

CIO Report

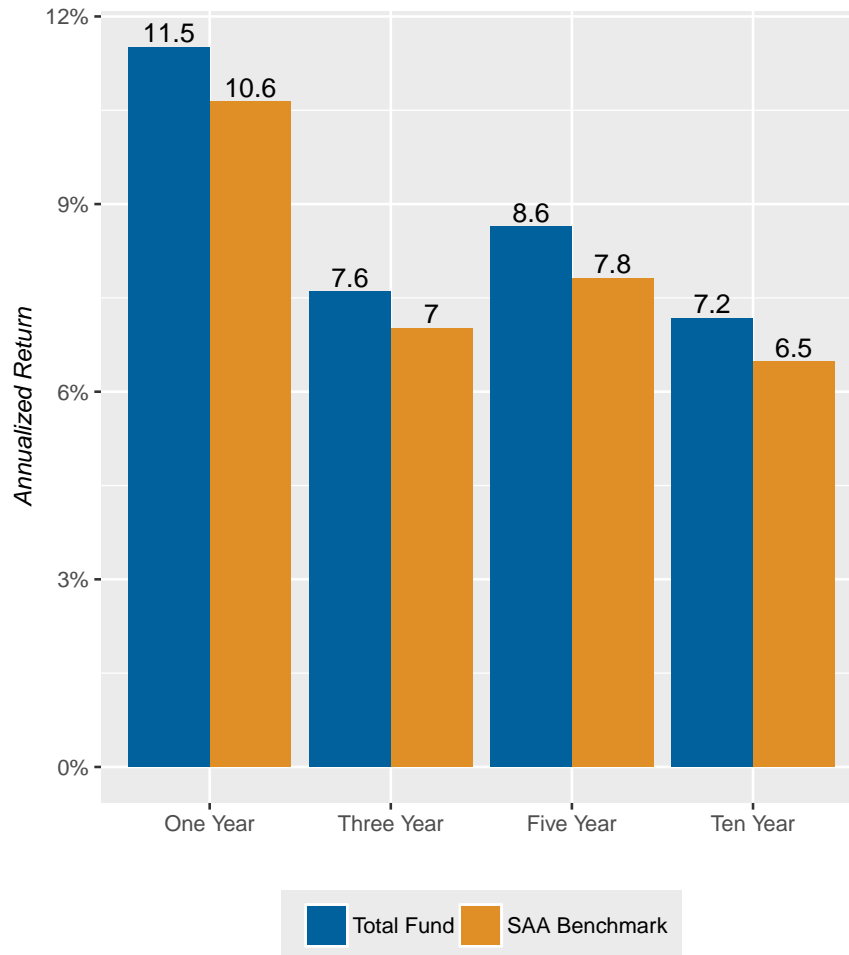
Arizona State Retirement System

April 17, 2018

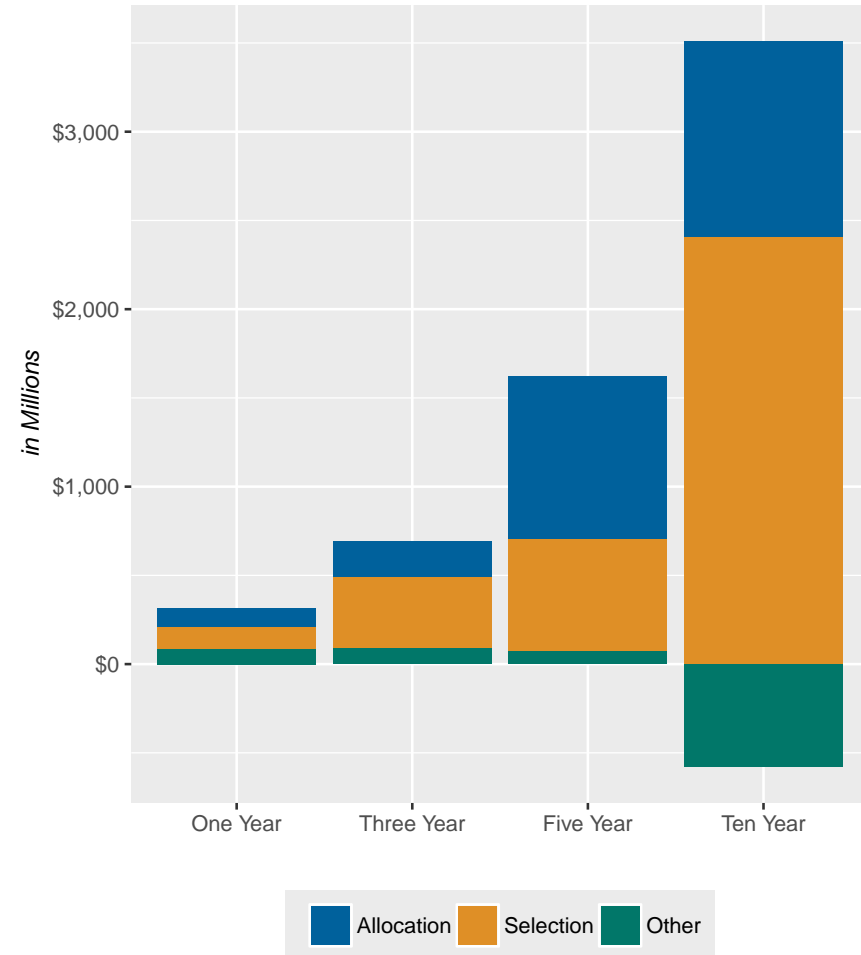
Trailing Returns & Dollar Value Add - Preliminary 3/31/2018

