1.38	1.40
2008	37	15.37	13.71	166	13.86	151	1.83	1.70	1.69	1.58	1.45	1.46
2009	18	21.77	12.89	888	11.80	997	2.48	1.66	1.58	1.59	1.14	1.11
2010	12	21.84	12.87	897	11.63	1,021	2.39	1.65	1.57	1.75	1.27	1.23
2011	36	15.65	11.72	393	9.78	587	1.73	1.51	1.40	0.99	0.86	0.83
2012	29	17.24	10.66	658	7.83	942	1.74	1.41	1.29	0.70	0.59	0.56
2013	31	13.28	10.52	277	7.38	590	1.51	1.39	1.26	0.50	0.47	0.44
2014	37	17.57	10.50	707	6.82	1,075	1.49	1.27	1.17	0.40	0.35	0.34
2015	42	11.99	10.31	168	5.99	599	1.29	1.24	1.13	0.13	0.13	0.13
2016	28	16.72	9.89	683	5.21	1,151	1.35	1.20	1.10	0.07	0.07	0.06
2017	32	2.36	9.80	-744	3.75	-139	1.03	1.11	1.04	0.02	0.02	0.02
2018	28	23.67	11.77	1,190	4.49	1,918	1.18	1.09	1.03	0.01	0.01	0.01

Notes: Based on data compiled from 811 US buyout funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mpME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mpME).

Sources: Cambridge Associates LLC, Frank Russell Company, and Thomson Reuters Datastream.

AS OF JUNE 30, 2020

US BUYOUT

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)			
		CA BENCHMARK INDEX	S&P 500 INDEX		MSCI ALL COUNTRY WORLD INDEX (GROSS)		CA BENCHMARK INDEX	S&P 500 INDEX	MSCI ALL COUNTRY WORLD INDEX (GROSS)	CA BENCHMARK INDEX	S&P 500 INDEX	MSCI ALL COUNTRY WORLD INDEX (GROSS)	
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD	TVPI	MPME TVPI	MPME TVPI	DPI	MPME DPI	MPME DPI
1995	23		13.47	10.53	295	6.75	672	1.66	1.43	1.29	1.66	1.43	1.29
1996	22		10.22	4.53	569	4.15	607	1.60	1.23	1.22	1.60	1.23	1.22
1997	39		7.06	1.62	545	3.08	398	1.44	1.09	1.17	1.44	1.08	1.17
1998	39		6.48	2.42	406	3.82	266	1.41	1.14	1.23	1.40	1.12	1.21
1999	36		16.07	3.26	1,281	5.82	1,025	1.97	1.14	1.27	1.96	1.14	1.26
2000	52		16.80	5.95	1,085	8.49	831	1.91	1.26	1.36	1.89	1.24	1.35
2001	18		23.27	7.10	1,617	8.57	1,470	2.23	1.33	1.36	2.20	1.32	1.35
2002	20		16.30	6.74	957	7.84	846	1.98	1.38	1.41	1.94	1.33	1.37
2003	23		14.75	5.48	926	5.62	913	1.99	1.33	1.31	1.98	1.31	1.30
2004	48		10.50	5.76	474	4.59	591	1.72	1.38	1.28	1.69	1.33	1.24
2005	55		7.83	7.52	32	4.85	298	1.60	1.59	1.34	1.54	1.51	1.28
2006	50		9.10	8.02	108	5.01	409	1.70	1.62	1.34	1.56	1.45	1.22
2007	56		12.19	12.20	0	8.20	400	1.70	1.73	1.43	1.41	1.38	1.17
2008	37		15.37	13.74	163	9.48	589	1.83	1.71	1.44	1.58	1.45	1.25
2009	18		21.77	13.16	861	8.96	1,281	2.48	1.69	1.43	1.59	1.15	1.00
2010	12		21.84	13.18	866	9.07	1,277	2.39	1.68	1.43	1.75	1.28	1.12
2011	36		15.65	12.13	352	8.32	733	1.73	1.53	1.34	0.99	0.87	0.78
2012	29		17.24	11.19	605	7.66	958	1.74	1.43	1.28	0.70	0.60	0.55
2013	31		13.28	11.08	220	7.63	565	1.51	1.41	1.27	0.50	0.47	0.44
2014	37		17.57	11.11	646	7.49	1,008	1.49	1.29	1.19	0.40	0.36	0.34
2015	42		11.99	10.97	102	7.15	483	1.29	1.26	1.16	0.13	0.13	0.13
2016	28		16.72	10.61	611	6.64	1,008	1.35	1.21	1.13	0.07	0.07	0.06
2017	32		2.36	10.53	-816	6.02	-366	1.03	1.12	1.07	0.02	0.02	0.02
2018	28		23.67	12.23	1,144	7.44	1,623	1.18	1.09	1.06	0.01	0.01	0.01

Notes: Based on data compiled from 811 US buyout funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mpMPE Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mpMPE).

Sources: Cambridge Associates LLC, MSCI Inc., Standard & Poor's, and Thomson Reuters Datastream.

MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets indexes are gross of dividend taxes. Total returns for MSCI Developed Markets indexes are net of dividend taxes.

US BUYOUT

AS OF JUNE 30, 2020

TOTAL VALUE TO PAID IN CAPITAL MULTIPLE (TVPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	1.66	1.60	1.57	2.20	0.92	23
1996	1.60	1.46	1.30	1.79	1.02	22
1997	1.44	1.31	1.39	1.69	0.92	39
1998	1.41	1.67	1.60	2.01	1.33	39
1999	1.97	1.73	1.54	2.22	1.29	36
2000	1.91	1.98	1.95	2.28	1.50	52
2001	2.23	1.94	1.86	2.24	1.51	18
2002	1.98	1.90	1.97	2.43	1.34	20
2003	1.99	1.75	1.76	2.07	1.30	23
2004	1.72	1.69	1.63	1.93	1.44	48
2005	1.60	1.64	1.61	2.01	1.23	55
2006	1.70	1.84	1.77	2.19	1.52	50
2007	1.70	1.76	1.79	2.12	1.43	56
2008	1.83	1.93	1.77	2.07	1.66	37
2009	2.48	2.39	2.42	2.59	1.84	18
2010	2.39	2.73	2.31	2.62	1.87	12
2011	1.73	1.79	1.71	1.94	1.45	36
2012	1.74	1.74	1.61	1.93	1.38	29
2013	1.51	1.65	1.52	1.68	1.28	31
2014	1.49	1.53	1.39	1.67	1.25	37
2015	1.29	1.28	1.21	1.35	1.10	42
2016	1.35	1.25	1.16	1.36	1.05	28
2017	1.03	1.07	1.03	1.18	0.92	32
2018	1.18	0.99	0.92	1.11	0.84	28

US BUYOUT

AS OF JUNE 30, 2020

DISTRIBUTION TO PAID IN CAPITAL MULTIPLE (DPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	1.66	1.60	1.57	2.20	0.92	23
1996	1.60	1.46	1.30	1.79	1.02	22
1997	1.44	1.31	1.39	1.69	0.90	39
1998	1.40	1.65	1.53	1.97	1.32	39
1999	1.96	1.72	1.54	2.11	1.28	36
2000	1.89	1.88	1.89	2.21	1.49	52
2001	2.20	1.92	1.86	2.19	1.51	18
2002	1.94	1.84	1.97	2.43	1.28	20
2003	1.98	1.72	1.76	2.06	1.18	23
2004	1.69	1.63	1.54	1.86	1.39	48
2005	1.54	1.58	1.59	2.00	1.03	55
2006	1.56	1.72	1.67	2.02	1.45	50
2007	1.41	1.57	1.50	1.97	1.28	56
2008	1.58	1.65	1.57	1.95	1.30	37
2009	1.59	1.93	1.90	2.29	1.23	18
2010	1.75	2.01	1.66	2.19	1.01	12
2011	0.99	1.14	1.06	1.30	0.69	36
2012	0.70	0.92	0.78	1.21	0.51	29
2013	0.50	0.57	0.48	0.73	0.26	31
2014	0.40	0.43	0.38	0.65	0.10	37
2015	0.13	0.20	0.09	0.34	0.01	42
2016	0.07	0.08	0.01	0.14	0.00	28
2017	0.02	0.08	0.00	0.04	0.00	32
2018	0.01	0.01	0.00	0.00	0.00	28

US BUYOUT

AS OF JUNE 30, 2020

RESIDUAL VALUE TO PAID IN CAPITAL MULTIPLE (RVPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	0.00	0.00	0.00	0.00	0.00	23
1996	0.00	0.00	0.00	0.00	0.00	22
1997	0.00	0.00	0.00	0.00	0.00	39
1998	0.02	0.01	0.00	0.00	0.00	39
1999	0.01	0.01	0.00	0.00	0.00	36
2000	0.02	0.10	0.00	0.01	0.00	52
2001	0.03	0.02	0.00	0.00	0.00	18
2002	0.04	0.05	0.00	0.05	0.00	20
2003	0.01	0.04	0.00	0.01	0.00	23
2004	0.04	0.06	0.01	0.07	0.00	48
2005	0.05	0.07	0.02	0.09	0.00	55
2006	0.14	0.12	0.06	0.18	0.01	50
2007	0.30	0.20	0.13	0.28	0.04	56
2008	0.25	0.28	0.20	0.34	0.09	37
2009	0.89	0.46	0.40	0.63	0.21	18
2010	0.64	0.72	0.59	0.92	0.38	12
2011	0.74	0.65	0.62	0.88	0.40	36
2012	1.04	0.82	0.89	1.04	0.62	29
2013	1.01	1.08	1.03	1.20	0.79	31
2014	1.09	1.10	1.11	1.26	0.87	37
2015	1.15	1.09	1.09	1.21	0.89	42
2016	1.28	1.17	1.13	1.28	0.97	28
2017	1.01	0.99	1.01	1.13	0.88	32
2018	1.17	0.98	0.90	1.10	0.84	28

EX US BUYOUT: FUND INDEX ANALYSIS



CAMBRIDGE
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EX US BUYOUT

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN

Net to Limited Partners

INDEX	1-QUARTER	YTD	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
EX US BUYOUT INDEX¹	8.19	-4.68	2.21	9.21	11.21	12.41	11.66	12.48	13.23
Bloomberg Barclays Capital Government/Credit Bond Index	3.71	7.21	10.02	5.87	4.74	4.13	4.50	5.30	5.46
Dow Jones Industrial Average Index	18.51	-8.43	-0.54	9.08	10.62	12.99	9.08	7.19	9.69
Dow Jones US Small Cap Index	25.61	-12.61	-6.87	3.08	4.14	10.75	7.75	7.59	9.38
Dow Jones US TopCap Index	21.42	-2.09	8.56	11.13	10.87	14.14	9.07	6.11	9.36
MSCI Emerging Markets Index (gross)	18.18	-9.67	-3.05	2.27	3.24	3.63	6.69	6.93	5.72
MSCI Europe Index (US\$) (net)	15.26	-12.78	-6.78	0.00	1.46	5.65	3.83	3.01	5.93
MSCI Europe Index (€) (net)	12.60	-12.84	-5.48	0.51	1.30	6.57	4.35	2.20	6.71
MSCI Pacific Index (net)	14.16	-9.01	-2.39	2.31	3.24	5.98	4.67	2.67	2.62
MSCI World Ex US Index (net)	15.34	-11.49	-5.42	0.84	2.01	5.43	4.10	2.98	4.68
MSCI World Index (net)	19.36	-5.77	2.84	6.70	6.90	9.95	6.55	4.32	6.76
Nasdaq Composite Index*	30.63	12.11	25.64	17.88	15.07	16.91	11.16	4.76	9.98
Russell 1000® Index	21.82	-2.81	7.48	10.64	10.47	13.97	8.91	6.10	9.41
Russell 2000® Index	25.42	-12.98	-6.63	2.01	4.29	10.50	7.01	6.69	8.16
S&P 500 Index	20.54	-3.08	7.51	10.73	10.73	13.99	8.83	5.91	9.27

The index is a horizon calculation based on data compiled from 736 Ex US buyout funds, including fully liquidated partnerships, formed between 1987 and 2019.

