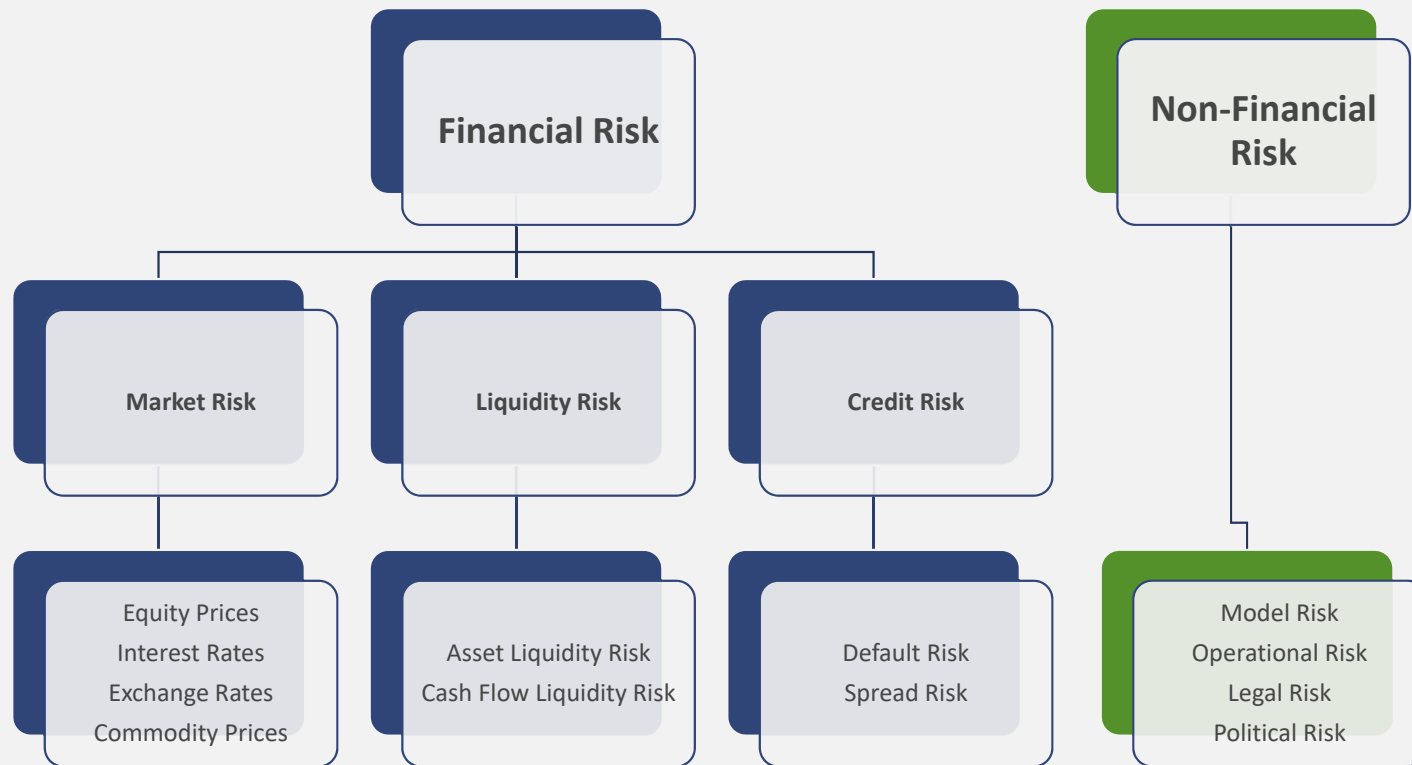


Investment Risk Exposures