Total Fund and SAA Benchmark

Trailing Period Returns as of 3/31/18

**Total Fund Dollar Value Add**

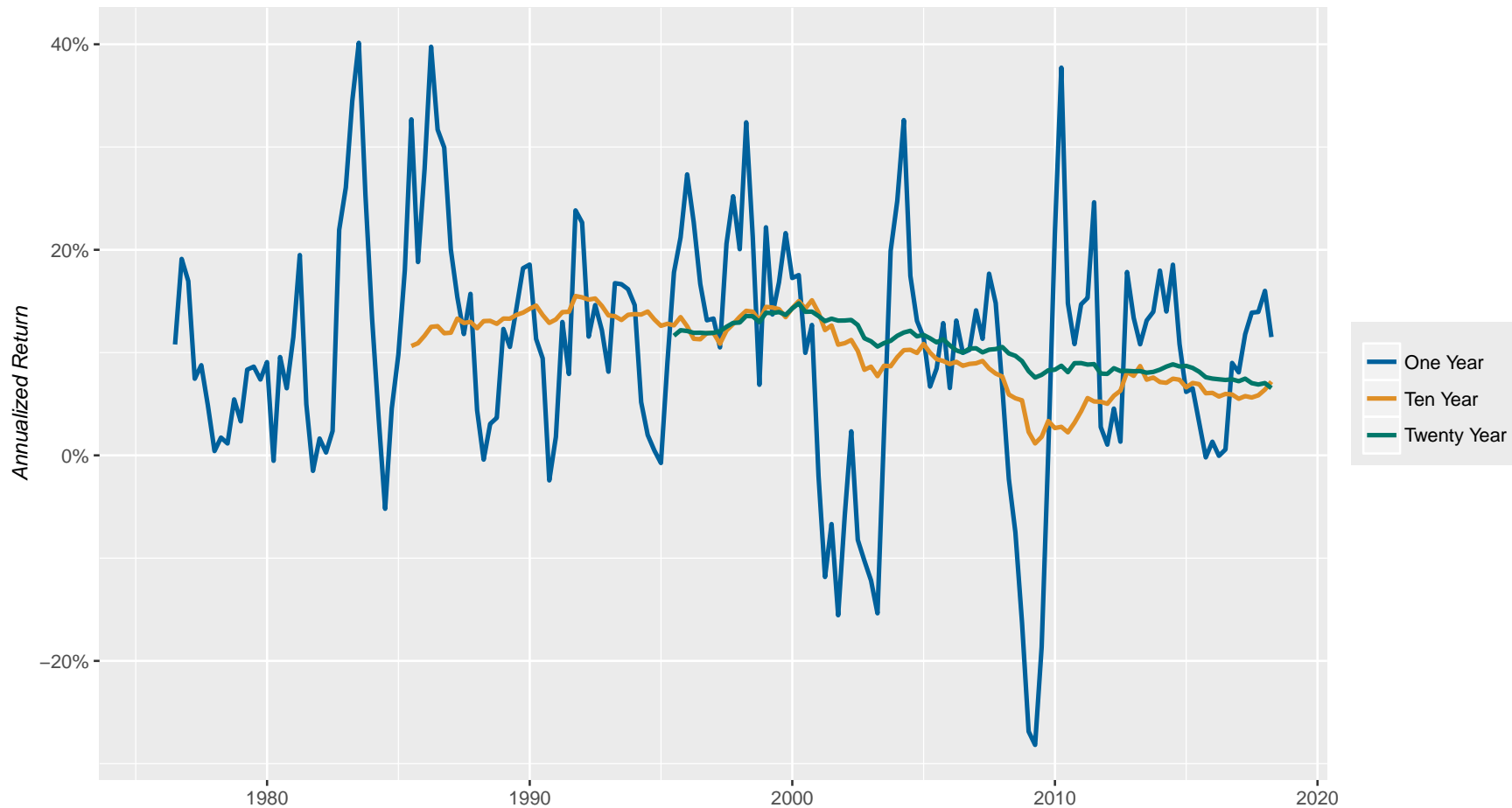
Relative to SAA Benchmark as of 3/31/18



Total Fund Returns - Preliminary 3/31/2018

Total Fund Rolling Returns

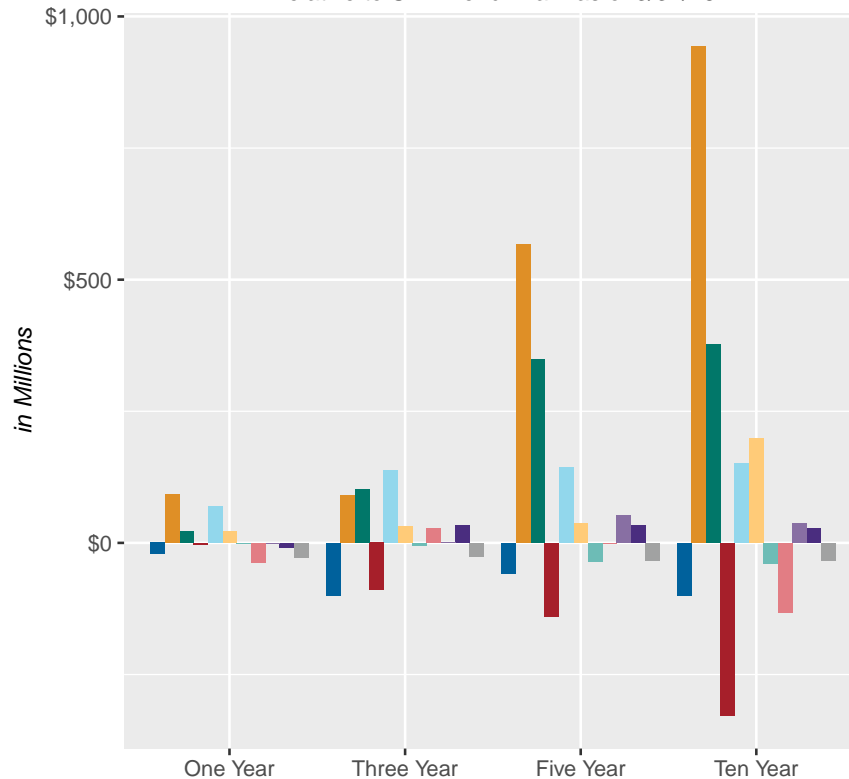
Trailing Period Returns as of 3/31/18



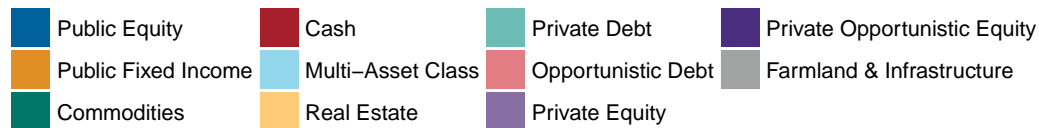
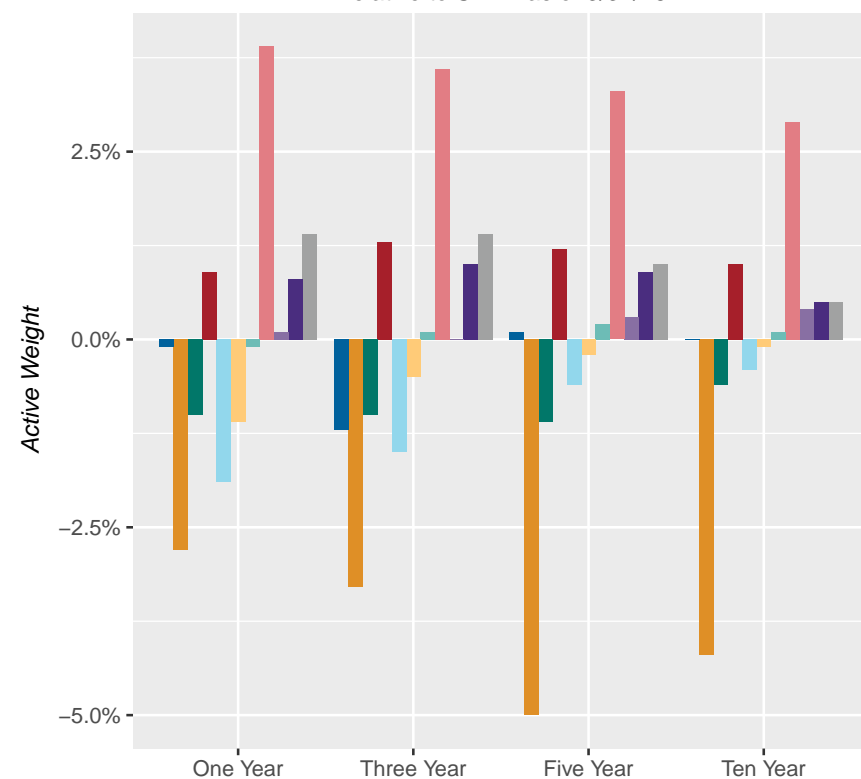
Allocation Effect - Preliminary 3/31/2018