¹ Private indexes are pooled horizon internal rate of return (IRR) calculations, net of fees, expenses, and carried interest. The timing and magnitude of fund cash flows are integral to the IRR performance calculation. Public indexes are average annual compounded return (AACR) calculations which are time weighted measures over the specified time horizon, and are shown for reference and directional purposes only. Due to the fundamental differences between the two calculations, direct comparison of IRRs to AACRs is not recommended. For a more accurate means of comparing private investment performance relative to public alternatives, see the analyses in this document using CA Modified Public Market Equivalent (mPME). See Methodology section for more detail.

Sources: Cambridge Associates LLC, Bloomberg Barclays, Dow Jones Indices, Frank Russell Company, MSCI Inc., Standard & Poor's and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets Indices are gross of dividend taxes. Total Returns for MSCI Developed Markets Indices are net of dividend taxes.

EX US BUYOUT

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

CA INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
EX US BUYOUT INDEX¹	2.21	9.21	11.21	12.41	11.66	12.48	13.23
MPME ANALYSIS²							
MSCI EAFE Index (net)	-5.02	0.92	1.83	6.27	3.70	3.76	4.00
Value-Add (bps)	723	829	938	613	796	873	923
MSCI Europe Index (net)	-6.65	0.08	1.24	6.33	3.48	3.66	4.02
Value-Add (bps)	886	913	997	608	818	883	921
S&P 500 Index	7.57	10.94	10.48	14.93	9.53	8.43	8.94
Value-Add (bps)	-536	-173	73	-252	213	406	429
Constructed Index: Global Financial Data Emerging Markets/MSCI Emerging Markets (gross) ³	-2.77	2.53	2.97	3.56	5.59	6.71	6.73
Value-Add (bps)	498	668	824	884	607	577	649
Constructed Index: MSCI World/MSCI All Country World Index ⁴ (gross)	2.78	6.93	6.77	10.28	6.91	6.42	6.75
Value-Add (bps)	-57	228	444	213	475	606	647

The index is a horizon calculation based on data compiled from 736 Ex US buyout funds, including fully liquidated partnerships, formed between 1987 and 2019.

¹ Pooled horizon return, net of fees, expenses, and carried interest.

² CA Modified Public Market Equivalent (mPME) replicates private investment performance under public market conditions. The public index's shares are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and mPME NAV is a function of mPME cash flows and public index returns. "Value-Add" shows (in basis points) the difference between the actual private investment return and the mPME calculated return. Refer to Methodology page for details.

³ Constructed MSCI EM Index: Data from 1/1/1986 to 12/31/1987 represented by GFD Emerging Markets price return. Data from 1/1/1988 to present represented by MSCI Emerging Markets total return gross.

⁴ Constructed Index: MSCI World/MSCI All Country World Index: Data from 1/1/1986 to 12/31/1987 represented by MSCI index gross total return. Data from 1/1/1988 to present represented by MSCI ACWI gross total return.

Sources: Cambridge Associates LLC, Global Financial Data, Inc., MSCI Inc., Standard & Poor's, and Thomson Reuters Datastream.

MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets indexes are gross of dividend taxes. Total returns for MSCI Developed Markets indexes are net of dividend taxes.

AS OF JUNE 30, 2020

EX US BUYOUT

FUND INDEX DETAILS: ONE QUARTER HORIZON POOLED RETURN

Net to Limited Partners

QUARTER ENDING	HORIZON RETURN
1995 Q1	5.76
1995 Q2	4.09
1995 Q3	3.87
1995 Q4	2.60
1996 Q1	1.10
1996 Q2	6.49
1996 Q3	6.00
1996 Q4	24.04
1997 Q1	-1.92
1997 Q2	5.75
1997 Q3	3.13
1997 Q4	9.83
1998 Q1	2.36
1998 Q2	12.24
1998 Q3	3.11
1998 Q4	0.96
1999 Q1	-0.53
1999 Q2	6.32
1999 Q3	7.83
1999 Q4	10.28
2000 Q1	3.64
2000 Q2	2.92
2000 Q3	-2.31
2000 Q4	3.32
2001 Q1	-5.65
2001 Q2	-0.54

QUARTER ENDING	HORIZON RETURN
2001 Q3	1.52
2001 Q4	-4.35
2002 Q1	-0.72
2002 Q2	8.79
2002 Q3	-1.85
2002 Q4	6.10
2003 Q1	1.09
2003 Q2	7.45
2003 Q3	1.83
2003 Q4	14.49
2004 Q1	1.30
2004 Q2	6.68
2004 Q3	5.25
2004 Q4	19.97
2005 Q1	0.92
2005 Q2	6.31
2005 Q3	5.49
2005 Q4	11.96
2006 Q1	7.45
2006 Q2	17.65
2006 Q3	3.62
2006 Q4	22.11
2007 Q1	3.76
2007 Q2	15.22
2007 Q3	6.72
2007 Q4	5.72

QUARTER ENDING	HORIZON RETURN
2008 Q1	4.09
2008 Q2	-4.06
2008 Q3	-16.11
2008 Q4	-22.63
2009 Q1	-7.85
2009 Q2	9.80
2009 Q3	9.35
2009 Q4	8.36
2010 Q1	-1.27
2010 Q2	-2.83
2010 Q3	11.66
2010 Q4	8.86
2011 Q1	5.52
2011 Q2	6.50
2011 Q3	-9.30
2011 Q4	0.67
2012 Q1	7.63
2012 Q2	-1.86
2012 Q3	4.02
2012 Q4	4.93
2013 Q1	0.95
2013 Q2	1.81
2013 Q3	6.53
2013 Q4	7.08
2014 Q1	2.90
2014 Q2	4.95

QUARTER ENDING	HORIZON RETURN
2014 Q3	-4.21
2014 Q4	0.61
2015 Q1	-2.33
2015 Q2	6.84
2015 Q3	-1.47
2015 Q4	3.26
2016 Q1	4.21
2016 Q2	1.39
2016 Q3	4.69
2016 Q4	0.90
2017 Q1	4.86
2017 Q2	9.93
2017 Q3	5.96
2017 Q4	5.69
2018 Q1	1.77
2018 Q2	1.22
2018 Q3	2.29
2018 Q4	-1.06
2019 Q1	3.12
2019 Q2	5.04
2019 Q3	-0.53
2019 Q4	7.91
2020 Q1	-11.98
2020 Q2	8.19

AS OF JUNE 30, 2020

EX US BUYOUT

FUND INDEX DETAILS: HORIZON POOLED RETURN

Net to Limited Partners

MULTI-YEAR RETURNS			
YEARS	HORIZON RETURN (%)	YEARS	HORIZON RETURN (%)
1 Year	2.21	14 Years	9.76
2 Years	5.86	15 Years	11.66
3 Years	9.21	16 Years	12.87
4 Years	12.56	17 Years	13.56
5 Years	11.21	18 Years	13.56
6 Years	8.56	19 Years	13.21
7 Years	11.43	20 Years	12.48
8 Years	11.57	21 Years	12.84
9 Years	8.99	22 Years	12.79
10 Years	12.41	23 Years	13.02
11 Years	12.49	24 Years	13.21
12 Years	7.14	25 Years	13.23
13 Years	7.47		

ONE YEAR ROLLING RETURNS			
ONE YEAR ENDED	HORIZON RETURN (%)	ONE YEAR ENDED	HORIZON RETURN (%)
6/30/2020	2.21	6/30/2007	51.26
6/30/2019	9.62	6/30/2006	48.87
6/30/2018	15.59	6/30/2005	35.64
6/30/2017	21.37	6/30/2004	26.07
6/30/2016	7.23	6/30/2003	13.67
6/30/2015	-0.07	6/30/2002	5.11
6/30/2014	23.32	6/30/2001	-5.27
6/30/2013	12.22	6/30/2000	25.59
6/30/2012	-3.73	6/30/1999	10.31
6/30/2011	36.42	6/30/1998	30.82
6/30/2010	13.14	6/30/1997	35.39
6/30/2009	-33.25	6/30/1996	14.88
6/30/2008	11.78		

EX US BUYOUT: FUND SINCE INCEPTION ANALYSIS



CAMBRIDGE
ASSOCIATES

EX US BUYOUT

AS OF JUNE 30, 2020

SINCE INCEPTION IRR & MULTIPLES BY FUND VINTAGE YEAR

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN (%)	ARITHMETIC MEAN (%)	MEDIAN (%)	EQUAL-WEIGHTED POOLED RETURN (%)	UPPER QUARTILE (%)	LOWER QUARTILE (%)	STANDARD DEVIATION (%)	DPI	RVPI	TVPI	NUMBER OF FUNDS
1995	27.62	16.92	11.98	18.44	20.04	0.57	25.46	2.14	0.00	2.14	13
1996	20.29	12.62	10.78	10.56	18.54	-2.53	23.62	1.86	0.00	1.86	16
1997	11.96	10.74	10.83	12.12	18.86	4.26	22.47	1.77	0.00	1.77	32
1998	15.00	14.31	13.60	17.28	21.61	6.46	12.35	2.14	0.01	2.15	28
1999	17.34	17.89	17.52	16.91	22.99	5.22	18.54	1.96	0.00	1.96	27
2000	29.50	26.15	27.12	28.06	38.18	17.38	19.94	2.58	0.01	2.60	32
2001	29.05	25.77	26.00	26.48	33.50	15.14	17.93	2.09	0.00	2.09	20
2002	22.48	16.73	19.92	19.99	30.40	12.22	28.95	2.08	0.01	2.09	23
2003	19.82	21.07	25.96	22.21	33.94	9.70	22.50	1.66	0.00	1.67	19
2004	12.55	18.48	9.23	19.56	23.67	5.76	24.28	1.66	0.07	1.74	31
2005	4.98	6.91	7.49	7.10	12.32	-0.21	12.83	1.27	0.03	1.30	57
2006	5.16	4.70	5.70	6.05	11.39	1.40	13.03	1.25	0.08	1.33	53
2007	9.66	6.58	8.38	7.78	13.08	3.82	15.34	1.48	0.13	1.60	62
2008	11.11	4.90	8.18	8.31	14.06	3.38	21.67	1.38	0.23	1.61	30
2009	7.03	8.98	9.03	8.99	16.40	0.17	11.10	1.04	0.34	1.38	15
2010	7.91	4.55	5.15	5.76	13.09	-4.33	13.07	0.88	0.49	1.37	18
2011	11.52	10.40	9.45	10.86	15.62	3.04	12.01	0.90	0.63	1.53	29
2012	14.51	11.20	12.34	11.77	14.80	7.95	7.24	0.91	0.80	1.71	29
2013	13.82	12.14	12.38	14.39	20.44	4.03	11.96	0.48	1.03	1.51	23
2014	12.91	11.23	11.43	11.95	15.47	6.01	7.31	0.36	0.99	1.36	26
2015	8.90	1.63	8.68	7.07	13.55	-2.20	24.82	0.16	1.04	1.20	23
2016	12.22	7.32	7.79	9.24	13.94	1.79	11.08	0.07	1.12	1.19	28
2017	7.51	-2.47	-0.32	2.92	10.78	-17.28	27.27	0.00	1.07	1.07	20
2018	-11.60	-14.42	-21.92	-16.97	-2.88	-53.84	86.77	0.00	0.92	0.92	20