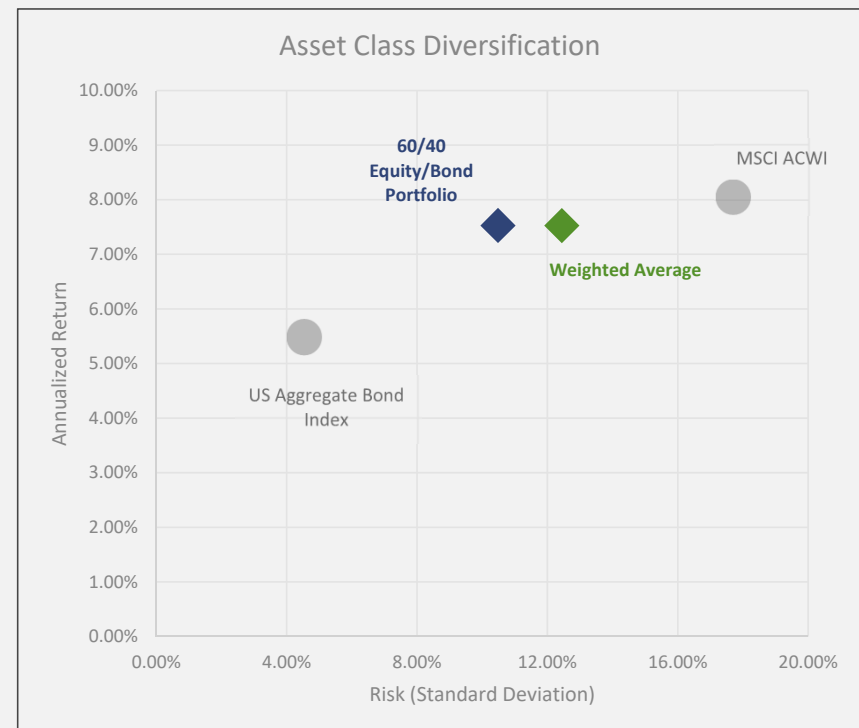
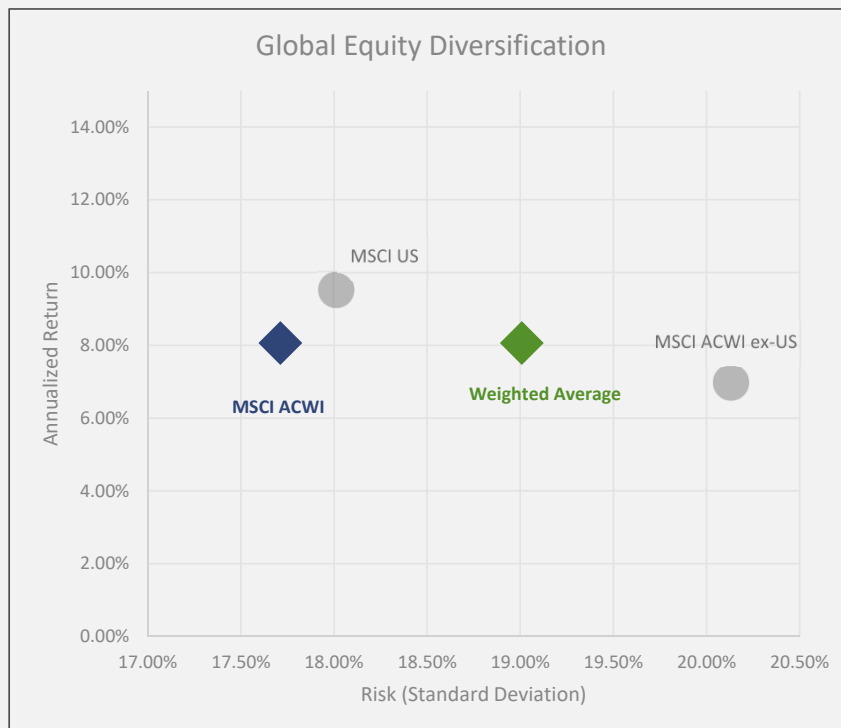


