# Callan



# **The Periodic Table Collection**

Rankings of Assorted Indices and Strategies

Year-End 2016

© 2017 Callan Associates Inc.

### **Table of Contents**

#### Callan Periodic Tables

Key Indices	2
Key Indices Ranked Relative to Zero	3
Key Indices Ranked Relative to Inflation	4
Real Asset Indices Ranked Relative to Inflation	5
Callan Fund Sponsor Database	6
U.S. Equity	7
Global Equity	8
Key Indices Including Alternatives	9
Key Indices Including Real Estate	10
Fixed Income Indices	11
Non-U.S. Fixed Income Indices	12
Hedge Fund Index Sub Strategies	13
Index Descriptions	14

The Periodic Tables of Investment Returns depict annual returns for various asset classes, ranked from best to worst. Each asset class is color-coded for easy tracking. Well-known, industry-standard market indices are used as proxies for each asset class. The Periodic Table of Investment Returns—a play on the Periodic Table of the Elements—was authored by Jay Kloepfer, Director of Callan's Capital Markets and Alternatives Research, in 1999. Mr. Kloepfer's vision of illustrating the importance of diversification resulted in a table of returns, similar to the Mendeleev creation. Callan's first Periodic Table of Investment Returns was distributed in 1999, for returns 1979 – 1998.

#### The Callan Periodic Table of Investment Returns

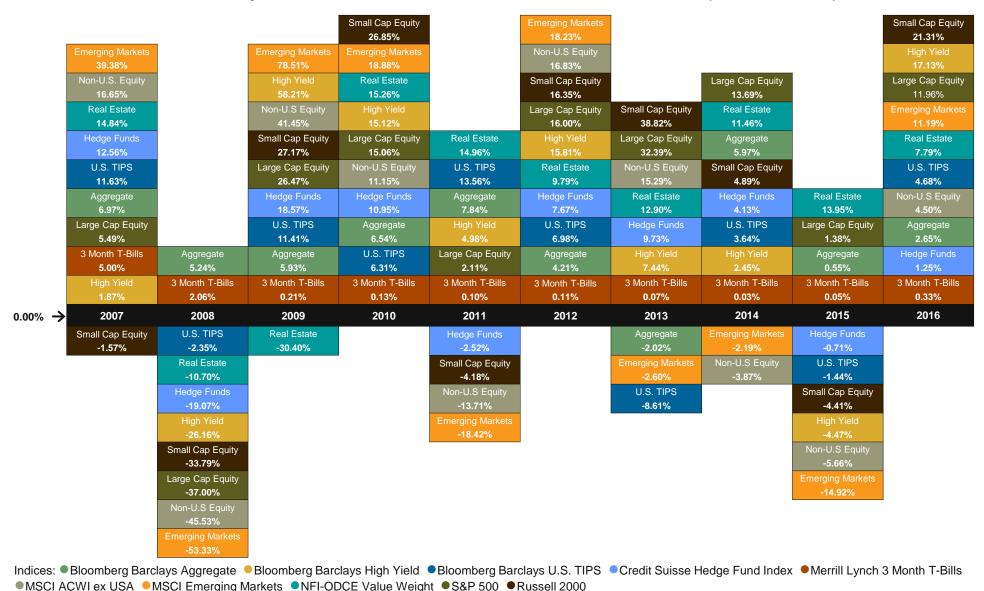
Annual Returns for Key Indices Ranked in Order of Performance (1997–2016)