AS OF JUNE 30, 2020

EX US BUYOUT

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)			
		CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)			MSCI EUROPE INDEX (NET)		CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)	MSCI EUROPE INDEX (NET)	CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)	MSCI EUROPE INDEX (NET)
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD						
1995	13	27.62	6.07	2,155		11.84	1,578	2.14	1.17	1.33	2.14	1.17	1.33
1996	16	20.29	6.15	1,415		9.00	1,129	1.86	1.21	1.31	1.86	1.21	1.31
1997	32	11.96	2.72	924		2.87	909	1.77	1.14	1.14	1.77	1.14	1.14
1998	28	15.00	3.43	1,157		3.72	1,129	2.15	1.17	1.18	2.14	1.16	1.18
1999	27	17.34	6.44	1,090		7.06	1,028	1.96	1.28	1.30	1.96	1.27	1.30
2000	32	29.50	11.78	1,772		12.25	1,725	2.60	1.40	1.41	2.58	1.39	1.41
2001	20	29.05	14.03	1,502		14.46	1,459	2.09	1.41	1.42	2.09	1.41	1.42
2002	23	22.48	8.27	1,421		8.69	1,379	2.09	1.31	1.32	2.08	1.30	1.32
2003	19	19.82	6.31	1,351		6.92	1,290	1.67	1.22	1.24	1.66	1.22	1.24
2004	31	12.55	2.97	958		3.11	944	1.74	1.15	1.15	1.66	1.10	1.11
2005	57	4.98	1.40	358		1.28	370	1.30	1.08	1.07	1.27	1.05	1.04
2006	53	5.16	2.61	255		2.42	273	1.33	1.16	1.14	1.25	1.08	1.07
2007	62	9.66	4.52	514		4.42	524	1.60	1.23	1.23	1.48	1.17	1.16
2008	30	11.11	5.83	528		5.79	532	1.61	1.28	1.28	1.38	1.10	1.10
2009	15	7.03	4.97	206		4.61	241	1.38	1.25	1.23	1.04	0.95	0.94
2010	18	7.91	4.63	328		4.21	370	1.37	1.20	1.18	0.88	0.79	0.79
2011	29	11.52	4.06	746		3.45	807	1.53	1.16	1.14	0.90	0.68	0.67
2012	29	14.51	3.39	1,113		2.65	1,186	1.71	1.13	1.10	0.91	0.65	0.63
2013	23	13.82	2.75	1,108		2.03	1,180	1.51	1.09	1.06	0.48	0.37	0.37
2014	26	12.91	2.53	1,039		1.92	1,099	1.36	1.06	1.05	0.36	0.30	0.30
2015	23	8.90	1.23	767		0.63	827	1.20	1.03	1.01	0.16	0.15	0.15
2016	28	12.22	-1.34	1,356		-2.13	1,435	1.19	0.98	0.97	0.07	0.06	0.06
2017	20	7.51	-0.67	818		-1.48	899	1.07	0.99	0.99	0.00	0.00	0.00
2018	20	-11.60	1.98	-1,358		1.12	-1,272	0.92	1.01	1.01	0.00	0.00	0.00

Notes: Based on data compiled from 674 Ex US buyout funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mPME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mPME).

Sources: Cambridge Associates LLC, MSCI, Inc., and Thomson Returns Datastream.

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AS OF JUNE 30, 2020

EX US BUYOUT

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)		
		CA BENCHMARK INDEX	S&P 500 INDEX		MSCI EMERGING MARKETS INDEX (GROSS)		CA BENCHMARK INDEX	S&P 500 INDEX	MSCI EMERGING MARKETS INDEX (GROSS)	CA BENCHMARK INDEX	S&P 500 INDEX	MSCI EMERGING MARKETS INDEX (GROSS)
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD					
1995	13	27.62	15.20	1,242	1.50	2,612	2.14	1.40	1.05	2.14	1.40	1.05
1996	16	20.29	11.12	917	5.71	1,459	1.86	1.35	1.26	1.86	1.35	1.26
1997	32	11.96	1.90	1,007	9.41	255	1.77	1.09	1.59	1.77	1.09	1.59
1998	28	15.00	0.90	1,411	12.11	289	2.15	1.04	1.75	2.14	1.04	1.74
1999	27	17.34	3.03	1,431	15.40	194	1.96	1.12	1.83	1.96	1.12	1.83
2000	32	29.50	6.11	2,339	22.70	680	2.60	1.20	1.93	2.58	1.19	1.92
2001	20	29.05	8.11	2,094	26.25	280	2.09	1.25	1.88	2.09	1.25	1.88
2002	23	22.48	6.92	1,556	18.14	434	2.09	1.31	1.72	2.08	1.30	1.72
2003	19	19.82	6.85	1,297	14.98	485	1.67	1.30	1.53	1.66	1.29	1.52
2004	31	12.55	6.23	632	8.47	408	1.74	1.38	1.43	1.66	1.29	1.37
2005	57	4.98	6.69	-171	4.08	90	1.30	1.47	1.23	1.27	1.40	1.20
2006	53	5.16	9.14	-399	2.76	240	1.33	1.68	1.16	1.25	1.54	1.09
2007	62	9.66	11.94	-229	2.47	719	1.60	1.77	1.12	1.48	1.64	1.06
2008	30	11.11	13.84	-273	3.27	784	1.61	1.83	1.15	1.38	1.50	0.98
2009	15	7.03	13.07	-604	2.97	406	1.38	1.82	1.15	1.04	1.30	0.86
2010	18	7.91	12.82	-490	2.98	493	1.37	1.68	1.13	0.88	1.03	0.73
2011	29	11.52	12.10	-58	3.78	774	1.53	1.57	1.15	0.90	0.86	0.67
2012	29	14.51	11.59	292	3.73	1,078	1.71	1.53	1.15	0.91	0.82	0.65
2013	23	13.82	11.22	260	4.50	932	1.51	1.40	1.14	0.48	0.44	0.39
2014	26	12.91	11.26	166	4.28	863	1.36	1.31	1.11	0.36	0.35	0.31
2015	23	8.90	10.90	-200	2.65	625	1.20	1.25	1.06	0.16	0.16	0.15
2016	28	12.22	9.67	255	0.09	1,213	1.19	1.15	1.00	0.07	0.07	0.06
2017	20	7.51	11.47	-396	1.28	623	1.07	1.11	1.01	0.00	0.00	0.00
2018	20	-11.60	15.28	-2,688	4.93	-1,653	0.92	1.10	1.03	0.00	0.00	0.00

Notes: Based on data compiled from 674 Ex US buyout funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mPME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mPME).

Sources: Cambridge Associates LLC, MSCI, Inc., Standard & Poor's, and Thomson Returns Datastream.

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AS OF JUNE 30, 2020

EX US BUYOUT

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)			TOTAL VALUE TO PAID IN (TVPI)		DISTRIBUTIONS TO PAID IN (DPI)	
		CA BENCHMARK INDEX	MSCI ALL COUNTRYWORLD INDEX (GROSS)		CA BENCHMARK INDEX	MSCI ALL COUNTRYWORLD INDEX (GROSS)		CA BENCHMARK INDEX
			IRR	MPME IRR		TVPI	MPME TVPI	
1995	13	27.62	9.54	1,809	2.14	1.27	2.14	1.26
1996	16	20.29	8.17	1,213	1.86	1.28	1.86	1.28
1997	32	11.96	2.58	938	1.77	1.13	1.77	1.13
1998	28	15.00	2.61	1,239	2.15	1.12	2.14	1.12
1999	27	17.34	5.32	1,202	1.96	1.23	1.96	1.23
2000	32	29.50	9.74	1,976	2.60	1.33	2.58	1.32
2001	20	29.05	11.97	1,708	2.09	1.36	2.09	1.36
2002	23	22.48	8.36	1,412	2.09	1.35	2.08	1.34
2003	19	19.82	7.34	1,249	1.67	1.29	1.66	1.28
2004	31	12.55	5.20	735	1.74	1.28	1.66	1.22
2005	57	4.98	4.35	63	1.30	1.27	1.27	1.22
2006	53	5.16	5.85	-69	1.33	1.39	1.25	1.28
2007	62	9.66	7.88	178	1.60	1.45	1.48	1.36
2008	30	11.11	9.43	168	1.61	1.50	1.38	1.26
2009	15	7.03	8.80	-178	1.38	1.50	1.04	1.10
2010	18	7.91	8.63	-71	1.37	1.42	0.88	0.89
2011	29	11.52	8.27	324	1.53	1.36	0.90	0.76
2012	29	14.51	7.83	669	1.71	1.34	0.91	0.73
2013	23	13.82	7.74	608	1.51	1.26	0.48	0.41
2014	26	12.91	7.79	512	1.36	1.20	0.36	0.33
2015	23	8.90	7.06	184	1.20	1.16	0.16	0.16
2016	28	12.22	5.36	687	1.19	1.08	0.07	0.07
2017	20	7.51	6.96	55	1.07	1.07	0.00	0.00
2018	20	-11.60	10.65	-2,226	0.92	1.07	0.00	0.00

Notes: Based on data compiled from 674 Ex US buyout funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mpME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mpME).

Sources: Cambridge Associates LLC, MSCI, Inc., and Thomson Returns Datastream.

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EX US BUYOUT

AS OF JUNE 30, 2020

TOTAL VALUE TO PAID IN CAPITAL MULTIPLE (TVPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	2.14	1.79	1.58	1.96	1.06	13
1996	1.86	1.53	1.59	1.81	0.85	16
1997	1.77	1.64	1.76	2.08	1.18	32
1998	2.15	2.39	1.78	2.42	1.48	28
1999	1.96	1.96	1.93	2.31	1.27	27
2000	2.60	2.43	2.35	2.98	1.92	32
2001	2.09	2.22	2.15	2.81	1.73	20
2002	2.09	2.02	1.97	2.24	1.52	23
2003	1.67	1.87	1.77	2.40	1.37	19
2004	1.74	1.90	1.52	2.23	1.27	31
2005	1.30	1.41	1.49	1.73	0.99	57
2006	1.33	1.36	1.38	1.71	1.08	53
2007	1.60	1.44	1.48	1.79	1.21	62
2008	1.61	1.44	1.39	1.83	1.13	30
2009	1.38	1.57	1.50	1.89	1.01	15
2010	1.37	1.24	1.27	1.58	0.79	18
2011	1.53	1.54	1.35	1.77	1.15	29
2012	1.71	1.54	1.58	1.77	1.33	29
2013	1.51	1.52	1.42	1.84	1.13	23
2014	1.36	1.33	1.31	1.46	1.14	26
2015	1.20	1.11	1.21	1.32	0.95	23
2016	1.19	1.15	1.14	1.29	1.04	28
2017	1.07	0.99	1.00	1.14	0.88	20
2018	0.92	0.91	0.84	0.97	0.61	20

EX US BUYOUT

AS OF JUNE 30, 2020

DISTRIBUTION TO PAID IN CAPITAL MULTIPLE (DPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	2.14	1.79	1.58	1.96	1.06	13
1996	1.86	1.53	1.59	1.81	0.85	16
1997	1.77	1.64	1.76	2.08	1.18	32
1998	2.14	2.38	1.78	2.42	1.48	28
1999	1.96	1.96	1.93	2.31	1.27	27
2000	2.58	2.43	2.35	2.98	1.89	32
2001	2.09	2.22	2.15	2.81	1.73	20
2002	2.08	2.00	1.97	2.23	1.52	23
2003	1.66	1.86	1.72	2.40	1.37	19
2004	1.66	1.81	1.48	2.16	1.22	31
2005	1.27	1.37	1.40	1.66	0.97	57
2006	1.25	1.28	1.36	1.66	0.86	53
2007	1.48	1.29	1.39	1.66	0.99	62
2008	1.38	1.22	1.19	1.54	0.75	30
2009	1.04	1.23	1.06	1.52	0.68	15
2010	0.88	0.76	0.70	1.25	0.27	18
2011	0.90	0.84	0.75	1.14	0.33	29
2012	0.91	0.74	0.70	1.04	0.34	29
2013	0.48	0.67	0.49	1.01	0.21	23
2014	0.36	0.37	0.29	0.48	0.09	26
2015	0.16	0.24	0.06	0.41	0.00	23
2016	0.07	0.09	0.01	0.14	0.00	28
2017	0.00	0.00	0.00	0.00	0.00	20
2018	0.00	0.00	0.00	0.00	0.00	20

