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Chicago Teachers' Pension Fund

Private Equity Performance Report

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CTPF Total Portfolio

Private Equity Allocation Overview: CTPF's Private Equity Portfolio was initiated in 1996 and currently utilizes 10 managers across approximately 58 individual investment vehicles. Five of the firms are fund-of-funds providers and five are direct partnership managers. CTPF's private equity portfolio also consists of two program mandates or initiatives: 1) a developed manager program that focuses on established managers that invest globally, and 2) an emerging manager program that targets minority and women-owned business enterprise managers and developing managers in Illinois and the Midwest region. CTPF has a well-developed, mature portfolio that is highly diversified.

In this report, the Total Private Equity Portfolio is reviewed followed by reviews of the individual managers. Fund-of-funds managers are listed first followed by direct partnership managers. Within each category the managers are listed chronologically by initial year of investment. The last two pages of this report provide individual vehicle-level performance and individual manager diversification, respectively.

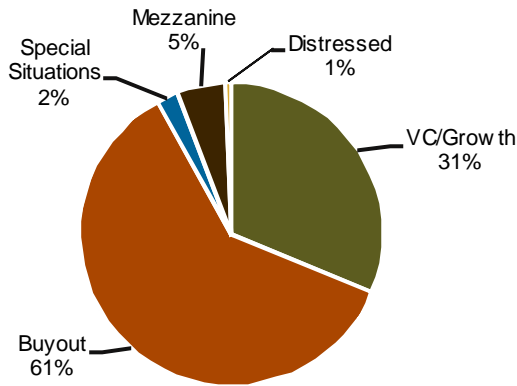
Financial Performance Overview: The table below summarizes the changes in the CTPF total private equity portfolio during the recent quarter and represents the aggregated cash flows and valuation information of all the underlying vehicles. See *Manager Vehicle-Level Performance* on the second to last page of this report for additional performance detail.

CTPF Total Portfolio	6/30/2016 CTPF Total Portfolio	Quarter Change	3/31/2016 CTPF Total Portfolio
Reporting Metrics			
Vintage Years	1996-2016		1996-2015
# Total Partnerships	2,579	41	2,538
# Active Partnerships	2,161	10	2,151
# Liquidated Partnerships	418	31	387
# Portfolio Companies	15,804	60	15,744
Committed	876,614,312	-44,240	876,658,552
Paid-in	671,550,474	9,239,685	662,310,789
Uncalled	206,734,688	-9,241,149	215,975,837
% Paid-In	76%	1%	75%
Distributed	703,778,029	12,642,014	691,136,015
Net Asset Value	290,026,429	2,880,658	287,145,771
Total Value	993,804,458	15,522,672	978,281,786
DPI	1.05	0.00	1.04
RVPI	0.43	0.00	0.43
TVPI	1.48	0.00	1.48
IRR	n/a	n/a	n/a
Benchmark TVPIs (Combined VYs):			
Thomson/Cambridge All PE 1st Quartile	1.76	-0.01	1.77
Thomson/Cambridge All PE Median	1.33	-0.01	1.33
Quartile Ranking	2nd		2nd
% Cash Distribution Yield (Principal and Gain)		4.4%	
\$ Unrealized Appreciation/(Depreciation)		-6,359,027	
% Unrealized Appreciation/(Depreciation)		-2.2%	
\$Total Valuation Change		6,282,987	
%Total Valuation Change		2.2%	

Note: Total portfolio financial figures represent cash flows through the reporting quarter-end. The valuations represent a majority of NAVs from the reporting quarter (current values) with a minority of values from the prior quarter (lagged values).

Portfolio Diversification: The following page shows three tables that summarize the total portfolio diversification by strategy, geography and industry. The CTPF portfolio is well diversified by all measures. The Total Portfolio diversification percentages are also summarized in the *Individual Manager Diversification Table* on the last page of this report.

Total Portfolio Diversification

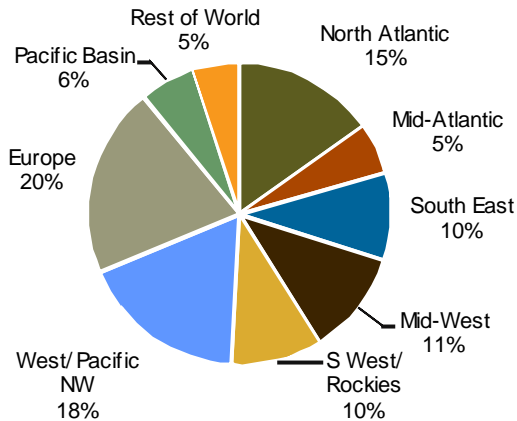


CTPF's Total Private Equity Portfolio is well-diversified by strategy as measured by net asset value at the partnership-level.

All key strategy sectors are included: venture capital, buyout, special situations, mezzanine debt and distressed debt.

Buyouts is the largest holding but is well diversified by across small, middle-market, large and mega funds.

Total Portfolio Geographic Diversification

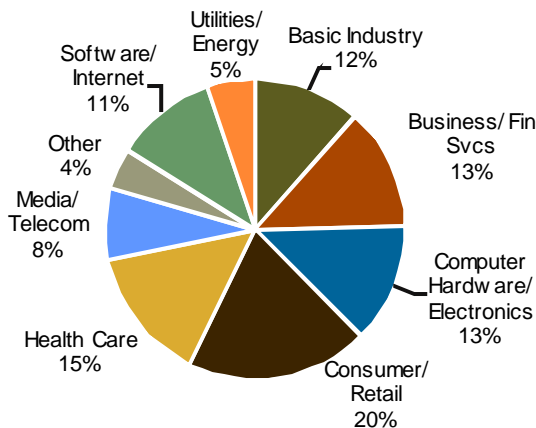


CTPF's Total Private Equity Portfolio is well-diversified by geography, as measured at the portfolio company-level.

The Mid-West has a strong representation and there is a good balance in all other US regions.

The U.S./Non-U.S. split is in line with institutional portfolios with the largest non-U.S. sector being developed Europe.

Total Portfolio Industry Diversification



CTPF's Total Private Equity Portfolio is well-diversified by industry, as measured at the portfolio company-level.

The largest categories approximate 20% and represent a diversity of sectors.

The portfolio has a good balance of growth sectors (computers, internet, health care) and stable, mature industries (basic industries, consumer).

Adams Street Partners

Adams Street Partners (ASP) has managed assets for CTPF since 1996. The firm is an independent, 100% employee-owned firm. The firm was started in 1972 as the private equity division of Brinson Partners, which was subsequently purchased by UBS. ASP became independent in 2008. ASP is a large global private equity manager with over 110 employees. The firm is headquartered in Chicago with additional offices located in Palo Alto, London and Singapore. ASP's Global Program product, in which CTPF participates, offers four distinct vehicles with the following strategies and approximate weightings: 1) U.S. partnerships (50%); 2) international developed markets partnerships (30%); 3) international emerging markets partnerships (10%); and, 4) U.S. direct co-investments (10%).

Financial Performance Overview: The table below summarizes the changes in the CTPF ASP portfolio during the recent quarter and represents the aggregated cash flows and valuation information of all the underlying vehicles. See *Manager Vehicle-Level Performance* on the second to last page of this report for additional manager performance detail.

Adams Street Partners	6/30/2016 ASP Total Program	Quarter Change	3/31/2016 ASP Total Program
Reporting Metrics			
Vintage Years	1996-2016		1996-2016
# Total Partnerships	1,823	8	1,815
# Active Partnerships	1,571	-1	1,572
# Liquidated Partnerships	252	9	243
Committed	293,295,218	0	293,295,218
Paid-in	202,951,345	4,101,500	198,849,845
Uncalled	90,512,469	-4,101,500	94,613,969
% Paid-In	69%	1%	68%
Distributed	181,181,125	2,782,937	178,398,188
Net Asset Value	119,232,764	4,270,848	114,961,916
Total Value	300,413,889	7,053,785	293,360,104
DPI	0.89	0.00	0.90
RVPI	0.59	0.01	0.58
TVPI	1.48	0.00	1.48
IRR	8.94%	0.00%	8.94%
Benchmark TVPIs (Combined VYs):			
Thomson/Cambridge All PE 1st Quartile	1.76	-0.01	1.77
Thomson/Cambridge All PE Median	1.33	-0.01	1.33
Quartile Ranking	2nd		2nd
% Cash Distribution Yield (Principal and Gain)		2.4%	
\$ Unrealized Appreciation/(Depreciation)		169,348	
% Unrealized Appreciation/(Depreciation)		0.1%	
\$Total Valuation Change		2,952,285	
%Total Valuation Change		2.6%	

Note: ASP States that the financial figures represent cash flows and valuations (NAVs) through the reporting quarter-end.