Allocation Effect by Asset Class

Relative to SAA Benchmark as of 3/31/18

**Asset Class Average Active Weights**

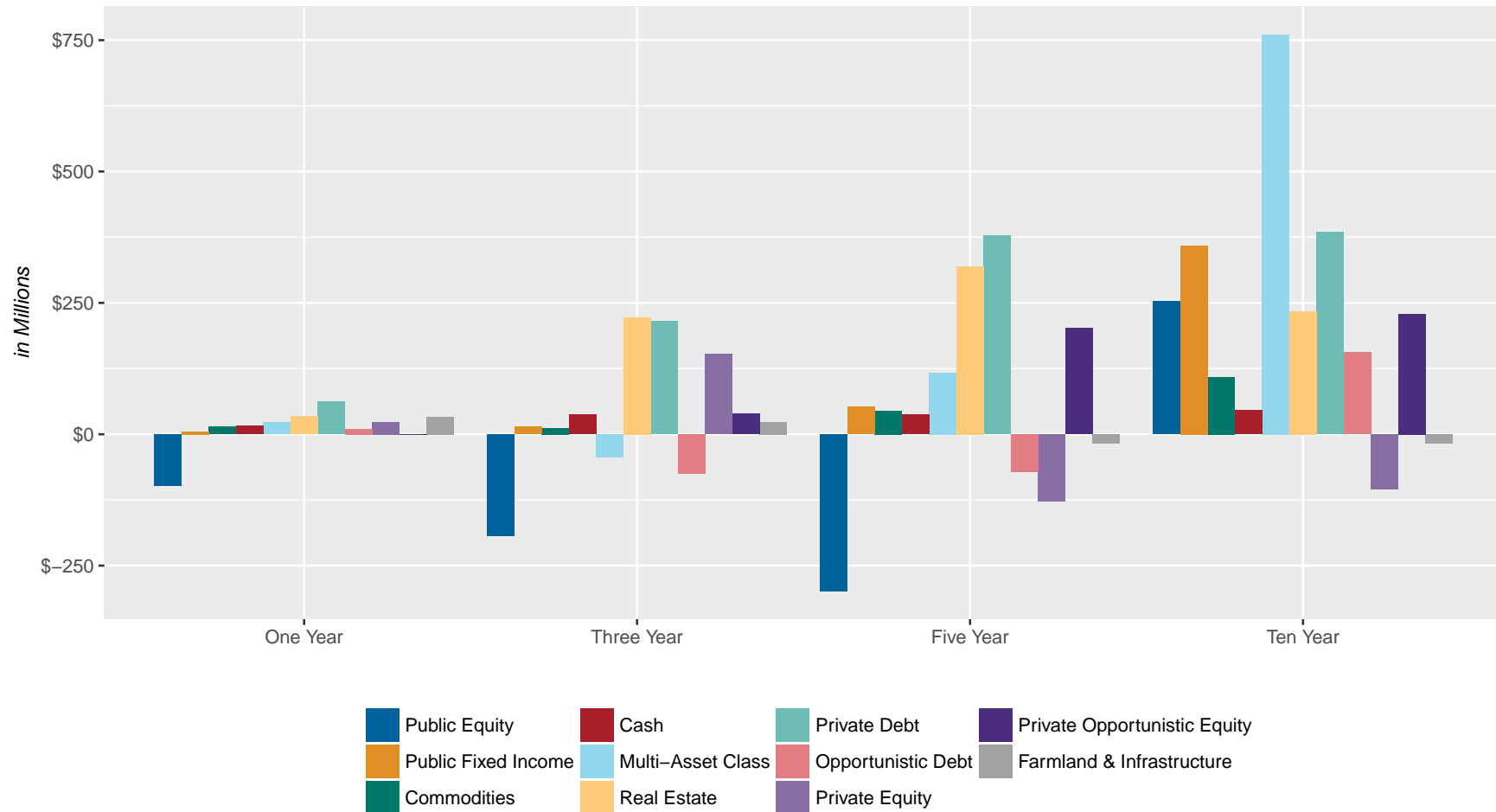
Relative to SAAP as of 3/31/18



Selection Effect - Preliminary 3/31/2018

Selection Effect by Asset Class

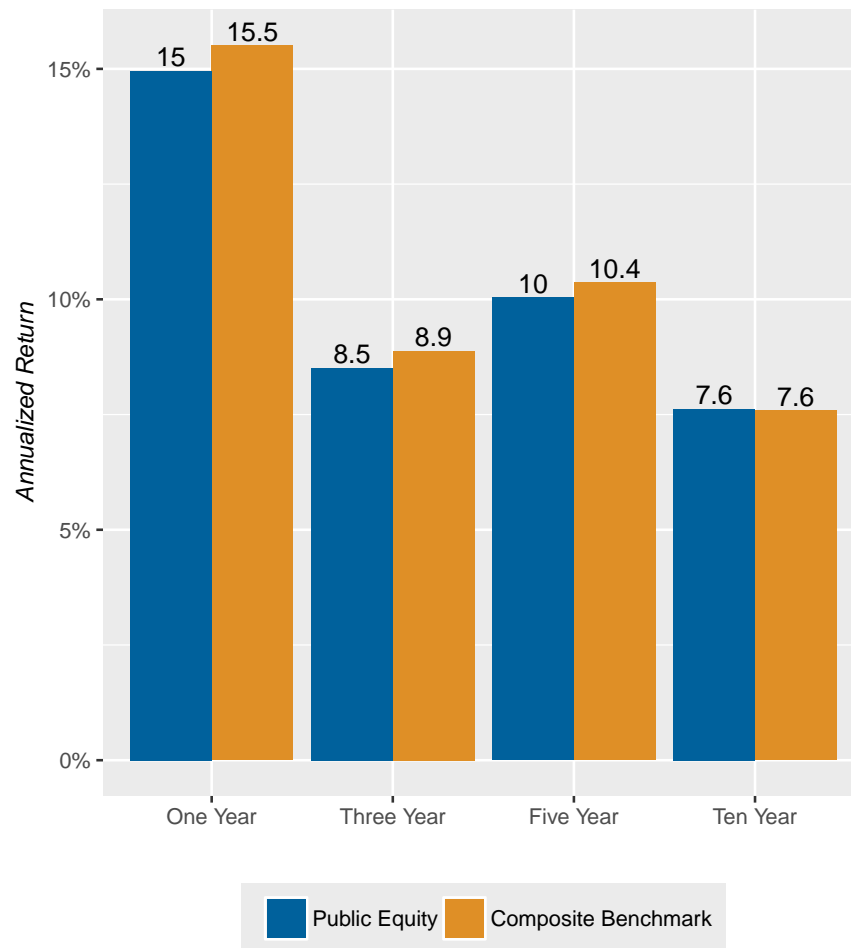
Relative to SAA Benchmark as of 3/31/18



Public Equities Returns & DVA - Preliminary 3/31/2018

