



TEXAS TECH UNIVERSITY SYSTEM™

Board of Regents Report for August 2014

Texas Tech University Endowment

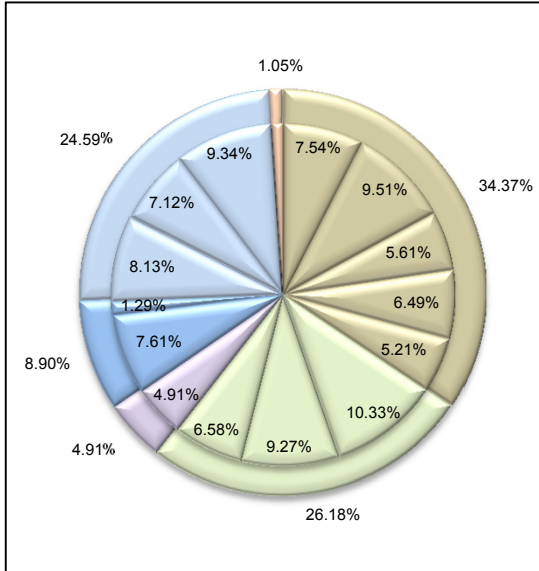
<u>Contents</u>	<u>Page</u>
Asset Class Allocation: Actual vs. Target	3
Asset Class Performance: Actual vs. Policy	4
Long Term Risk/Return of Endowment vs. 60/40 Portfolio and Policy Returns	5
Risk Profile	6
Overview	
- Equity	7
- Debt	8
- Liquid Real Assets	9
- Cash & Alpha Pool	10
- Private Equity	11
- Private Credit	12
- Private Real Assets	13
Appendix I – Sub-Asset Detail	14
Appendix II – Private Market Reports	16
Appendix III – Glossary	18
Appendix IV – Endowment Report	21



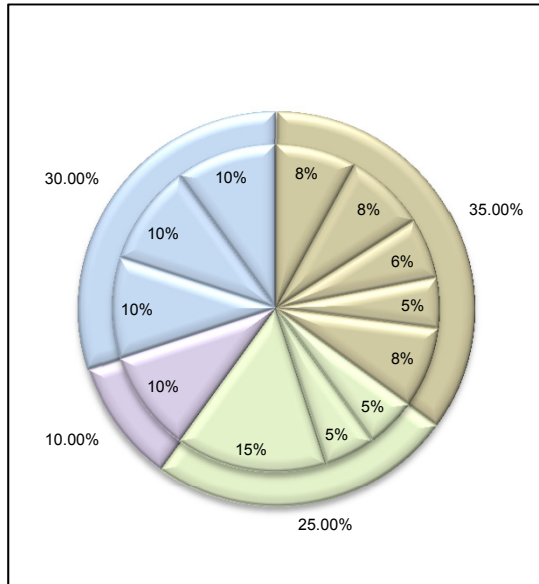
31st August 2014 (Final)

Asset Class Allocation: Actual vs. Target

Actual Allocation



Target Allocation



Asset Class	Sub-Asset Class	Actual \$ Allocation			Total % Allocation	Target % Allocation	Target Range
		Physical	Synthetic	Total			
Equity	US Equity	0	79,254,974	79,254,974	7.54%	8%	
	Global Equity	84,702,195	15,257,966	99,960,161	9.51%	8%	
	Non US Developed Equity	48,997,993	9,988,160	58,986,153	5.61%	6%	
	Non US Emerging Markets Equity	68,241,987	-13,731	68,228,256	6.49%	5%	
	Alternative Equity	54,807,543		54,807,543	5.21%	8%	
	Sub-Total		256,749,718	104,487,369	361,237,087	34.37%	35%
Debt	Sovereign/Investment Grade Bonds	8,679,431	99,853,782	108,533,213	10.33%	5%	
	Credit	97,475,115		97,475,115	9.27%	15%	
	Emerging Markets Debt	69,169,314		69,169,314	6.58%	5%	
	Sub-Total	175,323,861	99,853,782	275,177,642	26.18%	25%	20% - 30%
Liquid Real Assets		51,637,958	0	51,637,958	4.91%	10%	5% - 15%
Cash & Alpha Pool	Cash	101,465,899	-21,475,790	79,990,110	7.61%		
	Cash Collateral	19,392,441	-19,392,441	0	0.00%		
	Alpha Pool	177,051,000	-163,472,921	13,578,079	1.29%		
	Sub-Total	297,909,340	-204,341,151	93,568,189	8.90%	0%	0% - 10%
Private Investments	Private Equity	85,462,150		85,462,150	8.13%	10%	
	Private Credit	74,857,662		74,857,662	7.12%	10%	
	Private Real Assets	98,121,128		98,121,128	9.34%	10%	
	Sub-Total	258,440,940	0	258,440,940	24.59%	30%	10% - 55%
Liquidating		11,002,977	0	11,002,977	1.05%	0%	
Total		1,051,064,794	0	1,051,064,794	100%	100%	

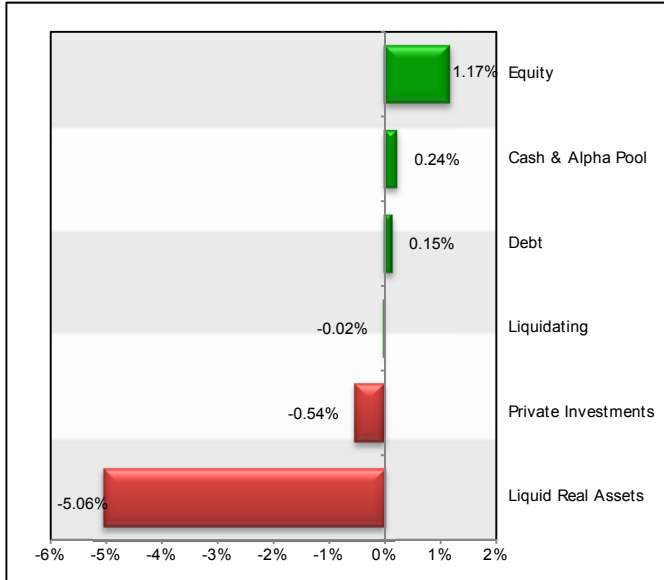
31st August 2014 (Final)



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Asset Class Performance: Actual vs. Policy

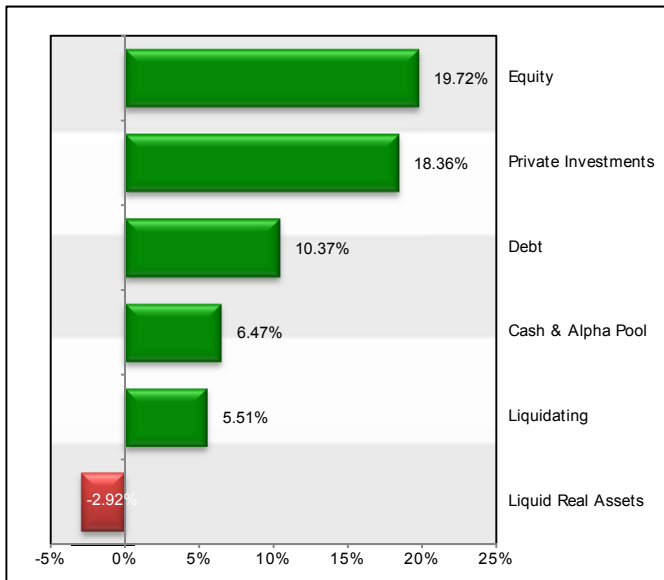
QTD Performance



Asset Class	Month				
	Physical Return	Synthetic Overlay	Alpha Pool + Cash	Total Return	Policy
Equity	2.39%	2.36%	0.21%	2.42%	2.21%
Debt	0.20%	0.46%	0.21%	0.32%	1.10%
Liquid Real Assets	-0.47%			-0.47%	0.17%
Cash & Alpha Pool	0.14%			0.14%	0.00%
Private Investments	-0.13%			-0.13%	0.00%
Liquidating	-0.04%			-0.04%	
Total	0.59%	1.50%	0.21%	0.78%	1.06%

Asset Class	QTD				
	Physical Return	Synthetic Overlay	Alpha Pool + Cash	Total Return	Policy
Equity	1.51%	-0.50%	0.35%	1.17%	0.97%
Debt	0.06%	0.19%	0.35%	0.15%	0.85%
Liquid Real Assets	-5.06%			-5.06%	0.46%
Cash & Alpha Pool	0.24%			0.24%	0.01%
Private Investments	-0.54%			-0.54%	0.00%
Liquidating	-0.02%			-0.02%	
Total	0.12%	-0.12%	0.35%	0.15%	0.61%

One Year Performance



Asset Class	Calendar YTD				
	Physical Return	Synthetic Overlay	Alpha Pool + Cash	Total Return	Policy
Equity	6.27%	3.74%	1.76%	6.01%	7.21%
Debt	6.92%	0.82%	1.80%	6.29%	4.81%
Liquid Real Assets	1.52%			1.52%	4.80%
Cash & Alpha Pool	3.02%			3.02%	0.03%
Private Investments	8.49%			8.49%	9.87%
Liquidating	-2.17%			-2.17%	
Total	5.07%	2.32%	1.80%	5.29%	7.19%

Asset Class	1 Year				
	Physical Return	Synthetic Overlay	Alpha Pool + Cash	Total Return	Policy
Equity	20.02%	3.74%	1.76%	19.72%	20.99%
Debt	11.03%	0.82%	1.80%	10.37%	5.66%
Liquid Real Assets	-2.92%			-2.92%	5.84%
Cash & Alpha Pool	6.47%			6.47%	0.04%
Private Investments	18.36%			18.36%	18.10%
Liquidating	5.51%			5.51%	
Total	14.48%	2.32%	1.80%	14.71%	15.64%

31st August 2014 (Final)