ASP's reported IRR is Gross of ASP management fees.

Benchmark: Global, All Private Equity

Portfolio Diversification: ASP's diversification percentages as of quarter-end are shown in the *Individual Manager Diversification Table* on the last page of this report.

CTPF's ASP portfolio is mature, spanning more than 15 years of commitments across more than 25 vehicles. The ASP portfolio broadly diversified across all key private equity investment strategies: buyouts, venture capital, mezzanine, special situations and distressed debt. The portfolio is global in nature. The portfolio has a majority of U.S. partnerships and companies. The international exposure in the portfolio is meaningful consisting of primarily of developed Europe, but also covering the Pacific Basin and emerging markets. The portfolio is broadly diversified by industry with the largest industry categories approximating 20%, but most being smaller.

Pantheon Ventures

Pantheon Ventures (PV) has managed assets for CTPF since 1999. PV is a subsidiary of Affiliated Manager Group (AMG). The firm was started in 1982 as the private equity division of GT Management, subsequently became independent in 1988, become a subsidiary of Russell Investments in 2004 and was sold to PV management and AMG in 2010. PV is a large global private equity manager with over 150 employees. The firm is headquartered in London with additional offices located in San Francisco, New York and Hong Kong. CTPF has invested six vehicles across four of PV's products: 1) U.S. II and U.S. IV are vehicles investing in a diversified strategy mix of U.S. domiciled partnerships; 2) Europe II and Europe IV are vehicles investing in a diversity of European private equity funds (primarily buyouts); 3) Asia V which focuses on partnerships in across the Pacific Basin; and 3) Global Annual Fund 2014, which spans all geographies.

Financial Performance Overview: The table below summarizes the changes in the CTPF PV portfolio during the recent quarter and represents the aggregated cash flows and valuation information of all the underlying vehicles. See *Manager Vehicle-Level Performance* on the second to last page of this report for additional manager performance detail.

Pantheon - USD Converted	6/30/2016 Pantheon Total Program	Quarter Change	3/31/2016 Pantheon Total Program
Reporting Metrics	1998-2012, 2015-16		1998-2012, 2015-16
Vintage Years			
# Total Partnerships	232	1	231
# Active Partnerships	148	-21	169
# Liquidated Partnerships	84	22	62
Committed	132,319,094	-44,240	132,363,334
Paid-in	100,250,297	984,910	99,265,387
Uncalled	32,068,797	-1,029,150	33,097,947
% Paid-In	76%	1%	75%
Distributed	128,715,218	1,370,389	127,344,829
Net Asset Value	16,439,242	-282,657	16,721,899
Total Value	145,154,460	1,087,732	144,066,728
DPI	1.28	0.00	1.28
RVPI	0.16	0.00	0.17
TVPI	1.45	0.00	1.45
IRR	7.50%	-0.01%	7.51%
Benchmark TVPIs (Combined VYs):			
Thomson/Cambridge All PE 1st Quartile	1.78	0.00	1.79
Thomson/Cambridge All PE Median	1.37	0.00	1.37
Quartile Ranking	2nd		2nd
% Cash Distribution Yield (Principal and Gain)		8.2%	
\$ Unrealized Appreciation/(Depreciation)		-1,267,567	
% Unrealized Appreciation/(Depreciation)		-7.6%	
\$Total Valuation Change		102,822	
%Total Valuation Change		0.6%	

Note: PV's financial figures represent cash flows through the reporting quarter-end. The valuations represent a majority of NAVs from the reporting quarter (current values) with a minority of values from the prior quarter (lagged values).

Benchmark: Global, All Private Equity

Portfolio Diversification: PV's diversification percentages as of quarter-end are shown in the *Individual Manager Diversification Table* on the last page of this report.

CTPF's PV portfolio is relatively mature spanning more than 12 years of commitments across five vehicles. The PV portfolio is broadly diversified across all key private equity investment strategies: buyouts, venture capital, mezzanine, special situations and distressed debt. By geography, 70% of commitments are with the two U.S. vehicles, 25% with the two Europe vehicles and 5% in the Asia-focused vehicle. The global program spans all key geographies. The portfolio is broadly diversified by industry with the largest industry categories approximating 20%, but most being smaller.

HarbourVest Partners

HarbourVest Partners (HVP) has managed assets for CTPF since 1999. HVP is an independent, 100% employee-owned firm. The firm was started in 1982 as the private equity division of Hancock Insurance and subsequently became independent in 1997. HVP is a large global private equity manager with over 230 employees. The firm is headquartered in Boston with additional offices located in London, Hong Kong, and Tokyo. The six HVP funds in which CTPF has invested are: Buyout VI and X vehicles investing primarily in middle-market and large buyout partnerships; Partnerships VI and Venture X vehicles investing primarily in venture capital partnerships; HIPEP VIII vehicle investing in international partnerships; and 3) Dover VIII vehicle investing in secondary purchases of private equity partnerships.

Financial Performance Overview: The table below summarizes the changes in the CTPF HVP portfolio during the recent quarter and represents the aggregated cash flows and valuation information of all the underlying vehicles. See *Manager Vehicle-Level Performance* on the second to last page of this report for additional manager performance detail.

HarbourVest Partners	6/30/2016 HVP Total Program	Quarter Change	3/31/2016 HVP Total Program
Reporting Metrics	1999-05, 2012-16		1999-05, 2012-16
Vintage Years			
# Total Partnerships	332	32	300
# Active Partnerships	260	32	228
# Liquidated Partnerships	72	0	72
Committed	166,000,000	0	166,000,000
Paid-in	114,385,000	2,575,000	111,810,000
Uncalled	51,615,000	-2,575,000	54,190,000
% Paid-In	69%	2%	67%
Distributed	152,536,198	2,400,445	150,135,753
Net Asset Value	26,058,502	337,476	25,721,026
Total Value	178,594,700	2,737,921	175,856,779
DPI	1.33	-0.01	1.34
RVPI	0.23	0.00	0.23
TVPI	1.56	-0.01	1.57
IRR	8.80%	0.00%	8.80%
Benchmark TVPIs (Combined VYs):			
Thomson/Cambridge All PE 1st Quartile	1.62	0.00	1.63
Thomson/Cambridge All PE Median	1.16	0.00	1.16
Quartile Ranking	2nd		2nd
% Cash Distribution Yield (Principal and Gain)		9.3%	
\$ Unrealized Appreciation/(Depreciation)		-2,237,524	
% Unrealized Appreciation/(Depreciation)		-8.7%	
\$Total Valuation Change		162,921	
%Total Valuation Change		0.6%	

Note: HVP states that financial figures represent cash flows and valuations (NAVs) through the reporting quarter-end.

Benchmark: US, All Venture Capital and All Buyouts

Portfolio Diversification: HVP's diversification percentages as of quarter-end are shown in the *Individual Manager Diversification Table* on the last page of this report.

CTPF's investments in the 2006 HVP Partnerships VI (venture capital) and Buyouts VI fund-of-funds are mature and liquidating. CTPF's investments in the vintage 2012 Dover VIII secondary fund and the 2015 Venture X and Buyouts X fund-of-funds are investing. The original HVP commitments were allocated 40% to the venture capital partnership and 60% to the buyout partnership. Both vehicles focus predominantly on U.S. partnerships although there is approximately 25% non-U.S. exposure at the portfolio company level (U.S. partnerships making non-U.S. investments). The portfolio is broadly diversified by industry with the largest industry categories approximating 20%, but most being smaller.