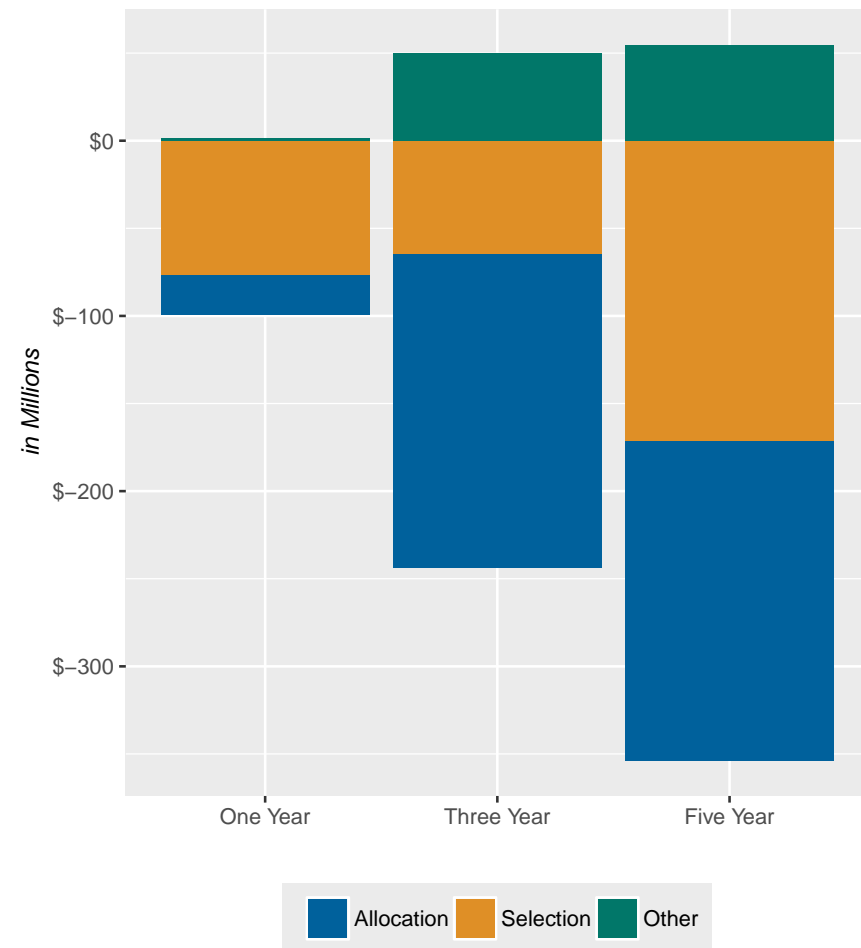
Public Equity and Composite Benchmark

Trailing Period Returns as of 3/31/18



Public Equity Dollar Value Add

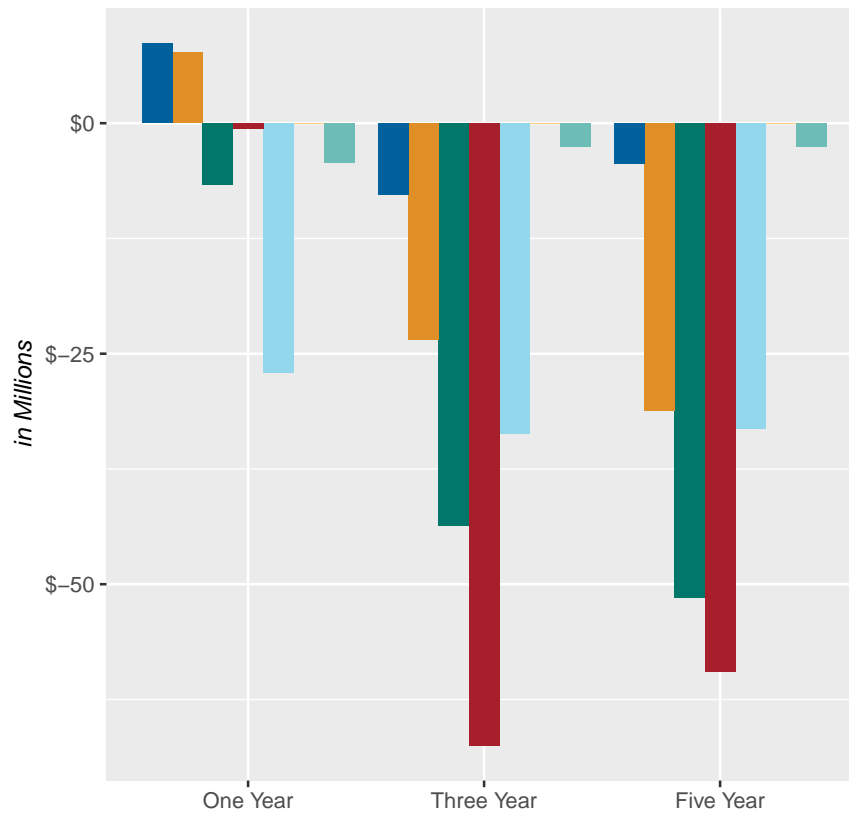
Relative to Composite Benchmark as of 3/31/18



Allocation Effect - Preliminary 3/31/2018

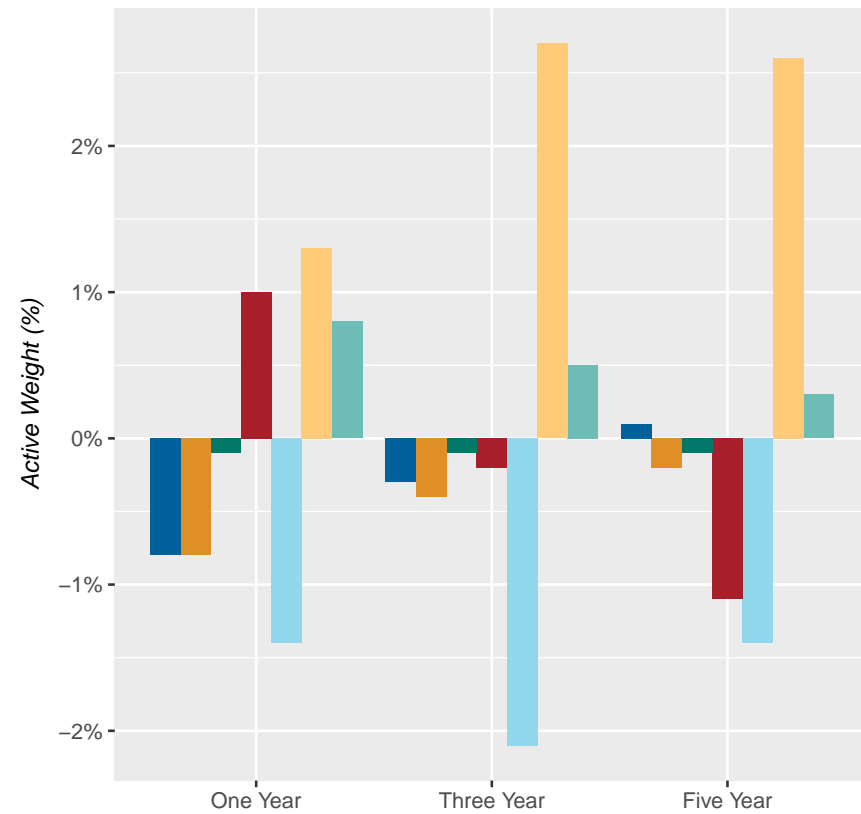
Public Equity Allocation Effect by Sub Asset Class