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
S&P 500	S&P 500	MSCI	NFI-ODCE	Bloomberg	Bloomberg	MSCI	MSCI	MSCI	MSCI	MSCI	Bloomberg	MSCI	Russell	NFI-ODCE	MSCI	Russell	S&P 500	NFI-ODCE	Russell
		Emerging	Val Wt	Barclays	Barclays GI	Emerging	Emerging	Emerging	Emerging	Emerging	Barclays	Emerging	2000	Val Wt	Emerging	2000		Val Wt	2000
		Markets		Agg	Agg ex US	Markets	Markets	Markets	Markets	Markets	Agg	Markets			Markets				
33.36%	28.58%	66.84%	13.19%	8.43%	22.37%	55.82%	25.55%	34.00%	32.17%	39.38%	5.24%	78.51%	26.85%	14.96%	18.23%	38.82%	13.69%	13.95%	21.31%
CS Hedge	Bloomberg	CS Hedge	Bloomberg	Bloomberg	Bloomberg	Russell	MSCI ACWI	NFI-ODCE	MSCI ACWI	MSCI ACWI	Bloomberg	Bloomberg	MSCI	Bloomberg	MSCI ACWI	S&P 500	NFI-ODCE	S&P 500	Bloomberg
Fund	Barclays GI	Fund	Barclays	Barclays	Barclays	2000	ex USA	Val Wt	ex USA	ex USA	Barclays GI	Barclays	Emerging	Barclays	ex USA		Val Wt		Barclays
	Agg ex US		Agg	High Yield	Agg						Agg ex US	High Yield	Markets	Agg					High Yield
25.94%	18.44%	23.43%	11.63%	5.28%	10.26%	47.25%	20.91%	20.15%	26.65%	16.65%	4.39%	58.21%	18.88%	7.84%	16.83%	32.39%	11.46%	1.38%	17.13%
Russell	NFI-ODCE	Russell	CS Hedge	NFI-ODCE	NFI-ODCE	MSCI ACWI	Russell	MSCI ACWI	Russell	NFI-ODCE	NFI-ODCE	MSCI ACWI	NFI-ODCE	Bloomberg	Russell	MSCI ACWI	Bloomberg	Bloomberg	S&P 500
2000	Val Wt	2000	Fund	Val Wt	Val Wt	ex USA	2000	ex USA	2000	Val Wt	Val Wt	ex USA	Val Wt	Barclays	2000	ex USA	Barclays	Barclays	
														High Yield			Agg	Agg	
22.36%	15.29%	21.26%	4.85%	4.64%	4.57%	40.83%	18.33%	16.62%	18.37%	14.84%	-10.70%	41.45%	15.26%	4.98%	16.35%	15.29%	5.97%	0.55%	11.96%
NFI-ODCE	Bloomberg	S&P 500	Russell	CS Hedge	CS Hedge	Bloomberg	Bloomberg	CS Hedge	S&P 500	CS Hedge	CS Hedge	Russell	Bloomberg	Bloomberg	S&P 500	NFI-ODCE	Russell	CS Hedge	MSCI
Val Wt	Barclays		2000	Fund	Fund	Barclays	Barclays GI	Fund		Fund	Fund	2000	Barclays	Barclays GI		Val Wt	2000	Fund	Emerging
	Agg					High Yield	Agg ex US						High Yield	Agg ex US					Markets
13.94%	8.70%	21.04%	-3.02%	4.42%	3.04%	28.97%	12.54%	7.61%	15.79%	12.56%	-19.07%	27.17%	15.12%	4.36%	16.00%	12.90%	4.89%	-0.71%	11.19%
Bloomberg	Bloomberg	NFI-ODCE	Bloomberg	Russell	Bloomberg	S&P 500	NFI-ODCE	S&P 500	NFI-ODCE	Bloomberg	Bloomberg	S&P 500	S&P 500	S&P 500	Bloomberg	CS Hedge	CS Hedge	Russell	NFI-ODCE
	Barclays	Val Wt	Barclays GI	2000	Barclays		Val Wt		Val Wt	Barclays GI	Barclays				Barclays	Fund	Fund	2000	Val Wt
	High Yield		Agg ex US		High Yield					Agg ex US	High Yield				High Yield				