Mesirow Financial Private Equity

Mesirow Financial Private Equity (MPE) is the private equity division of Mesirow Financial an independent, 100% employee-owned diversified financial services. MPE was started in 1982 to manage direct private equity partnerships and began a fund-of-funds product in 1998. MPE is a boutique in character focusing primarily on U.S. and European partnerships. MPE has over 40 employees including dedicated support personnel. The private equity team is located in Mesirow Financial's Chicago headquarters. CTPF has invested in seven vehicles across both of MPE's products as follows: 1) the four fund-of-funds vehicles invest in a diversified strategy mix of U.S. domiciled partnerships, with a moderate exposure to Western European partnerships; and 2) three co-investment funds that make select direct company investment alongside institutional private equity partnerships (primarily those invested in by the MPE fund-of-funds vehicles).

Financial Performance Overview: The table below summarizes the changes in the CTPF MPE portfolio during the recent quarter and represents the aggregated cash flows and valuation information of all the underlying vehicles. See *Manager Vehicle-Level Performance* on the second to last page of this report for additional manager performance detail.

Mesirow Financial	6/30/2016	Quarter	3/31/2016
Reporting Metrics	MFPE Total	Change	MFPE Total
	Program		Program
Vintage Years	1999-2013		1999-2013
# Total Partnerships	161	0	161
# Active Partnerships	152	0	152
# Liquidated Partnerships	9	0	9
Committed	170,000,000	0	170,000,000
Paid-in	161,050,000	0	161,050,000
Uncalled	8,950,000	0	8,950,000
% Paid-In	95%	0%	95%
Distributed	179,579,452	2,125,000	177,454,452
Net Asset Value	78,325,104	289,055	78,036,049
Total Value	257,904,556	2,414,055	255,490,501
DPI	1.12	0.01	1.10
RVPI	0.49	0.00	0.48
TVPI	1.60	0.01	1.59
IRR	8.80%	0.10%	8.70%
Benchmark TVPIs (Combined VYs):			
Thomson/Cambridge All PE 1st Quartile	1.78	0.00	1.78
Thomson/Cambridge All PE Median	1.37	0.00	1.37
Quartile Ranking	2nd		2nd
% Cash Distribution Yield (Principal and Gain)		2.7%	
\$ Unrealized Appreciation/(Depreciation)		289,055	
% Unrealized Appreciation/(Depreciation)		0.4%	
\$Total Valuation Change		2,414,055	
%Total Valuation Change		3.1%	

Note: MPE states that financial figures represent cash flows and valuations (NAVs) through the reporting quarter-end.

Benchmark: Global, All Private Equity

Portfolio Diversification: MPE's diversification percentages as of quarter-end are shown in the *Individual Manager Diversification Table* on the last page of this report.

CTPF's MPE portfolio is mature spanning more than 12 years of commitments across seven vehicles. The MPE portfolio is broadly diversified across all key private equity investment strategies. By geography, commitments are focused primarily on U.S. domiciled partnerships, with approximately 25% target to European partnerships. MPE may selectively expand into Asian partnerships in the future. The portfolio is broadly diversified by industry with the largest industry categories approximating 20%, but most being smaller.

Muller & Monroe

Muller & Monroe (M²) is a minority-owned business enterprise that was formed in 1999. The boutique private equity firm is located in Chicago and has nine professionals with additional support staff. The firm has two fund-of-funds products. One fund focuses on minority/women-led managers and mid-west based/mid-west focused managers. The second fund represents M²'s core strategy of investing in smaller/newer lower middle market fund managers. CTPF has invested in both products.

Financial Performance Overview: The table below summarizes the changes in the CTPF M2 portfolio during the recent quarter and represents the aggregated cash flows and valuation information of all the underlying vehicles. See *Manager Vehicle-Level Performance* on the second to last page of this report for additional manager performance detail.

Muller & Monroe	6/30/2016		3/31/2016
Reporting Metrics	M2 Total Program	Quarter Change	M2 Total Program
Vintage Years	2003-2010		2003 - 2010
# Total Partnerships	23	0	23
# Active Partnerships	23	0	23
# Liquidated Partnerships	0	0	0
Committed	35,000,000	0	35,000,000
Paid-in	30,819,880	53,641	30,766,239
Uncalled	4,766,546	-53,641	4,820,187
% Paid-In	86%	0%	86%
Distributed	22,178,095	297,948	21,880,147
Net Asset Value	12,707,561	151,123	12,556,438
Total Value	34,885,656	449,071	34,436,585
DPI	0.72	0.01	0.71
RVPI	0.41	0.00	0.41
TVPI	1.13	0.01	1.12
IRR	2.55%	0.14%	2.41%
Benchmark TVPIs (Combined VYs):			
Thomson/Cambridge All PE 1st Quartile	1.94	0.01	1.93
Thomson/Cambridge All PE Median	1.54	0.00	1.54
Quartile Ranking	4th		4th
% Cash Distribution Yield (Principal and Gain)		2.4%	
\$ Unrealized Appreciation/(Depreciation)		97,482	
% Unrealized Appreciation/(Depreciation)		0.8%	
\$Total Valuation Change		395,430	
%Total Valuation Change		3.1%	

Note: M2 states that financial figures represent cash flows and valuations (NAVs) through the reporting quarter-end.

Benchmark: US, All Venture Capital and All Buyouts

Portfolio Diversification: M2's diversification percentages as of quarter-end are shown in the *Individual Manager Diversification Table* on the last page of this report.

CTPF's M² portfolio is maturing, with the MWBE/Mid-west vehicle committing from 2003-2006 and the second lower middle market vehicle committing from 2006-2009. The M² portfolios are predominantly small buyout-oriented with modest exposures in venture capital and debt-related partnerships. Geographically, the partnerships are all U.S. domiciled. Company exposure is national, but with a majority exposure in the Mid-West and Central states regions due to the geographic restrictions in the first fund. The portfolio has broad industry exposure with slightly larger concentrations than the global developed manager program products.

Hispania Capital Partners

Hispania is a minority-owned business enterprise that was formed in 2003. The boutique firm is located in Chicago and has seven professionals with additional support staff. Hispania manages direct investment partnerships (not fund-of-funds). The firm demographically targets companies that are strategically targeting the U.S. Hispanic market for growth and/or are Hispanic-owned or managed. Hispania makes growth equity or buyout investments in lower-middle market companies in the U.S. and Puerto Rico. Hispania focuses on the business services, consumer products, education and health care services industry sectors. CTPF has invested in two Hispania partnerships.

Financial Performance Overview: The table below summarizes the changes in the CTPF Hispania portfolio during the recent quarter and represents the aggregated cash flows and valuation information of all the underlying vehicles. See *Manager Vehicle-Level Performance* on the second to last page of this report for additional manager performance detail.

Hispania I & II	6/30/2016 Hispania Total Program	Quarter Change	3/31/2016 Hispania Total Program
Reporting Metrics	2003 & 2009		2003 & 2009
Vintage Years			
# Total Partnerships	2	0	2
# Active Partnerships	1	0	1
# Liquidated Partnerships	1	0	1
Committed	15,000,000	0	15,000,000
Paid-in	13,478,422	0	13,478,422
Uncalled	1,521,578	0	1,521,578
% Paid-In	90%	0%	90%
Distributed	12,388,438	3,522,945	8,865,493
Net Asset Value	5,071,415	-3,553,066	8,624,481
Total Value	17,459,853	-30,121	17,489,974
DPI	0.92	0.26	0.66
RVPI	0.38	-0.26	0.64
TVPI	1.30	0.00	1.30
IRR	6.42%	-0.16%	6.58%
Benchmark TVPIs (Combined VYs):			
Thomson/Cambridge All PE 1st Quartile	2.12	-0.01	2.13
Thomson/Cambridge All PE Median	1.86	0.02	1.85
Quartile Ranking	4th		4th
% Cash Distribution Yield (Principal and Gain)		40.8%	
\$ Unrealized Appreciation/(Depreciation)		-3,553,066	
% Unrealized Appreciation/(Depreciation)		-41.2%	
\$Total Valuation Change		-30,121	
%Total Valuation Change		-0.3%	

Note: Hispania's financial figures represent cash flows and capital account information through the reporting quarter-end.

