



TEXAS TECH UNIVERSITY SYSTEM™

Board of Regents Report

for May 2017

Texas Tech University System Endowment

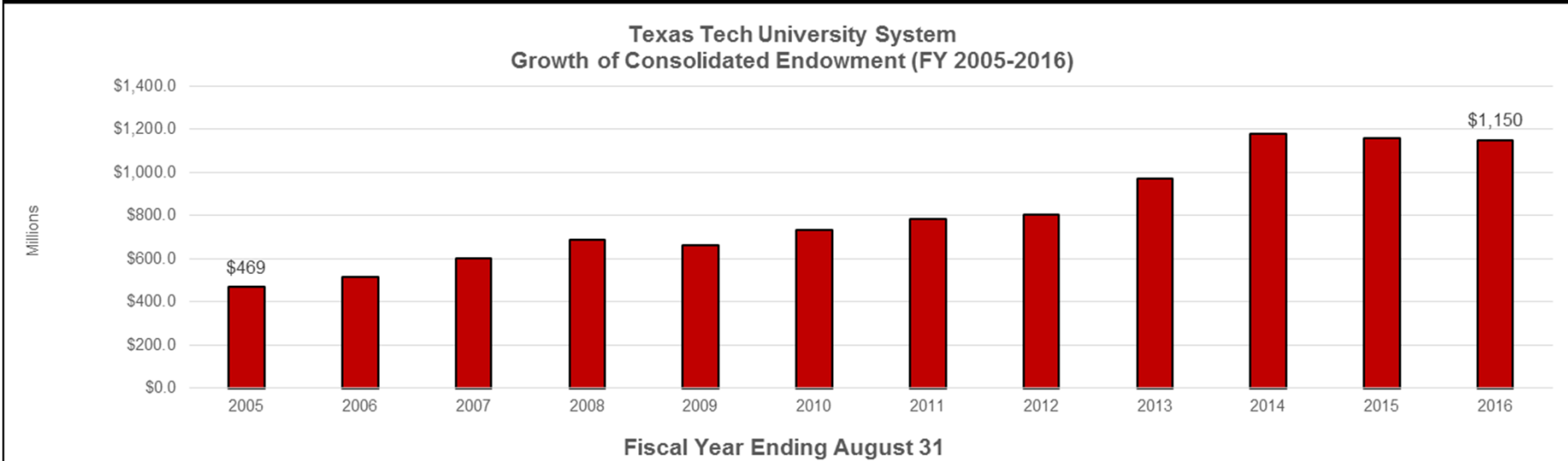
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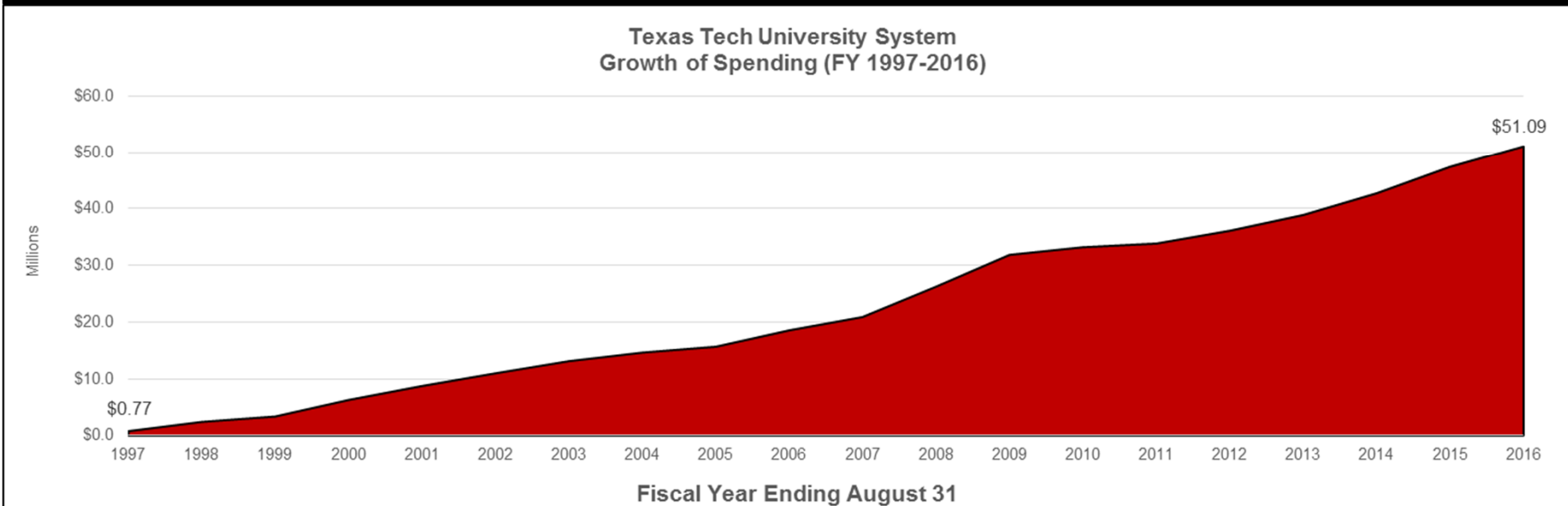
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Endowment Data

HISTORICAL MARKET VALUE (Fiscal Year)



HISTORICAL SPENDING (Fiscal Year)



The 4.5% distribution rate has been realized every year since inception.

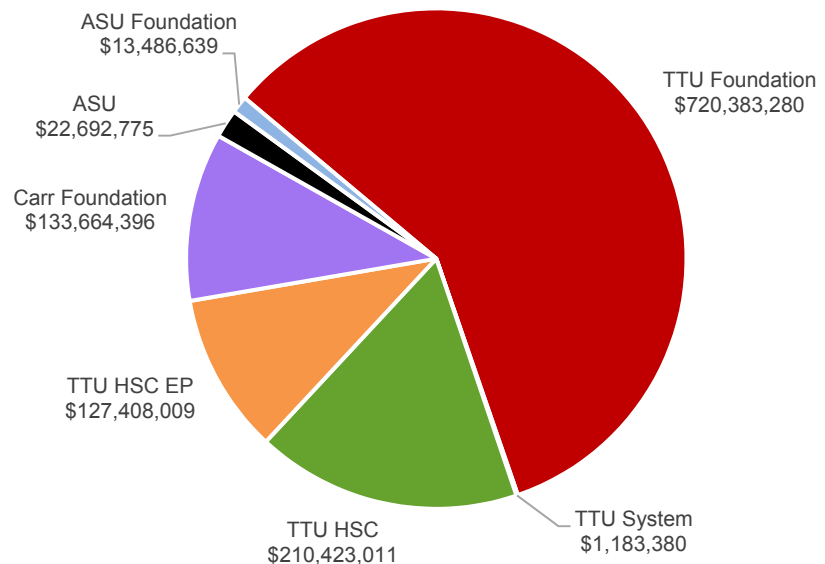


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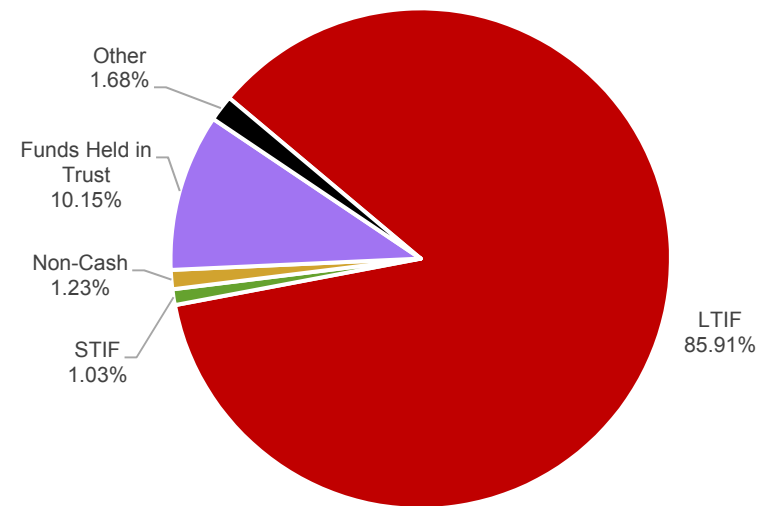
Endowment Data (cont.)