EX US BUYOUT

AS OF JUNE 30, 2020

RESIDUAL VALUE TO PAID IN CAPITAL MULTIPLE (RVPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	0.00	0.00	0.00	0.00	0.00	13
1996	0.00	0.00	0.00	0.00	0.00	16
1997	0.00	0.00	0.00	0.00	0.00	32
1998	0.01	0.01	0.00	0.00	0.00	28
1999	0.00	0.00	0.00	0.00	0.00	27
2000	0.01	0.00	0.00	0.00	0.00	32
2001	0.00	0.00	0.00	0.00	0.00	20
2002	0.01	0.02	0.00	0.01	0.00	23
2003	0.00	0.01	0.00	0.00	0.00	19
2004	0.07	0.08	0.00	0.05	0.00	31
2005	0.03	0.04	0.01	0.04	0.00	57
2006	0.08	0.07	0.02	0.10	0.00	53
2007	0.13	0.16	0.05	0.18	0.01	62
2008	0.23	0.23	0.14	0.38	0.01	30
2009	0.34	0.34	0.27	0.47	0.14	15
2010	0.49	0.48	0.49	0.61	0.35	18
2011	0.63	0.70	0.61	0.92	0.38	29
2012	0.80	0.80	0.77	1.00	0.72	29
2013	1.03	0.85	0.85	1.02	0.67	23
2014	0.99	0.96	0.95	1.10	0.84	26
2015	1.04	0.86	0.88	1.07	0.74	23
2016	1.12	1.06	1.08	1.16	0.89	28
2017	1.07	0.99	0.99	1.14	0.88	20
2018	0.92	0.91	0.82	0.97	0.61	20

GROWTH EQUITY: FUND INDEX ANALYSIS



CAMBRIDGE
ASSOCIATES

GROWTHEQUITY

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN

Net to Limited Partners

INDEX	1-QUARTER	YTD	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
GROWTH EQUITY INDEX¹	12.85	6.54	13.08	16.42	13.12	14.11	13.10	10.94	14.66
Bloomberg Barclays Capital Government/Credit Bond Index	3.71	7.21	10.02	5.87	4.74	4.13	4.50	5.30	5.46
Dow Jones Industrial Average Index	18.51	-8.43	-0.54	9.08	10.62	12.99	9.08	7.19	9.69
Dow Jones US Small Cap Index	25.61	-12.61	-6.87	3.08	4.14	10.75	7.75	7.59	9.38
Dow Jones US TopCap Index	21.42	-2.09	8.56	11.13	10.87	14.14	9.07	6.11	9.36
MSCI Emerging Markets Index (gross)	18.18	-9.67	-3.05	2.27	3.24	3.63	6.69	6.93	5.72
MSCI Europe Index (US\$) (net)	15.26	-12.78	-6.78	0.00	1.46	5.65	3.83	3.01	5.93
MSCI Europe Index (€) (net)	12.60	-12.84	-5.48	0.51	1.30	6.57	4.35	2.20	6.71
MSCI Pacific Index (net)	14.16	-9.01	-2.39	2.31	3.24	5.98	4.67	2.67	2.62
MSCI World Ex US Index (net)	15.34	-11.49	-5.42	0.84	2.01	5.43	4.10	2.98	4.68
MSCI World Index (net)	19.36	-5.77	2.84	6.70	6.90	9.95	6.55	4.32	6.76
Nasdaq Composite Index*	30.63	12.11	25.64	17.88	15.07	16.91	11.16	4.76	9.98
Russell 1000® Index	21.82	-2.81	7.48	10.64	10.47	13.97	8.91	6.10	9.41
Russell 2000® Index	25.42	-12.98	-6.63	2.01	4.29	10.50	7.01	6.69	8.16
S&P 500 Index	20.54	-3.08	7.51	10.73	10.73	13.99	8.83	5.91	9.27

The index is a horizon calculation based on data compiled from 646 growth equity funds, including fully liquidated partnerships, formed between 1986 and 2019.

¹ Private indexes are pooled horizon internal rate of return (IRR) calculations, net of fees, expenses, and carried interest. The timing and magnitude of fund cash flows are integral to the IRR performance calculation. Public indexes are average annual compounded return (AACR) calculations which are time weighted measures over the specified time horizon, and are shown for reference and directional purposes only. Due to the fundamental differences between the two calculations, direct comparison of IRRs to AACRs is not recommended. For a more accurate means of comparing private investment performance relative to public alternatives, see the analyses in this document using CA Modified Public Market Equivalent (mPME). See Methodology section for more detail.

Sources: Cambridge Associates LLC, Bloomberg Barclays, Dow Jones Indices, Frank Russell Company, MSCI Inc., Standard & Poor's and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets Indices are gross of dividend taxes. Total Returns for MSCI Developed Markets Indices are net of dividend taxes.

GROWTH EQUITY

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

CA INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
GROWTH EQUITY INDEX¹	13.08	16.42	13.12	14.11	13.10	10.94	14.66
MPME ANALYSIS²							
MSCI EAFE Index (net)	-5.02	0.67	2.08	5.09	3.56	3.47	3.79
Value-Add (bps)	1,810	1,575	1,104	902	954	747	1,087
MSCI Europe Index (net)	-6.65	-0.12	1.49	4.90	3.24	3.26	3.81
Value-Add (bps)	1,973	1,654	1,163	921	986	768	1,085
S&P 500 Index	7.49	10.73	10.75	13.87	9.91	8.54	9.35
Value-Add (bps)	559	569	237	24	320	240	531
Russell 2000® Index	-6.46	1.94	4.30	10.34	7.63	7.56	7.92
Value-Add (bps)	1,955	1,448	882	377	548	338	674
Russell 3000® Index	6.52	10.04	10.06	13.61	9.78	8.55	9.32
Value-Add (bps)	656	638	306	50	332	239	534
Constructed Index: MSCI World/MSCI All Country World Index ³ (gross)	2.70	6.67	7.12	9.48	7.15	6.46	6.94
Value-Add (bps)	1,038	975	600	463	595	448	772

The index is a horizon calculation based on data compiled from 646 growth equity funds, including fully liquidated partnerships, formed between 1986 and 2019.

¹Pooled horizon return, net of fees, expenses, and carried interest.

²CA Modified Public Market Equivalent (mPME) replicates private investment performance under public market conditions. The public index's shares are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and mPME NAV is a function of mPME cash flows and public index returns. "Value-Add" shows (in basis points) the difference between the actual private investment return and the mPME calculated return. Refer to Methodology page for details.

³Constructed Index: MSCI World/MSCI All Country World Index: Data rom 1/1/1986 to 12/31/1987 represented by MSCI index gross total return. Data from 1/1/1988 to present represented by MSCI ACWI gross total return.

AS OF JUNE 30, 2020

GROWTH EQUITY

FUND INDEX DETAILS: ONE QUARTER HORIZON POOLED RETURN

Net to Limited Partners

QUARTER ENDING	HORIZON RETURN
1995 Q1	10.13
1995 Q2	7.02
1995 Q3	7.49
1995 Q4	7.33
1996 Q1	6.61
1996 Q2	10.10
1996 Q3	5.72
1996 Q4	4.17
1997 Q1	1.24
1997 Q2	21.00
1997 Q3	9.74
1997 Q4	-1.66
1998 Q1	12.15
1998 Q2	-3.77
1998 Q3	-5.76
1998 Q4	7.21
1999 Q1	7.72
1999 Q2	14.35
1999 Q3	6.61
1999 Q4	53.09
2000 Q1	18.54
2000 Q2	2.88
2000 Q3	8.15
2000 Q4	-7.63
2001 Q1	-9.75
2001 Q2	2.24

QUARTER ENDING	HORIZON RETURN
2001 Q3	-10.91
2001 Q4	2.31
2002 Q1	-2.38
2002 Q2	-4.15
2002 Q3	-8.69
2002 Q4	-0.98
2003 Q1	-3.68
2003 Q2	6.37
2003 Q3	6.22
2003 Q4	6.96
2004 Q1	4.43
2004 Q2	0.89
2004 Q3	0.74
2004 Q4	10.51
2005 Q1	1.65
2005 Q2	7.64
2005 Q3	8.10
2005 Q4	3.62
2006 Q1	8.17
2006 Q2	-0.11
2006 Q3	5.23
2006 Q4	10.53
2007 Q1	8.59
2007 Q2	10.69
2007 Q3	4.40
2007 Q4	8.27

QUARTER ENDING	HORIZON RETURN
2008 Q1	-5.29
2008 Q2	-0.62
2008 Q3	-6.16
2008 Q4	-14.93
2009 Q1	-3.17
2009 Q2	8.37
2009 Q3	6.66
2009 Q4	6.03
2010 Q1	4.88
2010 Q2	0.14
2010 Q3	6.21
2010 Q4	10.65
2011 Q1	3.66
2011 Q2	4.13
2011 Q3	-5.43
2011 Q4	3.67
2012 Q1	6.14
2012 Q2	-1.39
2012 Q3	2.94
2012 Q4	3.50
2013 Q1	2.89
2013 Q2	1.81
2013 Q3	6.07
2013 Q4	8.75
2014 Q1	3.32
2014 Q2	4.52

QUARTER ENDING	HORIZON RETURN
2014 Q3	1.56
2014 Q4	1.28
2015 Q1	3.05
2015 Q2	5.69
2015 Q3	-2.83
2015 Q4	3.37
2016 Q1	-0.15
2016 Q2	1.68
2016 Q3	4.00
2016 Q4	2.22
2017 Q1	4.24
2017 Q2	4.15
2017 Q3	4.56
2017 Q4	5.00
2018 Q1	4.14
2018 Q2	5.66
2018 Q3	3.36
2018 Q4	0.32
2019 Q1	6.19
2019 Q2	4.86
2019 Q3	1.00
2019 Q4	5.16
2020 Q1	-5.53
2020 Q2	12.85

AS OF JUNE 30, 2020

GROWTHEQUITY

FUND INDEX DETAILS: HORIZON POOLED RETURN

Net to Limited Partners

MULTI-YEAR RETURNS			
YEARS	HORIZON RETURN (%)	YEARS	HORIZON RETURN (%)
1 Year	13.08	14 Years	12.76
2 Years	14.28	15 Years	13.10
3 Years	16.42	16 Years	13.47
4 Years	16.16	17 Years	13.71
5 Years	13.12	18 Years	12.83
6 Years	12.93	19 Years	11.66
7 Years	14.55	20 Years	10.94
8 Years	14.16	21 Years	13.43
9 Years	12.77	22 Years	13.84
10 Years	14.11	23 Years	13.90
11 Years	14.49	24 Years	14.33
12 Years	11.88	25 Years	14.66
13 Years	11.48		

ONE YEAR ROLLING RETURNS			
ONE YEAR ENDED	HORIZON RETURN (%)	ONE YEAR ENDED	HORIZON RETURN (%)
6/30/2020	13.08	6/30/2007	40.08
6/30/2019	15.47	6/30/2006	21.19
6/30/2018	20.81	6/30/2005	21.76
6/30/2017	15.42	6/30/2004	19.61
6/30/2016	1.98	6/30/2003	-7.15
6/30/2015	11.98	6/30/2002	-14.38
6/30/2014	24.58	6/30/2001	-7.35
6/30/2013	11.65	6/30/2000	101.90
6/30/2012	2.80	6/30/1999	26.88
6/30/2011	26.81	6/30/1998	16.11
6/30/2010	18.58	6/30/1997	35.93
6/30/2009	-15.66	6/30/1996	35.66
6/30/2008	5.56		