Benchmark: US, All Buyouts

Portfolio Diversification: Hispania's diversification percentages as of quarter-end are shown in the *Individual Manager Diversification Table* on the last page of this report.

Regarding CTPF's investments, Hispania's first 2003 fund is mature, and the second 2009 fund is developing. The majority of the capital has gone to growth equity, with a small portion in control buyouts. Geographically, the portfolio is concentrated in the U.S. East and Mid-West. Industry exposure is primarily business services and consumer/retail.

Pharos Capital Group

Pharos is a minority-owned business enterprise that was formed in 2005. The boutique firm is headquartered in Dallas, with offices in Nashville and Baltimore. Pharos has 13 professionals with additional support staff. Pharos manages direct investment partnerships (not fund-of-funds). The firm targets companies in underserved markets that have less competition and lower pricing by employing ethnic demographic and geographic considerations. Pharos focuses on later-stage equity fundings for internal growth, acquisitions, leveraged buyouts, management buyouts, or recapitalizations across industry sectors, with particular emphasis on healthcare, business services, and technology.

Financial Performance Overview: The table below summarizes the changes in the CTPF Pharos portfolio during the recent quarter and represents the aggregated cash flows and valuation information of all the underlying vehicles. See *Manager Vehicle-Level Performance* on the second to last page of this report for additional manager performance detail

Pharos II-A & III	6/30/2016 Pharos Total Program	Quarter Change	3/31/2016 Pharos Total Program
Reporting Metrics			
Vintage Years	2005 & 2013		2005 & 2013
# Total Partnerships	2	0	2
# Active Partnerships	2	0	2
# Liquidated Partnerships	0	0	0
Committed	22,500,000	0	22,500,000
Paid-in	14,775,000	1,425,000	13,350,000
Uncalled	7,725,000	-1,425,000	9,150,000
% Paid-In	66%	6%	59%
Distributed	4,819,924	0	4,819,924
Net Asset Value	12,595,031	1,401,278	11,193,753
Total Value	17,414,955	1,401,278	16,013,677
DPI	0.33	-0.03	0.36
RVPI	0.85	0.01	0.84
TVPI	1.18	-0.02	1.20
IRR	5.44%	-0.42%	5.86%
Benchmark TVPIs (Combined VYs):			
Thomson/Cambridge All PE 1st Quartile	1.69	0.02	1.66
Thomson/Cambridge All PE Median	1.29	0.00	1.30
Quartile Ranking	3rd		3rd
% Cash Distribution Yield (Principal and Gain)		0.0%	
\$ Unrealized Appreciation/(Depreciation)		-23,722	
% Unrealized Appreciation/(Depreciation)		-0.2%	
\$Total Valuation Change		-23,722	
%Total Valuation Change		-0.2%	

Note: Pharos's financial figures represent cash flows and capital account information through the reporting quarter-end.

Benchmark: US, All Buyouts

Portfolio Diversification: Pharos's diversification percentages as of quarter-end are shown in the *Individual Manager Diversification Table* on the last page of this report.

CTPF's 2005 investment in Pharos II-A is mature and the 2013 investment in Pharos III is investing. The majority of the capital has gone to growth equity, with a smaller portion in control buyouts. Geographically, the portfolio is predominantly in the Mid-west, followed by the South East with representations nationally. Health care and business services are the largest industry categories.

Palladium Equity Partners

Palladium is a minority-owned business enterprise that was formed in 1997. The boutique firm is headquartered in New York, with an office in Los Angeles. Palladium has 17 professionals with additional support staff. Palladium manages direct investment partnerships (not fund-of-funds). The firm has a particular focus investing in companies that are well-positioned to capitalize on the fast-growing U.S. Hispanic market. Palladium provides equity capital to companies seeking to grow, restructure or provide liquidity for shareholders. Industries targeted include business services, financial services, consumer/retail, food/restaurants, healthcare, manufacturing, and media.

Financial Performance Overview: The table below summarizes the changes in the CTPF Palladium portfolio during the recent quarter and represents the aggregated cash flows and valuation information of all the underlying vehicles. See *Manager Vehicle-Level Performance* on the second to last page of this report for additional manager performance detail.

Palladium III & IV	6/30/2016 Palladium Total Program	Quarter Change	3/31/2016 Palladium Total Program
Reporting Metrics	2005 & 2012		2005 & 2012
Vintage Years	2005 & 2012		2005 & 2012
# Total Partnerships	2	0	2
# Active Partnerships	2	0	2
# Liquidated Partnerships	0	0	0
Committed	17,500,000	0	17,500,000
Paid-in	12,946,535	79,652	12,866,883
Uncalled	5,469,293	-36,876	5,506,169
% Paid-In	69%	0%	69%
Distributed	11,450,890	142,350	11,308,540
Net Asset Value	7,507,473	-73,135	7,580,608
Total Value	18,958,363	69,215	18,889,148
DPI	0.88	0.01	0.88
RVPI	0.58	-0.01	0.59
TVPI	1.46	0.00	1.47
IRR	11.20%	0.00%	11.20%
Benchmark TVPIs (Combined VYs):			
Thomson/Cambridge All PE 1st Quartile	1.78	0.01	1.78
Thomson/Cambridge All PE Median	1.44	0.03	1.41
Quartile Ranking	2nd		2nd
% Cash Distribution Yield (Principal and Gain)		1.9%	
\$ Unrealized Appreciation/(Depreciation)		-152,787	
% Unrealized Appreciation/(Depreciation)		-2.0%	
\$Total Valuation Change		-10,437	
%Total Valuation Change		-0.1%	

Note: Palladium states that financial figures represent cash flows and valuations (NAVs) through the reporting quarter-end.

Benchmark: US, All Buyouts

Portfolio Diversification: Palladium's diversification percentages as of quarter-end are shown in the *Individual Manager Diversification Table* on the last page of this report.

CTPF's 2005 Palladium investment is mature. All of the capital has been invested in buyout transactions. The portfolio companies are all in the U.S. and are geographically diverse. Business/financial services and health care are the two largest industry categories.

ICV Partners

ICV is a minority business enterprise that was formed in 1998 as Inner City Ventures. The firm has offices in New York and Atlanta. ICV has 13 professionals with additional support staff. ICV manages direct investment partnerships (not fund-of-funds). The firm values ethnic diversity and emphasizes investments where it can build MBEs of scale. ICV focuses on corporate divestitures and management buyouts, family successions and recapitalizations seeking to invest equity of 45% to 55% of the transaction value. Industry specialties include manufacturing, consumer goods and services, business services, food and beverage, commercial services, and health care.

Financial Performance Overview: The table below summarizes the changes in the CTPF ICV portfolio during the recent quarter and represents the aggregated cash flows and valuation information of all the underlying vehicles. See *Manager Vehicle-Level Performance* on the second to last page of this report for additional manager performance detail.

ICV II & III	6/30/2016 ICV Total Program	Quarter Change	3/31/2016 ICV Total Program
Reporting Metrics	2006 & 2013		2006 & 2013
Vintage Years			
# Total Partnerships	2	0	2
# Active Partnerships	2	0	2
# Liquidated Partnerships	0	0	0
Committed	17,500,000	0	17,500,000
Paid-in	13,414,867	0	13,414,867
Uncalled	4,085,133	0	4,085,133
% Paid-In	77%	0%	77%
Distributed	10,928,689	0	10,928,689
Net Asset Value	9,890,732	328,307	9,562,425
Total Value	20,819,421	328,307	20,491,114
DPI	0.81	0.00	0.81
RVPI	0.74	0.02	0.71
TVPI	1.55	0.02	1.53
IRR	12.51%	0.11%	12.40%
Benchmark TVPIs (Combined VYs):			
Thomson/Cambridge All PE 1st Quartile	1.74	-0.03	1.77
Thomson/Cambridge All PE Median	1.37	0.03	1.34
Quartile Ranking	2nd		2nd
% Cash Distribution Yield (Principal and Gain)		0.0%	
\$ Unrealized Appreciation/(Depreciation)		328,307	
% Unrealized Appreciation/(Depreciation)		3.4%	
\$Total Valuation Change		328,307	
%Total Valuation Change		3.4%	

Note: ICV states that financial figures represent cash flows and valuations (NAVs) through the reporting quarter-end.