TOTAL ENDOWMENT (Fiscal Year 2017 through Q2)

**Texas Tech University System
Endowment Breakout
by Institution**



**Texas Tech University System
Endowment Breakout
by Pool**



Summary of Endowment

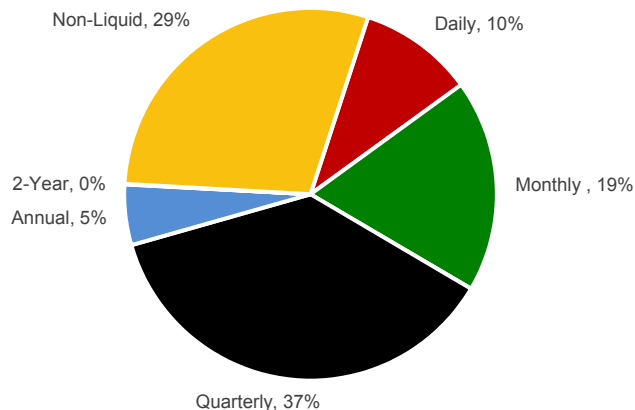
	TTU Foundation	TTU System	TTU HSC	TTU HSC EP	Carr Foundation	ASU	ASU Foundation	Total
LTIF	\$656,556,065	\$1,183,380	\$146,026,943	\$96,501,800	\$125,001,230	\$17,287,503	\$13,486,639	\$1,056,043,558
STIF	\$4,752,209	\$0	\$2,455,541	\$70	\$0	\$5,405,050	\$0	\$12,612,869
Non-Cash	\$5,028,772	\$0	\$1,465,795	\$0	\$8,663,166	\$0	\$0	\$15,157,733
Funds Held in Trust	\$33,351,752	\$0	\$60,474,733	\$30,906,139	\$0	\$0	\$0	\$124,732,625
Other	\$20,694,482	\$0	\$0	\$0	\$0	\$223	\$0	\$20,694,705
Total	\$720,383,280	\$1,183,380	\$210,423,011	\$127,408,009	\$133,664,396	\$22,692,775	\$13,486,639	\$1,229,241,490



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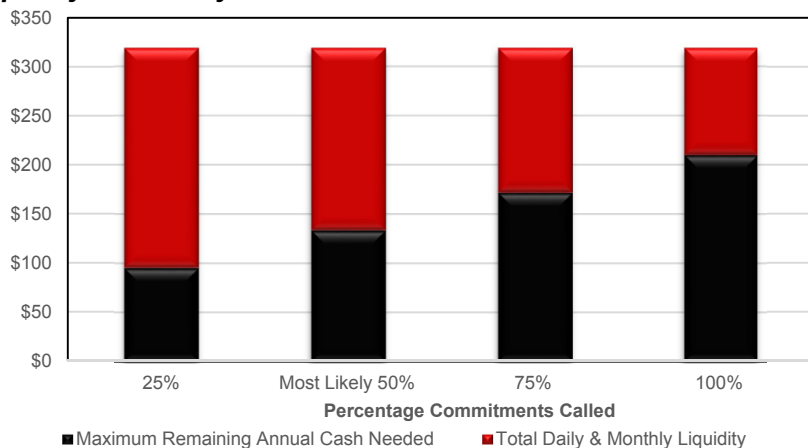
LTIF Liquidity

LTIF Liquidity



LTIF		Liquidity
Daily	\$112,103,503	10.0%
Monthly	\$206,991,141	18.5%
Quarterly	\$416,172,073	37.1%
Annual	\$58,916,475	5.3%
2-Year	\$546,806	0.0%
Non-Liquid	\$326,255,846	29.1%
Total LTIF	\$1,120,985,843	100%

Liquidity Sensitivity



	<u>Commitment</u>	<u>Capital Called</u>	<u>Distributions</u>	<u>Account Balance</u>	<u>Remaining Commitment</u>
Private Equity	\$232,500,000	\$130,482,871	\$66,202,751	\$84,994,172	\$102,017,129
Private Credit	\$150,702,805	\$104,657,848	\$28,008,169	\$100,056,484	\$46,044,957
Private Real Assets	\$241,163,450	\$236,467,463	\$178,215,290	\$125,244,619	\$4,695,987
Total Illiquid Assets	\$624,366,255	\$471,608,182	\$272,426,210	\$310,295,274	\$152,758,073
			Annual Spending		\$57,500,000
			Total Committed Funds		\$210,258,073

Unfunded Commitments - Sensitivity Analysis

	<u>25% Called</u>	<u>Most Likely 50% Called</u>	<u>75% Called</u>	<u>100% Called</u>
Maximum Remaining Annual Cash Needed	\$95,689,518	\$133,879,037	\$172,068,555	\$210,258,073
Percentage of Daily & Monthly Liquidity	30%	42%	54%	66%

31st May 2017**Market Data**

Benchmarks	Underlying	Weight	MTD Perf.	QTD Perf.	Calendar YTD	Fiscal YTD	Nacubo YTD	1 Year Perf.	3 Year Perf.	5 Year Perf.
Policy Benchmarks			1.02%	1.86%	5.99%	7.54%	9.50%	10.22%	5.37%	8.96%
Equity	Global Index (MSCI ACWI)	35%	2.00%	3.63%	10.67%	12.89%	18.31%	17.46%	5.40%	11.65%
Debt	Global Bonds (Barclays Global Agg)	25%	1.55%	2.69%	4.50%	-2.35%	-2.10%	0.76%	-0.08%	0.89%
Diversifying Assets	HFRX Global Hedge Fund	10%	0.24%	0.67%	2.34%	4.86%	5.72%	6.29%	5.20%	5.11%
Private Investments	VE All PE Qtr Lag	27%	0.00%	0.00%	4.74%	12.99%	12.99%	13.25%	9.92%	12.67%
Private Investments	NCREIF	3%	0.00%	0.00%	1.55%	5.13%	5.13%	7.27%	10.58%	10.69%
Other Benchmarks										
Equity	S&P 500 Total Return		1.41%	2.45%	8.66%	12.84%	17.16%	17.47%	10.14%	15.42%
Equity	Non US Developed Equity (MSCI EAFE)		3.67%	6.31%	14.01%	14.59%	20.48%	16.44%	1.53%	10.21%
Equity	EM Equities (MSCI EMF)		2.96%	5.21%	17.25%	13.81%	22.51%	27.41%	1.62%	4.54%
Debt	EM Bonds (JPM EM Bond Index)		0.83%	2.47%	6.47%	2.33%	5.79%	9.74%	4.94%	5.99%
Cash & Alpha Pool	90 Day T-Bills		0.08%	0.14%	0.29%	0.42%	0.48%	0.50%	0.23%	0.16%
Hedge Funds	HFRI FOF Composite		0.31%	0.83%	3.23%	4.47%	6.51%	6.02%	1.90%	3.81%
Private Investments	Private Market Index (90% VE, 10% NCREIF)		0.00%	0.00%	4.42%	12.21%	12.21%	12.65%	9.99%	12.47%

CIO NOTES:

Global markets, specifically equities, have been in a strong rally over the past year with emerging market equities up over 27% followed by US and non-US equities at 17% and 16%, respectively. More recently, non-US equities have been outperforming US equities. For the quarter-to-date, non-US equities are up 6.31% with the US up 2.45%.