Relative to Composite Benchmark as of 3/31/18



Public Equity Average Monthly Active Weight

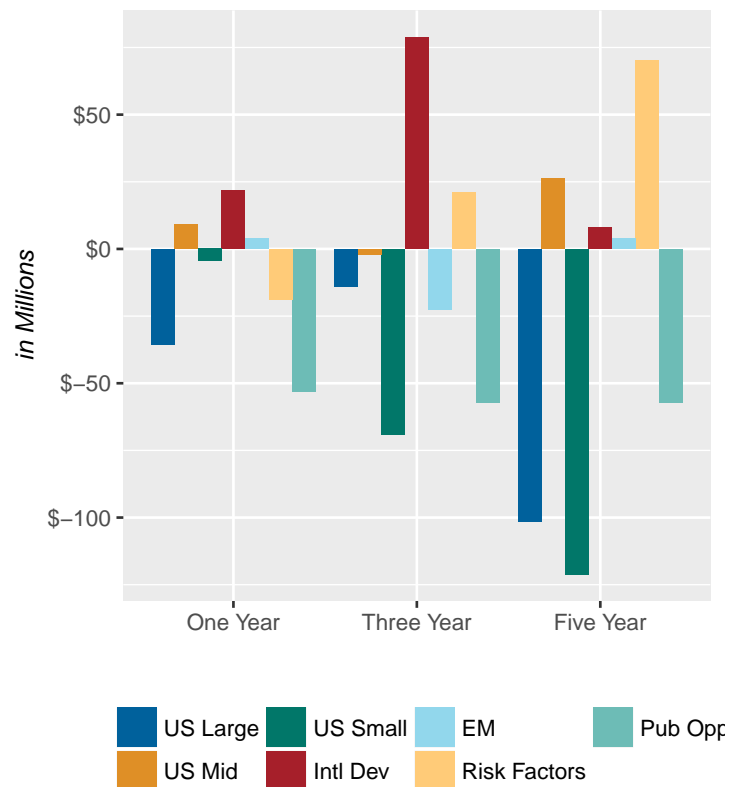
Relative to Composite Benchmark as of 3/31/18



Selection Effect - Preliminary 3/31/2018

Public Equity Selection Effect

Relative to Composite Benchmark as of 3/31/18



Annualized Returns

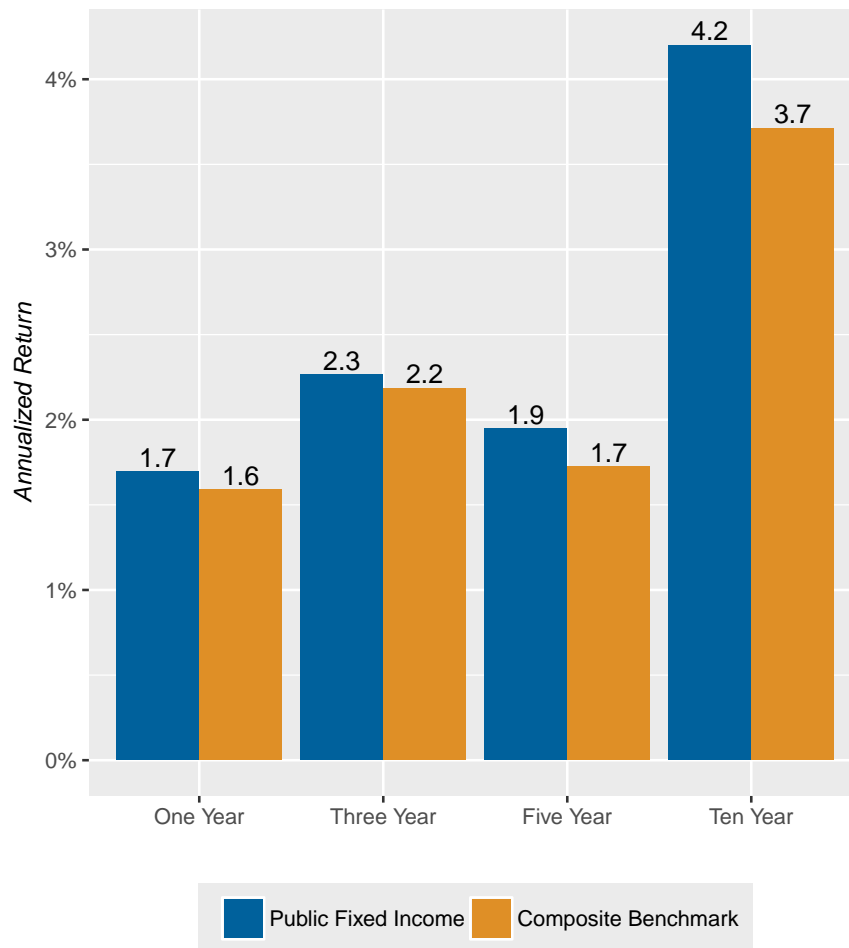
as of 3/31/18

	Composite	One Year	Three Year	Five Year	Ten Year
US Large Cap	13.48%		10.72%	13.07%	9.56%
Benchmark	13.99%		10.78%	13.31%	9.49%
Excess	-0.51%		-0.06%	-0.23%	0.07%
US Mid Cap	12.15%		8.9%	12.2%	10.82%
Benchmark	10.97%		8.96%	11.97%	10.9%
Excess	1.17%		-0.06%	0.24%	-0.08%
US Small Cap	12.26%		8.43%	11.59%	10.95%
Benchmark	12.68%		10.76%	13.56%	11.35%
Excess	-0.42%		-2.34%	-1.97%	-0.41%
non-US Developed	16.06%		6.65%	7.1%	3.86%
Benchmark	15.73%		6.28%	7.11%	3.99%
Excess	0.33%		0.37%	-0.01%	-0.14%
Emerging Markets	25.34%		8.31%	4.97%	NA%
Benchmark	24.93%		8.81%	5.05%	NA%
Excess	0.41%		-0.5%	-0.08%	NA%
Public Opportunistic	-19.55%		NA%	NA%	NA%
Benchmark	13.55%		NA%	NA%	NA%
Excess	-33.1%		NA%	NA%	NA%