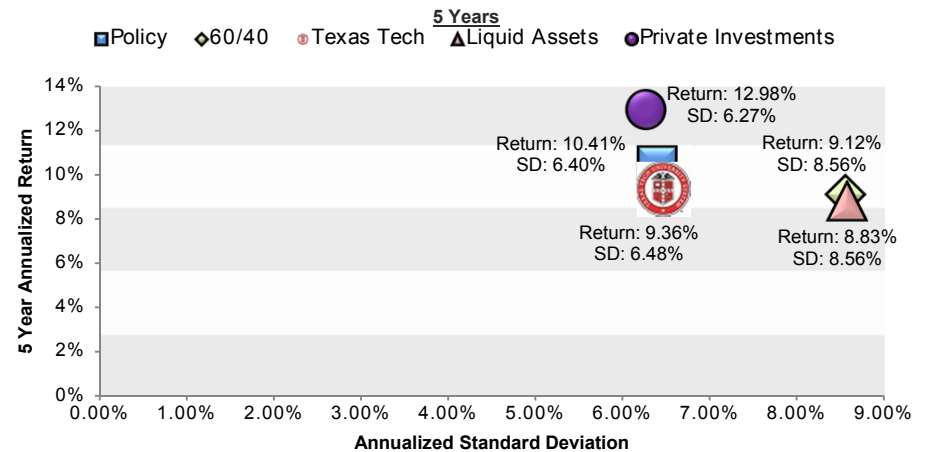
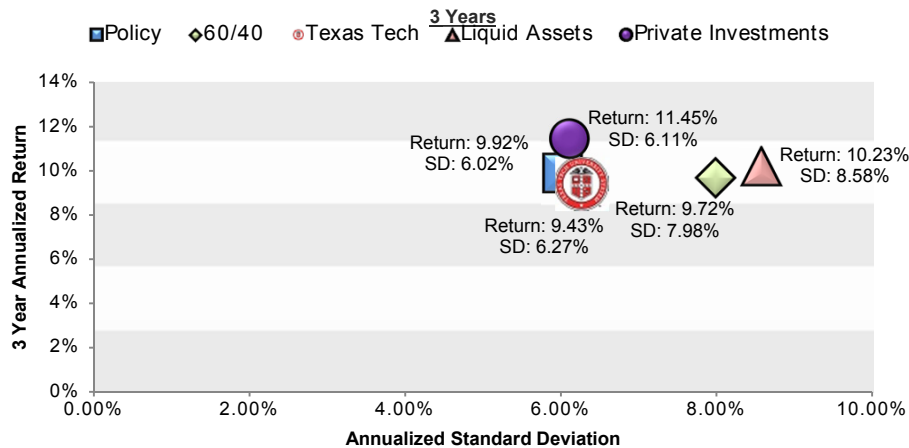
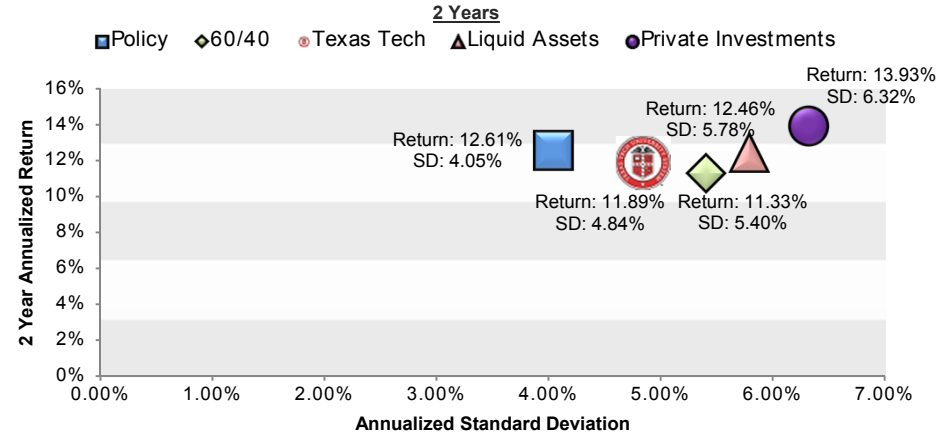
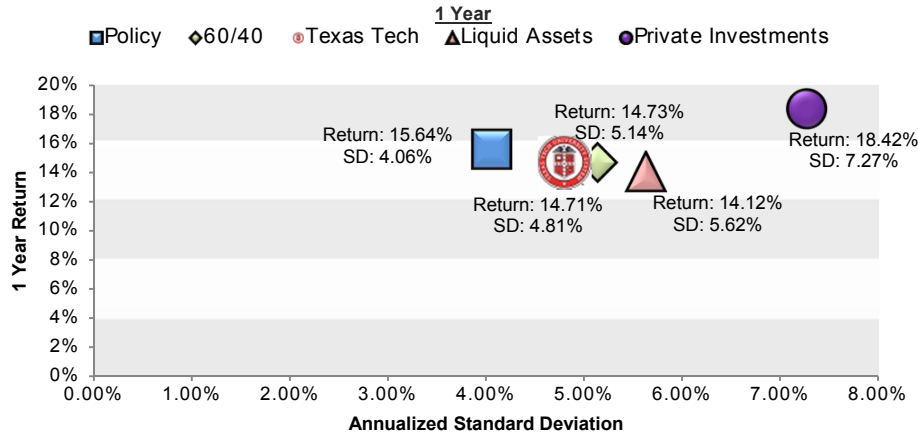
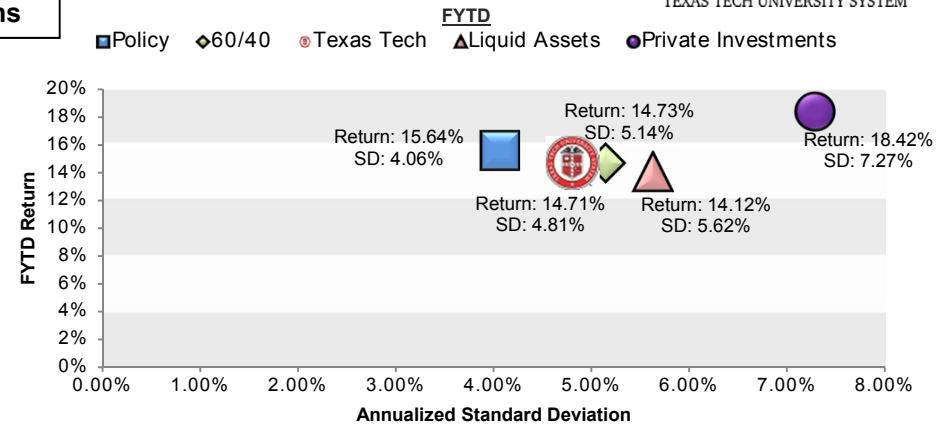


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Long Term Risk/Return of Endowment vs. 60/40 Portfolio & Policy Returns

Commentary

- The Texas Tech portfolio generates a higher risk adjusted return than a 60/40 portfolio.
- The Texas Tech portfolio is less volatile than a 60/40 portfolio over all time horizons
- The 60/40 portfolio has the most volatile returns over all periods.



31st August 2014 (Final)

Risk Profile (VaR)

- The Texas Tech portfolio has a 5% chance of losing \$46 million (or more) in a month with a 1% chance of losing \$69 million (or more) in a month based on observed portfolio volatility.
- Liquid Real Assets, Alternative Equity and Liquidating have generated the lowest risk adjusted returns.

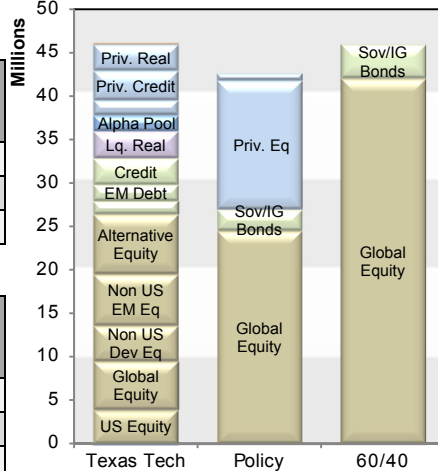
Value at Risk – One Month – 95% Confidence

- Sub Asset Classes with large Value at Risk:

Sub-Asset Class	5% chance of losing \$
Alternative Equity	6,898,610
Non US Emerging Markets Equity	5,918,416
Global Equity	5,591,113

- Sub Asset Classes with small Value at Risk:

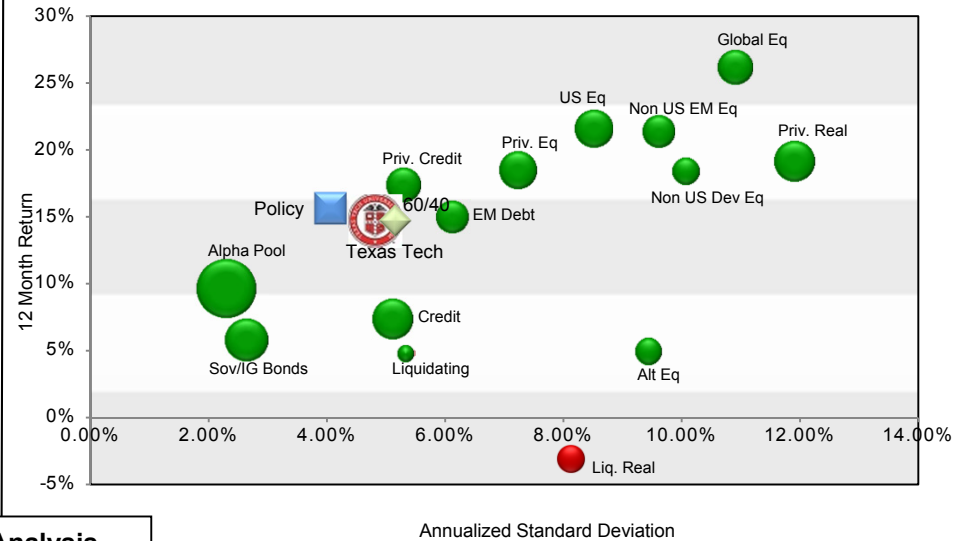
Sub-Asset Class	5% chance of losing \$
Sovereign/Investment Grade Bonds	1,494,505
Private Equity	1,717,584
Alpha Pool	1,820,263



TEXAS TECH UNIVERSITY SYSTEM

Risk Profile

- Alpha Pool, Private Credit and Private Equity have provided the highest risk adjusted returns.
- Liquid Real Assets, Alternative Equity and Liquidating have generated the lowest risk adjusted returns.



Factor Analysis

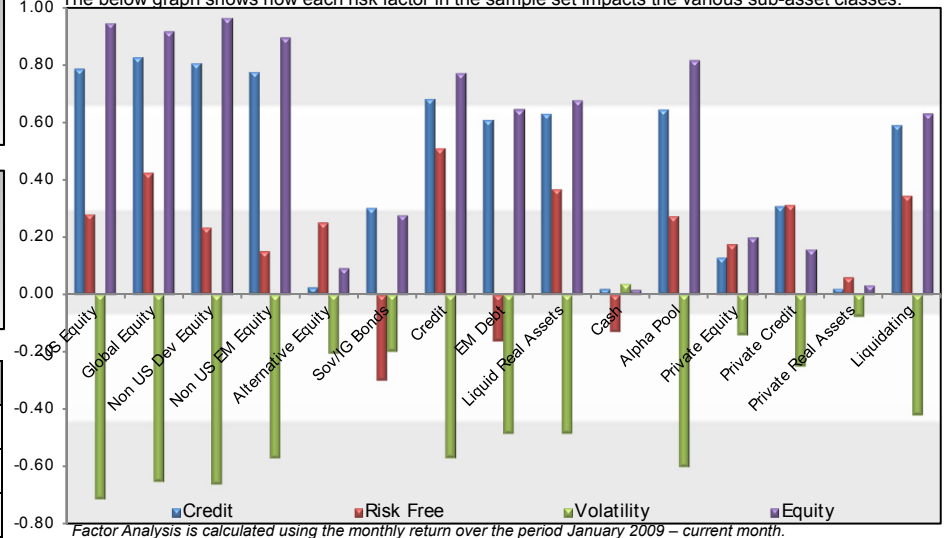
- The model analyses historical returns of the portfolio against the returns and volatility of key indicators:
 - Credit is benchmarked against the High Yield North American CDX Index.
 - Risk-Free is benchmarked against the US 10 Year Treasury Bond.
 - Volatility is benchmarked against the VIX Index.
 - Equity Markets is benchmarked against the MSCI AC World IMI (Net).

- The model shows that performance and volatility of both the Texas Tech portfolio and a 60/40 portfolio are well explained by the 4 factor model.
- The Texas Tech portfolio exhibits a lower correlation to the Equity markets than the 60/40 and Policy portfolios, but a higher correlation to the risk free index.

Portfolio	Credit	Risk Free	Volatility	Equity	R ²
Texas Tech	0.79	0.31	-0.69	0.92	0.83
60/40	0.81	0.18	-0.68	0.99	0.83
Policy	0.76	0.21	-0.63	0.95	0.79

Annualized Standard Deviation

The below graph shows how each risk factor in the sample set impacts the various sub-asset classes.



Factor Analysis is calculated using the monthly return over the period January 2009 – current month.