Over the last year, private investments have struggled to keep pace as has real estate at 12.65% and 6.02%, respectively. Global Bonds have been the week spot over the last year at a mere 0.76% return.

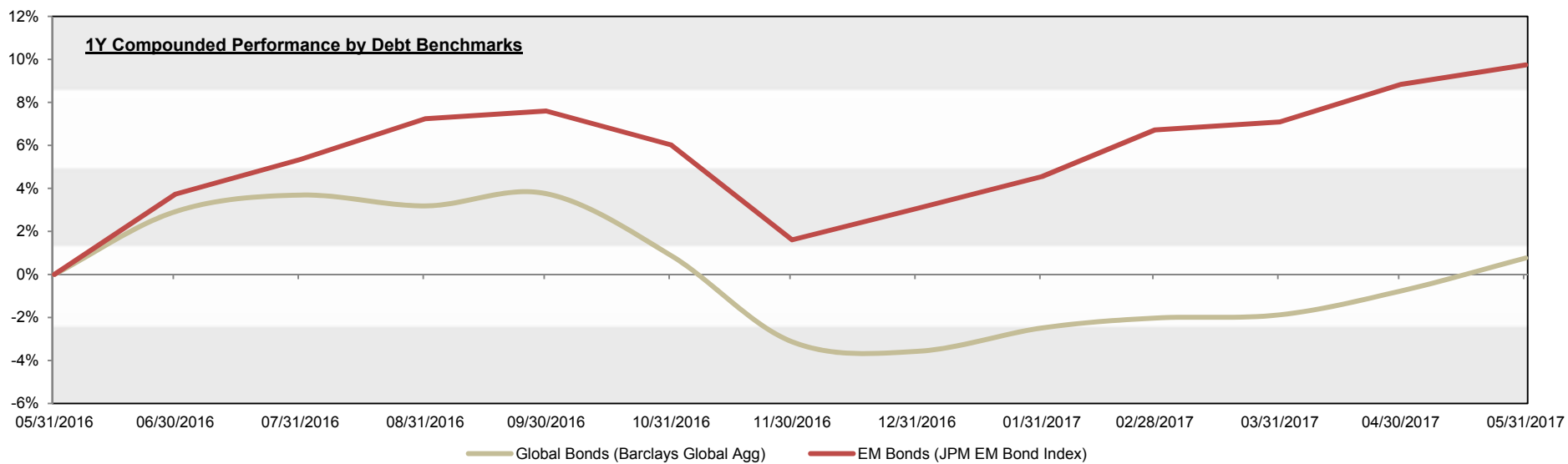
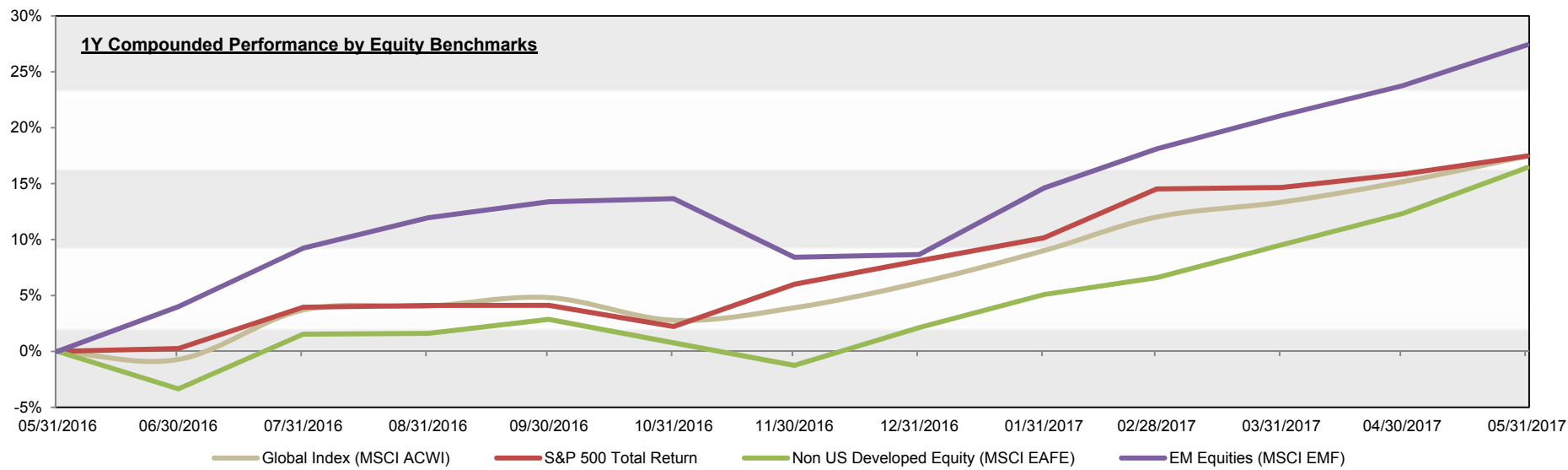
While valuations are high in the US and global liquidity is accommodative, earnings are coming in relatively strong and globally economies are improving. Against that backdrop, I am cautiously optimistic markets will continue the march higher. With that said, we are managing the portfolio in a very balanced manner as this bull market is one of the longest in history.

The LTIF one-year performance ending in May was very strong at 12.71% versus the Policy Benchmark at 10.22%.



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Market Data (cont.)

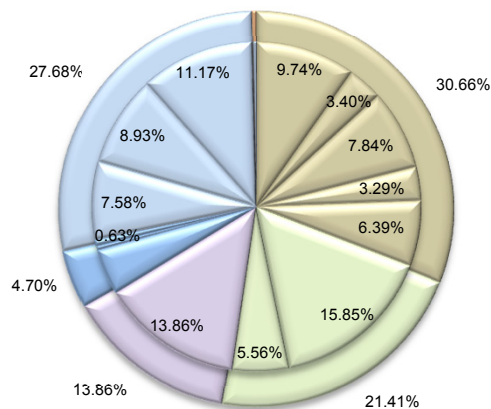




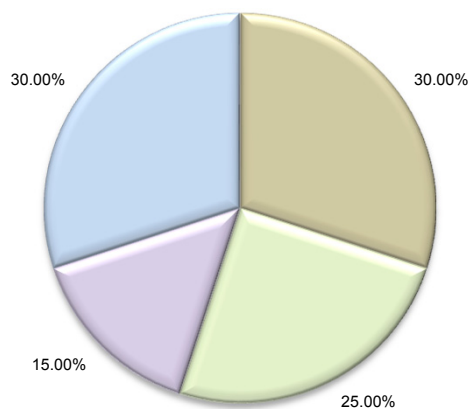
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Asset Class Allocation: Actual vs. Target