GROWTH EQUITY: FUND SINCE INCEPTION ANALYSIS



CAMBRIDGE
ASSOCIATES

GROWTHEQUITY

AS OF JUNE 30, 2020

SINCE INCEPTION IRR & MULTIPLES BY FUND VINTAGE YEAR

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN (%)	ARITHMETIC MEAN (%)	MEDIAN (%)	EQUAL-WEIGHTED POOLED RETURN (%)	UPPER QUARTILE (%)	LOWER QUARTILE (%)	STANDARD DEVIATION (%)	DPI	RVPI	TVPI	NUMBER OF FUNDS
1995	49.48	17.21	2.78	23.35	30.55	-3.54	33.24	3.44	0.00	3.44	11
1996	10.04	7.23	6.73	9.66	14.76	-3.55	11.92	1.59	0.00	1.60	13
1997	13.32	19.03	14.44	16.51	26.88	9.24	21.82	1.82	0.00	1.83	12
1998	10.14	8.61	9.74	9.49	15.18	2.01	9.48	1.58	0.00	1.58	13
1999	3.11	6.96	0.74	7.67	17.17	-3.76	15.53	1.21	0.01	1.22	12
2000	9.07	7.01	6.91	7.29	14.85	2.33	10.71	1.59	0.01	1.60	28
2001	14.47	5.16	10.58	6.87	—	—	—	2.25	0.01	2.25	7
2002	15.70	24.10	15.83	19.43	—	—	—	1.96	0.01	1.98	7
2003	16.55	23.11	14.49	24.08	—	—	—	1.90	0.04	1.94	7
2004	8.10	26.46	7.50	13.05	23.89	0.91	56.26	1.38	0.10	1.48	20
2005	12.06	11.68	9.95	13.94	17.65	1.14	17.12	1.78	0.10	1.88	36
2006	7.72	7.03	5.21	10.93	12.49	0.74	11.18	1.42	0.11	1.53	29
2007	9.95	4.45	3.59	7.88	11.26	-2.67	13.41	1.51	0.27	1.78	49
2008	11.05	7.91	5.54	8.86	12.25	2.77	9.43	1.28	0.51	1.79	34
2009	15.83	10.40	8.49	12.40	14.73	5.60	8.46	1.21	1.05	2.25	18
2010	13.97	13.75	8.25	13.21	20.86	3.56	17.56	1.07	0.83	1.90	26
2011	13.68	12.04	12.21	13.79	16.94	6.60	9.66	1.05	0.72	1.77	34
2012	12.11	9.15	7.63	10.70	15.30	2.74	9.70	0.60	1.00	1.60	30
2013	17.01	13.62	12.50	14.61	19.96	8.67	11.90	0.53	1.34	1.88	36
2014	19.25	15.78	13.15	18.37	21.64	9.79	10.73	0.45	1.30	1.75	35
2015	19.10	16.18	14.71	18.84	24.93	7.76	13.53	0.23	1.29	1.52	36
2016	26.07	18.15	16.71	22.99	26.61	8.19	15.04	0.17	1.43	1.61	34
2017	14.77	9.70	7.18	13.84	20.88	1.08	18.03	0.03	1.17	1.20	23
2018	5.36	-5.91	-4.38	0.48	8.97	-12.44	22.42	0.01	1.04	1.05	38

GROWTHEQUITY

AS OF JUNE 30, 2020

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)			
		CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)			MSCI EUROPE INDEX (NET)		CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)	MSCI EUROPE INDEX (NET)	CA BENCHMARK INDEX	MSCI EAFE INDEX (NET)	MSCI EUROPE INDEX (NET)
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD						
1995	11	49.48	7.72	4,176		14.46	3,502	3.44	1.21	1.41	3.44	1.21	1.41
1996	13	10.04	3.93	611		5.08	496	1.60	1.19	1.25	1.59	1.19	1.24
1997	12	13.32	3.36	996		3.60	973	1.83	1.17	1.18	1.82	1.16	1.18
1998	13	10.14	2.33	781		2.56	758	1.58	1.11	1.12	1.58	1.11	1.12
1999	12	3.11	3.97	-86		4.60	-149	1.22	1.24	1.28	1.21	1.23	1.28
2000	28	9.07	7.46	160		7.83	123	1.60	1.41	1.44	1.59	1.40	1.42
2001	7	14.47	8.25	622		8.64	583	2.25	1.53	1.56	2.25	1.53	1.55
2002	7	15.70	12.37	333		12.72	298	1.98	1.62	1.64	1.96	1.61	1.63
2003	7	16.55	3.95	1,260		4.16	1,239	1.94	1.17	1.18	1.90	1.15	1.16
2004	20	8.10	2.67	543		2.72	538	1.48	1.15	1.15	1.38	1.07	1.07
2005	36	12.06	1.28	1,078		1.23	1,084	1.88	1.07	1.07	1.78	1.02	1.01
2006	29	7.72	2.29	543		2.06	566	1.53	1.14	1.13	1.42	1.02	1.01
2007	49	9.95	4.45	551		4.34	562	1.78	1.28	1.27	1.51	1.15	1.14
2008	34	11.05	5.34	571		5.17	587	1.79	1.31	1.30	1.28	1.01	1.00
2009	18	15.83	4.92	1,091		4.66	1,117	2.25	1.27	1.25	1.21	0.83	0.83
2010	26	13.97	4.79	919		4.43	954	1.90	1.24	1.22	1.07	0.77	0.77
2011	34	13.68	4.08	961		3.47	1,021	1.77	1.19	1.16	1.05	0.74	0.73
2012	30	12.11	2.73	938		1.96	1,015	1.60	1.11	1.08	0.60	0.47	0.46
2013	36	17.01	2.85	1,415		2.08	1,493	1.88	1.11	1.08	0.53	0.39	0.38
2014	35	19.25	2.94	1,631		2.28	1,697	1.75	1.09	1.07	0.45	0.32	0.32
2015	36	19.10	1.60	1,750		1.00	1,810	1.52	1.04	1.02	0.23	0.18	0.18
2016	34	26.07	0.08	2,600		-0.49	2,656	1.61	1.00	0.99	0.17	0.13	0.13
2017	23	14.77	-1.80	1,657		-2.45	1,722	1.20	0.98	0.97	0.03	0.03	0.03
2018	38	5.36	-1.61	697		-2.49	785	1.05	0.99	0.98	0.01	0.01	0.01

Notes: Based on data compiled from 588 growth equity funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mPME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mPME).

Sources: Cambridge Associates LLC, MSCI Inc., and Thomson Reuters Datastream.

MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets indexes are gross of dividend taxes. Total returns for MSCI Developed Markets indexes are net of dividend taxes.

GROWTHEQUITY

AS OF JUNE 30, 2020

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)		
		CA BENCHMARK INDEX	S&P 500 INDEX		RUSSELL 2000® INDEX		CA BENCHMARK INDEX	S&P 500 INDEX	RUSSELL 2000® INDEX	CA BENCHMARK INDEX	S&P 500 INDEX	RUSSELL 2000® INDEX
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD	TVPI	MPME TVPI	MPME TVPI	DPI	MPME DPI
1995	11	49.48	19.21	3,026	10.01	3,946	3.44	1.55	1.29	3.44	1.55	1.29
1996	13	10.04	4.60	544	7.07	297	1.60	1.21	1.37	1.59	1.20	1.36
1997	12	13.32	1.74	1,158	7.43	589	1.83	1.08	1.39	1.82	1.07	1.38
1998	13	10.14	0.33	982	6.65	349	1.58	1.01	1.32	1.58	1.01	1.32
1999	12	3.11	1.22	189	6.91	-380	1.22	1.07	1.45	1.21	1.06	1.43
2000	28	9.07	5.07	399	7.98	108	1.60	1.31	1.49	1.59	1.29	1.47
2001	7	14.47	6.50	797	8.28	619	2.25	1.48	1.62	2.25	1.47	1.61
2002	7	15.70	6.98	872	10.33	536	1.98	1.36	1.55	1.96	1.35	1.54
2003	7	16.55	5.99	1,055	6.92	962	1.94	1.32	1.36	1.90	1.27	1.32
2004	20	8.10	6.17	193	6.10	200	1.48	1.44	1.41	1.38	1.26	1.28
2005	36	12.06	5.88	618	5.97	609	1.88	1.40	1.39	1.78	1.28	1.30
2006	29	7.72	8.82	-110	8.33	-61	1.53	1.72	1.64	1.42	1.46	1.44
2007	49	9.95	11.71	-176	10.94	-98	1.78	1.94	1.82	1.51	1.68	1.62
2008	34	11.05	13.38	-233	11.50	-46	1.79	2.02	1.79	1.28	1.43	1.34
2009	18	15.83	13.20	263	10.13	570	2.25	1.92	1.63	1.21	1.14	1.05
2010	26	13.97	12.96	102	9.64	433	1.90	1.80	1.53	1.07	1.03	0.95
2011	34	13.68	12.18	150	8.27	541	1.77	1.68	1.41	1.05	0.97	0.88
2012	30	12.11	11.10	101	6.05	606	1.60	1.54	1.26	0.60	0.59	0.53
2013	36	17.01	11.08	592	5.81	1,120	1.88	1.51	1.24	0.53	0.47	0.43
2014	35	19.25	11.32	793	5.06	1,419	1.75	1.39	1.16	0.45	0.38	0.34
2015	36	19.10	10.95	815	2.43	1,667	1.52	1.28	1.06	0.23	0.21	0.19
2016	34	26.07	10.25	1,583	-0.06	2,613	1.61	1.21	1.00	0.17	0.14	0.13
2017	23	14.77	9.58	519	-2.86	1,763	1.20	1.13	0.96	0.03	0.03	0.03
2018	38	5.36	10.71	-535	-1.88	724	1.05	1.10	0.98	0.01	0.01	0.01

Notes: Based on data compiled from 588 growth equity funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mPME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mPME).

Sources: Cambridge Associates LLC, Frank Russell Company, Standard & Poor's, and Thomson Reuters Datastream.