Benchmark: US, All Buyouts

Portfolio Diversification: ICV's diversification percentages as of quarter-end are shown in the *Individual Manager Diversification Table* on the last page of this report.

CTPF's 2005 ICV investment is developing. The majority of the capital has gone to growth equity. Geographically, the portfolio is predominantly in the Mid-Atlantic, followed by the Mid-West and Central states. The industry sectors include business services and consumer/retail.

SynCom Venture Partners

Syndicated Communications Inc. (SynCom) was formed in 1977 with a mission to diversify the ownership of media in the United States. Today SynCom is a minority-owned business enterprise that focuses on venture capital investments of \$5 to \$15 million in companies along their growth curves. The boutique firm is located in Silver Springs, MD, and has 13 professionals with additional support staff. SynCom manages direct investment partnerships (not fund-of-funds). The firm seeks to support entrepreneurship within underserved communities. SynCom targets primarily early-stage investments in next-generation rapidly growing companies in the digital media, mobile technology, and web based services sectors.

Financial Performance Overview: The table below summarizes the changes in the CTPF SynCom portfolio during the recent quarter and represents the aggregated cash flows and valuation information of all the underlying vehicles. See *Manager Vehicle-Level Performance* on the second to last page of this report for additional manager performance detail.

SynCom V	6/30/2016 SynCom Ventures V	Quarter Change	3/31/2016 SynCom Ventures V
Reporting Metrics			
Vintage Years	2006		2006
# Total Partnerships	1	0	1
# Active Partnerships	1	0	1
# Liquidated Partnerships	0	0	0
Committed	7,500,000	0	7,500,000
Paid-in	7,479,128	19,982	7,459,146
Uncalled	20,872	-19,982	40,854
% Paid-In	100%	0%	99%
Distributed	0	0	0
Net Asset Value	2,198,605	11,429	2,187,176
Total Value	2,198,605	11,429	2,187,176
DPI	0.00	0.00	0.00
RVPI	0.29	0.00	0.29
TVPI	0.29	0.00	0.29
IRR	-17.47%	0.95%	-18.42%
Benchmark TVPIs (Combined VYs):			
Thomson/Cambridge All PE 1st Quartile	1.80	0.06	1.74
Thomson/Cambridge All PE Median	1.34	0.00	1.34
Quartile Ranking	4th		4th
% Cash Distribution Yield (Principal and Gain)		0.0%	
\$ Unrealized Appreciation/(Depreciation)		-8,553	
% Unrealized Appreciation/(Depreciation)		-0.4%	
\$Total Valuation Change		-8,553	
%Total Valuation Change		-0.4%	

Note: SynCom states that financial figures represent cash flows and valuations (NAVs) through the reporting quarter-end.

Benchmark: US, All Venture Capital

Portfolio Diversification: SynCom's diversification percentages as of quarter-end are shown in the *Individual Manager Diversification Table* on the last page of this report.

CTPF's 2006 Syncom investment is maturing. All of the capital has gone to venture capital investments. The portfolio is geographically diverse within the U.S. with the largest weighting in the West. The portfolio is entirely composed on investments in the media/communications and software/internet industry sectors.