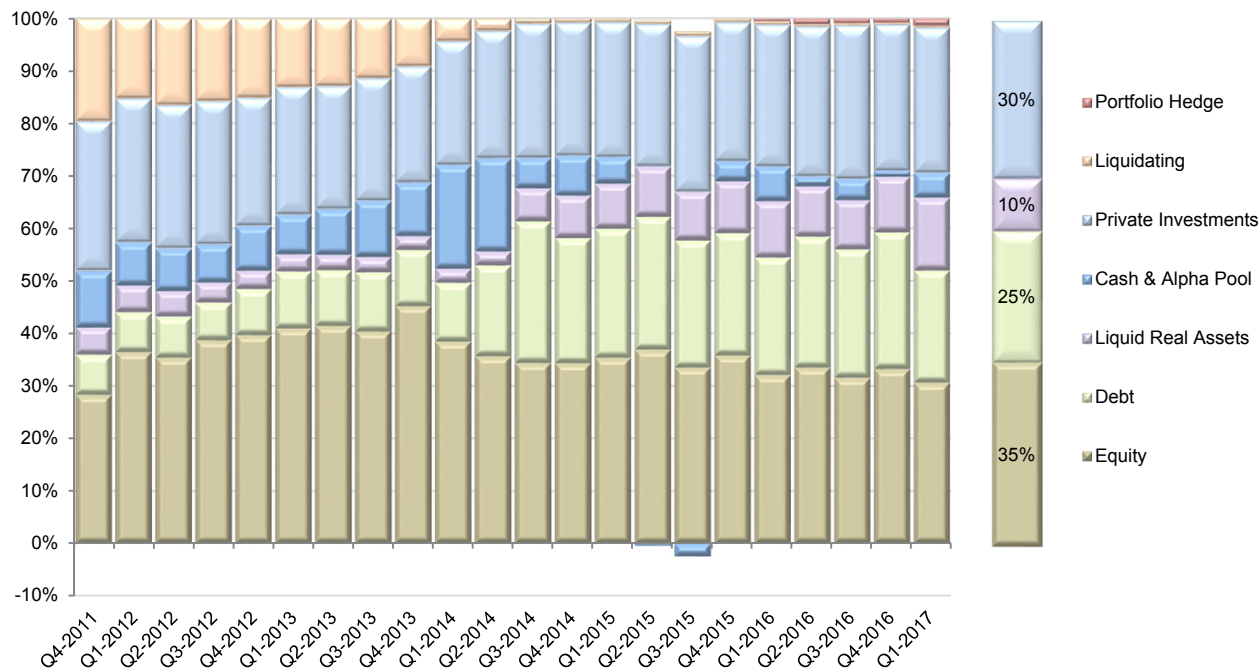
Actual Allocation



Target Allocation



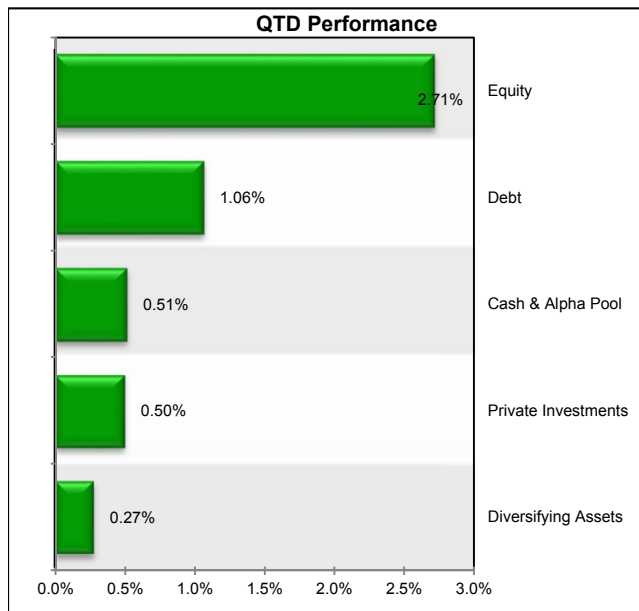
Asset Class	Actual \$ Allocation			Total % Allocation	Target % Allocation	Target Range
	Physical	Synthetic	Total			
Equity	124,794,302	218,890,618	343,684,920	30.66%	30%	30% - 40%
Debt	240,012,553	0	240,012,553	21.41%	25%	20% - 30%
Liquid Real Assets	117,677,844	37,720,509	155,398,353	13.86%	15%	5% - 15%
Cash & Alpha Pool	316,850,046	-264,117,046	52,733,000	4.70%	0%	0% - 10%
Private Investments	310,295,274	0	310,295,274	27.68%	30%	10% - 55%
Liquidating	4,197,280	0	4,197,280	0.37%	0%	
Portfolio Hedge	7,158,544	7,505,919	14,664,463	1.31%	0%	
Total	1,120,985,843	0	1,120,985,843	100%	100%	





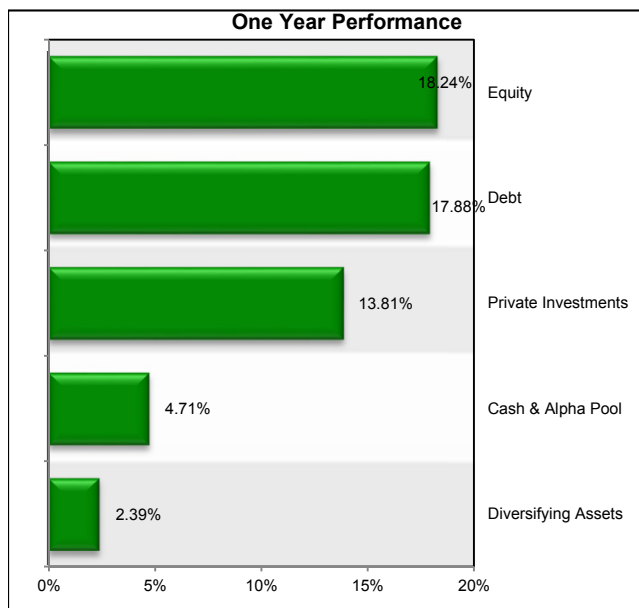
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Asset Class Performance: Actual vs. Policy



Asset Class	Month				
	Physical Return	Synthetic Overlay	Alpha Pool + Cash	Total Return	Policy
Equity	0.09%	1.71%	0.37%	1.34%	2.00%
Debt	-0.25%			-0.25%	1.55%
Diversifying Assets	-0.33%	-0.18%	0.37%	-0.21%	0.24%
Cash & Alpha Pool	0.31%			0.31%	
Private Investments	0.39%			0.39%	0.00%
Portfolio Hedge Contr.	0.01%			0.01%	
Total	0.11%	1.42%	0.37%	0.43%	1.02%

Asset Class	QTD				
	Physical Return	Synthetic Overlay	Alpha Pool + Cash	Total Return	Policy
Equity	1.23%	2.97%	0.60%	2.71%	3.63%
Debt	1.06%			1.06%	2.69%
Diversifying Assets	-0.40%	1.93%	0.60%	0.27%	0.67%
Cash & Alpha Pool	0.51%			0.51%	
Private Investments	0.50%			0.50%	0.00%
Portfolio Hedge Contr.	-0.01%			-0.01%	
Total	0.61%	2.81%	0.60%	1.13%	1.86%