Risk Measurement

Volatility	Typically measured as standard deviation
Tracking Error	Active risk - measured as the volatility of an investment's excess returns
Beta	Sensitivity to market movements
Duration	Sensitivity to parallel shift in the yield curve
Value at Risk (VaR)	Statistically derived estimate of a loss given a specified confidence interval
Stress Testing	Simulations used to determine how an investment will fare given varying scenarios

Diversification

| The risk of a portfolio of investments is less than the weighted average risk of its individual components



Time Horizon and Volatility

Annual Returns	MSCI US	MSCI ex-US	MSCI ACWI	BB US Agg	0-3 mo T-bill	60/40
1993	7.02%	32.35%	22.12%	9.75%	3.10%	17.17%
1994	-0.86%	4.83%	2.85%	-2.92%	4.08%	0.55%
1995	37.98%	9.94%	19.40%	18.47%	5.79%	19.03%
1996	24.03%	6.58%	13.13%	3.63%	5.27%	9.33%
1997	34.06%	1.85%	14.87%	9.65%	5.27%	12.79%
1998	30.68%	14.27%	21.87%	8.69%	5.12%	16.60%
1999	22.38%	31.19%	26.99%	-0.82%	4.73%	15.87%
2000	-12.55%	-15.09%	-13.92%	11.63%	5.98%	-3.70%
2001	-12.06%	-19.39%	-15.82%	8.44%	4.10%	-6.11%
2002	-22.69%	-14.69%	-18.98%	10.25%	1.70%	-7.28%
2003	29.12%	41.34%	34.61%	4.10%	1.07%	22.41%
2004	10.71%	21.33%	15.74%	4.34%	1.25%	11.18%
2005	5.73%	17.08%	11.36%	2.43%	2.99%	7.79%
2006	15.32%	27.11%	21.51%	4.33%	4.79%	14.64%
2007	6.15%	17.09%	12.23%	6.97%	4.81%	10.12%
2008	-37.14%	-45.27%	-41.86%	5.24%	1.75%	-23.02%
2009	27.14%	42.06%	35.37%	5.93%	0.14%	23.59%
2010	15.49%	11.56%	13.20%	6.54%	0.13%	10.54%
2011	1.99%	-13.42%	-6.92%	7.84%	0.07%	-1.02%
2012	16.13%	17.23%	16.72%	4.22%	0.07%	11.72%
2013	32.61%	15.69%	23.39%	-2.02%	0.05%	13.22%
2014	13.36%	-3.49%	4.67%	5.97%	0.03%	5.19%
2015	1.32%	-5.30%	-1.87%	0.55%	0.02%	-0.90%
2016	11.61%	4.97%	8.47%	2.65%	0.25%	6.14%
2017	21.90%	27.70%	24.59%	3.54%	0.81%	16.17%

| Variability over longer time horizons is lower than variability over shorter horizons

	MSCI US	MSCI ex-US	MSCI ACWI	BB US Agg	0-3 mo T-bill	60/40
Std. Dev (Annual Returns)	18.01%	20.13%	17.71%	4.54%	2.19%	10.49%
Std. Dev (5-yr Annualized Returns)	8.00%	10.01%	8.24%	2.05%	1.89%	4.30%