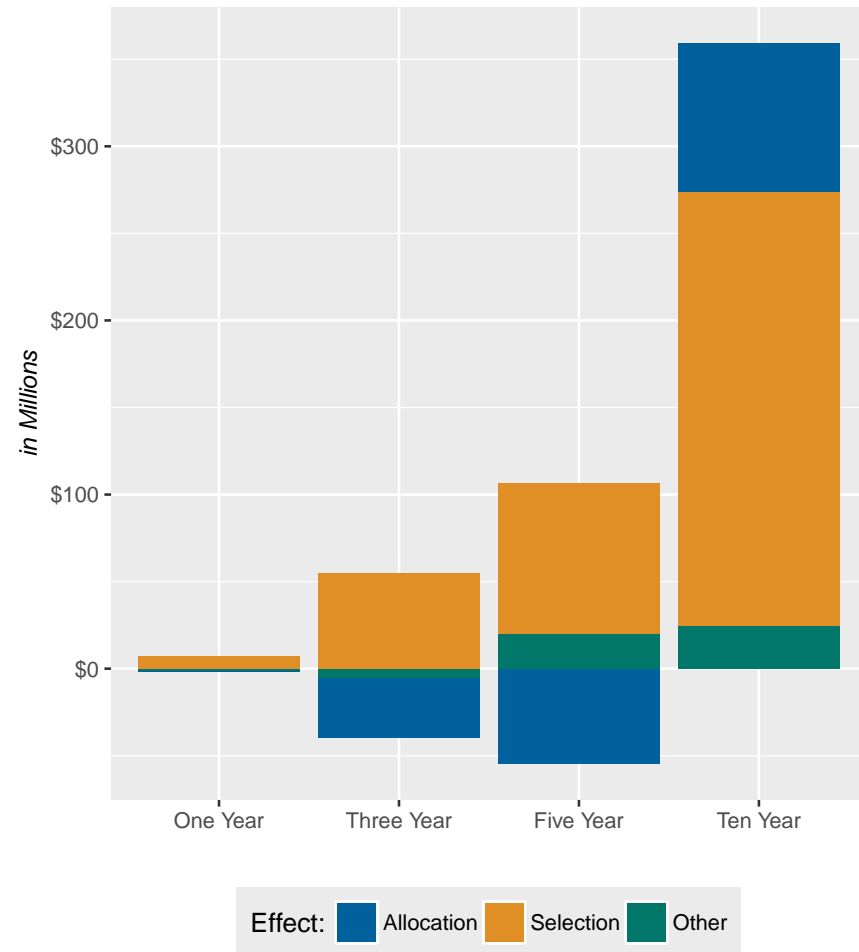
Public Fixed Income Returns & DVA - Preliminary 3/31/2018

Public Fixed Income and Composite Benchmark

Trailing Period Returns as of 3/31/18

**Public Fixed Income Dollar Value Add**

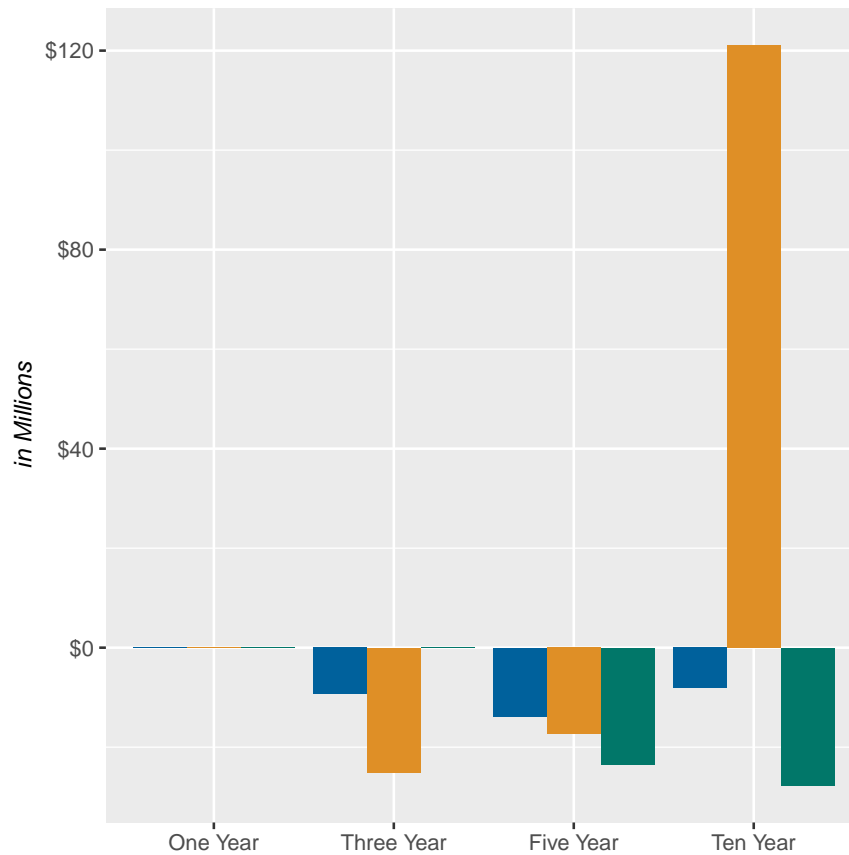
Relative to Composite Benchmark as of 3/31/18



Allocation Effect - Preliminary 3/31/2018

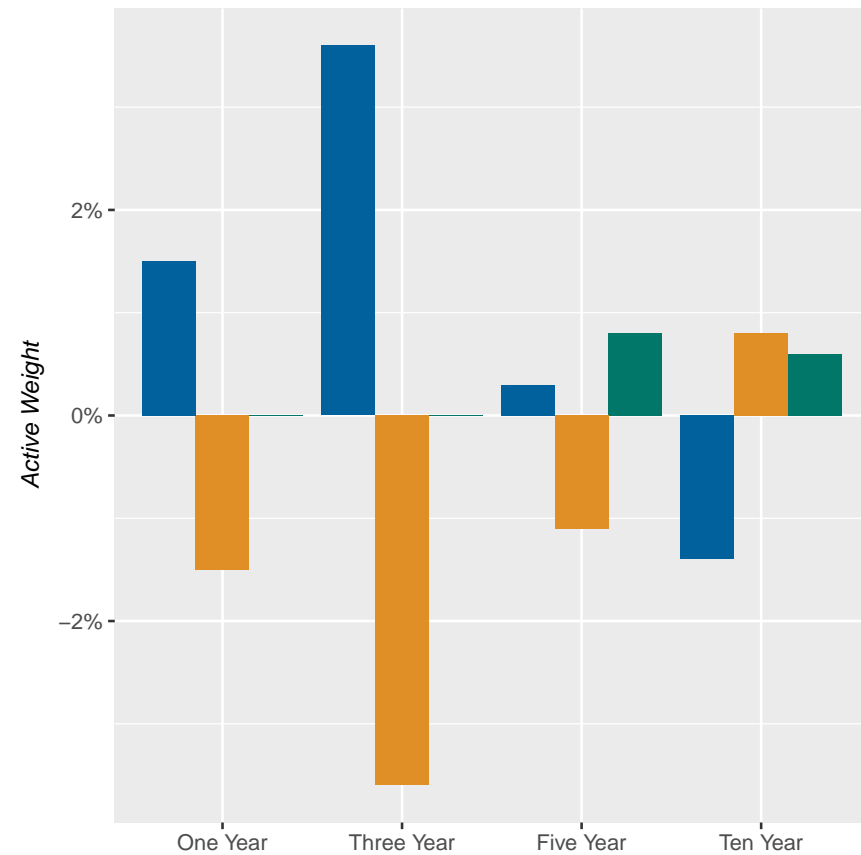
Fixed Income Allocation Effect by Sub Asset Class