Asset Class	Calendar YTD				
	Physical Return	Synthetic Overlay	Alpha Pool + Cash	Total Return	Policy
Equity	9.85%	10.80%	0.92%	11.17%	10.67%
Debt	5.73%	-0.07%	0.32%	5.26%	4.50%
Diversifying Assets	-1.40%	7.15%	0.92%	0.22%	2.34%
Cash & Alpha Pool	0.76%			0.76%	
Private Investments	1.58%			1.58%	4.42%
Portfolio Hedge Contr.	-0.06%			-0.06%	
Total	3.48%	9.13%	0.92%	4.54%	5.99%

Asset Class	1 Year				
	Physical Return	Synthetic Overlay	Alpha Pool + Cash	Total Return	Policy
Equity	15.71%	14.71%	4.98%	18.24%	17.46%
Debt	20.49%	-0.32%	4.98%	17.88%	0.76%
Diversifying Assets	-1.11%	24.94%	4.98%	2.39%	6.29%
Cash & Alpha Pool	4.71%			4.71%	
Private Investments	13.81%			13.81%	12.65%
Portfolio Hedge Contr.	-0.23%			-0.23%	
Total	11.96%	12.93%	4.98%	12.71%	10.22%

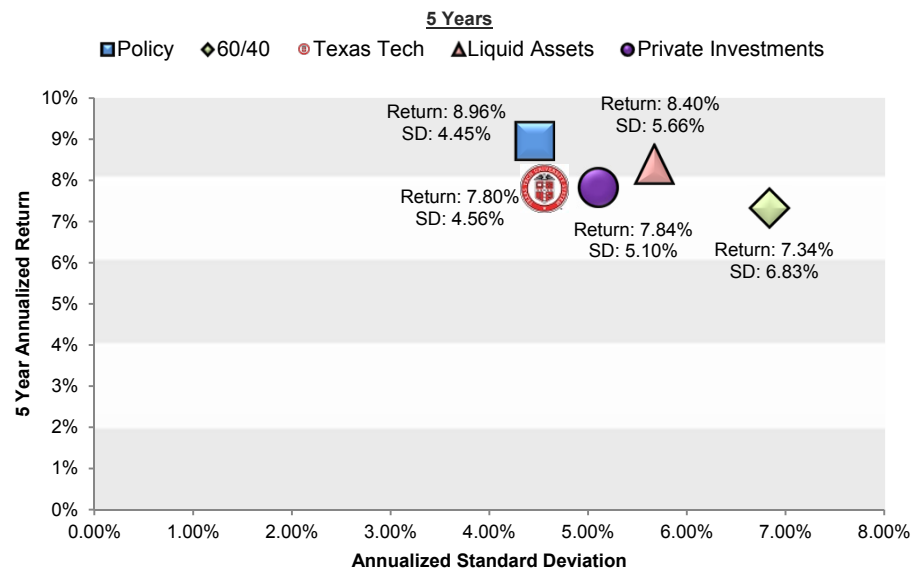
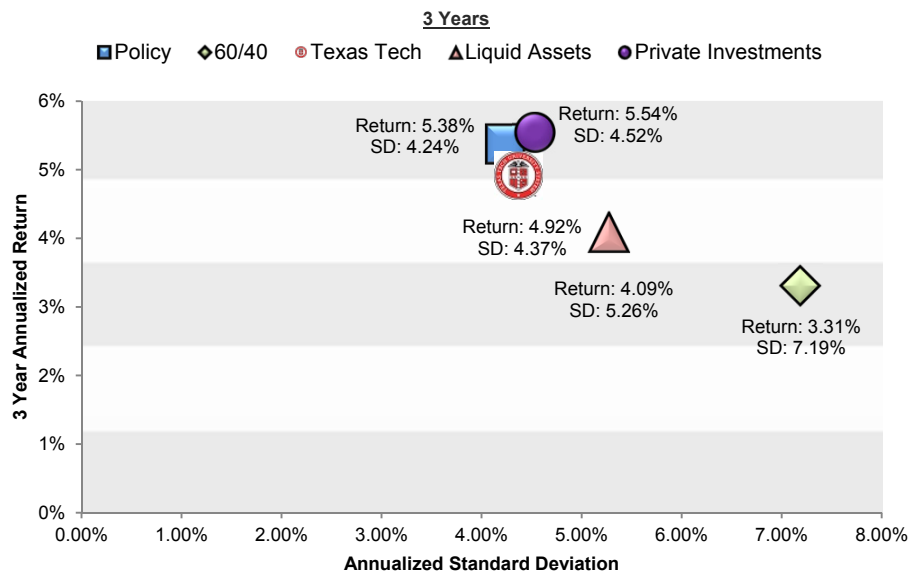
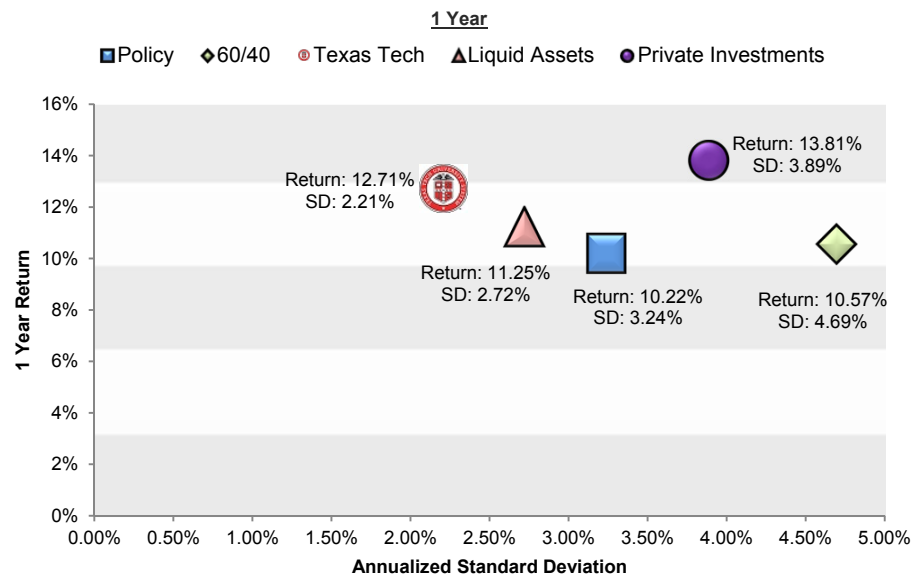


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Long Term Risk/Return of Endowment vs. 60/40 Portfolio & Policy Returns

Commentary

- The Texas Tech portfolio is less volatile than the 60/40 portfolio over all time horizons.
- The Texas Tech portfolio outperforms the 60/40 portfolio over all time horizons.
- Volatility (measured by standard deviation) on the Texas Tech portfolio has decreased over the past 12 months compared with the annualized 5 year volatility.