Equity

(Total NAV: \$361,237,087)

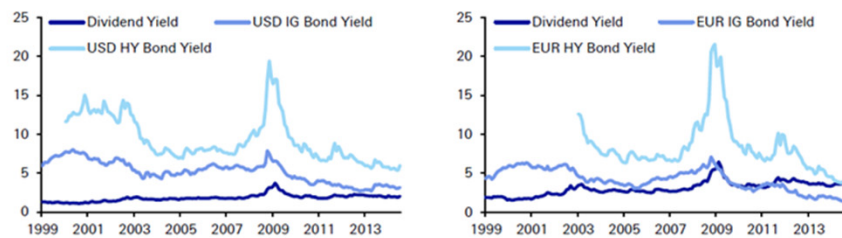
31st August 2014 (Final)

Overview and Risk Profile by Asset Class

Commentary

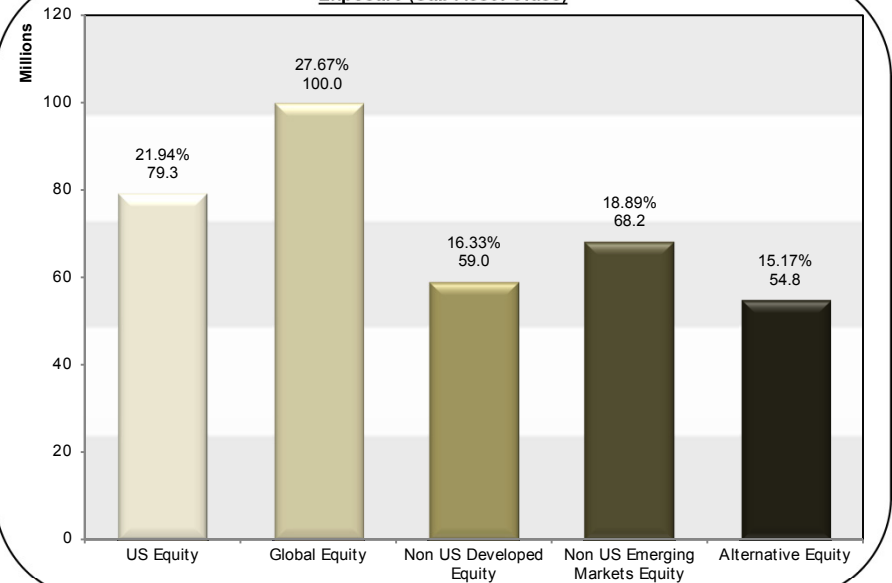
- By comparing the bond yields of HY and IG corporate bonds with a broad equity index aggregate dividend yield, Deutsche Banks show that, on an aggregate basis, US investment grade corporate bond yields have not fallen below dividend yields.
- In the EUR market, however, the story is very different. Aggregate dividend yields appear to be higher. Along with generally lower corporate bond yields, this has IG corporate bond yields comfortably below dividend yields.

Figure 41: US (left) and Europe (right) Dividend Yields vs. Corporate Bond Yields



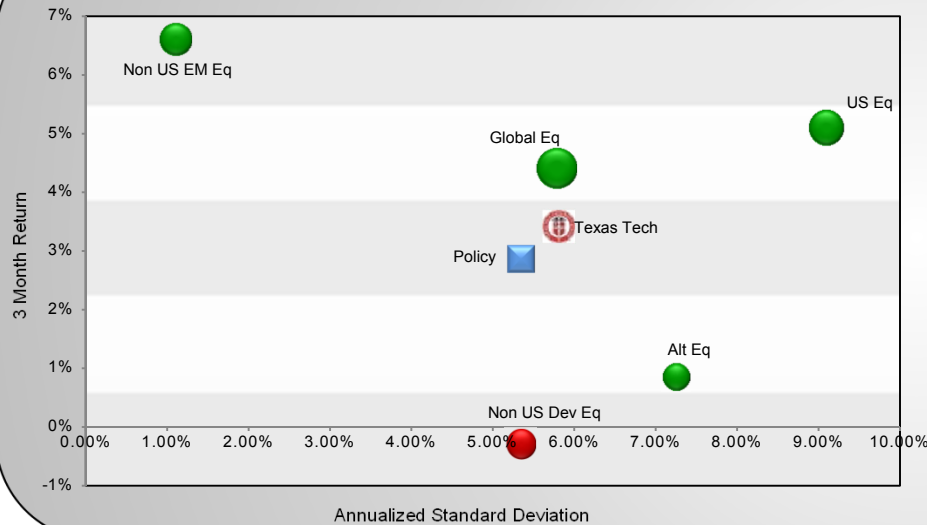
Source: Deutsche Bank, Bloomberg Finance LP

Exposure (Sub Asset Class)

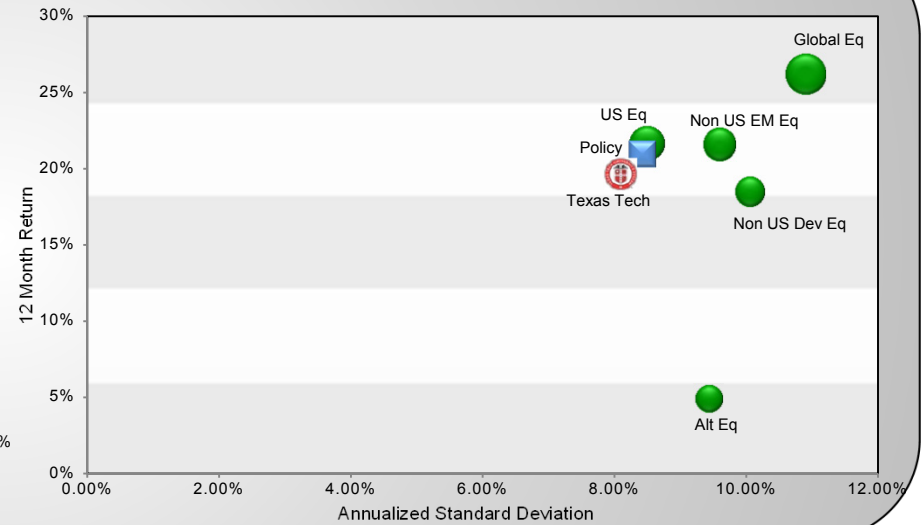


Risk vs. Return (Sub Assets)

Three Months



One Year



*Performance is calculated using time weighted Cash on Cash returns. This is an industry standard and allows direct comparison between manager returns and policy returns.



Debt

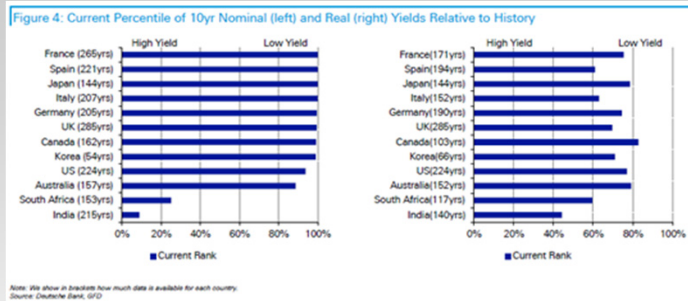
(Total NAV: \$275,177,642)

31st August 2014 (Final)

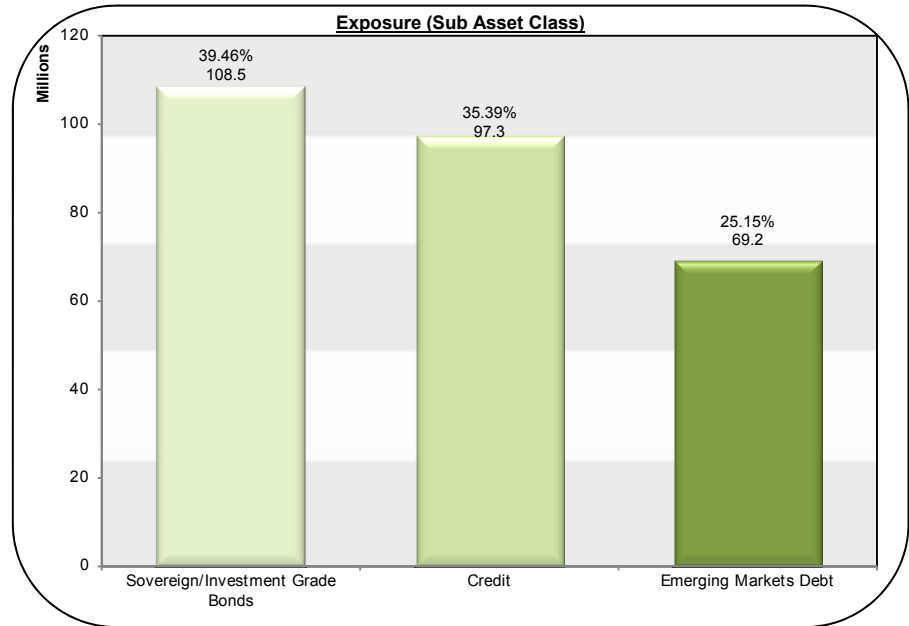
Overview and Risk Profile by Asset Class

Commentary

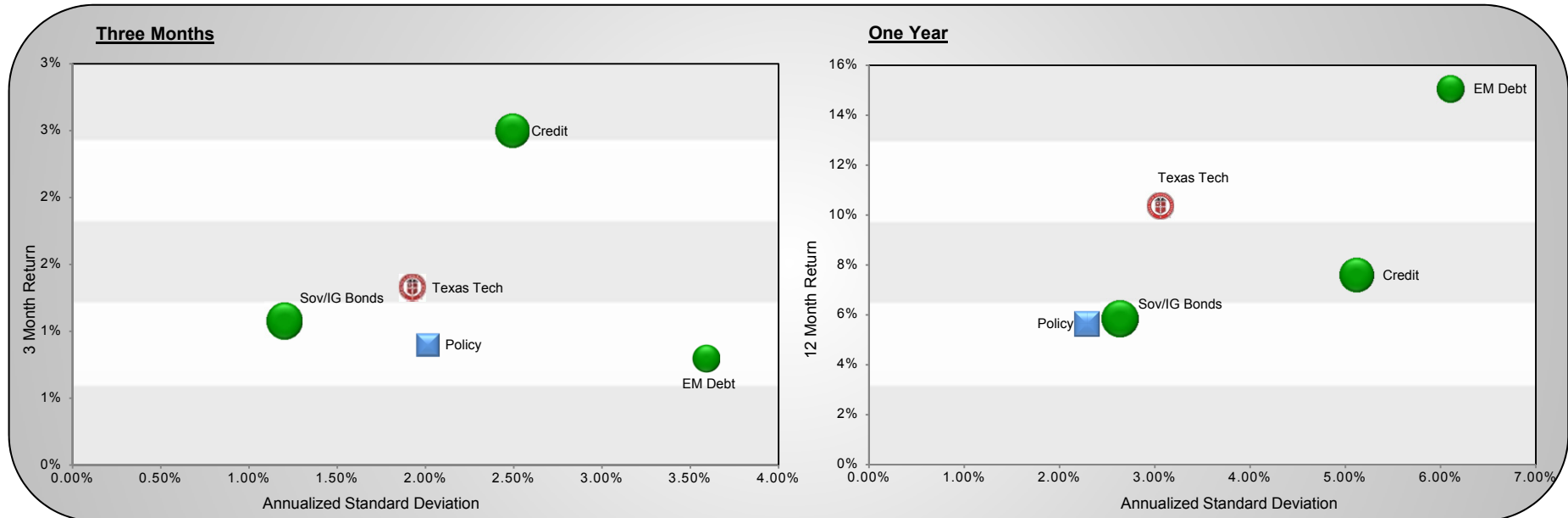
- Nominal yields have rarely been lower than current levels for most 10 year government bonds according to Deutsche Bank research.
- However, real yields are not at such extreme levels. Most countries are sit within the 60-80% range, meaning they have had lower rates for 20-40% of the time.
- So, with nominal yields close to all-time lows, and real yields not as extreme, arithmetically it must be true that inflation is low relative to history, especially in Europe.