12.76%	1.87%	12.05%	-3.91%	2.49%	-1.41%	28.68%	12.00%	4.91%	15.27%	11.03%	-26.16%	26.47%	15.06%	2.11%	15.81%	9.73%	4.13%	-4.41%	7.79%
Bloomberg	CS Hedge	Bloomberg	Bloomberg	MSCI	MSCI	Bloomberg	Bloomberg	Russell	CS Hedge	Bloomberg	Russell	CS Hedge	MSCI ACWI	CS Hedge	NFI-ODCE	Bloomberg	Bloomberg	Bloomberg	MSCI ACWI
Barclays	Fund	Barclays	Barclays	Emerging	Emerging	Barclays GI	Barclays	2000	Fund	Barclays	2000	Fund	ex USA	Fund	Val Wt	Barclays	Barclays	Barclays	ex USA
Agg		High Yield	High Yield	Markets	Markets	Agg ex US	High Yield			Agg						High Yield	High Yield	High Yield	
9.64%	-0.36%	2.39%	-5.86%	-2.62%	-6.16%	19.36%	11.13%	4.55%	13.86%	6.97%	-33.79%	18.57%	11.15%	-2.52%	9.79%	7.44%	2.45%	-4.47%	4.50%
Bloomberg	Russell	Bloomberg	S&P 500	Bloomberg	MSCI ACWI	CS Hedge	S&P 500	Bloomberg	Bloomberg	S&P 500	S&P 500	Bloomberg	CS Hedge	Russell	CS Hedge	Bloomberg	MSCI	MSCI ACWI	Bloomberg
Barclays GI	2000	Barclays		Barclays GI	ex USA	Fund		Barclays	Barclays			Barclays GI	Fund	2000	Fund	Barclays	Emerging	ex USA	Barclays
Agg ex US		Agg		Agg ex US				High Yield	High Yield			Agg ex US				Agg	Markets		Agg
-4.01%	-2.55%	-0.82%	-9.11%	-3.75%	-14.95%	15.44%	10.88%	2.74%	11.85%	5.49%	-37.00%	7.53%	10.95%	-4.18%	7.67%	-2.02%	-2.19%	-5.66%	2.65%
MSCI	MSCI	Bloomberg	MSCI	S&P 500	Russell	NFI-ODCE	CS Hedge	Bloomberg	Bloomberg	Bloomberg	MSCI ACWI	Bloomberg	Bloomberg	MSCI ACWI	Bloomberg	MSCI	Bloomberg	Bloomberg	Bloomberg
	Emerging	Barclays GI	Emerging		2000	Val Wt	Fund	Barclays	Barclays GI	Barclays	ex USA	Barclays	Barclays	ex USA	Barclays	Emerging	Barclays GI	Barclays GI	Barclays GI
	Markets	Agg ex US	Markets					Agg	Agg ex US	High Yield		Agg	Agg		Agg	Markets	Agg ex US	Agg ex US	Agg ex US
-11.59%	-25.34%	-8.83%	-30.71%	-11.89%	-20.48%	8.28%	9.64%	2.43%	8.16%	1.87%	-45.53%	5.93%	6.54%	-13.71%	4.21%	-2.60%	-3.09%	-6.02%	1.49%
				MSCI ACWI	S&P 500	Bloomberg	Bloomberg	Bloomberg	Bloomberg	Russell	MSCI	NFI-ODCE	Bloomberg	MSCI	Bloomberg	Bloomberg	MSCI ACWI	MSCI	CS Hedge
				ex USA		Barclays	Barclays	Barclays GI	Barclays	2000	Emerging	Val Wt	Barclays GI	Emerging	Barclays GI	Barclays GI	ex USA	Emerging	Fund
						Agg	Agg	Agg ex US	Agg		Markets		Agg ex US	Markets	Agg ex US	Agg ex US		Markets	
				-19.73%	-22.10%	4.10%	4.34%	-8.65%	4.33%	-1.57%	-53.33%	-30.40%	4.95%	-18.42%	4.09%	-3.08%	-3.87%	-14.92%	1.25%
				10.1070		7.1070	7.0 770	0.0070	7.0070	1.01 /0	00.0070	00.4070	7.0070	10.72/0	7.0070	0.0070	0.01 /0	1-1.02/0	1.20 /0