Period: 1993-2017

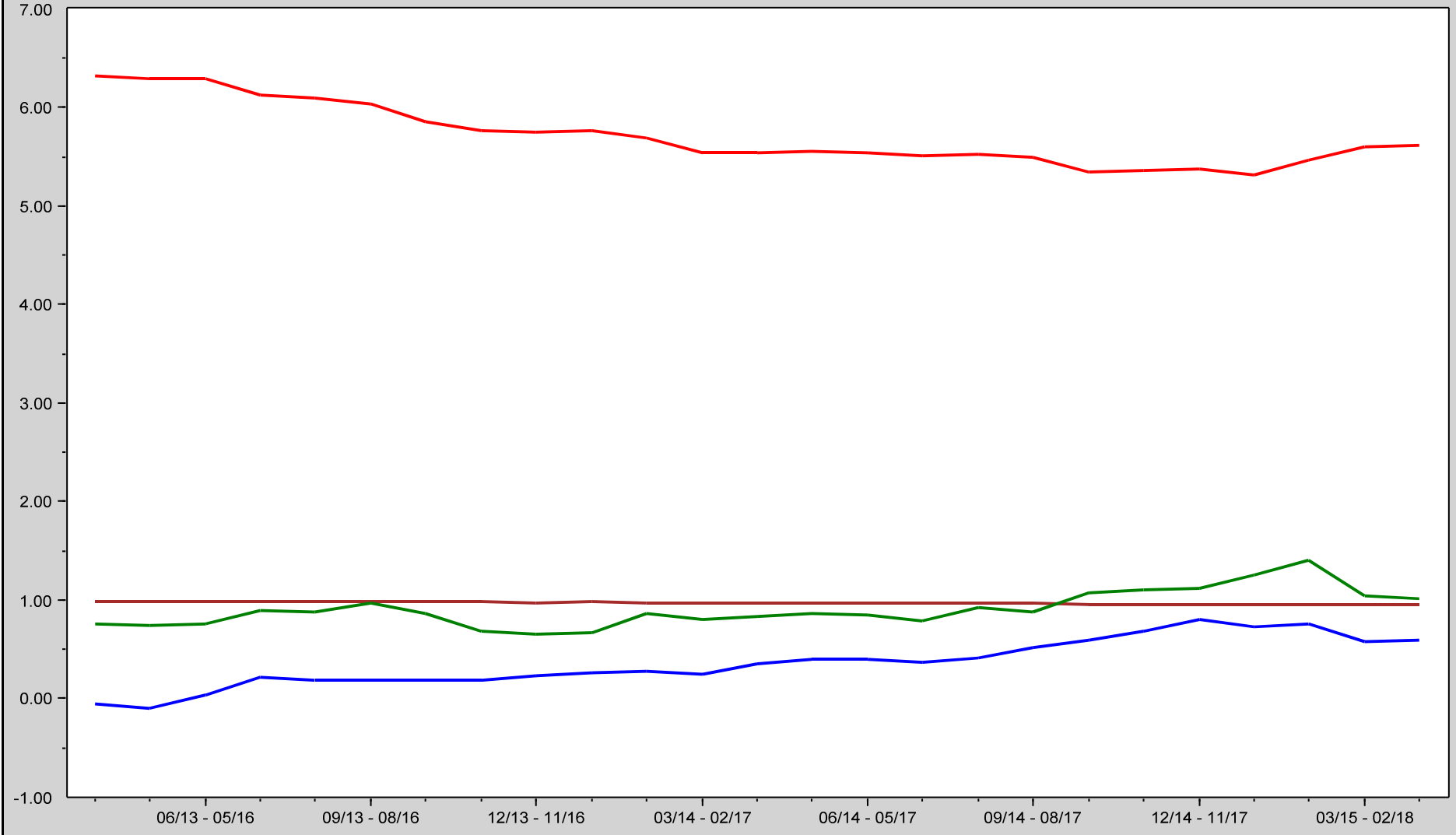
5-yr Returns (Annualized)	MSCI US	MSCI ex-US	MSCI ACWI	BB US Agg	0-3 mo T-bill	60/40
1993-1997	19.47%	10.61%	14.28%	7.48%	4.70%	11.57%
1998-2002	-1.00%	-2.63%	-1.90%	7.55%	4.32%	2.52%
2003-2007	13.09%	24.47%	18.79%	4.42%	2.97%	13.12%
2008-2012	1.80%	-2.52%	-0.65%	5.95%	0.43%	3.06%
2013-2017	15.69%	7.23%	11.36%	2.10%	0.23%	7.79%