GROWTHEQUITY

AS OF JUNE 30, 2020

SINCE INCEPTION IRR & MULTIPLES COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

VINTAGE YEAR	NUMBER OF FUNDS	POOLED IRR (%) AND IRR-BASED VALUE-ADD (BPS)					TOTAL VALUE TO PAID IN (TVPI)			DISTRIBUTIONS TO PAID IN (DPI)		
		CA BENCHMARK INDEX	RUSSELL 3000® INDEX		MSCI ALL COUNTRY WORLD INDEX (GROSS)		CA BENCHMARK INDEX	RUSSELL 3000® INDEX	MSCI ALL COUNTRY WORLD INDEX (GROSS)	CA BENCHMARK INDEX	RUSSELL 3000® INDEX	MSCI ALL COUNTRY WORLD INDEX (GROSS)
			IRR	MPME IRR	VALUE-ADD	MPME IRR	VALUE-ADD	TVPI	MPME TVPI	MPME TVPI	DPI	MPME DPI
1995	11	49.48	18.04	3,143	12.41	3,707	3.44	1.52	1.35	3.44	1.52	1.35
1996	13	10.04	5.06	498	4.33	571	1.60	1.23	1.20	1.59	1.23	1.20
1997	12	13.32	2.59	1,073	2.90	1,042	1.83	1.12	1.14	1.82	1.12	1.14
1998	13	10.14	1.18	896	1.77	837	1.58	1.05	1.08	1.58	1.05	1.08
1999	12	3.11	2.01	110	3.10	1	1.22	1.12	1.19	1.21	1.10	1.18
2000	28	9.07	5.62	344	7.00	207	1.60	1.35	1.42	1.59	1.32	1.40
2001	7	14.47	6.98	749	8.14	633	2.25	1.52	1.57	2.25	1.51	1.57
2002	7	15.70	7.73	797	10.41	529	1.98	1.40	1.53	1.96	1.39	1.52
2003	7	16.55	6.33	1,021	5.64	1,091	1.94	1.34	1.27	1.90	1.29	1.24
2004	20	8.10	6.35	175	5.04	306	1.48	1.45	1.31	1.38	1.28	1.19
2005	36	12.06	6.05	601	4.07	800	1.88	1.41	1.25	1.78	1.30	1.17
2006	29	7.72	8.91	-118	5.62	210	1.53	1.72	1.40	1.42	1.47	1.22
2007	49	9.95	11.74	-179	7.85	211	1.78	1.94	1.55	1.51	1.69	1.37
2008	34	11.05	13.25	-221	9.08	196	1.79	2.00	1.61	1.28	1.42	1.18
2009	18	15.83	12.90	293	8.82	701	2.25	1.89	1.55	1.21	1.13	0.96
2010	26	13.97	12.64	133	8.78	519	1.90	1.77	1.49	1.07	1.02	0.88
2011	34	13.68	11.76	193	8.33	536	1.77	1.65	1.42	1.05	0.96	0.85
2012	30	12.11	10.56	155	7.38	473	1.60	1.50	1.33	0.60	0.58	0.53
2013	36	17.01	10.55	646	7.59	942	1.88	1.48	1.32	0.53	0.47	0.43
2014	35	19.25	10.76	849	7.94	1,131	1.75	1.37	1.26	0.45	0.37	0.35
2015	36	19.10	10.29	881	7.24	1,186	1.52	1.26	1.18	0.23	0.21	0.20
2016	34	26.07	9.46	1,661	6.13	1,994	1.61	1.20	1.12	0.17	0.14	0.14
2017	23	14.77	8.74	603	5.14	962	1.20	1.12	1.07	0.03	0.03	0.03
2018	38	5.36	10.07	-471	6.20	-84	1.05	1.09	1.05	0.01	0.01	0.01

Notes: Based on data compiled from 588 growth equity funds, including fully liquidated partnerships, formed between 1995 and 2018. Internal rates of returns are net of fees, expenses and carried interest. CA research shows that most funds take at least six years to settle into their final quartile ranking, and previous to this settling they typically rank in 2-3 other quartiles; therefore fund or benchmark performance metrics from more recent vintage years may be less meaningful. Benchmarks with “—” have an insufficient number of funds in the vintage year sample to produce a meaningful return.

mpME Note: Refer to Methodology page for further details on Cambridge Associates Modified PME (mpME).

Sources: Cambridge Associates LLC, Frank Russell Company, MSCI Inc., and Thomson Reuters Datastream.

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GROWTHEQUITY

AS OF JUNE 30, 2020

TOTAL VALUE TO PAID IN CAPITAL MULTIPLE (TVPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	3.44	2.03	1.18	2.31	0.85	11
1996	1.60	1.75	1.43	2.02	0.77	13
1997	1.83	2.17	1.88	2.52	1.58	12
1998	1.58	1.48	1.50	1.78	1.14	13
1999	1.22	1.58	1.07	2.08	0.81	12
2000	1.60	1.44	1.39	1.81	1.14	28
2001	2.25	1.47	1.51	—	—	7
2002	1.98	2.46	2.32	—	—	7
2003	1.94	2.25	1.77	—	—	7
2004	1.48	1.73	1.39	1.89	1.05	20
2005	1.88	1.99	1.69	2.45	1.12	36
2006	1.53	1.89	1.33	1.91	1.06	29
2007	1.78	1.61	1.24	1.76	0.85	49
2008	1.79	1.64	1.40	2.00	1.14	34
2009	2.25	1.98	1.69	2.16	1.33	18
2010	1.90	1.84	1.46	2.29	1.19	26
2011	1.77	1.85	1.78	1.99	1.34	34
2012	1.60	1.51	1.42	1.69	1.12	30
2013	1.88	1.68	1.48	2.07	1.31	36
2014	1.75	1.76	1.49	1.97	1.30	35
2015	1.52	1.53	1.44	1.64	1.18	36
2016	1.61	1.45	1.35	1.53	1.14	34
2017	1.20	1.17	1.07	1.30	1.02	23
2018	1.05	0.95	0.96	1.08	0.91	38

GROWTHEQUITY

AS OF JUNE 30, 2020

DISTRIBUTION TO PAID IN CAPITAL MULTIPLE (DPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	3.44	2.03	1.18	2.31	0.85	11
1996	1.59	1.74	1.43	1.98	0.77	13
1997	1.82	2.16	1.88	2.52	1.58	12
1998	1.58	1.48	1.50	1.78	1.14	13
1999	1.21	1.56	1.06	2.08	0.72	12
2000	1.59	1.42	1.39	1.81	1.12	28
2001	2.25	1.45	1.51	—	—	7
2002	1.96	2.44	2.32	—	—	7
2003	1.90	2.22	1.77	—	—	7
2004	1.38	1.54	1.27	1.67	0.86	20
2005	1.78	1.87	1.54	2.29	0.90	36
2006	1.42	1.74	1.23	1.66	0.91	29
2007	1.51	1.18	0.93	1.54	0.52	49
2008	1.28	1.14	0.97	1.53	0.69	34
2009	1.21	0.94	0.94	1.20	0.64	18
2010	1.07	1.08	0.87	1.67	0.50	26
2011	1.05	0.98	0.54	1.29	0.35	34
2012	0.60	0.54	0.44	0.87	0.15	30
2013	0.53	0.50	0.34	0.75	0.07	36
2014	0.45	0.45	0.29	0.57	0.17	35
2015	0.23	0.20	0.14	0.32	0.05	36
2016	0.17	0.15	0.04	0.16	0.00	34
2017	0.03	0.04	0.00	0.01	0.00	23
2018	0.01	0.00	0.00	0.00	0.00	38

GROWTHEQUITY

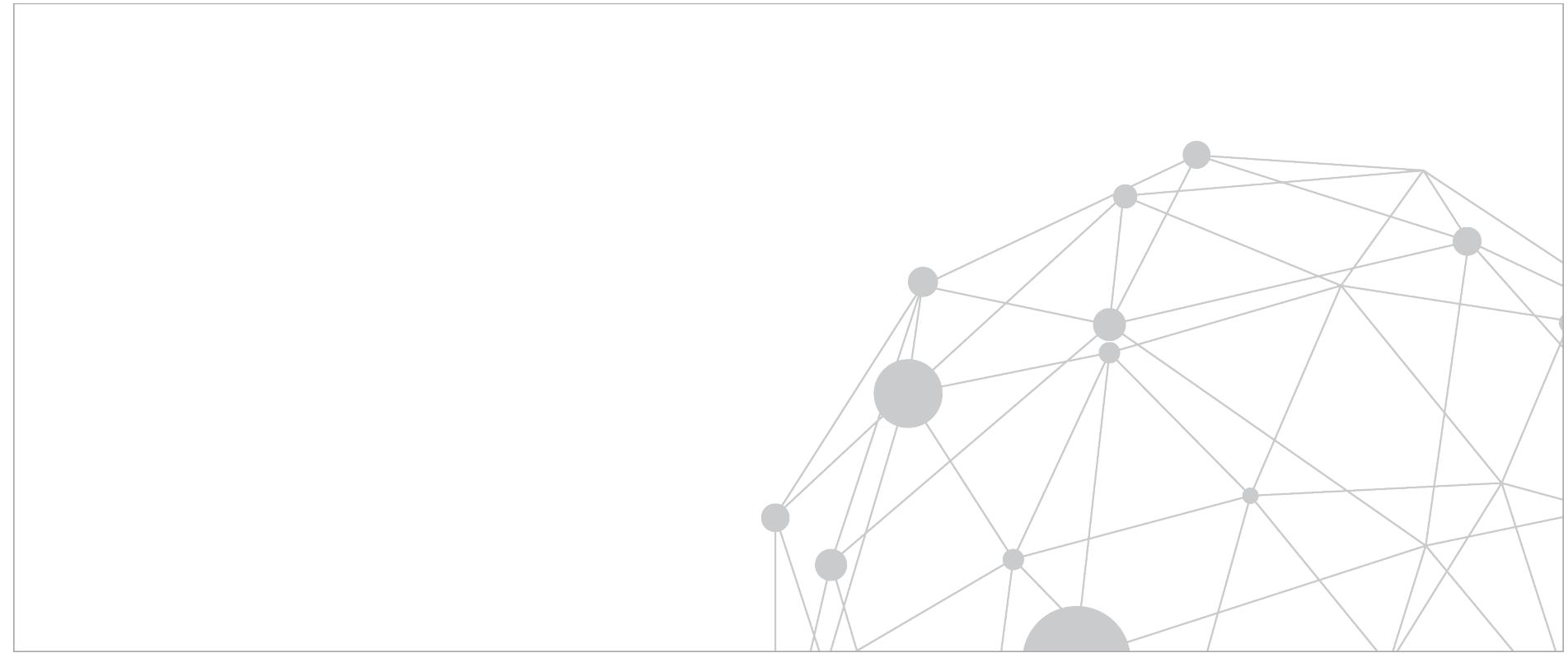
AS OF JUNE 30, 2020

RESIDUAL VALUE TO PAID IN CAPITAL MULTIPLE (RVPI)

Net to Limited Partners

VINTAGE YEAR	POOLED RETURN	ARITHMETIC MEAN	MEDIAN	UPPER QUARTILE	LOWER QUARTILE	NUMBER OF FUNDS
1995	0.00	0.00	0.00	0.00	0.00	11
1996	0.00	0.00	0.00	0.00	0.00	13
1997	0.00	0.01	0.00	0.00	0.00	12
1998	0.00	0.00	0.00	0.00	0.00	13
1999	0.01	0.02	0.00	0.01	0.00	12
2000	0.01	0.02	0.00	0.01	0.00	28
2001	0.01	0.02	0.00	—	—	7
2002	0.01	0.02	0.00	—	—	7
2003	0.04	0.03	0.00	—	—	7
2004	0.10	0.19	0.02	0.08	0.00	20
2005	0.10	0.12	0.03	0.19	0.00	36
2006	0.11	0.14	0.06	0.19	0.00	29
2007	0.27	0.42	0.11	0.40	0.02	49
2008	0.51	0.49	0.36	0.63	0.15	34
2009	1.05	1.04	0.96	1.10	0.57	18
2010	0.83	0.76	0.74	0.86	0.49	26
2011	0.72	0.87	0.76	1.08	0.58	34
2012	1.00	0.97	0.89	1.07	0.70	30
2013	1.34	1.17	1.10	1.47	0.86	36
2014	1.30	1.30	1.19	1.39	0.93	35
2015	1.29	1.33	1.22	1.53	0.98	36
2016	1.43	1.30	1.26	1.42	1.09	34
2017	1.17	1.12	1.06	1.23	0.97	23
2018	1.04	0.95	0.96	1.07	0.91	38

US GROWTH EQUITY: FUND INDEX ANALYSIS



CAMBRIDGE
ASSOCIATES

US GROWTH EQUITY

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN

Net to Limited Partners

INDEX	1-QUARTER	YTD	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
US GROWTH EQUITY INDEX¹	13.06	6.02	12.86	19.40	15.63	16.69	14.10	11.30	19.42
Bloomberg Barclays Capital Government/Credit Bond Index	3.71	7.21	10.02	5.87	4.74	4.13	4.50	5.30	5.46
Dow Jones Industrial Average Index	18.51	-8.43	-0.54	9.08	10.62	12.99	9.08	7.19	9.69
Dow Jones US Small Cap Index	25.61	-12.61	-6.87	3.08	4.14	10.75	7.75	7.59	9.38
Dow Jones US TopCap Index	21.42	-2.09	8.56	11.13	10.87	14.14	9.07	6.11	9.36
Nasdaq Composite Index*	30.63	12.11	25.64	17.88	15.07	16.91	11.16	4.76	9.98
Russell 1000® Index	21.82	-2.81	7.48	10.64	10.47	13.97	8.91	6.10	9.41
Russell 2000® Index	25.42	-12.98	-6.63	2.01	4.29	10.50	7.01	6.69	8.16
S&P 500 Index	20.54	-3.08	7.51	10.73	10.73	13.99	8.83	5.91	9.27
Wilshire 5000 Total Market Index	21.94	-3.30	6.78	10.13	10.27	13.74	8.86	6.23	9.30

The index is a horizon calculation based on data compiled from 295 US growth equity funds, including fully liquidated partnerships, formed between 1986 and 2019.