Source – Deutsche Bank



Risk vs. Return (Sub Assets)



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Liquid Real Assets

(Total NAV: \$51,637,958)

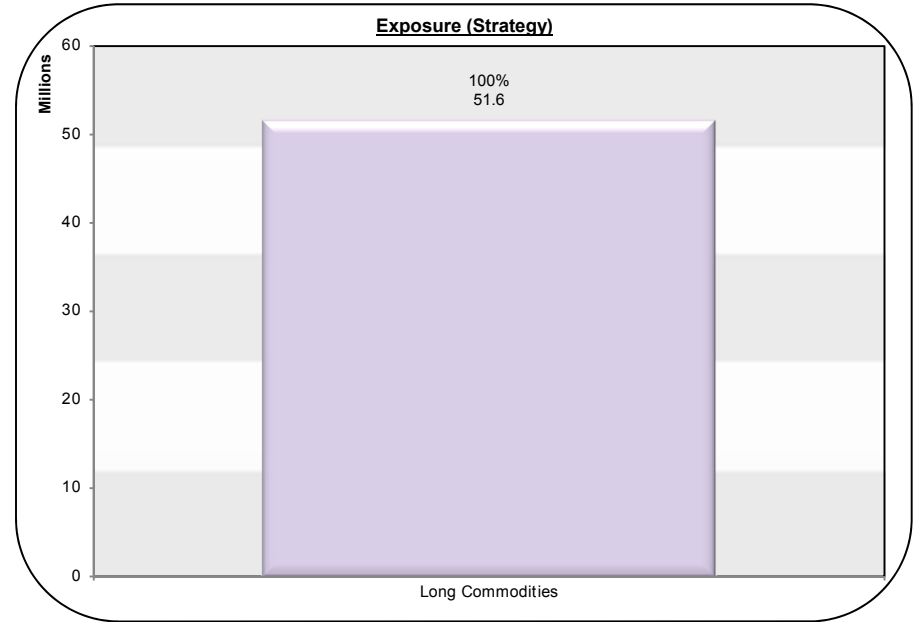
31st August 2014 (Final)

Overview and Risk Profile by Asset Class

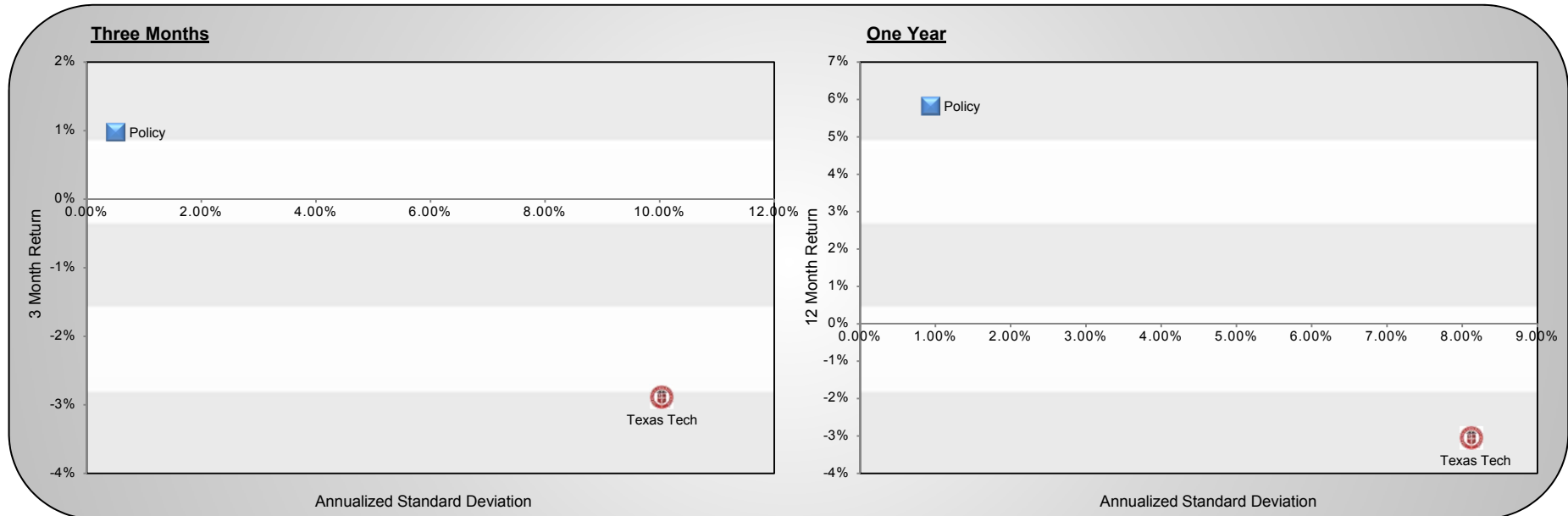
Commentary

- North Sea Brent crude (-2.8%) fell amid increased Libyan oil exports and projections for a sizable increase in September crude oil loadings. Anticipation of falling future refinery demand, as a result of the upcoming maintenance season, continued to put downward pressure on West Texas Intermediate (WTI) crude (-2.0%), even as Cushing, Oklahoma inventories remained significantly below their five-year average.
- Natural gas prices (+4.8%) advanced. Prices initially retreated as weather since May through the end of August was 4% cooler compared with the same period last year and 11% cooler than the five-year average.
- Precious metals (-1.0%) finished lower. At the start of the period, geopolitical concerns broadly supported prices for high quality metals such as gold (+0.4%), but those early gains soon faded, particularly for silver (-4.8%). Palladium (+4.0%) outperformed, breaking the psychologically important \$900/oz level.
- Base metals (+0.5%) were mixed. Aluminum (+4.7%) advanced as fundamentals improved substantially on supply cuts and robust demand. Nickel (+1.5%) also gained as deficits were forecast to develop later this year. Zinc (-0.6%) drifted lower amid some profit taking, and copper fell 2.7% on demand concerns as the seasonal slow period for China consumption approaches.

Source – Cohen & Steers



Risk vs. Return (Strategy)



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31st August 2014 (Final)

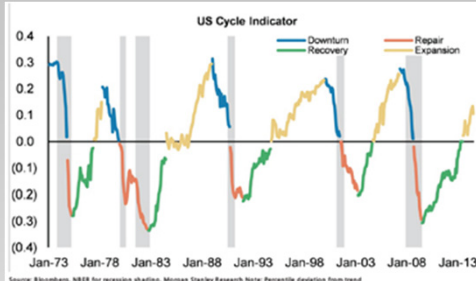
Cash & Alpha Pool

(Total NAV: \$93,568,189)

Overview and Risk Profile by Asset Class

Commentary

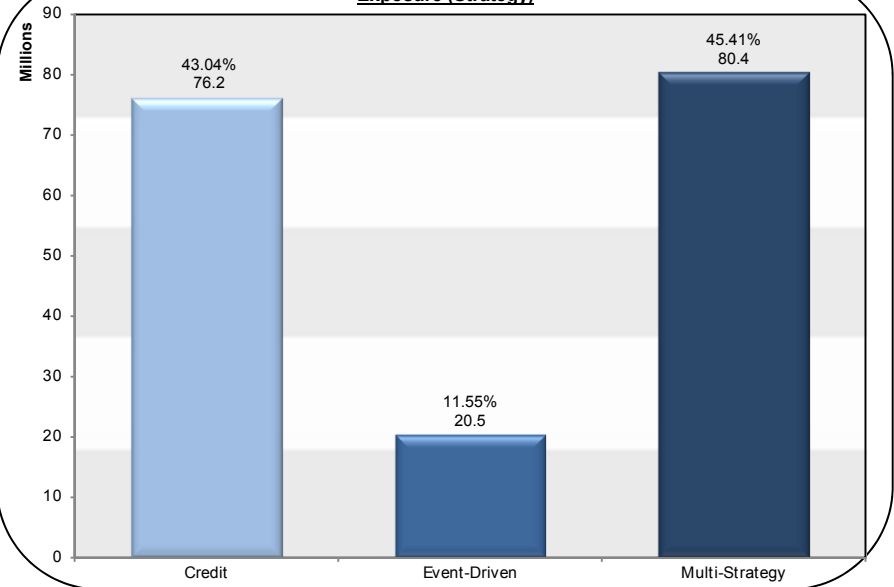
- Morgan Stanley believes that the US economy has largely completed the repair phase and is entering the very early stages of expansion.



- The MS US Equity Strategy team's bullishness regarding the equity market is based on the thesis that the top of the cycle, or the end of the expansion, will be defined by some form of reckless management spending, and debt.
- In a scenario where the cycle does extend for several more years, earnings could grow modestly as well. EPS growth of 6% from 2015-2020 would drive S&P 500 earnings to near \$170. A 17x multiple would translate into a peak level for the S&P 500 near 3,000 in this scenario

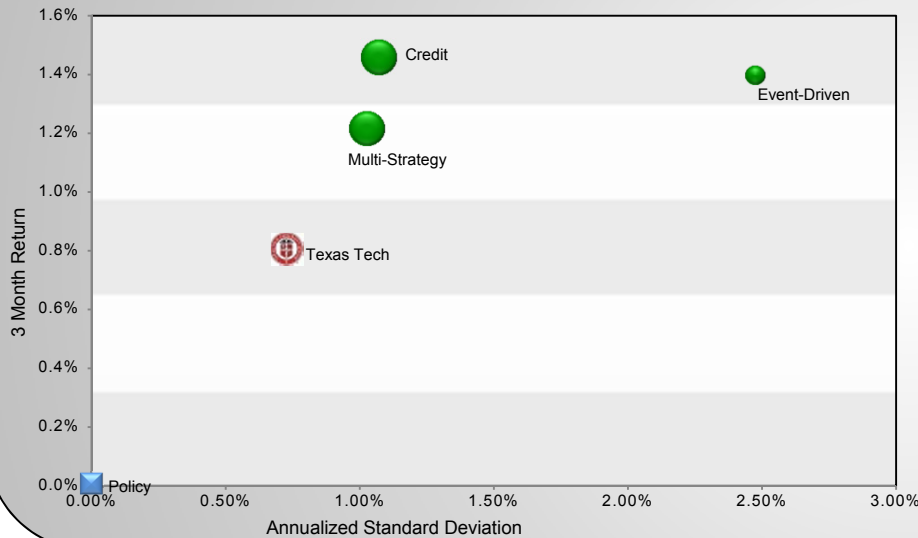
Source – Morgan Stanley

Exposure (Strategy)

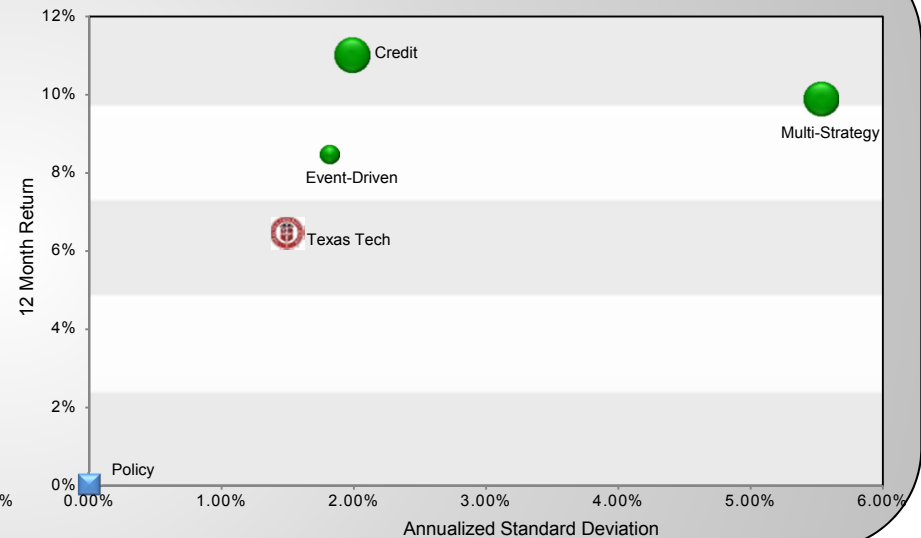


Risk vs. Return (Strategy)

Three Months



One Year



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31st August 2014 (Final)

Private Equity

(Total NAV: \$85,462,150)

Overview and Risk Profile by Asset Class

Commentary

Source – Wall Street Journal

- Annual data from Preqin shows that annual private equity distributions reached record levels in 2013.
- In 2013, a total of \$388bn was called and \$568bn distributed, compared to \$492bn and \$381bn in 2012 respectively.
- As of December 2013, total annual distributions surpassed capital calls by 46%; only in 2004, 2005 and 2011 have distributions exceeded capital calls and in each of these years it was by only 3%, 5% and 7% respectively.