The Callan Periodic Table of Investment Returns conveys the strong case for diversification across asset classes (stocks vs. bonds), investment styles (growth vs. value), capitalizations (large vs. small), and equity markets (U.S. vs. international). The Table highlights the uncertainty inherent in all capital markets. Rankings change every year. Also noteworthy is the difference between absolute and relative performance, as returns for the top-performing asset class span a wide range over the past 20 years.

### Callan Periodic Table of Investment Returns (Relative to Zero)

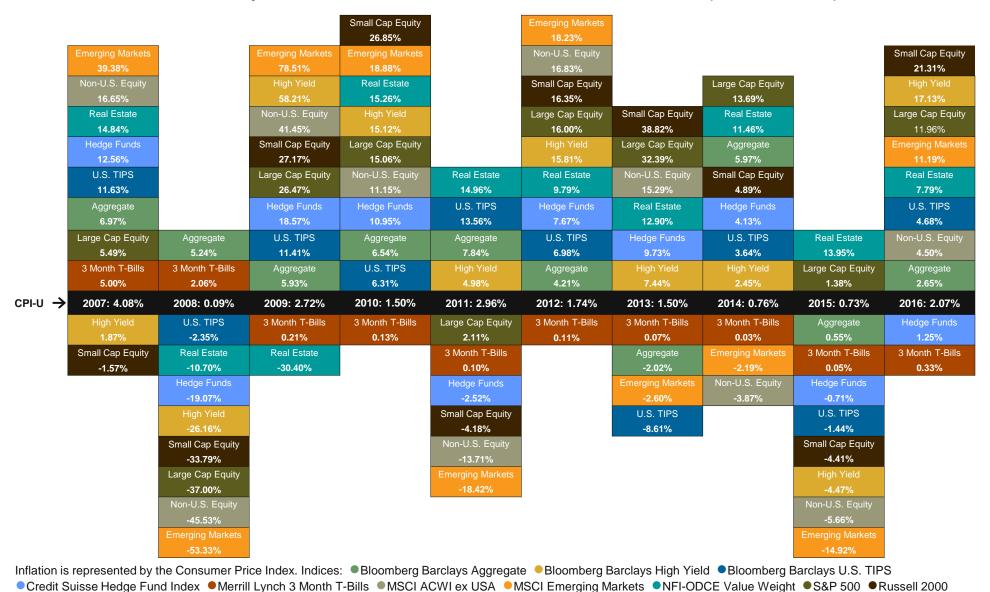
#### Annual Returns for Key Indices Ranked in Order of Performance (2007–2016)





## Callan Periodic Table of Investment Returns (Relative to Inflation)

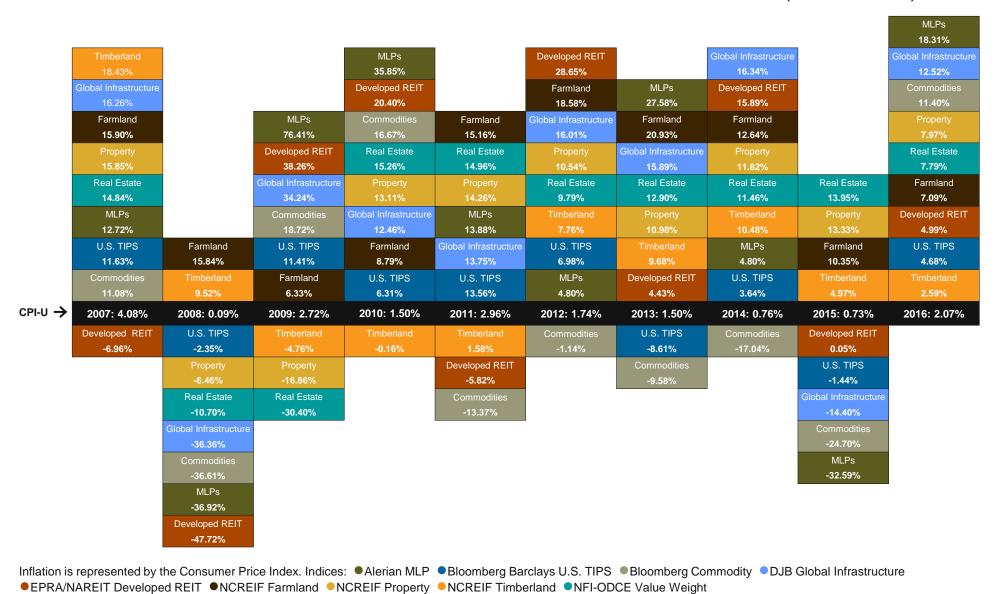
#### Annual Returns for Key Indices Ranked in Order of Performance (2007–2016)





### Callan Periodic Table of Real Asset Returns (Relative to Inflation)

#### Annual Returns for Real Asset Indices Ranked in Order of Performance (2007–2016)





# Callan Periodic Table of Fund Sponsor Database Returns

Annual Returns for Fund Sponsor Database Ranked in Order of Performance (1997–2016)