Relative to Composite Benchmark as of 3/31/18



Fixed Income Average Monthly Active Weights

Relative to Composite Benchmark as of 3/31/18

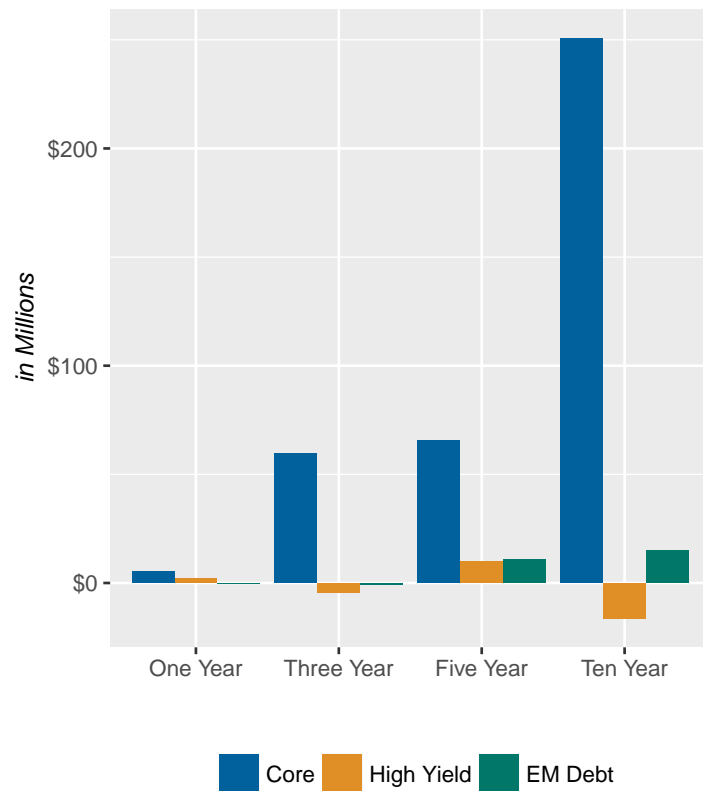


Interest Rate Sensitive High Yield Composite Emerging Market Debt

Selection Effect - Preliminary 3/31/2018

Fixed Income Selection Effect

Relative to Composite Benchmark



Annualized Returns

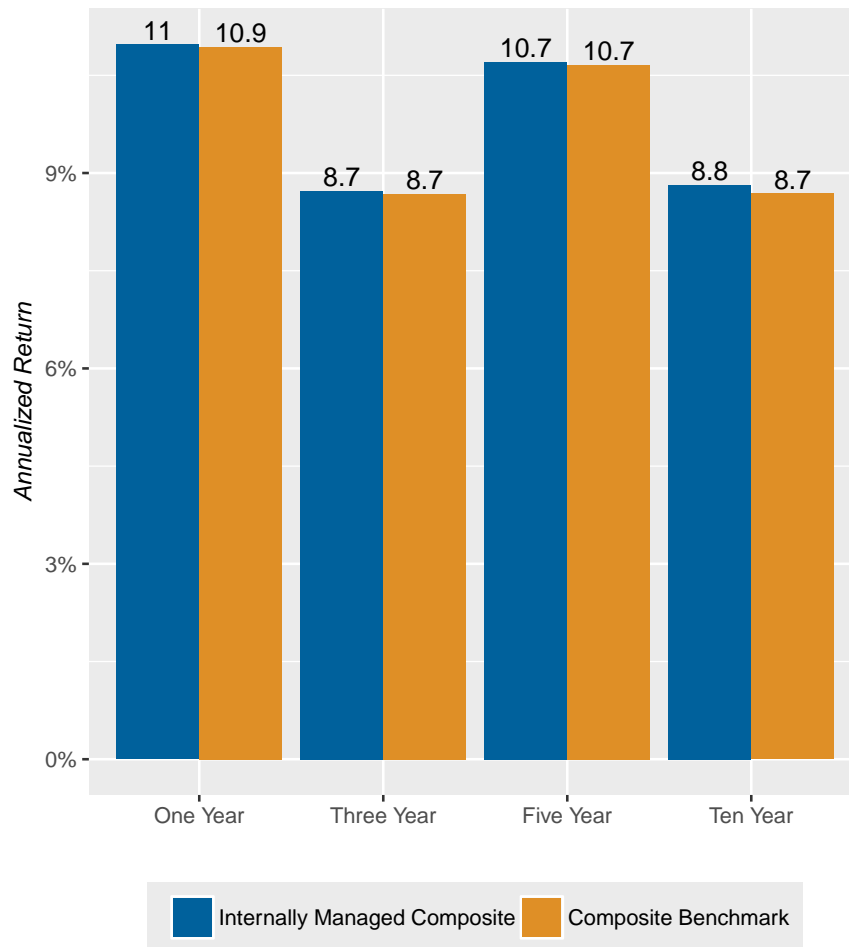
as of 3/31/18

	Composite	One Year	Three Year	Five Year	Ten Year
Interest Rate Sensitive		1.33%	1.63%	2.12%	4.01%
Benchmark		1.2%	1.2%	1.82%	3.63%
Excess		0.13%	0.43%	0.29%	0.38%
High Yield Composite		4%	4.96%	5.09%	NA%
Benchmark		3.78%	5.17%	4.99%	NA%
Excess		0.22%	-0.21%	0.09%	NA%