¹ Private indexes are pooled horizon internal rate of return (IRR) calculations, net of fees, expenses, and carried interest. The timing and magnitude of fund cash flows are integral to the IRR performance calculation. Public indexes are average annual compounded return (AACR) calculations which are time weighted measures over the specified time horizon, and are shown for reference and directional purposes only. Due to the fundamental differences between the two calculations, direct comparison of IRRs to AACRs is not recommended. For a more accurate means of comparing private investment performance relative to public alternatives, see the analyses in this document using CA Modified Public Market Equivalent (mPME). See Methodology section for more detail.

Sources: Cambridge Associates LLC, Bloomberg Barclays, Dow Jones Indices, Frank Russell Company, Standard & Poor's and Thomson Reuters Datastream, and Wilshire Associates.

*Capital change only

US GROWTH EQUITY

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

CA INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
US GROWTH EQUITY INDEX¹	12.86	19.40	15.63	16.69	14.10	11.30	19.42
MPME ANALYSIS²							
Russell 2000® Index	-6.47	1.94	4.32	10.93	7.62	7.63	7.98
Value-Add (bps)	1,933	1,746	1,131	577	648	368	1,144
Russell 2500™ Index	-4.57	4.06	5.45	12.02	8.51	8.60	9.14
Value-Add (bps)	1,743	1,534	1,018	468	560	270	1,028
Russell 3000® Index	6.51	10.07	10.08	13.98	9.49	8.30	9.08
Value-Add (bps)	635	934	555	271	462	300	1,034
Russell Midcap® Index	-2.16	5.82	6.81	12.88	9.13	9.13	9.73
Value-Add (bps)	1,502	1,358	882	381	498	218	969
S&P 500 Index	7.48	10.76	10.77	14.20	9.57	8.24	9.07
Value-Add (bps)	538	865	486	249	453	306	1,035
Constructed Index: MSCI World/MSCI All Country World Index ³ (gross)	2.69	6.71	7.16	9.77	7.07	6.41	6.92
Value-Add (bps)	1,017	1,269	846	693	703	489	1,250

The index is a horizon calculation based on data compiled from 295 US growth equity funds, including fully liquidated partnerships, formed between 1986 and 2019.

¹Pooled horizon return, net of fees, expenses, and carried interest.

²CA Modified Public Market Equivalent (mPME) replicates private investment performance under public market conditions. The public index's shares are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and mPME NAV is a function of mPME cash flows and public index returns. "Value-Add" shows (in basis points) the difference between the actual private investment return and the mPME calculated return. Refer to Methodology page for details.

³Constructed Index: MSCI World/MSCI All Country World Index: Data rom 1/1/1986 to 12/31/1987 represented by MSCI index gross total return. Data from 1/1/1988 to present represented by MSCI ACWI gross total return.

AS OF JUNE 30, 2020

US GROWTH EQUITY

FUND INDEX DETAILS: ONE QUARTER HORIZON POOLED RETURN

Net to Limited Partners

QUARTER ENDING	HORIZON RETURN
1995 Q1	15.18
1995 Q2	10.30
1995 Q3	10.45
1995 Q4	13.30
1996 Q1	9.30
1996 Q2	14.17
1996 Q3	7.58
1996 Q4	3.56
1997 Q1	-0.19
1997 Q2	31.44
1997 Q3	14.58
1997 Q4	0.49
1998 Q1	15.49
1998 Q2	-2.94
1998 Q3	-6.77
1998 Q4	7.59
1999 Q1	10.45
1999 Q2	16.48
1999 Q3	9.55
1999 Q4	70.40
2000 Q1	22.17
2000 Q2	5.26
2000 Q3	12.49
2000 Q4	-7.71
2001 Q1	-12.53
2001 Q2	3.36

QUARTER ENDING	HORIZON RETURN
2001 Q3	-13.01
2001 Q4	3.18
2002 Q1	-4.20
2002 Q2	-5.12
2002 Q3	-8.39
2002 Q4	-0.82
2003 Q1	-3.80
2003 Q2	6.51
2003 Q3	5.66
2003 Q4	7.36
2004 Q1	3.51
2004 Q2	1.47
2004 Q3	-0.17
2004 Q4	10.57
2005 Q1	-0.22
2005 Q2	8.31
2005 Q3	8.45
2005 Q4	2.22
2006 Q1	7.80
2006 Q2	-0.36
2006 Q3	4.49
2006 Q4	7.89
2007 Q1	7.27
2007 Q2	9.16
2007 Q3	3.83
2007 Q4	4.44

QUARTER ENDING	HORIZON RETURN
2008 Q1	-3.65
2008 Q2	0.19
2008 Q3	-3.50
2008 Q4	-12.99
2009 Q1	-3.60
2009 Q2	5.96
2009 Q3	5.20
2009 Q4	3.84
2010 Q1	4.44
2010 Q2	1.02
2010 Q3	4.51
2010 Q4	10.78
2011 Q1	4.13
2011 Q2	5.18
2011 Q3	-3.30
2011 Q4	6.19
2012 Q1	6.15
2012 Q2	-0.14
2012 Q3	3.87
2012 Q4	3.15
2013 Q1	3.73
2013 Q2	3.33
2013 Q3	8.24
2013 Q4	8.48
2014 Q1	3.24
2014 Q2	4.88

QUARTER ENDING	HORIZON RETURN
2014 Q3	1.40
2014 Q4	1.46
2015 Q1	3.14
2015 Q2	5.02
2015 Q3	-1.05
2015 Q4	1.74
2016 Q1	0.31
2016 Q2	2.56
2016 Q3	5.17
2016 Q4	2.79
2017 Q1	4.45
2017 Q2	4.54
2017 Q3	4.92
2017 Q4	4.57
2018 Q1	5.68
2018 Q2	7.41
2018 Q3	4.75
2018 Q4	0.27
2019 Q1	6.68
2019 Q2	7.91
2019 Q3	1.21
2019 Q4	5.25
2020 Q1	-6.13
2020 Q2	13.06

AS OF JUNE 30, 2020

US GROWTH EQUITY

FUND INDEX DETAILS: HORIZON POOLED RETURN

Net to Limited Partners

MULTI-YEAR RETURNS			
YEARS	HORIZON RETURN (%)	YEARS	HORIZON RETURN (%)
1 Year	12.86	14 Years	13.83
2 Years	16.87	15 Years	14.10
3 Years	19.40	16 Years	14.37
4 Years	19.04	17 Years	14.58
5 Years	15.63	18 Years	13.56
6 Years	14.86	19 Years	12.02
7 Years	16.73	20 Years	11.30
8 Years	16.44	21 Years	15.76
9 Years	15.37	22 Years	16.53
10 Years	16.69	23 Years	17.07
11 Years	16.53	24 Years	18.20
12 Years	13.44	25 Years	19.42
13 Years	12.75		

ONE YEAR ROLLING RETURNS			
ONE YEAR ENDED	HORIZON RETURN (%)	ONE YEAR ENDED	HORIZON RETURN (%)
6/30/2020	12.86	6/30/2007	32.20
6/30/2019	20.88	6/30/2006	19.22
6/30/2018	24.45	6/30/2005	19.31
6/30/2017	18.03	6/30/2004	19.06
6/30/2016	3.56	6/30/2003	-6.67
6/30/2015	11.33	6/30/2002	-18.02
6/30/2014	27.39	6/30/2001	-5.08
6/30/2013	14.85	6/30/2000	147.18
6/30/2012	8.98	6/30/1999	31.29
6/30/2011	26.82	6/30/1998	28.86
6/30/2010	15.18	6/30/1997	47.25
6/30/2009	-13.83	6/30/1996	56.19
6/30/2008	4.17		

EX US GROWTH EQUITY: FUND INDEX ANALYSIS



CAMBRIDGE
ASSOCIATES

EX US GROWTH EQUITY

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN

Net to Limited Partners

INDEX	1-QUARTER	YTD	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
EX US GROWTH EQUITY INDEX¹	12.59	7.23	13.38	12.77	10.05	10.73	11.39	10.23	10.04
Bloomberg Barclays Capital Government/Credit Bond Index	3.71	7.21	10.02	5.87	4.74	4.13	4.50	5.30	5.46
Dow Jones Industrial Average Index	18.51	-8.43	-0.54	9.08	10.62	12.99	9.08	7.19	9.69
Dow Jones US Small Cap Index	25.61	-12.61	-6.87	3.08	4.14	10.75	7.75	7.59	9.38
Dow Jones US TopCap Index	21.42	-2.09	8.56	11.13	10.87	14.14	9.07	6.11	9.36
MSCI Emerging Markets Index (gross)	18.18	-9.67	-3.05	2.27	3.24	3.63	6.69	6.93	5.72
MSCI Europe Index (US\$) (net)	15.26	-12.78	-6.78	0.00	1.46	5.65	3.83	3.01	5.93
MSCI Europe Index (€) (net)	12.60	-12.84	-5.48	0.51	1.30	6.57	4.35	2.20	6.71
MSCI Pacific Index (net)	14.16	-9.01	-2.39	2.31	3.24	5.98	4.67	2.67	2.62
MSCI World Ex US Index (net)	15.34	-11.49	-5.42	0.84	2.01	5.43	4.10	2.98	4.68
MSCI World Index (net)	19.36	-5.77	2.84	6.70	6.90	9.95	6.55	4.32	6.76
Nasdaq Composite Index*	30.63	12.11	25.64	17.88	15.07	16.91	11.16	4.76	9.98
Russell 1000® Index	21.82	-2.81	7.48	10.64	10.47	13.97	8.91	6.10	9.41
Russell 2000® Index	25.42	-12.98	-6.63	2.01	4.29	10.50	7.01	6.69	8.16
S&P 500 Index	20.54	-3.08	7.51	10.73	10.73	13.99	8.83	5.91	9.27

The index is a horizon calculation based on data compiled from 351 Ex US growth equity funds, including fully liquidated partnerships, formed between 1989 and 2019.

¹ Private indexes are pooled horizon internal rate of return (IRR) calculations, net of fees, expenses, and carried interest. The timing and magnitude of fund cash flows are integral to the IRR performance calculation. Public indexes are average annual compounded return (AACR) calculations which are time weighted measures over the specified time horizon, and are shown for reference and directional purposes only. Due to the fundamental differences between the two calculations, direct comparison of IRRs to AACRs is not recommended. For a more accurate means of comparing private investment performance relative to public alternatives, see the analyses in this document using CA Modified Public Market Equivalent (mPME). See Methodology section for more detail.

Sources: Cambridge Associates LLC, Bloomberg Barclays, Dow Jones Indices, Frank Russell Company, MSCI Inc., Standard & Poor's and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets Indices are gross of dividend taxes. Total Returns for MSCI Developed Markets Indices are net of dividend taxes.