Historical Risk - Three Year Rolling Periods

TOTAL PLAN

5 Years Ending March 31, 2018

Trend



Market Proxy: Total Plan Benchmark; Risk-Free Proxy: BofA Merrill Lynch 3 Month US Treasury Bill G001

— Ann Std Dev
 — Ann Sharpe Ratio
 — Ann Alpha
 — Beta

Risk Exposures

3 Years Ending March 31, 2018

	Annualized Return	Ann Std Dev	Beta (ACWI)	Beta (BC AGG)	Beta (GSCI)	Beta (CPI)
US Public Equity	10.27	10.20	0.90	-0.36	0.13	1.38
Non-US Public Equity	6.49	12.26	1.10	0.43	0.26	2.31
Equity Hedge Funds	2.10	3.82	0.18	-0.35	0.02	0.91
TOTAL PRIVATE EQUITY	13.08	5.15	-0.08	0.14	0.02	0.80
Traditional Fixed Income	1.37	2.63	0.03	0.98	-0.02	0.17
TOTAL REAL ESTATE	10.59	1.89	0.01	0.16	-0.03	-0.27
Real Return Hedge Funds	3.69	2.60	0.09	-0.25	0.02	0.65
Inflation-Linked Bonds	1.13	2.30	0.03	0.67	0.02	0.51
Cash	0.89	0.23	0.00	0.01	0.00	0.05
Russell Overlay Fd	0.02	0.07	-0.00	-0.01	-0.00	-0.03
TOTAL PLAN	6.10	5.62	0.52	0.14	0.11	1.10

Perspective on Duration, Credit, and Return Volatility



- Extending duration adds yield and return potential.
- Adding credit improves risk adjusted return profile.

Total Return (Monthly) 10 Years Ending 3/31/2018:	iMoneyNet Money Market Index	ML 1-Year Treasury	ML 1-3 Treasury	ML 1-3 Govt/Credit	ML 1-5 Treasury	ML 1-5 Govt/Credit	Barclays Intermed Govt/Credit	Barclays Intermed Aggregate	Barclays Aggregate
Yield-to-Maturity ¹ :	1.2%	2.1%	2.3%	2.5%	2.4%	2.7%	2.8%	3.0%	3.1%
Duration ¹ :	-	0.9 yrs	1.9 yrs	1.9 yrs	2.7 yrs	2.7 yrs	4.0 yrs	4.4 yrs	6.1 yrs
Maximum	0.2%	0.6%	1.2%	1.3%	2.1%	2.0%	3.3%	2.8%	3.7%
Minimum	0.0%	-0.2%	-0.8%	-0.6%	-1.3%	-1.1%	-2.1%	-1.8%	-2.4%
Average	0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.3%	0.3%
Std Deviation (monthly) ²	0.2%	0.4%	1.0%	1.0%	1.7%	1.6%	2.8%	2.5%	3.3%
Std Deviation (quarterly) ²	0.3%	0.6%	1.2%	1.1%	2.0%	1.7%	2.9%	2.5%	3.4%
# of Negative Rolling 12 Months	0	0	2	0	14	0	10	8	12
# of Negative Rolling Quarters	0	5	25	18	31	23	31	28	31
# of Negative Months	0	24	42	39	48	40	46	43	43
# of Negative Months in %	0%	20%	35%	33%	40%	33%	38%	36%	36%
Annualized Trailing Returns									
3 Year	0.5%	0.6%	0.4%	0.7%	0.5%	0.8%	0.9%	1.0%	1.2%
5 Year	0.3%	0.5%	0.5%	0.8%	0.7%	1.0%	1.3%	1.5%	1.8%
10 Year	0.4%	0.7%	1.1%	1.6%	1.6%	2.2%	2.9%	3.2%	3.6%
Sharpe Ratio (10 Year)	-	1.1	0.8	1.3	0.8	1.1	1.0	1.1	1.0

¹ As of 3/31/2018

² Annualized