Internally Managed Portfolios - Preliminary 3/31/2018

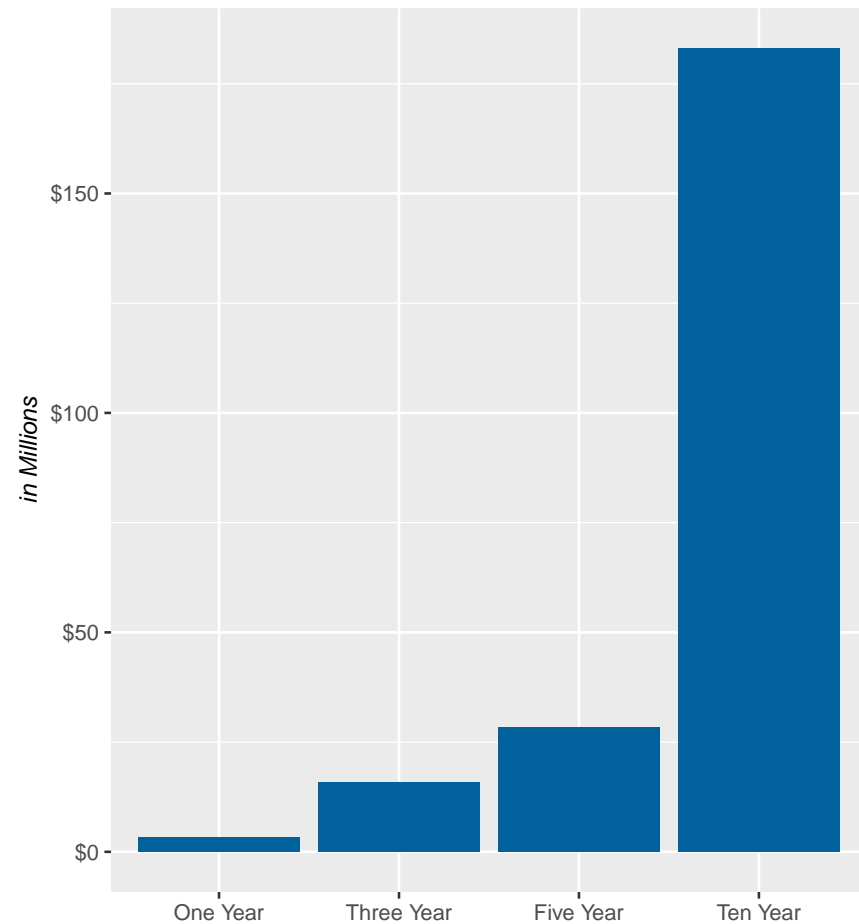
Internally Managed Portfolios and Composite Benchmark

Trailing Period Returns as of 3/31/18



Internally Managed Portfolios Dollar Value Add

Relative to Composite Benchmark as of 3/31/18



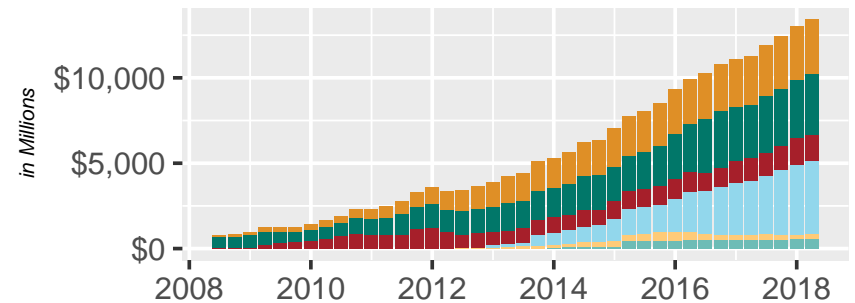
Private Markets Decomposition - Preliminary 3/31/2018

Annualized IRRs

as Estimated 3/31/18

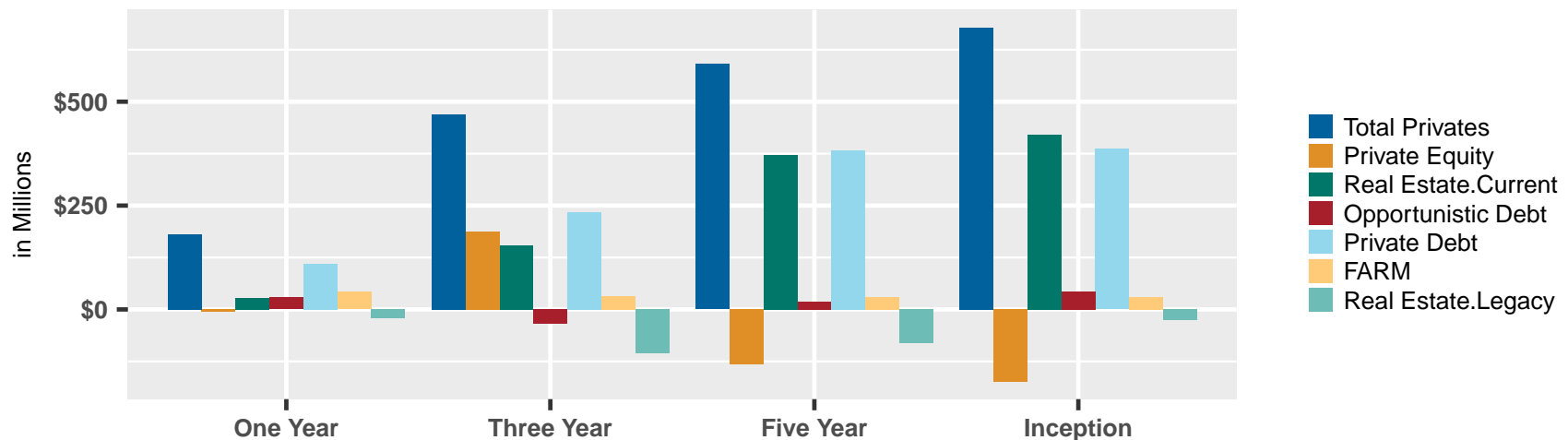
	One Year	Three Year	Five Year	Inception
Total Private Markets	10.43%	10.3%	11.43%	10.24%
Benchmark	8.94%	8.91%	10.22%	9.32%
Excess	1.49%	1.39%	1.21%	0.92%

Private Market Values as of 3/31/18



Private Equity Opportunistic Debt Private Opportunistic Equity
Real Estate Private Debt Farmland and Infrastructure

Private Markets Dollar Value Add Relative to Composite Benchmarks



Private Markets Composites - Preliminary 3/31/2018

Annualized IRRs

as Estimated 3/31/18

	One Year	Three Year	Five Year	Inception
Private Equity	14.74%	12.27%	13.08%	12.48%
PE Benchmark	14.93%	10.34%	13.92%	13.23%
PE Excess	-0.19%	1.93%	-0.84%	-0.76%
Real Estate Current	7.98%	11.78%	14.28%	14.63%
RE Current Benchmark	7.05%	9.72%	10.2%	10.19%
RE Current Excess	0.93%	2.07%	4.08%	4.44%
Real Estate Legacy	1.98%	6.96%	10.44%	5.92%
RE Legacy Benchmark	7.05%	11.18%	11.81%	6.09%
RE Legacy Excess	-5.07%	-4.22%	-1.37%	-0.17%
Opportunistic Debt	8.78%	6.27%	7%	9.64%
Opp Debt Benchmark	6.73%	7.13%	6.7%	9.26%
Opp Debt Excess	2.04%	-0.86%	0.31%	0.38%
Private Debt	9.78%	10.23%	10.75%	10.81%
PD Benchmark	6.71%	7.46%	7.01%	7.06%
PD Excess	3.07%	2.77%	3.75%	3.75%
Farmland & Infrastructure	13.47%	7.55%	NA%	7.17%
Farmland Benchmark	5.32%	5.58%	NA%	5.53%
Farmland Excess	8.15%	1.97%	NA%	1.64%