Fig. 1: All Private Equity Amount Called, Distributed and Unrealized Value, 2000 - 2013

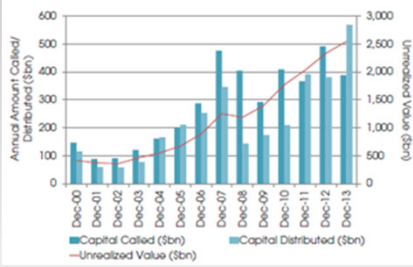
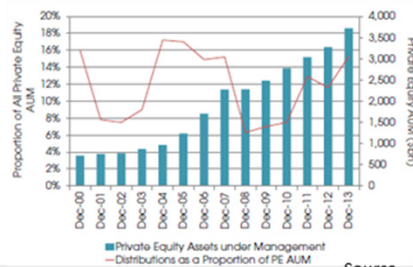
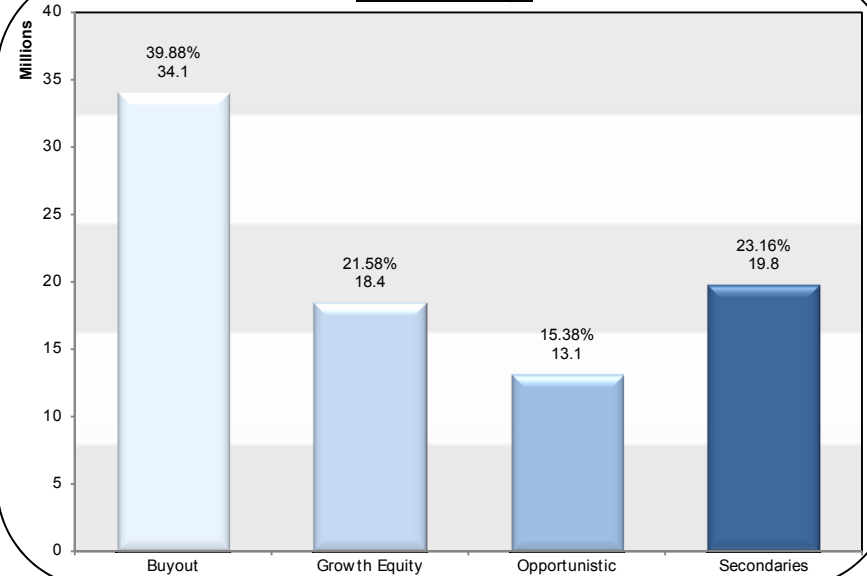


Fig. 2: Distributions as a Proportion of All Private Equity Assets under Management, 2000 - 2013



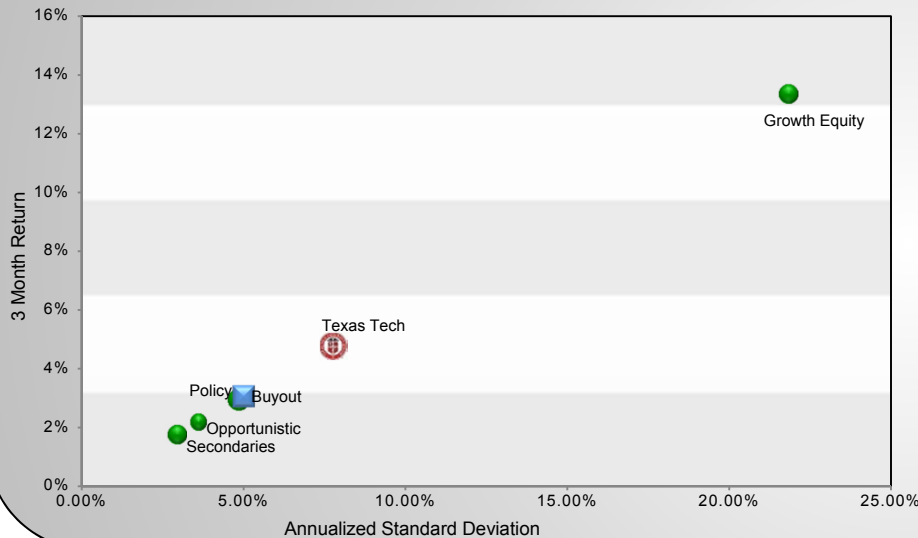
Source – Preqin

Exposure (Strategy)

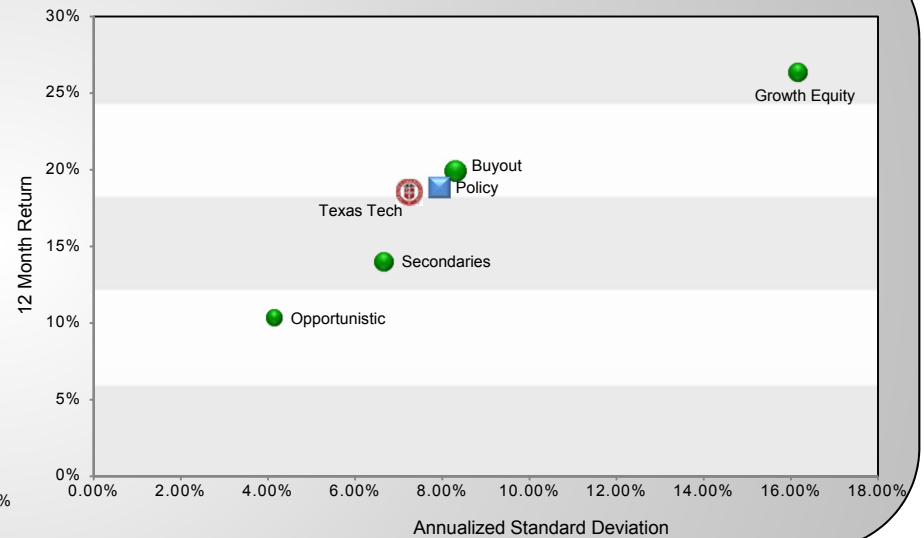


Risk vs. Return (Strategy)

Three Months



One Year



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Private Credit

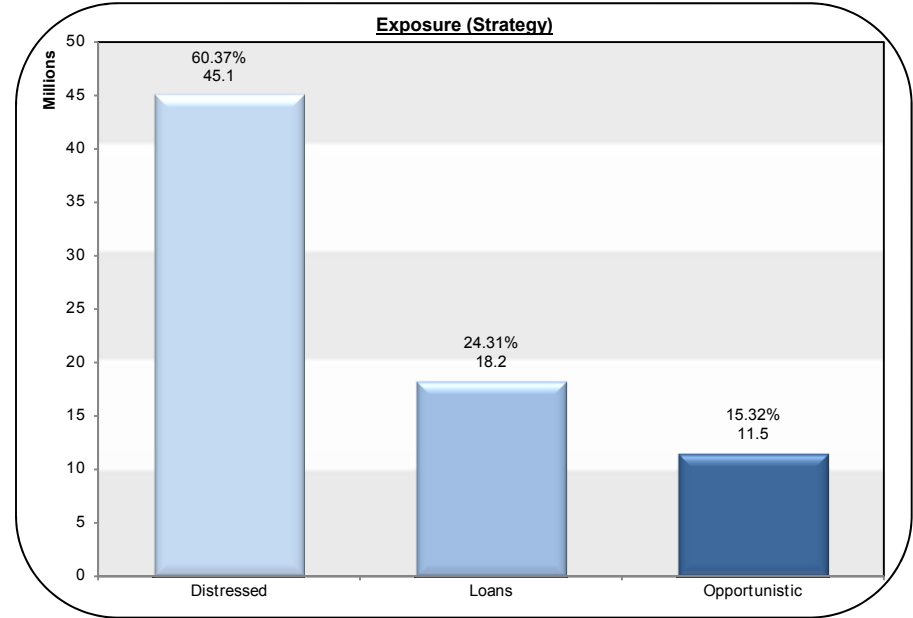
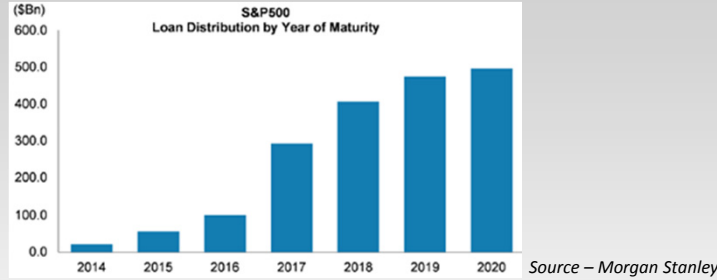
(Total NAV: \$74,857,662)

31st August 2014 (Final)

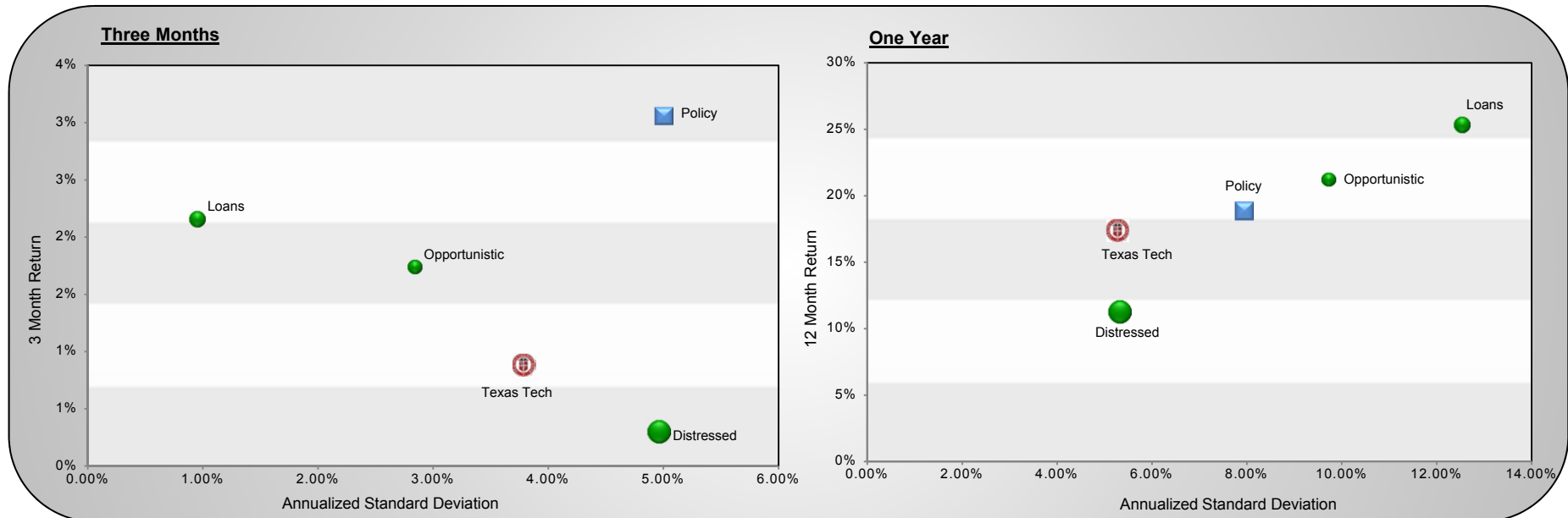
Overview and Risk Profile by Asset Class

Commentary

- Debt maturities have been pushed out until 2017 or later, as management teams have taken advantage of the low cost of capital and ample capital availability.
- While the total amount of debt due by US corporations is high, rolling over that debt is further out on the horizon and may not prove difficult. Interest coverage is elevated as cash-rich companies have been able to refinance at low interest costs. The odds of companies having difficulty making debt payments in the future is sharply lower than it has been in some time.
- MS economics team believes that when the Fed does begin to raise rates, the terminal nominal federal funds rate will be 3.5% and will take several years to get there. This suggests that even in a rising interest rate scenario companies will still face historically low costs of financing.