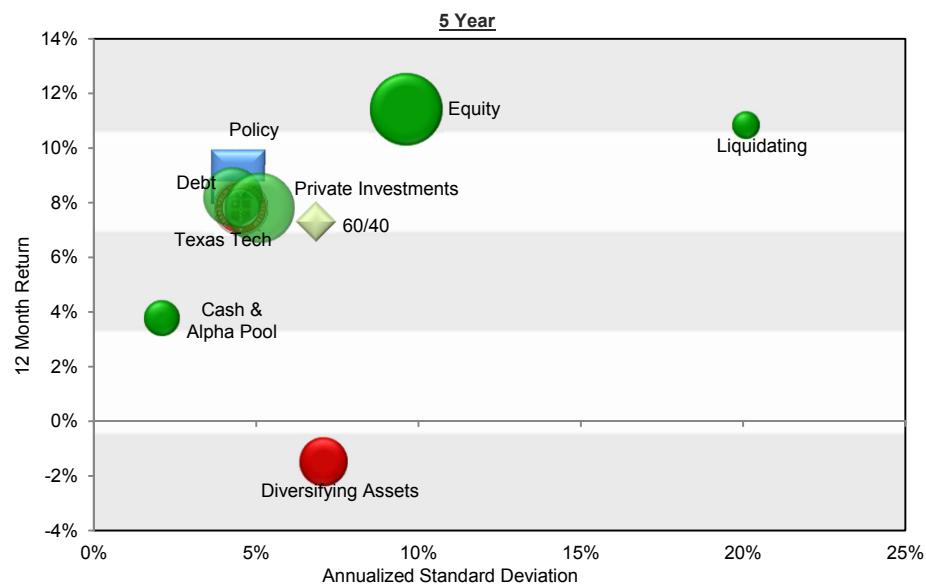
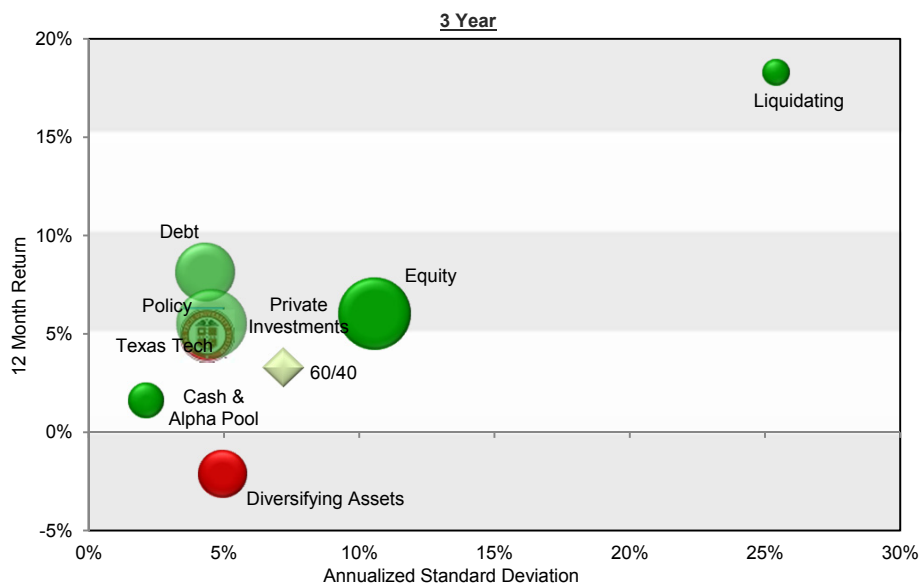
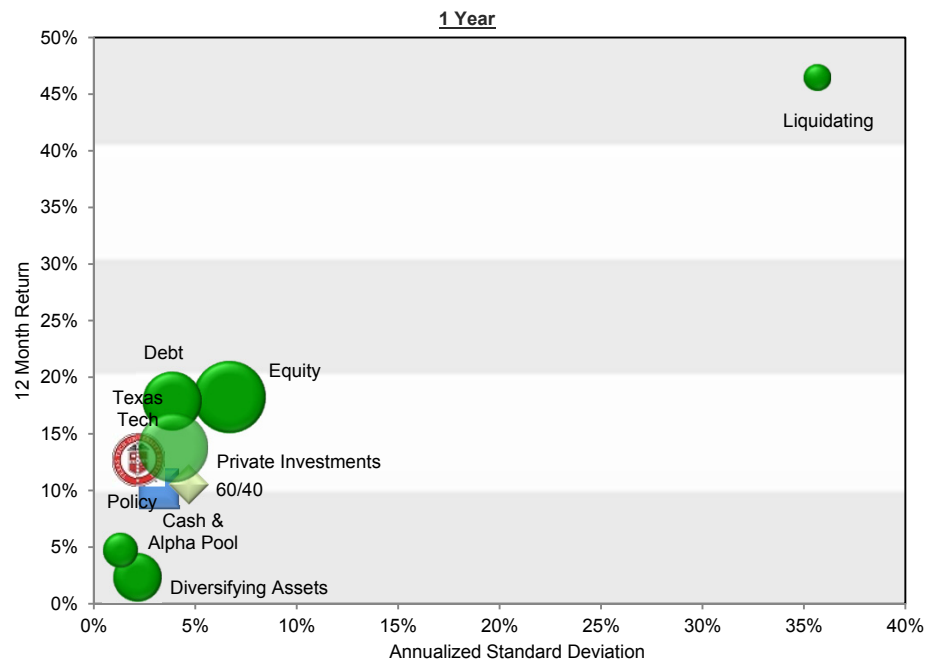


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Risk Profile

Commentary

- Private Credit, Non-US EM Equity, and Private Real Assets have provided the highest risk adjusted returns over the last 12 months
- Diversifying Assets, Private Equity and Alternative Equity have generated the lowest risk adjusted returns over the last 12 months.