EX US GROWTH EQUITY

AS OF JUNE 30, 2020

FUND INDEX SUMMARY: HORIZON POOLED RETURN COMPARED TO CA MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

Net to Limited Partners

CA INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR	25-YEAR
EX US GROWTH EQUITY INDEX¹	13.38	12.77	10.05	10.73	11.39	10.23	10.04

MPME ANALYSIS ²							
MSCI EAFE Index (net)	-4.99	0.64	2.02	4.70	3.45	3.18	3.47
Value-Add (bps)	1,836	1,212	803	603	794	705	657
MSCI Europe Index (net)	-6.62	-0.14	1.43	4.43	3.09	2.91	3.44
Value-Add (bps)	1,999	1,291	862	630	830	732	661
S&P 500 Index	7.51	10.69	10.72	13.46	10.35	8.68	9.49
Value-Add (bps)	587	207	-67	-273	104	155	55
Constructed Index: Global Financial Data Emerging Markets/MSCI Emerging Markets (gross) ³	-2.89	2.02	3.35	3.43	4.52	5.05	5.06
Value-Add (bps)	1,627	1,075	670	730	687	517	499
Constructed Index: MSCI World/MSCI All Country World Index ⁴ (gross)	2.71	6.62	7.06	9.12	7.27	6.36	6.83
Value-Add (bps)	1,066	615	299	161	412	386	321

The index is a horizon calculation based on data compiled from 351 Ex US growth equity funds, including fully liquidated partnerships, formed between 1989 and 2019.

¹ Pooled horizon return, net of fees, expenses, and carried interest.

² CA Modified Public Market Equivalent (mPME) replicates private investment performance under public market conditions. The public index's shares are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and mPME NAV is a function of mPME cash flows and public index returns. "Value-Add" shows (in basis points) the difference between the actual private investment return and the mPME calculated return. Refer to Methodology page for details.

³ Constructed MSCI EM Index: Data from 1/1/1986 to 12/31/1987 represented by GFD Emerging Markets price return. Data from 1/1/1988 to present represented by MSCI Emerging Markets total return gross.

⁴ Constructed Index: MSCI World/MSCI All Country World Index: Data rom 1/1/1986 to 12/31/1987 represented by MSCI index gross total return. Data from 1/1/1988 to present represented by MSCI ACWI gross total return.

Sources: Cambridge Associates LLC, Global Financial Data, Inc., MSCI Inc., Standard & Poor's, and Thomson Reuters Datastream.

MSCI data provided "as is" without any express or implied warranties. Total returns for MSCI Emerging Markets indexes are gross of dividend taxes. Total returns for MSCI Developed Markets indexes are net of dividend taxes.

AS OF JUNE 30, 2020

EX US GROWTH EQUITY

FUND INDEX DETAILS: ONE QUARTER HORIZON POOLED RETURN

Net to Limited Partners

QUARTER ENDING	HORIZON RETURN
1995 Q1	0.07
1995 Q2	0.48
1995 Q3	1.53
1995 Q4	-4.38
1996 Q1	0.92
1996 Q2	1.13
1996 Q3	1.39
1996 Q4	5.62
1997 Q1	4.46
1997 Q2	-0.42
1997 Q3	-2.78
1997 Q4	-7.75
1998 Q1	2.50
1998 Q2	-6.37
1998 Q3	2.76
1998 Q4	6.18
1999 Q1	0.78
1999 Q2	8.71
1999 Q3	-1.07
1999 Q4	11.47
2000 Q1	8.17
2000 Q2	-3.72
2000 Q3	-3.37
2000 Q4	-7.39
2001 Q1	-2.21
2001 Q2	-0.52

QUARTER ENDING	HORIZON RETURN
2001 Q3	-5.47
2001 Q4	0.18
2002 Q1	2.18
2002 Q2	-1.86
2002 Q3	-9.39
2002 Q4	-1.35
2003 Q1	-3.42
2003 Q2	6.03
2003 Q3	7.57
2003 Q4	5.97
2004 Q1	6.68
2004 Q2	-0.51
2004 Q3	3.07
2004 Q4	10.36
2005 Q1	6.44
2005 Q2	5.90
2005 Q3	7.15
2005 Q4	7.39
2006 Q1	9.14
2006 Q2	0.57
2006 Q3	7.20
2006 Q4	17.32
2007 Q1	11.61
2007 Q2	13.97
2007 Q3	5.54
2007 Q4	15.69

QUARTER ENDING	HORIZON RETURN
2008 Q1	-8.14
2008 Q2	-2.10
2008 Q3	-11.11
2008 Q4	-18.74
2009 Q1	-2.29
2009 Q2	13.37
2009 Q3	9.53
2009 Q4	10.12
2010 Q1	5.64
2010 Q2	-1.32
2010 Q3	9.06
2010 Q4	10.44
2011 Q1	2.90
2011 Q2	2.49
2011 Q3	-8.81
2011 Q4	-0.57
2012 Q1	6.13
2012 Q2	-3.50
2012 Q3	1.37
2012 Q4	4.07
2013 Q1	1.62
2013 Q2	-0.43
2013 Q3	2.97
2013 Q4	9.12
2014 Q1	3.43
2014 Q2	4.07

QUARTER ENDING	HORIZON RETURN
2014 Q3	1.78
2014 Q4	1.05
2015 Q1	2.93
2015 Q2	6.49
2015 Q3	-4.93
2015 Q4	5.33
2016 Q1	-0.68
2016 Q2	0.64
2016 Q3	2.59
2016 Q4	1.52
2017 Q1	3.99
2017 Q2	3.66
2017 Q3	4.10
2017 Q4	5.55
2018 Q1	2.30
2018 Q2	3.55
2018 Q3	1.65
2018 Q4	0.39
2019 Q1	5.58
2019 Q2	1.02
2019 Q3	0.72
2019 Q4	5.03
2020 Q1	-4.72
2020 Q2	12.59

AS OF JUNE 30, 2020

EX US GROWTH EQUITY

FUND INDEX DETAILS: HORIZON POOLED RETURN

Net to Limited Partners

MULTI-YEAR RETURNS			
YEARS	HORIZON RETURN (%)	YEARS	HORIZON RETURN (%)
1 Year	13.38	14 Years	10.98
2 Years	11.08	15 Years	11.39
3 Years	12.77	16 Years	11.86
4 Years	12.65	17 Years	12.12
5 Years	10.05	18 Years	11.47
6 Years	10.49	19 Years	10.96
7 Years	11.82	20 Years	10.23
8 Years	11.25	21 Years	10.31
9 Years	9.49	22 Years	10.37
10 Years	10.73	23 Years	10.10
11 Years	11.60	24 Years	10.11
12 Years	9.59	25 Years	10.04
13 Years	9.53		

ONE YEAR ROLLING RETURNS			
ONE YEAR ENDED	HORIZON RETURN (%)	ONE YEAR ENDED	HORIZON RETURN (%)
6/30/2020	13.38	6/30/2007	60.46
6/30/2019	8.86	6/30/2006	26.53
6/30/2018	16.37	6/30/2005	28.26
6/30/2017	12.28	6/30/2004	20.95
6/30/2016	0.15	6/30/2003	-8.26
6/30/2015	12.79	6/30/2002	-4.81
6/30/2014	20.91	6/30/2001	-12.82
6/30/2013	6.74	6/30/2000	14.35
6/30/2012	-6.87	6/30/1999	14.95
6/30/2011	26.81	6/30/1998	-13.90
6/30/2010	25.04	6/30/1997	11.08
6/30/2009	-19.02	6/30/1996	-0.55
6/30/2008	8.29		

DESCRIPTION OF PERFORMANCE MEASUREMENT METHODOLOGY

Cambridge Associates LLC (CA) has established a database to monitor investments made by venture capital and other alternative asset partnerships. On June 30, 2020, 2,296 private equity funds (buyout & growth equity only) from the years 1986 through 2019 were included in the sample. Users of the analysis may find the following description of the data sources and calculation techniques helpful to their interpretation of information presented in the report:

Partnership financial statements and narratives are the primary source of information concerning cash flows and ending residual/ net asset values (NAV) for both partnerships and portfolio company investments.

Recognizing the alternative asset community's sensitivity to the distribution of information pertaining to individual fund investments, as a matter of policy CA only releases aggregated figures in its benchmark report.

Vintage year is defined as the legal inception date as noted in a fund's financial statement. This date can usually be found in the first note to the audited financial statements and is prior to the first close or capital call.

CA uses both the since inception internal rate of return and the end-to-end or horizon performance calculation in its benchmark reports:

The since inception internal rate of return (SIIRR) is a since inception calculation that solves for the discount rate, which makes the net present value of an investment equal to zero. The calculation is based on cash-on-cash returns over equal periods modified for the residual value of the partnership's equity or portfolio company's NAV. The residual value attributed to each respective group being measured is incorporated as its ending value. Transactions are accounted for on a quarterly basis, and annualized values are used for reporting purposes. Please note that all transactions are recorded on the 45th day or midpoint of the quarter.

Cambridge Associates uses the end-to-end or horizon internal rate of return calculation to calculate the official quarterly, annual, and multi-year index figures. The horizon IRR performance calculation is a money-weighted return similar to the since inception IRR; however, it is measuring performance between two points in time. The calculation incorporates the beginning NAV (if any, treated as an inflow), interim cash flows and the ending NAV (if any, treated as an outflow). All interim cash flows are recorded on the mid-period date of the quarter. In order for a fund to be included in a horizon IRR calculation, the fund must have at least one quarterly contribution, distribution or NAV during the time frame being measured. Similar to the since inception IRR, the horizon IRR is annualized for time frames greater than one year.

DESCRIPTION OF PERFORMANCE MEASUREMENT METHODOLOGY

Additional Calculation Definitions:

In order to provide meaningful statistics, Cambridge Associates has applied minimum fund count thresholds for each calculation. See minimum counts in parenthesis after each calculation.

Pooled return aggregates all cash flows and ending NAVs in a sample to calculate a dollar-weighted return. (minimum 3 funds)

Arithmetic mean averages the individual fund IRRs included in a vintage year. (minimum 3 funds)

Median is the middle fund IRR of the group of individual fund IRRs included in a vintage year. (minimum 5 funds)

Equal-weighted pooled return equally weights all cash flows and ending NAVs based on committed capital to calculate a dollar-weighted return. (minimum 3 funds)

Upper/ lower quartile are the thresholds for the upper (top 25%) and lower (bottom 25%) quartiles based on the individual fund IRRs included in a vintage year. Can be used in conjunction with the median to determine quartile placement. (minimum 8 funds)

Top 5 percent/ bottom 5 percent are the thresholds for the upper and lower 5th percentiles based on the individual fund IRRs included in a vintage year. (minimum 8 funds)

Standard deviation is a measure of the dispersion of the individual returns. The calculation employs the standard methodology for calculating a sample mean (not a population mean). (minimum 8 funds)

Realization ratio exhibits (TVPI, DPI, RVPI): CA has independently calculated the proper realization ratio for each fund in each vintage year. Please note that each fund has been ranked within its respective vintage year by the corresponding realization ratio, as opposed to being ranked by IRR as they are ranked in the since inception IRR exhibit. As a result a fund's ranking within its vintage year may change. For example, it is possible that a vintage year can have a different median fund when ranked by IRR vs. when ranked by TVPI, DPI or RVPI.

Cambridge Associates Modified Public Market Equivalent (mPME): The mPME calculation is a private-to-public comparison that seeks to replicate private investment performance under public market conditions. The public index's shares are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and the mPME NAV (the value of the shares held by the public equivalent) is a function of mPME cash flows and public index returns. The mPME attempts to evaluate what return would have been earned had the dollars been deployed in the public markets instead of in private investments while avoiding the "negative NAV" issue inherent in some PME methodologies. "Value-Add" shows (in basis points) the difference between the actual private investment return and the mPME calculated return.

Exhibits detailing data for portfolio companies are grouped by year of the fund's initial investment in a company, as opposed to vintage year. Returns are gross returns.



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