CTPF - PRIVATE EQUITY VEHICLE HOLDINGS

June 30, 2016

Private Equity - Manager Detail

Portfolio	VY	Committed	Paid-In	Uncalled	% PI	Distributed	NAV	DPI	RVPI	TVPI	IRR
Developed Manager Program											
1 1996 BPF Trust	1996	4,988,363	4,869,285	119,078	98%	9,117,641	76,842	1.87	0.02	1.89	14.3%
2 1998 BPF Trust	1998	9,587,574	9,408,420	179,153	98%	13,341,043	277,459	1.42	0.03	1.45	4.8%
3 2000 BPF Trust	2000	24,628,095	23,546,436	1,081,659	96%	36,421,699	3,129,266	1.55	0.13	1.68	7.3%
4 2001 BPF Trust	2001	34,668,854	33,071,211	1,597,643	95%	51,695,039	6,605,303	1.56	0.20	1.76	8.8%
5 2001 BPF Non-US Trust	2001	14,422,332	13,958,396	463,936	97%	24,446,947	2,237,489	1.75	0.16	1.91	12.3%
6 2005 ASP US Fund	2005	7,000,000	6,646,500	353,500	95%	6,255,463	3,329,590	0.94	0.50	1.44	6.6%
7 2005 ASP Non-US Fund	2005	3,000,000	2,851,500	148,500	95%	2,403,684	1,306,596	0.84	0.46	1.30	4.6%
8 2007 ASP Non-US Secondary	2007	5,000,000	4,816,097	352,500	93%	2,733,214	3,537,738	0.57	0.73	1.30	5.9%
9 2008 ASP US Fund	2008	5,000,000	4,443,500	556,500	89%	3,552,369	3,918,429	0.80	0.88	1.68	15.4%
10 2008 ASP Non-US Fund	2008	14,000,000	11,557,000	2,443,000	83%	4,929,167	10,688,473	0.43	0.92	1.35	8.9%
11 2008 ASP Direct Fund	2008	1,000,000	963,500	36,500	96%	982,281	1,067,544	1.02	1.11	2.13	15.9%
12 2009 ASP Co-Invest II	2009	10,000,000	8,535,000	1,465,000	85%	9,419,011	8,787,130	1.10	1.03	2.13	28.4%
13 2010 ASP US Fund	2010	10,000,000	6,980,000	3,020,000	70%	2,515,078	7,811,058	0.36	1.12	1.48	14.6%
14 2010 ASP Developed Non-US	2010	6,000,000	4,164,000	1,836,000	69%	1,297,525	3,696,844	0.31	0.89	1.20	7.4%
15 2010 ASP Emerging Non-US	2010	2,000,000	1,438,000	562,000	72%	73,452	1,757,188	0.05	1.22	1.27	9.7%
16 2010 ASP Direct Fund	2010	2,000,000	1,844,000	156,000	92%	957,722	1,835,858	0.52	1.00	1.51	12.5%
17 2011 ASP US Fund	2011	10,000,000	6,725,000	3,275,000	67%	1,694,830	7,355,078	0.25	1.09	1.35	13.1%
18 2011 ASP Developed Non-US	2011	6,000,000	3,876,000	2,124,000	65%	1,160,185	3,388,313	0.30	0.87	1.17	7.5%
19 2011 ASP Emerging Non-US	2011	2,000,000	1,327,000	673,000	66%	124,875	1,562,388	0.09	1.18	1.27	9.9%
20 2011 ASP Direct Fund	2011	2,000,000	1,750,000	250,000	88%	647,901	2,217,927	0.37	1.27	1.64	18.4%
21 2012 ASP Global Secondary 5	2012	30,000,000	18,381,000	11,619,000	61%	4,993,869	12,966,211	0.27	0.71	0.98	-1.7%
22 2012 ASP Global Fund	2012	15,000,000	8,788,500	6,211,500	59%	902,187	8,881,361	0.10	1.01	1.11	6.3%
23 2013 ASP Global Fund	2013	25,000,000	12,125,000	12,875,000	49%	899,511	11,864,854	0.07	0.98	1.05	3.6%
24 2014 ASP Global Fund	2014	20,000,000	7,270,000	12,730,000	36%	616,432	6,990,364	0.08	0.96	1.05	4.0%
25 2014 Co-Investment Fund III	2014	10,000,000	2,701,000	7,299,000	27%	-	2,766,715	-	1.02	1.02	N/A
26 2015 ASP US Fund	2015	11,000,000	550,000	10,450,000	5%	-	859,749	-	1.56	1.56	56.3%
27 2015 ASP International Fund	2015	7,000,000	175,000	6,825,000	3%	-	179,531	-	1.03	1.03	2.6%
28 2015 Direct Venture/Growth Fund	2015	2,000,000	190,000	1,810,000	10%	-	137,466	-	0.72	0.72	-27.7%
Total ASP		293,295,218	202,951,345	90,512,469	69%	181,181,125	119,232,764	0.89	0.59	1.48	8.9%
29 Pantheon USA III	1998	35,000,000	34,230,000	770,000	98%	38,255,000	424,485	1.12	0.01	1.13	2.0%
30 Pantheon USA IV	2000	35,000,000	33,425,000	1,575,000	96%	49,630,001	4,189,843	1.48	0.13	1.61	-27.7%
31 Pantheon Europe II (in USD)	2000	18,646,124	18,269,797	376,327	98%	33,516,202	200,877	1.83	0.01	1.85	8.9%
32 Pantheon Asia V	2006	5,000,000	4,562,500	437,500	91%	3,222,500	3,389,797	0.71	0.74	1.45	2.0%
33 Pantheon Europe VI (in USD)	2007	8,672,970	7,334,392	1,338,578	85%	4,091,515	5,882,999	0.56	0.80	1.36	10.2%
34 Pantheon Global Annual Series 2014	2014	30,000,000	2,428,608	27,571,392	8%	-	2,351,241	-	0.97	0.97	18.3%
Total Pantheon (USD Converted)		132,319,094	100,250,297	32,068,797	76%	128,715,218	16,439,242	1.28	0.16	1.45	7.5%
35 HVP Partnerships 6	1999	40,000,000	39,200,000	800,000	98%	45,473,812	4,827,661	1.16	0.12	1.28	3.6%
36 HVP Buyouts 6	1999	60,000,000	57,300,000	2,700,000	96%	101,002,400	4,727,259	1.76	0.08	1.85	12.0%
37 HVP Dover VIII	2012	16,000,000	12,400,000	3,600,000	78%	5,892,553	11,057,772	0.48	0.89	1.37	27.6%
38 HVP HIPEP VII	2014	20,000,000	3,850,000	16,150,000	19%	167,433	3,744,903	0.04	0.97	1.02	2.0%
39 HVP Venture Capital X	2015	9,000,000	585,000	8,415,000	7%	-	585,647	-	-	-	NM
40 HVP Buyouts X	2015	21,000,000	1,050,000	19,950,000	5%	-	1,115,260	-	-	-	NM
Total HVP		166,000,000	114,385,000	51,615,000	69%	152,536,198	26,058,502	1.33	0.23	1.56	8.8%
41 Mesirow Partnerships I	1999	40,000,000	40,000,000	-	100%	44,776,744	2,227,536	1.12	0.06	1.18	2.5%
42 Mesirow Partnerships II	2001	45,000,000	45,000,000	-	100%	73,933,987	12,585,561	1.64	0.28	1.92	12.5%
43 Mesirow Partnerships IV	2006	20,000,000	18,000,000	2,000,000	90%	13,303,007	14,655,545	0.74	0.81	1.55	9.9%
44 Mesirow Partnerships V	2009	20,000,000	14,400,000	5,600,000	72%	4,603,949	18,005,138	0.32	1.25	1.57	15.9%
45 Mesirow Capital Pttrs VIII	2001	5,000,000	5,000,000	-	100%	10,110,944	-	2.02	-	2.02	22.3%
46 Mesirow Capital Pttrs IX	2005	10,000,000	9,550,000	450,000	96%	3,272,640	2,814,697	0.34	0.29	0.64	-5.8%
47 Mesirow Capital Pttrs X	2009	30,000,000	29,100,000	900,000	97%	29,578,181	28,036,627	1.02	0.96	1.98	21.6%
Total Mesirow		170,000,000	161,050,000	8,950,000	95%	179,579,452	78,325,104	1.12	0.49	1.60	8.8%
Total Developed Manager Program		761,614,312	578,636,642	183,146,266	76%	642,011,993	240,055,612	1.11	0.41	1.52	n/a

CTPF - PRIVATE EQUITY VEHICLE HOLDINGS

June 30, 2016

Private Equity - Manager Detail

	Portfolio	VY	Committed	Paid-In	Uncalled	% PI	Distributed	NAV	DPI	RVPI	TVPI	IRR
	Emerging Manager Program											
48	M2 Illinois	2004	25,000,000	21,309,643	4,187,516	83%	12,939,772	8,081,363	0.61	0.38	0.99	-0.3%
49	M2 PEFOF (Developing)	2007	10,000,000	9,510,237	579,030	94%	9,238,323	4,626,198	0.97	0.49	1.46	9.2%
	Total Muller & Monroe		35,000,000	30,819,880	4,766,546	86%	22,178,095	12,707,561	0.72	0.41	1.13	2.6%
50	Hispania I	2003	5,000,000	5,000,000	-	100%	916,500	-	0.18	-	0.18	N/A
51	Hispania II	2009	10,000,000	8,478,422	1,521,578	85%	11,471,938	5,071,415	1.35	0.60	1.95	25.8%
	Total Hispania		15,000,000	13,478,422	1,521,578	90%	12,388,438	5,071,415	0.92	0.38	1.30	6.6%
52	Pharos II-A	2005	7,500,000	7,425,000	75,000	99%	4,484,571	5,780,161	0.60	0.78	1.38	5.4%
53	Pharos III	2013	15,000,000	7,350,000	7,650,000	49%	335,353	6,814,870	0.05	0.93	0.97	N/A
	Total Pharos		22,500,000	14,775,000	7,725,000	66%	4,819,924	12,595,031	0.33	0.85	1.18	5.4%
54	Paladium III	2005	7,500,000	8,223,140	105,449	99%	11,081,605	3,123,727	1.35	0.38	1.73	12.3%
55	Paladium IV	2012	10,000,000	4,723,395	5,363,844	46%	369,285	4,383,746	0.08	0.93	1.01	1.4%
	Total Palladium		17,500,000	12,946,535	5,469,293	69%	11,450,890	7,507,473	0.88	0.58	1.46	11.2%
56	ICV II	2005	7,500,000	7,165,769	334,231	96%	10,870,708	2,696,160	1.52	0.38	1.89	13.5%
57	ICV III	2013	10,000,000	6,249,098	3,750,902	62%	57,981	7,194,572	0.01	1.15	1.16	7.3%
	Total ICV		17,500,000	13,414,867	4,085,133	77%	10,928,689	9,890,732	0.81	0.74	1.55	12.5%
58	SynCom V	2006	7,500,000	7,479,128	20,872	100%	-	2,198,605	-	0.29	0.29	-17.5%
	Total Emerging Manager Program		115,000,000	92,913,832	23,588,422	79%	61,766,036	49,970,817	0.66	0.54	1.20	n/a
	Total Private Equity		876,614,312	671,550,474	206,734,688	76%	703,778,029	290,026,429	1.05	0.43	1.48	n/a

Note: The financial figures represent cash flows through the reporting quarter-end. The valuations represent a majority of NAVs from the reporting quarter (current values) with a minority of values from the prior quarter (lagged values).