Risk vs. Return (Strategy)



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Private Real Assets

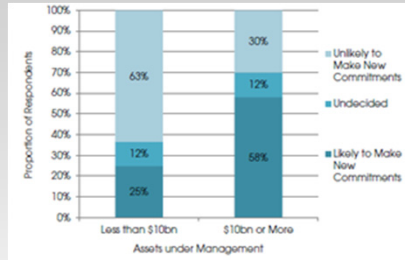
(Total NAV: \$98,121,128)

31st August 2014 (Final)

Overview and Risk Profile by Asset Class

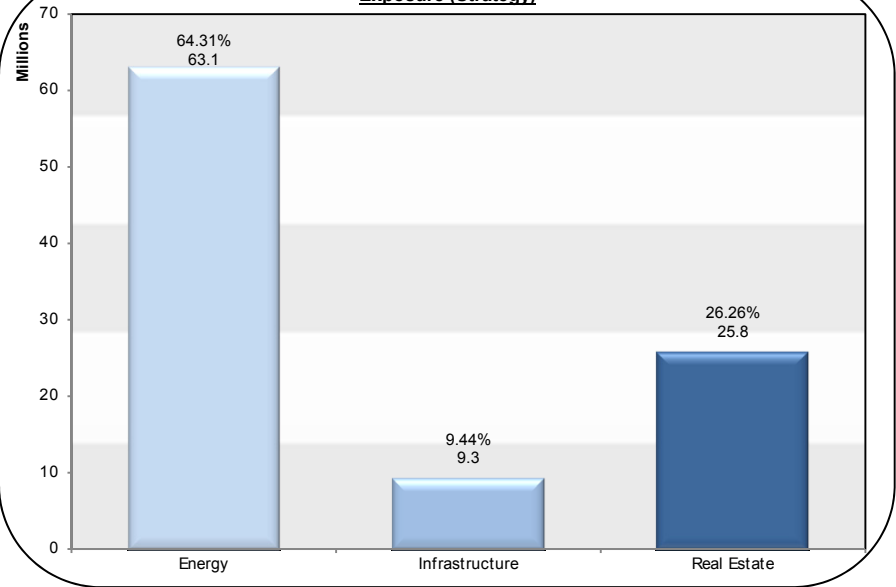
Commentary

- According to Preqin, a considerable 58% of investors with \$10bn or more in assets under management plan to invest in private real estate investments in the next 12 months. This compares to just 25% of investors with less than \$10bn in AUM.
- Regionally, European investors are marginally more likely to invest in the next 12 months than investors based in North America and Asia, with 38% planning to make new investments, compared to 32% and 37% respectively.
- Investor confidence in private real estate appears to have increased over the last six months, with 29% of investors planning to commit more capital to the asset class in the year ahead than they did over the previous 12 months, compared to 18% which stated so in December 2013.



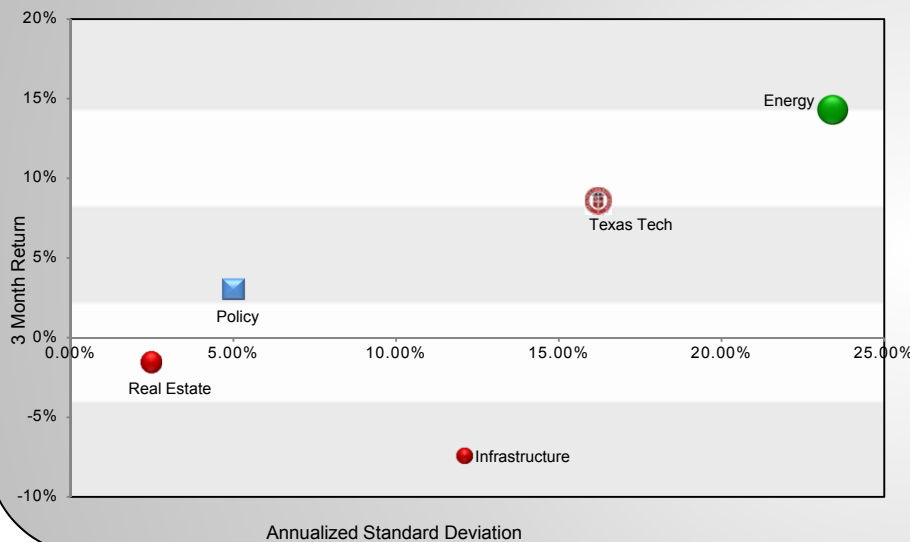
Source – Preqin

Exposure (Strategy)

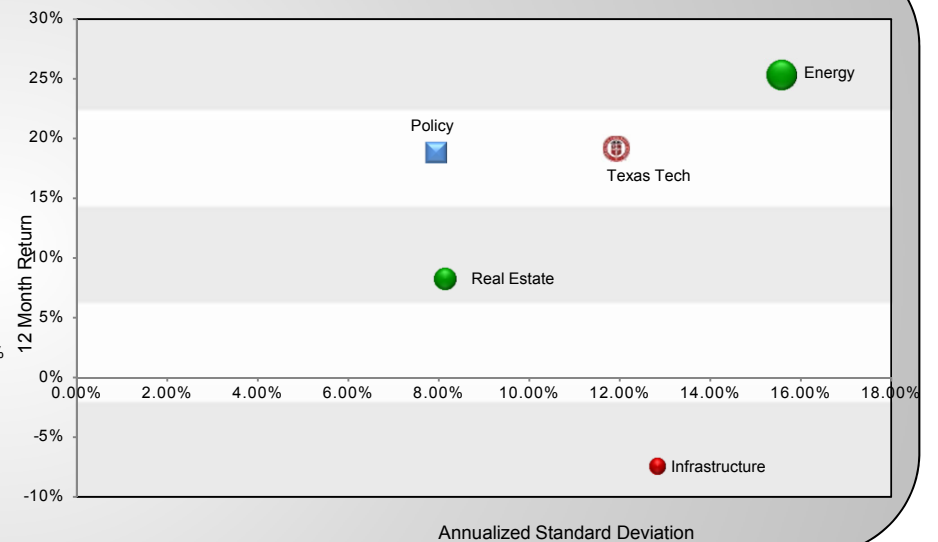


Risk vs. Return (Strategy)

Three Months



One Year



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Appendix I – Sub-Asset Detail

Fund	Current Exposure	MTD Perf.	3 Mo. Perf.	Calendar YTD	Fiscal YTD	Nacubo YTD	1 Year Perf.	3 Year Perf.	5 Year Perf.
TOTAL	1,051,064,794	0.76%	2.76%	5.29%	14.71%	0.15%	14.71%	9.43%	9.36%
Policy		1.06%	2.26%	7.19%	15.64%	0.61%	15.64%	9.92%	10.41%
Equity	361,237,087	2.42%	3.42%	6.01%	19.72%	1.17%	19.72%	14.87%	11.97%
US Equity	79,254,974	4.00%	5.11%	6.94%	21.68%	1.96%	21.68%	15.72%	12.56%
<i>Benchmark: S&P 500 Total Return</i>		4.00%	4.68%	9.89%	25.25%	2.57%	25.25%	20.61%	16.88%
Global Equity	99,960,161	3.02%	4.41%	8.36%	26.22%	2.14%	26.22%	22.81%	n/a
<i>Benchmark: MSCI ACWI</i>		2.21%	2.87%	7.21%	20.99%	0.97%	20.99%	14.06%	11.80%
Non US Developed Equity	58,986,153	0.88%	-0.29%	2.99%	18.52%	-1.40%	18.52%	12.15%	10.20%
<i>Benchmark: MSCI EAFE</i>		-0.15%	-1.13%	2.93%	16.92%	-2.10%	16.92%	11.87%	8.69%
Non US Emerging Markets Equity	68,228,256	2.31%	6.62%	12.93%	21.63%	4.07%	21.63%	6.56%	8.07%
<i>Benchmark: MSCI EMF</i>		2.29%	7.18%	10.95%	20.40%	4.36%	20.40%	4.70%	8.24%
Alternative Equity	54,807,543	1.13%	0.86%	-3.98%	4.98%	-1.46%	4.98%	28.60%	n/a
<i>Benchmark: MSCI ACWI</i>		2.21%	2.87%	7.21%	20.99%	0.97%	20.99%	14.06%	11.80%
Debt	275,177,642	0.32%	1.33%	6.29%	10.37%	0.15%	10.37%	8.00%	8.47%
Sovereign/Investment Grade Bonds	108,533,213	0.70%	1.08%	4.00%	5.85%	0.59%	5.85%	3.39%	n/a
<i>Benchmark: Barclays Global Aggregate</i>		1.10%	0.90%	4.81%	5.66%	0.85%	5.66%	2.91%	4.48%
Credit	97,475,115	1.05%	2.50%	0.15%	7.62%	0.91%	7.62%	12.92%	11.39%
<i>Benchmark: Barclays Global Aggregate</i>		1.10%	0.90%	4.81%	5.66%	0.85%	5.66%	2.91%	4.48%
Emerging Markets Debt	69,169,314	-0.72%	0.80%	10.15%	15.06%	-0.89%	15.06%	7.98%	n/a
<i>Benchmark: JP Morgan EM Bond Index</i>		0.66%	1.38%	9.94%	13.91%	0.78%	13.91%	7.03%	9.52%
Liquid Real Assets	51,637,958	-0.47%	-2.84%	1.52%	-2.92%	-5.06%	-2.92%	-8.32%	-0.39%
<i>Benchmark: CPI + 4%</i>		0.17%	0.98%	4.80%	5.84%	0.46%	5.84%	5.78%	6.11%
Cash & Alpha Pool	93,568,189	0.14%	0.81%	3.02%	6.47%	0.24%	6.47%	5.58%	4.54%
Cash	(102,875,252)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.35%	0.22%
Cash Collateral	19,392,441	0.00%	0.00%	n/a	n/a	0.00%	n/a	n/a	n/a
Alpha Pool	177,051,000	0.27%	1.34%	4.96%	9.66%	0.45%	9.66%	8.53%	7.84%
<i>Benchmark: HFRI FOF Index</i>		0.89%	1.50%	2.64%	7.87%	0.51%	7.87%	4.27%	3.81%
Liquidating	11,002,977	-0.04%	2.71%	-2.17%	5.51%	-0.02%	5.51%	0.49%	3.72%

*Cash is adjusted for synthetic exposures.

31st August 2014 (Final)

Appendix I – Sub-Asset Detail (cont.)
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Fund	Current Exposure	1 Year Performance	3 Year Performance	5 Year Performance
Private Investments	258,440,940	18.36%	11.44%	12.97%
<i>Benchmark: Private Market Index (90% VE, 10% NCREIF)</i>		18.10%	13.26%	10.89%
Private Equity	85,462,150	18.31%	10.73%	11.42%
Private Credit	74,857,662	17.45%	11.14%	13.59%
Private Real Assets	98,121,128	19.17%	12.27%	13.88%

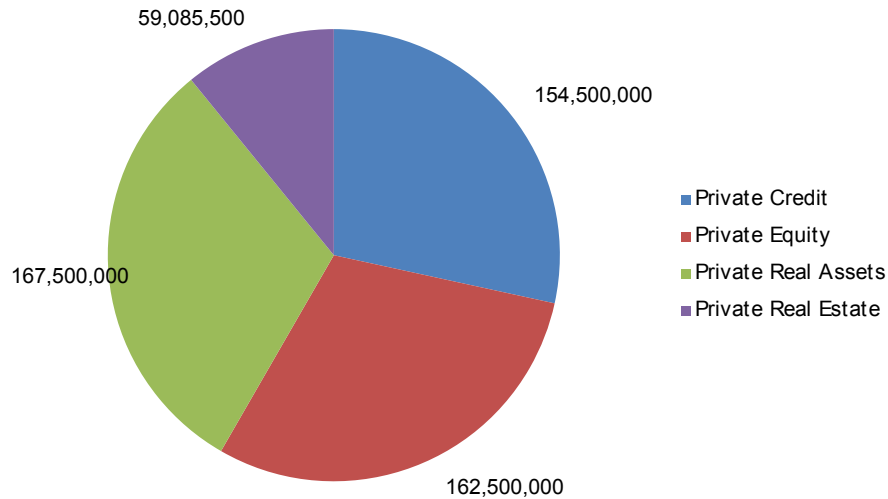
*Performance is calculated using time weighted Cash on Cash returns. This is an industry standard and allows direct comparison between manager returns and policy returns. IRR returns can be seen in appendix 2.