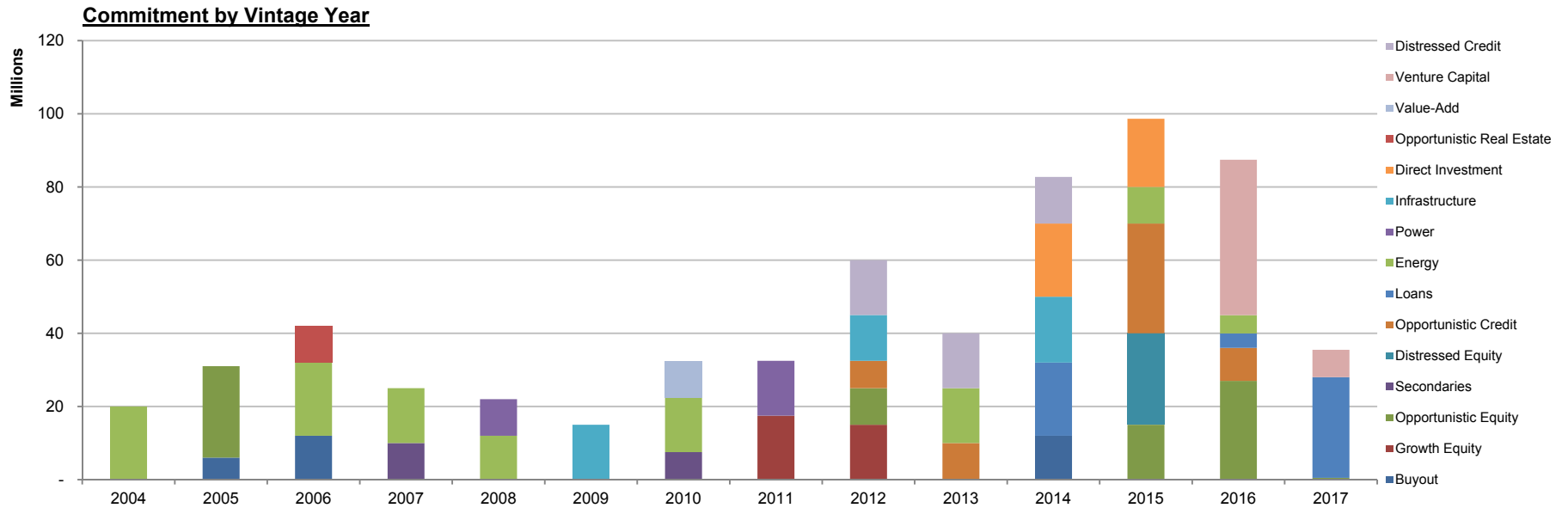
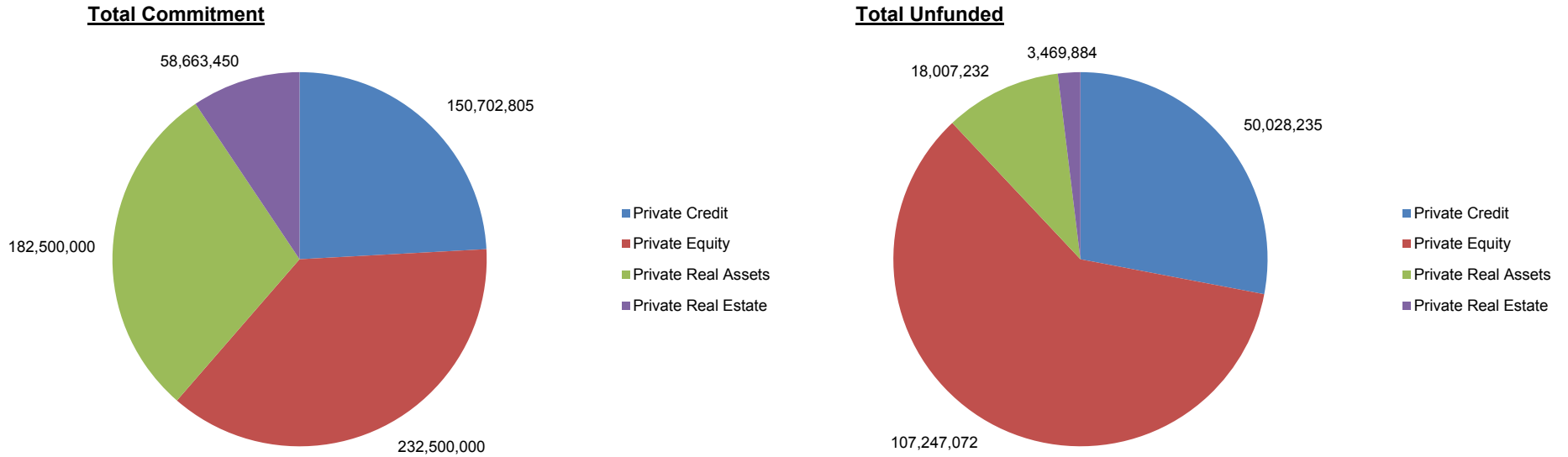
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Appendix I – Sub-Asset Detail

Fund	Current Exposure	MTD Perf.	QTD Perf.	Calendar YTD	Fiscal YTD	Nacubo YTD	1 Year Perf.	3 Year Perf.	5 Year Perf.
TOTAL	1,120,985,843	0.43%	1.13%	4.54%	8.88%	12.46%	12.71%	4.92%	7.80%
Policy		1.02%	1.86%	5.99%	7.54%	9.50%	10.22%	5.38%	8.96%
Portfolio Hedge	14,664,463	0.01%	-0.01%	-0.06%	-0.15%	-0.33%	-0.23%	n/a	n/a
Equity	343,684,920	1.34%	2.71%	11.17%	13.82%	21.08%	18.24%	6.13%	11.49%
<i>Equity Policy Benchmark (MSCI ACWI)</i>		2.00%	3.63%	10.67%	12.89%	18.31%	17.46%	5.40%	11.65%
US Equity	109,218,300	1.53%	2.70%	9.30%	15.30%	21.41%	21.59%	10.57%	14.76%
<i>Benchmark: S&P 500 Total Return</i>		1.41%	2.45%	8.66%	12.84%	17.16%	17.47%	10.14%	15.42%
Global Equity	38,121,203	1.55%	4.36%	12.95%	10.89%	18.80%	16.65%	7.53%	14.55%
<i>Benchmark: MSCI ACWI (Net)</i>		2.00%	3.63%	10.67%	12.89%	18.31%	17.46%	5.40%	11.65%
Non US Developed Equity	87,861,877	2.53%	4.23%	12.28%	16.40%	24.44%	19.01%	1.86%	10.75%
<i>Benchmark: MSCI EAFE (Net)</i>		3.67%	6.31%	14.01%	14.59%	20.48%	16.44%	1.53%	10.21%
Non US Emerging Markets Equity	36,848,107	2.45%	4.34%	19.36%	19.13%	29.26%	33.98%	5.81%	7.67%
<i>Benchmark: MSCI EMF (Net)</i>		2.96%	5.21%	17.25%	13.81%	22.51%	27.41%	1.62%	4.54%
Alternative Equity	71,635,433	-1.01%	-0.60%	6.80%	11.32%	17.19%	13.02%	6.15%	8.88%
<i>Benchmark: MSCI ACWI (Net)</i>		2.00%	3.63%	10.67%	12.89%	18.31%	17.46%	5.40%	11.65%
Debt	240,012,553	-0.25%	1.06%	5.26%	11.80%	16.28%	17.88%	8.18%	8.24%
<i>Debt Policy Benchmark (Barclays Global Agg)</i>		1.55%	2.69%	4.50%	-2.35%	-2.10%	0.76%	-0.08%	0.89%
Sovereign/Investment Grade Bonds	-	0.00%	0.00%	0.25%	1.91%	3.30%	4.02%	2.91%	2.50%
<i>Benchmark: Barclays Global Aggregate</i>		1.55%	2.69%	4.50%	-2.35%	-2.10%	0.76%	-0.08%	0.89%
Credit	177,711,054	-0.55%	-0.41%	6.09%	13.43%	19.31%	19.68%	8.65%	10.68%
<i>Benchmark: Barclays Global Aggregate</i>		1.55%	2.69%	4.50%	-2.35%	-2.10%	0.76%	-0.08%	0.89%
Emerging Markets Debt	62,301,499	0.63%	5.60%	4.96%	13.80%	17.26%	22.42%	9.30%	9.45%
<i>Benchmark: JP Morgan EM Bond Index</i>		0.83%	2.47%	6.47%	2.33%	5.79%	9.74%	4.94%	5.99%
Diversifying Assets	155,398,353	-0.21%	0.27%	0.22%	1.96%	3.36%	2.39%	-2.11%	-1.49%
<i>Benchmark: HFRXGL Index</i>		0.24%	0.67%	2.34%	4.86%	5.72%	6.29%	5.20%	5.11%
Cash & Alpha Pool	52,733,000	0.31%	0.51%	0.76%	2.95%	4.66%	4.71%	2.49%	4.31%
Cash	35,264,074	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.16%
Cash Collateral	66,191,510	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	n/a
Collateral Held Elsewhere	3,090,000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	n/a	n/a
Adjustments for Synthetic Exposure	(264,117,046)								
Alpha Pool	212,304,462	0.46%	0.76%	1.15%	3.94%	6.19%	6.26%	3.40%	6.02%
<i>Benchmark: HFRI FOF Index</i>		0.31%	0.83%	3.23%	4.47%	6.51%	6.02%	1.90%	3.81%
Liquidating	4,197,280	-0.43%	-1.00%	47.01%	43.49%	46.34%	46.49%	18.31%	10.86%
Private Investments	310,295,274	0.39%	0.50%	1.58%	8.78%	10.28%	13.81%	5.54%	7.84%
<i>Benchmark: Private Market Index (90% VE, 10% NCREIF)</i>		0.00%	0.00%	4.42%	12.21%	12.21%	12.65%	9.99%	12.47%
Private Equity	84,994,172	-0.15%	-0.60%	-1.73%	6.01%	5.19%	9.56%	5.27%	8.38%
Private Credit	100,056,484	0.12%	0.69%	1.97%	6.94%	8.53%	10.44%	4.32%	9.34%
Private Real Assets	125,244,619	0.97%	1.08%	3.51%	12.41%	15.52%	20.10%	6.21%	6.04%