Private Equity Portfolio Diversification

06/30/16

	ASP	HVP	MPE	PV	M2	Hispania	Pharos	Palladium	ICV	SynCom	Total
Strategy											
Venture/Growth	26%	26%	42%	34%	31%	62%	39%	0%	0%	100%	31%
Buyout	61%	73%	51%	53%	63%	38%	61%	100%	100%	0%	61%
Special Situations	2%	0%	2%	13%	0%	0%	0%	0%	0%	0%	2%
Mezzanine	9%	1%	4%	0%	5%	0%	0%	0%	0%	0%	5%
Distressed	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%
Total Portfolio	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Geography by Underlying Portfolio Company Exposure											
Total # Companies	8,665	3,211	2,593	998	288	9	12	8	0	12	15,796
North Atlantic	9%	5%	33%	8%	16%	0%	16%	5%	0%	25%	15%
Mid-Atlantic	4%	17%	0%	0%	12%	10%	21%	15%	0%	17%	5%
South East	5%	5%	10%	4%	10%	0%	41%	18%	46%	0%	10%
Mid-West	11%	8%	7%	3%	22%	44%	22%	20%	19%	0%	11%
South West/Rockies	11%	8%	10%	0%	10%	0%	0%	25%	17%	25%	10%
West/Pacific Northwest	16%	14%	23%	9%	25%	46%	0%	18%	18%	33%	18%
Total US	56%	57%	82%	24%	95%	100%	100%	100%	100%	100%	69%
Europe	31%	27%	11%	42%	0%	0%	0%	0%	0%	0%	20%
Pacific Basin	7%	8%	2%	33%	0%	0%	0%	0%	0%	0%	6%
Rest of World	6%	8%	5%	2%	5%	0%	0%	0%	0%	0%	5%
Total International	44%	43%	18%	76%	5%	0%	0%	0%	0%	0%	31%
Total Portfolio	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Industry by Underlying Portfolio Company Exposure											
Total # Companies	8,665	3,211	2,593	998	288	9	12	8	0	12	15,796
Basic Industry	17%	8%	6%	14%	27%	0%	0%	10%	0%	0%	12%
Business/Financial Services	12%	14%	15%	6%	5%	0%	16%	38%	14%	0%	13%
Computer Hardware/Electronics	28%	0%	0%	0%	12%	0%	20%	0%	0%	0%	13%
Consumer/Retail	17%	17%	24%	25%	30%	31%	0%	27%	18%	0%	20%
Health Care (incl Biotech/Devices)	14%	18%	7%	16%	3%	31%	54%	5%	32%	0%	15%
Media/Telecom	3%	6%	17%	1%	13%	0%	2%	5%	0%	69%	8%
Other	1%	18%	1%	3%	7%	38%	8%	7%	19%	0%	4%
Software/Internet	0%	19%	26%	26%	1%	0%	0%	0%	17%	31%	11%
Utilities/Energy	8%	0%	4%	9%	3%	0%	0%	7%	0%	0%	5%
Total Portfolio	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Information approximates exposures based on manager provided percentage figures. The percentages were multiplied by CTPF's individual capital accounts. Any cash has been apportioned across the exposures according to the percentage weightings.

Appendix

Terms and Glossary

Private Equity: Refers to companies that are not quoted on the stock exchange. Investments are typically illiquid in nature. Ownership consists of a limited partnership interest.

Vintage Year: The year in which a private equity fund makes its first investment.

Commitment: The amount of a limited partner's obligation to a private equity fund.

Capital Contribution: The amount of capital called or drawn down by the general partner for an investment and also fees and expenses. Capital contributed is also referred to as paid-in capital and represents the amount of capital paid-into underlying investments, or companies.

Recycling/Reinvestment and Recalable Cash Flows: Private equity vehicles are usually characterized by the prohibition (unless stipulated by agreement) to reinvest proceeds or allow redemptions. This means that unless otherwise agreed to, private equity funds must distribute proceeds from investments to limited partners and cannot reinvest that capital. In some cases, distributions are "recalable", that is, after the fund distributes proceeds to its investors, it can draw down the same capital again, which makes it possible for the fund to draw capital in excess of its total committed capital.

Distributions include both recalable and non-recalable distributions. This means that a recalable distribution must be treated as an actual distribution and, if and when that distribution is called again, it must be treated as additional paid-in capital but must not reduce unfunded commitments or change cumulative committed capital.

It should be noted that recalable distributions have an impact on the metric calculations. For example, this recalable feature means that cumulative paid-in capital can be higher than cumulative committed capital. It also means that, all other things being equal, the DPI, RVPI, and TVPI multiples will be lower for funds with recalable distributions as the denominator will be increased. It also means that the PIC multiple (paid-in capital to cumulative committed capital) will be higher for funds with recalable distributions, all other things being equal. (Source: GIPS Guidance Statement on Private Equity, January 2011)

Distribution: Are the returns of cash or securities that an investor in a private equity fund receives.

Market Value: Represents the carrying value of the investments. Market value is commonly referred to as the NAV, or net asset value.

Internal Rate of Return (IRR): Is the CFA Institute GIPS approved methodology to calculate return performance of private equity investments. The IRR uses the sum of present value of cash drawdowns (money invested), the present value of distributions (money returned from investments) and the current value of unrealized investments and applies a discount. The IRR is a dollar weighted calculation and accounts for the timing and size of flows, while the TWR seeks to mitigate the timing effects of the associated flows.

Pooled IRR: Is an IRR calculation that treats the ThomsonONE database as a single portfolio. The initial database flow represents the total market value of the ThomsonONE database (if any) and the database is then adjusted for periodic flows thereafter.

J Curve Effect: Is a common phenomenon associated with a developing private equity program. The actual curve is realized by plotting the return generated by a private equity fund against time (from inception to termination). In the early years of a developing program the payment of management fees out of drawn down notices does not produce an equivalent book value. Consequently, a private equity fund will initially show a negative return. For more detailed information on the "J-Curve Effect" ask to see Callan's Whitepaper on the topic.

Major Components of Private Equity

Venture Capital

- **Seed Capital** – An initial state of a company’s growth characterized by a founding management team, business plan development, prototype development, and beta testing.
 - **Series A – first round of institutional investment capital**
 - **Series B – second round of institutional investment capital**
 - **Series C – third round of institutional investment capital (Source: VCExperts)**
- **Early Stage** – A state of a company that typically has completed its seed stage and has a founding or core senior management team, has proven its concept or completed its beta test, has minimal revenues, and no positive earnings or cash flows. (Source: VCExperts)
- **Later Stage** – A fund investment strategy involving financing for the expansion of a company that is producing, shipping and increasing its sales volume. Later stage funds often provide the financing to help a company achieve critical mass in order to position its shareholders for an Exit Event, e.g., an IPO or strategic sale of the company. (Source: VCExperts)

Buyouts / Corporate Finance

- **Leveraged Buyout** – A takeover of a company, using a combination of equity and borrowed funds. Generally, the target company’s assets act as the collateral for the loans taken out by the acquiring group. The acquiring group then repays the loan from the cash flow of the acquired company. For example, a group of investors may borrow funds, using the assets of the company as collateral, in order to take over a company. Or the management of the company may use this vehicle as a means to regain control of the company by converting a company from public to private. In most LBOs, public shareholders receive a premium to the market price of the shares. (Source: VCExperts)
- **Management Buyout** – A private equity firm will often provide financing to enable current operating management to acquire or to buy at least 50 per cent of the business they manage. In return, the private equity firm usually receives a stake in the business. This is one of the least risky types of private equity investment because the company is already established and the managers running it know the business—and the market it operates in—extremely well. (Source: VCExperts)
- **Allocation by Fund Size:**
 - **Small Buyout** (\$0 to \$1 billion)
 - **Medium Buyout** (\$1 billion to \$3 billion)
 - **Large Buyout** (\$3 billion to \$7 billion)
 - **Mega Buyout** (\$7 billion +)

Mezzanine (subordinated debt): Is an investment strategy that involves providing capital or financing that is below the senior debt and above the equity in terms of liquidation priority. Mezzanine is analogous to private high yield debt and typically includes preferred stock and warrants. The majority of return is provided through coupon payments and equity sweeteners typically help to increase the returns. Mezzanine debt is typically structured as part of an LBO transaction.