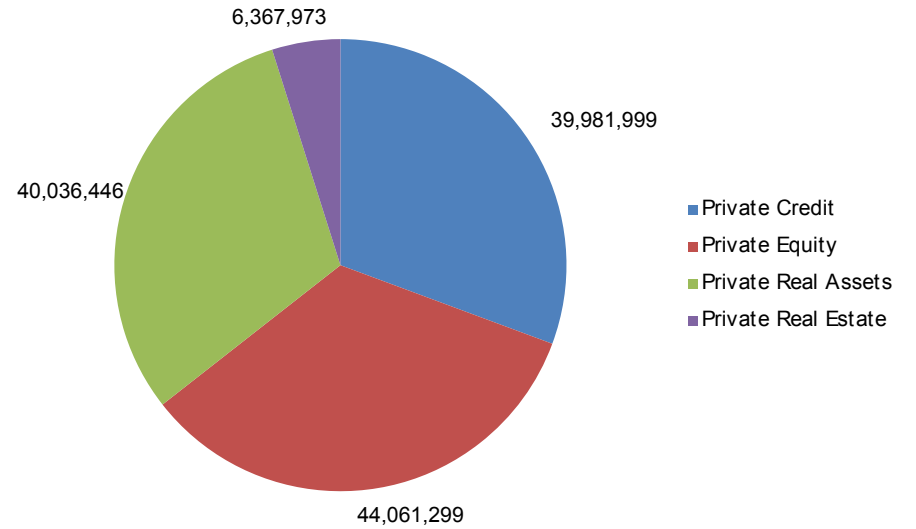
31st August 2014 (Final)

Appendix II - Private Markets Report (as of August 2014) - Total Commitment

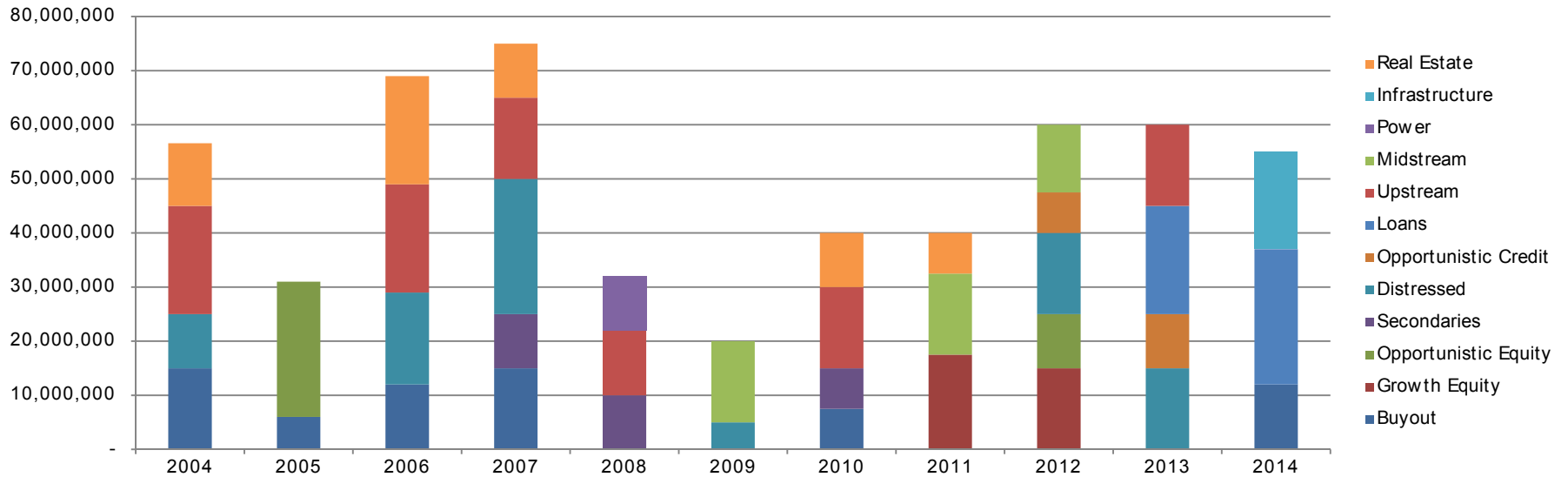
Total Commitment



Total Unfunded



Commitment by Vintage Year



Data Provided by Texas Tech University System
 Reported Valuations through June 30, 2014 Statements
 Adjusted Valuations included all cashflows through August 31, 2014

31st August 2014 (Final)
Appendix II - Private Markets Report (as of August 2014) - Performance Analysis by Strategy Type & Asset Class
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	6	\$67,500,000	\$53,217,378	\$56,411,863	\$59,702,674	84%	\$34,866,200	\$30,564,110	12.30%	1.60
	Growth Equity	2	\$32,500,000	\$10,844,882	\$11,958,677	\$1,030,168	37%	\$11,788,059	\$12,165,162	7.79%	1.10
	Opportunistic	2	\$35,000,000	\$31,300,000	\$31,300,000	\$14,424,876	89%	\$20,427,792	\$20,802,138	2.93%	1.13
	Secondaries	3	\$27,500,000	\$20,673,022	\$21,092,739	\$11,047,455	77%	\$19,849,346	\$19,604,275	10.30%	1.45
	Total	13	\$162,500,000	\$116,035,282	\$120,763,279	\$86,205,173	74%	\$86,931,397	\$83,135,685	9.38%	1.40
Private Credit	Distressed	9	\$92,000,000	\$87,178,082	\$87,240,090	\$81,760,668	95%	\$44,192,279	\$45,513,436	13.19%	1.46
	Loans	2	\$45,000,000	\$17,272,219	\$17,272,219	\$0	38%	\$18,051,393	\$18,051,393	5.43%	1.05
	Opportunistic	2	\$17,500,000	\$9,158,840	\$10,221,374	\$1,203,873	58%	\$11,155,313	\$11,155,313	15.37%	1.21
	Total	13	\$154,500,000	\$113,609,141	\$114,733,683	\$82,964,541	74%	\$73,398,985	\$74,720,142	13.21%	1.37
Private Real Assets	Upstream	6	\$97,000,000	\$80,253,547	\$84,048,588	\$95,721,673	87%	\$36,510,004	\$32,868,553	18.44%	1.53
	Midstream	3	\$42,500,000	\$27,330,201	\$28,475,047	\$18,627,230	67%	\$26,931,054	\$26,247,348	34.79%	1.58
	Power	1	\$10,000,000	\$8,420,529	\$8,541,077	\$3,093,891	85%	\$2,869,821	\$2,772,930	-16.41%	0.69
	Infrastructure	1	\$18,000,000	\$9,364,626	\$10,476,177	\$105,248	58%	\$0	\$9,259,378	-10.72%	0.89
	Total	11	\$167,500,000	\$125,368,903	\$131,540,889	\$117,548,042	79%	\$66,310,879	\$71,148,209	18.30%	1.43
Private Real Estate	Value-Add	3	\$31,585,500	\$28,824,135	\$28,886,064	\$22,210,443	91%	\$13,876,507	\$13,876,507	5.18%	1.25
	Opportunistic	3	\$27,500,000	\$23,645,226	\$23,893,392	\$3,202,707	87%	\$11,176,037	\$11,698,005	-10.42%	0.62
	Total	6	\$59,085,500	\$52,469,361	\$52,779,456	\$25,413,150	89%	\$25,052,544	\$25,574,512	-0.82%	0.97

Performance by Asset Class

Asset Class	# of Funds	Commitment	Funded	Paid-In Capital	Distributions	% Drawn	Reported Valuation	Adjusted Valuation	IRR	MOC
Private Equity	13	\$162,500,000	\$116,035,282	\$120,763,279	\$86,205,173	74%	\$86,931,397	\$83,135,685	9.38%	1.40
Private Credit	13	\$154,500,000	\$113,609,141	\$118,337,138	\$82,964,541	77%	\$73,398,985	\$74,720,142	13.21%	1.37
Private Real Assets	11	\$167,500,000	\$125,368,903	\$130,096,900	\$117,548,042	78%	\$66,310,879	\$71,148,209	18.30%	1.43
Private Real Estate	6	\$59,085,500	\$52,469,361	\$57,197,358	\$25,413,150	97%	\$25,052,544	\$25,574,512	-0.82%	0.97
Total	43	\$543,585,500	\$407,482,687	\$426,394,675	\$312,130,906	78%	\$251,693,805	\$254,578,548	10.62%	1.35



31st August 2014 (Final)

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



31st August 2014 (Final)

Appendix III – Glossary (cont.)

Investment Terms/Performance Statistics

Active Premium: A measure of the investment's annualized return minus the benchmark's annualized return

Alpha: Return generated by the manager that is not explained by the returns of the benchmark. A measure of a fund's performance beyond what its benchmark would predict

Annual Return: The annual rate at which an investment would have grown, if it had grown at a steady rate. Also called "Compound Annual Growth Rate" (CAGR), or the "Compound Rate of Return Annualized" (Compound RoR)

Annual Volatility: A statistical measure of the dispersion of returns around the average (mean) return. Often used as a measure of investment risk with a higher value indicating higher risk

Arbitrage: The simultaneous purchase and sale of an asset in order to profit from a difference in the price

Beta: A measure of the risk of the fund relative to the benchmark. Beta describes the sensitivity of the investment to benchmark movements where the benchmark is always assigned a beta of 1.0

Calmar Ratio: A return/risk ratio calculated over the last three year period as [annual compounded return / (Maximum Drawdown)]

Capital Commitment: Every investor in a private equity fund commits to investing a specified sum of money in the fund partnership over a specified period of time.

Capital Distribution: The returns that an investor in a private equity fund receives; the income and capital realized from investments less expenses and liabilities

Carried Interest: The share of profits that the fund manager is due once it has returned the cost of investment to investors

Catch up: A clause that allows the general partner to take, for a limited period of time, a greater share of the carried interest than would normally be allowed. This continues until the time when the carried interest allocation, as agreed in the limited partnership, has been reached.

Clawback: Ensures that a general partner does not receive more than its agreed percentage of carried interest over the life of the fund

Correlation: A measure between +1 and -1 that explains the degree to which the returns of the fund and a benchmark are related

Down Capture: Measures how much of the benchmark's return the fund captures when the benchmark is negative

Down Number: The percentage of the time the fund was down when the benchmark was down

Drawdown: When a private equity firm has decided where it would like to invest, it will approach its own investors in order to draw down the money. The money will already have been pledged to the fund but this is the actual act of transferring the money so that it reaches the investment target

Excess Kurtosis: Measures the distribution of observed data around the mean with an emphasis on "outlier" data, both positive and negative

Exit: The means by which a fund is able to realize its investment in a company – by an initial public offering, a trade sale, selling to another private equity firm or a company buy-back

Fundraising: The process by which a private equity firm solicits financial commitments from limited partners for a fund

General Partner: This can refer to the top-ranking partner(s) at a private equity firm as well as the firm managing the private equity fund



31st August 2014 (Final)

Appendix III – Glossary (cont.)

Investment Terms/Performance Statistics (cont.)