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Appendix VII - Private Markets Report (as of May 2017) - Total Commitment



Data provided by Texas Tech University System
 Reported valuations use latest available statements ranging from June 2016 to May 2017
 Adjusted Valuations include all cashflows through May 2017



Appendix VII - Private Markets Report (as of May 2017) - Performance Analysis by Asset Class & Strategy Type

Performance by Asset Class

Asset Class	# of Funds	Commitment	Funded	Paid-In Capital	Distributions	% Drawn	Reported Valuation	Adjusted Valuation	IRR	MOC
Private Equity	18	\$232,500,000	\$125,294,395	\$130,482,871	\$66,202,751	56%	\$78,246,141	\$84,444,861	4.30%	1.15
Private Credit	12	\$150,702,805	\$100,674,570	\$104,657,848	\$28,008,169	69%	\$88,043,820	\$96,512,641	7.70%	1.19
Private Real Assets	13	\$182,500,000	\$165,204,321	\$177,874,360	\$163,953,510	97%	\$71,925,586	\$72,471,252	14.29%	1.34
Private Real Estate	4	\$58,663,450	\$57,144,790	\$58,593,103	\$14,261,780	100%	\$55,683,961	\$54,817,362	5.31%	1.18
Total	47	\$624,366,255	\$448,318,076	\$471,608,182	\$272,426,210	76%	\$293,899,508	\$308,246,116	8.35%	1.23

Performance by Strategy Type

Asset Class	Strategy	# of Funds	Commitment	Funded	Paid-In Capital	Distributions	% Drawn	Reported Valuation	Adjusted Valuation	IRR	MOC
Private Equity	Buyout	3	\$30,000,000	\$23,008,190	\$24,101,962	\$20,169,492	80%	\$8,372,088	\$9,587,370	5.48%	1.23
	Distressed Equity	1	\$25,000,000	\$4,524,992	\$4,524,992	\$1,004,850	18%	\$5,184,504	\$5,184,504	32.50%	1.37
	Growth Equity	2	\$32,500,000	\$21,793,005	\$24,711,789	\$4,298,662	76%	\$21,699,221	\$22,358,076	3.20%	1.08
	Opportunistic Equity	7	\$77,500,000	\$51,453,092	\$51,748,676	\$27,512,711	67%	\$34,376,533	\$33,931,038	4.38%	1.19
	Secondaries	2	\$17,500,000	\$16,410,991	\$17,049,452	\$13,217,036	97%	\$6,189,374	\$5,368,452	2.06%	1.09
	Venture Capital	3	\$50,000,000	\$8,104,125	\$8,346,000	\$0	17%	\$2,424,421	\$8,015,421	-12.18%	0.96
	Total	18	\$232,500,000	\$125,294,395	\$130,482,871	\$66,202,751	56%	\$78,246,141	\$84,444,861	4.30%	1.15
Private Credit	Distressed Credit	3	\$42,750,000	\$40,119,345	\$40,248,413	\$15,130,502	94%	\$32,867,974	\$32,867,974	6.31%	1.19
	Loans	4	\$51,452,805	\$29,892,326	\$30,416,512	\$5,906,000	59%	\$24,967,484	\$31,379,810	10.60%	1.23
	Opportunistic Credit	5	\$56,500,000	\$30,662,899	\$33,992,923	\$6,971,667	60%	\$30,208,362	\$32,264,857	7.54%	1.15
	Total	12	\$150,702,805	\$100,674,570	\$104,657,848	\$28,008,169	69%	\$88,043,820	\$96,512,641	7.70%	1.19
Private Real Assets	Energy	8	\$112,000,000	\$103,934,488	\$110,348,903	\$113,178,583	99%	\$32,790,930	\$33,493,132	14.25%	1.34
	Infrastructure	3	\$45,500,000	\$39,490,746	\$44,901,701	\$42,024,291	99%	\$28,950,766	\$28,794,230	30.94%	1.58
	Power	2	\$25,000,000	\$21,779,087	\$22,623,756	\$8,750,636	90%	\$10,183,890	\$10,183,890	-5.94%	0.84
	Total	13	\$182,500,000	\$165,204,321	\$177,874,360	\$163,953,510	97%	\$71,925,586	\$72,471,252	14.29%	1.34
Private Real Estate	Direct Investment	2	\$38,663,450	\$39,590,116	\$40,981,929	\$9,039,647	106%	\$43,771,502	\$43,779,900	16.23%	1.29
	Opportunistic Real Estate	1	\$10,000,000	\$10,000,000	\$10,000,000	\$0	100%	\$3,922,477	\$3,922,477	-11.82%	0.39
	Value-Add	1	\$10,000,000	\$7,554,674	\$7,611,174	\$5,222,133	76%	\$7,989,982	\$7,114,985	11.02%	1.62
	Total	4	\$58,663,450	\$57,144,790	\$58,593,103	\$14,261,780	100%	\$55,683,961	\$54,817,362	5.31%	1.18



31st May 2017

Appendix III – Glossary

Major Asset Classes

Alpha Pool: Investments that tend to be uncorrelated with “traditional” stock and bond investments. Not technically an asset class, but rather an investment construct within a *portable alpha framework

Cash & Equivalents: Cash and short term investments held in lieu of cash and readily converted into cash within a short time span (i.e., CDs, commercial paper, Treasury bills, etc.)

Global Debt: Investments in debt instruments located in developed markets, may include various credit, mortgage-backed and emerging markets debt securities

Global Equity: Investments in companies domiciled in developed market countries and may include opportunistic investments in emerging market countries

Liquidating: The residual investment in terminated managers

Liquid Real Assets: Liquid investments in strategies whose values are sensitive to inflation

Private Equity: Investments in equity securities and debt in operating companies that are not publicly traded on a stock exchange

Private Real Assets: Investments in equity securities and debt in operating companies that are not publicly traded on a stock exchange and whose strategies are sensitive to inflation

Sub-Asset Classes

Alternative Equity: Investments in companies globally through both long and short positions and may include non-equity instruments such as fixed income, commodities, CDS, options, etc.

Credit: Investments in companies, often stressed or distressed, principally through the debt portion of capital structure

Emerging Market Debt: Investments in debt securities in emerging market countries, primarily in three categories - external sovereign, local sovereign, and corporate debt

Emerging Market Equity: Investments in companies located in emerging market countries

Investment Grade Bonds: Investments in investment grade rated debt securities

Non-US Developed Equity: Investments in companies domiciled in developed market countries

US Equity: Investments in companies domiciled in the US