Distressed Debt: Corporate bonds of companies that have either filed for bankruptcy or appear likely to do so in the near future. The strategy of distressed debt firms involves first becoming a major creditor of the target company by snapping up the company’s bonds at pennies on the dollar. This gives them the leverage they need to call most of the shots during either the reorganization, or the liquidation, of the company. In the event of a liquidation, distressed debt firms, by standing ahead of the equity holders in the line to be repaid, often recover all of their money, if not a healthy return on their investment. Usually, however, the more desirable outcome is a

reorganization, which allows the company to emerge from bankruptcy protection. As part of these reorganizations, distressed debt firms often forgive the debt obligations of the company, in return for enough equity in the company to compensate them. (This strategy explains why distressed debt firms are considered to be private equity firms.) (Source: VCExperts)

Secondary: The private equity secondary market (also often called private equity secondaries or secondaries) refers to the buying and selling of pre-existing investor commitments to private equity investment funds. Secondary funds are vehicles which buy (invest in) secondary partnership interests purchased from pre-existing investors.

Fund-of-Funds: A fund set up to distribute investments among a selection of private equity fund managers, who in turn invest the capital directly. Fund of funds are specialist private equity investors and have existing relationships with firms. They may be able to provide investors with a route to investing in particular funds that would otherwise be closed to them. Investing in fund of funds can also help spread the risk of investing in private equity because they invest the capital in a variety of funds. (Source: VCExperts)

Performance Ratios

DPI = Distribution as a ratio of (divided by) paid-in capital (0.60 means that 60 cents has been distributed back to investors for every dollar contributed)

RVPI = Residual Value (NAV) as a ratio of (divided by) paid-in capital (0.70 means that the investment(s) is currently valued at 70 cents for every dollar contributed).

TVPI = Total Value (Distributions + Net Asset Value) as a ratio of (divided by) paid-in capital. 1.30 means that the investment has created a total gain of 30 cent for every dollar contributed, however total value is composed of both returned capital and residual value (e.g., DPI of 0.60 + RVPI of 0.70 = TVPI of 1.30).

Disclosure Statement

Of the investment manager candidates listed in this report, the firms below and/or their Parent/Affiliate companies are those who currently do business with Callan Associates Inc.* In no way do these affiliations affect the outcome or process by which Callan Associates' investment manager searches are conducted.

Firm	Currently Does Business with Callan	Currently Does Not Do Business with Callan	Parent/ Affiliate Does Business with Callan
Adams Street Partners		X	
Pantheon Ventures		X	
HarbourVest Partners		X	
Mesirow Financial		X	
Muller & Monroe		X	
Hispania Capital Partners		X	
Pharos Capital Group		X	
Palladium Equity Partners		X	
ICV Partners		X	
SynCom Venture Partners		X	

*Because Callan's client list of investment managers changes periodically, the above information may not reflect very recent changes that are not yet updated in our database. You are welcome to request a list of Callan's investment manager clients at any time. Reasonable care has been taken to identify affiliated organizations in this disclosure. Affiliated organizations can include (but are not limited to); holding companies, subsidiaries, and wholly-owned distinct organizations that have financial relationships with Callan's investment manager clients. Organizational affiliations in the investment management industry are complex, fluid, and can involve multiple layers of corporate structure. In some cases Callan may be unaware of the financial relationship between two entities, and hence some affiliated organizations may be inadvertently omitted from this disclosure.

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Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance Department.

Manager Name
1607 Capital Partners, LLC
Aberdeen Asset Management PLC
Acadian Asset Management LLC
AEGON USA Investment Management
Affiliated Managers Group, Inc.
AllianceBernstein
Allianz Global Investors
Allianz Life Insurance Company of North America
American Century Investment Management
Amundi Smith Breeden LLC
Analytic Investors
Angelo, Gordon & Co.
Apollo Global Management
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Aristotle Capital Management, LLC
Artisan Holdings
Atlanta Capital Management Co., LLC
Aviva Investors Americas
AXA Investment Managers
Babson Capital Management
Baillie Gifford Overseas Limited
Baird Advisors
Bank of America
Baring Asset Management
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Asset Management, Corp.
BNP Paribas Investment Partners
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
Brown Brothers Harriman & Company
Cambiar Investors, LLC

Manager Name
Capital Group
CastleArk Management, LLC
Causeway Capital Management
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Management Investment Advisers, LLC
Columbus Circle Investors
Corbin Capital Partners, L.P.
Cornerstone Capital Management
Cramer Rosenthal McGlynn, LLC
Crawford Investment Counsel, Inc.
Credit Suisse Asset Management
Crestline Investors, Inc.
DE Shaw Investment Management, LLC
Delaware Investments
DePrince, Race & Zollo, Inc.
Deutsche Asset Management
Diamond Hill Investments
Duff & Phelps Investment Mgmt. Co.
Eagle Asset Management, Inc.
EARNEST Partners, LLC
Eaton Vance Management
Epoch Investment Partners, Inc.
Fayez Sarofim & Company
Federated Investors
Fidelity Institutional Asset Management
Fiera Capital Global Asset Management
First Eagle Investment Management, LLC
First Hawaiian Bank Wealth Management Division
Fisher Investments
Fort Washington Investment Advisors, Inc.
Franklin Templeton Institutional
Fred Alger Management, Inc.
Fuller & Thaler Asset Management, Inc.
GAM (USA) Inc.
GE Asset Management

Manager Name
GMO
Goldman Sachs Asset Management
Grand-Jean Capital Management
Guggenheim Investments
GW&K Investment Management
Harbor Capital Group Trust
Hartford Funds
Hartford Investment Management Co.
Henderson Global Investors
Hotchkis & Wiley Capital Management, LLC
HSBC Global Asset Management
Income Research + Management, Inc.
Insight Investment Management Limited
Institutional Capital LLC
INTECH Investment Management, LLC
Invesco
Investec Asset Management
Janus Capital Management, LLC
Jensen Investment Management
J.P. Morgan Asset Management
KeyCorp
Lazard Asset Management
Legal & General Investment Management America
Lincoln National Corporation
LMCG Investments, LLC
Longview Partners
Loomis, Sayles & Company, L.P.
Lord Abbett & Company
Los Angeles Capital Management
LSV Asset Management
MacKay Shields LLC
Man Investments Inc.
Manulife Asset Management
Martin Currie Inc.
MFS Investment Management
MidFirst Bank
Mondrian Investment Partners Limited
Montag & Caldwell, LLC
Morgan Stanley Investment Management
Mountain Lake Investment Management LLC
MUFG Union Bank, N.A.
Neuberger Berman
Newton Investment Management (fka Newton Capital Management)
Nikko Asset Management Co., Ltd.
Northern Trust Asset Management
Nuveen Investments, Inc.
OFI Global Asset Management
Old Mutual Asset Management
Opus Capital Management Inc.
Pacific Investment Management Company

Manager Name
Parametric Portfolio Associates
Peregrine Capital Management, Inc.
PGIM
PineBridge Investments
Pinnacle Asset Management L.P.
Pioneer Investments
PNC Capital Advisors, LLC
Principal Global Investors
Private Advisors, LLC
Putnam Investments, LLC
QMA (Quantitative Management Associates)
RBC Global Asset Management
Regions Financial Corporation
RidgeWorth Capital Management, Inc.
Rockefeller & Co., Inc.
Rothschild Asset Management, Inc.
Russell Investments
Santander Global Facilities
Schroder Investment Management North America Inc.
Scout Investments
SEI Investments
Smith, Graham & Co. Investment Advisors, L.P.
Smith Group Asset Management
Standard Life Investments Limited
Standish
State Street Global Advisors
Stone Harbor Investment Partners, L.P.
Systematic Financial Management
T. Rowe Price Associates, Inc.
Taplin, Canida & Habacht
The Boston Company Asset Management, LLC
The Hartford
The London Company
The TCW Group, Inc.
Tri-Star Trust Bank
UBS Asset Management
Van Eck Global
Versus Capital Group
Victory Capital Management Inc.
Vontobel Asset Management, Inc.
Voya Financial
Voya Investment Management (fka ING)
Waddell & Reed Asset Management Group
WCM Investment Management
WEDGE Capital Management
Wellington Management Company, LLP
Wells Capital Management
Western Asset Management Company
William Blair & Company