Gross Exposure: Aggregate of long and short investment positions in relation to the Net Asset Value (NAV)

Holding Period: The length of time that an investment is held

Information Ratio: The Active Premium divided by the Tracking Error. This measure explicitly relates the degree by which an investment has beaten the benchmark to the consistency by which the investment has beaten the benchmark

Internal Rate of Return: A time-weighted return expressed as a percentage that uses the present sum 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

Leverage: Increasing exposure to markets (both long and short) by borrowing or the use of derivatives

Limited Partnership: The standard vehicle for investment in private equity funds

Long Position: Owning a security

Management Fee: The annual fee paid to the general partner

Max Drawdown: The largest percentage loss of Net Asset Value (NAV) as measured from peak-to-trough

Net Exposure: Difference between the long and short positions, representing the exposure to market fluctuations

Preferred Return: This is the minimum amount of return that is distributed to the limited partners until the time when the general partner is eligible to deduct carried interest

Omega Ratio: The weighted gain/loss ratio relative to the average monthly historical return; captures the effects of extreme returns and conveys the preference for positive volatility versus negative volatility

Sharpe Ratio: A return/risk ratio calculated as: $[(\text{annual compounded return} - \text{risk-free rate}) / (\text{annual volatility of returns})]$

Skewness: A measure of the symmetry of return distribution, as compared with a normal (bell-shaped) distribution

Sortino Ratio: A return/risk ratio calculated as such: $[(\text{annual compounded return} - \text{minimum acceptable return (MAR)}) / (\text{downside deviation of returns below MAR})]$. This ratio was developed to differentiate between good (upside) and bad (downside) volatility

Standard Deviation: Measures the dispersal or uncertainty in a random variable (in this case, investment returns). It measures the degree of variation of returns around the mean (average) return

Short Position: Selling a security

Tracking Error: A measure of the unexplained portion of an investments performance relative to a benchmark

Up Capture: Measures the percentage of the benchmark's return the fund captures when the benchmark is positive

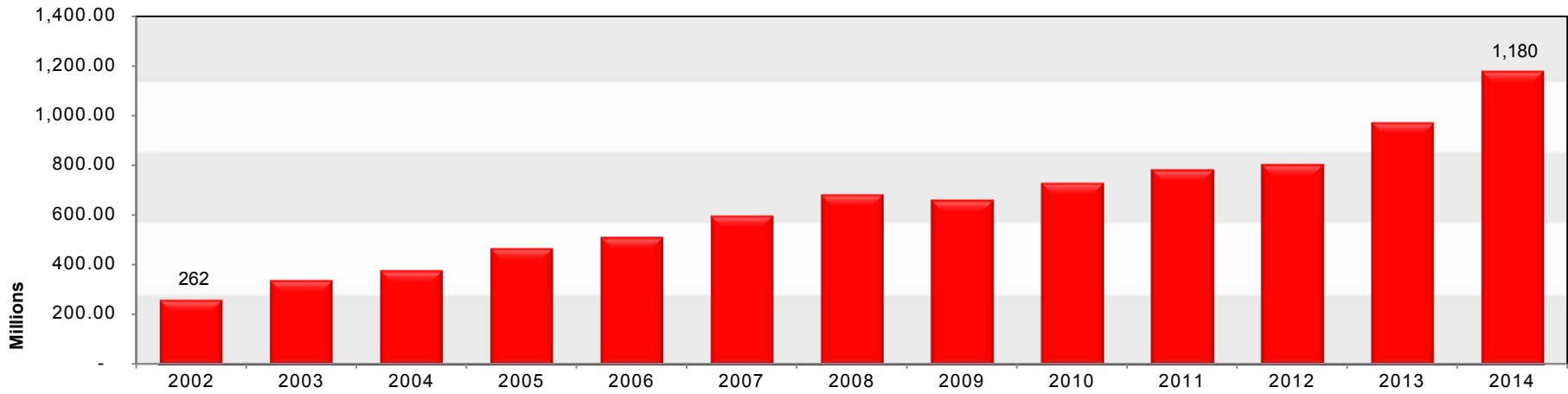
Up Number: The percentage of the time the fund was up when the benchmark was up

Value at Risk (VAR): The maximum loss that can be expected within a specified holding period with a specified confidence level

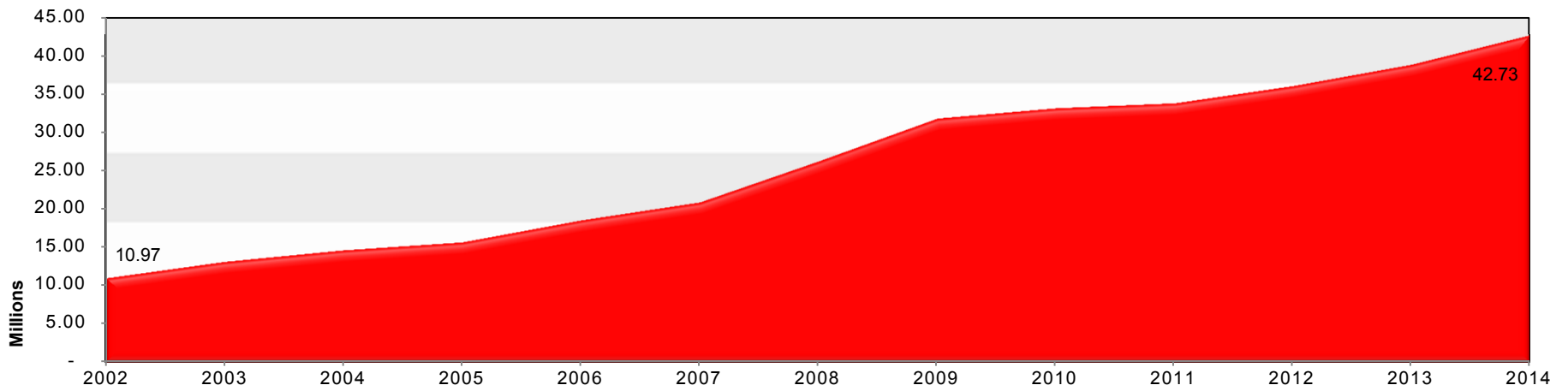


Appendix IV – Endowment Report

Historical Market Value (Fiscal Year)



Historical Spending (Fiscal Year)



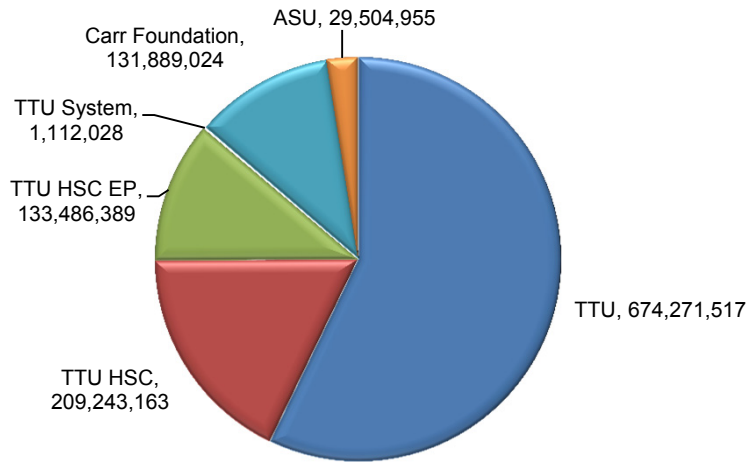


31st August 2014 (Final)

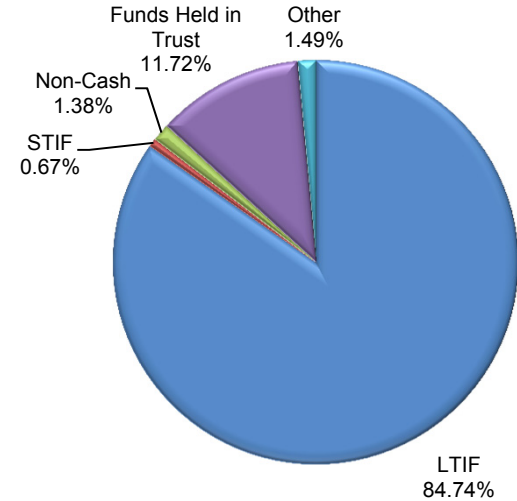
Appendix IV – Endowment Report (cont.)

Total Endowment (Fiscal Year 2014)

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



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



Summary of Endowment

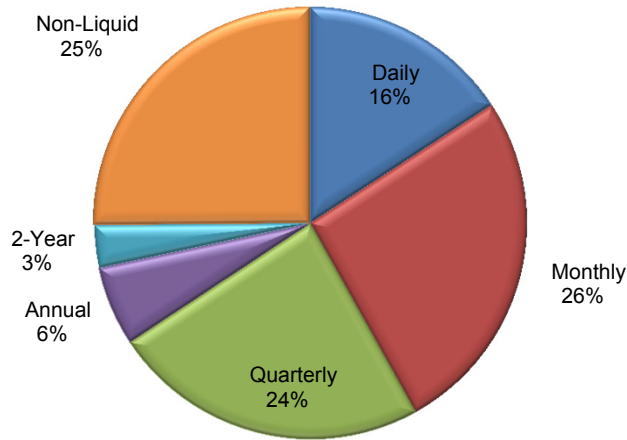
	TTU	TTU HSC	TTU HSC EP	TTU System	Carr Foundation	ASU	Total
LTIF	\$605,640,386	\$140,553,675	\$99,040,709	\$1,096,799	\$124,707,323	\$28,447,714	\$999,486,605
STIF	\$4,894,311	\$2,699,405	\$69	(\$3,956)	\$0	\$290,627	\$7,880,455
Non-Cash	\$6,907,137	\$2,273,830	\$0	\$0	\$6,837,834	\$226,935	\$16,245,736
Funds Held in Trust	\$40,245,612	\$63,037,680	\$34,445,612	\$0	\$0	\$539,085	\$138,267,989
Other	\$16,584,071	\$678,573	\$0	\$19,186	\$343,867	\$595	\$17,626,291
Total	\$674,271,517	\$209,243,163	\$133,486,389	\$1,112,028	\$131,889,024	\$29,504,955	\$1,179,507,076



31st August 2014 (Final)

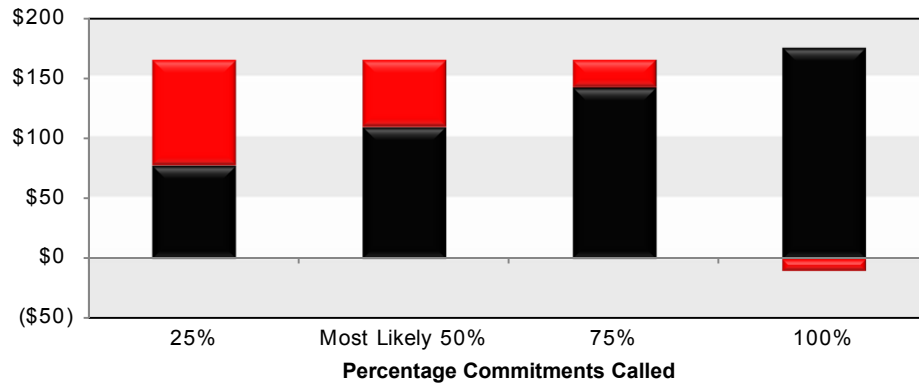
Appendix IV – Endowment Report (cont.)

Endowment Liquidity



Endowment		Liquidity
Daily	\$166,087,723	15.8%
Monthly	\$274,288,211	26.1%
Quarterly	\$250,287,379	23.8%
Annual	\$62,689,046	6.0%
2-Year	\$33,515,125	3.2%
Non-Liquid	\$264,197,312	25.1%
Total Endowment	\$1,051,064,794	100%

Liquidity Sensitivity



	<u>Commitment</u>	<u>Capital Called</u>	<u>Distributions</u>	<u>Account Balance</u>	<u>Remaining Commitment</u>
Private Equity	\$162,500,000	\$120,763,279	\$86,205,173	\$83,135,685	\$44,061,299
Private Credit	\$154,500,000	\$114,733,683	\$82,964,541	\$74,720,142	\$39,981,989
Real Assets	\$226,585,500	\$184,320,345	\$142,961,192	\$96,722,721	\$46,404,419
Total	\$543,585,500	\$419,817,307	\$312,130,906	\$254,578,548	\$130,447,707

Annual Spending \$45,200,000
Total Committed Funds \$175,647,707

■ Maximum Remaining Annual Cash Needed ■ Total Daily Liquidity

Unfunded Commitments - Sensitivity Analysis

Maximum Remaining Annual Cash Needed
 Percentage of Daily Liquidity

25% Called
 \$77,811,927
 47%

Most Likely 50% Called
 \$110,423,854
 66%

75% Called
 \$143,035,780
 86%

100% Called
 \$175,647,707
 106%