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Callan	Callan	Callan	Callan Taft-	Callan Taft-	Callan Taft-	Callan	Callan	Callan	Callan	Callan	Callan Taft-	Callan	Callan	Callan	Callan	Callan Taft-	Callan	Callan Taft-	Callan
Endowment/	Large Fund	Large Fund	Hartley DB	Hartley DB	Hartley DB	Large Fund	Large Fund	Large Fund	Large Fund	Large Fund	Hartley DB	Endowment/	Large Fund	Corporate	Large Fund	Hartley DB	Large Fund	Hartley DB	Corporate
Foundation	Sponsor DB	Sponsor DB				Sponsor DB	Sponsor DB	Sponsor DB	Sponsor DB	Sponsor DB		Foundation	Sponsor DB	Funds DB	Sponsor DB		Sponsor DB		Funds DB
DB												DB							
19.7%	14.9%	15.4%	2.8%	-1.7%	-7.9%	22.6%	11.7%	8.0%	14.0%	8.9%	-23.4%	21.2%	13.4%	2.0%	13.1%	17.3%	7.1%	1.3%	7.9%
Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan
Corporate	Public	Corporate	Small Fund	Small Fund	Public	Corporate	Corporate	Endowment/	Public	Endowment/	Corporate	Small Fund	Corporate	Large Fund	Corporate	Public	Corporate	Public	Large Fund
Funds DB	Funds DB	Funds DB	Sponsor DB	Sponsor DB	Funds DB	Funds DB	Funds DB	Foundation	Funds DB	Foundation	Funds DB	Sponsor DB	Funds DB	Sponsor DB	Funds DB	Funds DB	Funds DB	Funds DB	Sponsor DB
								DB		DB									
19.5%	14.6%	14.1%	2.7%	-2.2%	-8.1%	22.3%	11.2%	7.5%	13.5%	8.7%	-24.7%	20.8%	13.1%	1.5%	13.0%	15.7%	7.0%	0.1%	7.9%
Callan	Callan	Callan	Callan	Callan Mid	Callan Mid	Callan	Callan	Callan	Callan	Callan Total	Callan	Callan	Callan	Callan Taft-	Callan	Callan	Callan Taft-	Callan	Callan Taft-
Small Fund	Corporate		Endowment/	Fund	Fund	Endowment/	Public	Public	Endowment/	Fund	Small Fund	Corporate	Public	Hartley DB	Public	Small Fund	Hartley DB	_	Hartley DB
Sponsor DB	Funds DB	Foundation	Foundation	Sponsor DB	Sponsor DB	Foundation	Funds DB	Funds DB	Foundation	Sponsor DB	Sponsor DB	Funds DB	Funds DB		Funds DB	Sponsor DB		Sponsor DB	
		DB	DB			DB			DB										
19.3%	14.3%	13.9%	1.8%	-2.8%	-8.8%	22.3%	11.2%	7.4%	13.5%	8.1%	-24.8%	20.6%	13.0%	1.5%	12.7%	15.6%	6.9%	-0.1%	7.8%
Callan Mid	Callan Total	Callan	Callan Total	Callan Total	Callan	Callan Mid	Callan	Callan Mid	Callan Mid	Callan	Callan Mid	Callan	Callan Total	Callan Mid	Callan Mid	Callan Total	Callan Mid	Callan Mid	Callan Mid
Fund	Fund	Public	Fund	Fund	Small Fund	Fund	Endowment/	Fund	Fund	Corporate	Fund	Public	Fund	Fund	Fund	Fund	Fund	Fund	Fund
Sponsor DB	Sponsor DB	Funds DB	Sponsor DB	Sponsor DB	Sponsor DB	Sponsor DB	Foundation DB	Sponsor DB	Sponsor DB	Funds DB	Sponsor DB	Funds DB	Sponsor DB	Sponsor DB	Sponsor DB	Sponsor DB	Sponsor DB	Sponsor DB	Sponsor DB
							DB												
19.2%	14.1%	13.8%	1.8%	-3.0%	-8.9%	21.9%	11.2%	7.3%	13.2%	8.0%	-25.1%	20.2%	12.9%	1.1%	12.6%	14.9%	6.1%	-0.6%	7.7%
Callan Taft-	Callan Taft-	Callan Mid	Callan Mid	Callan	Callan Total	Callan Total	Callan Mid	Callan Total	Callan	Callan Mid	Callan Total	Callan Total	Callan Mid	Callan	Callan Total	Callan	Callan	Callan Total	Callan Total
Hartley DB	Hartley DB	Fund	Fund	Public	Fund	Fund	Fund	Fund	Corporate	Fund	Fund	Fund	Fund	Public	Fund	Endowment/	Public	Fund	Fund
		Sponsor DB	Sponsor DB	Funds DB	Sponsor DB	Sponsor DB	Sponsor DB	Sponsor DB	Funds DB	Sponsor DB	Sponsor DB	Sponsor DB	Sponsor DB	Funds DB	Sponsor DB	Foundation DB	Funds DB	Sponsor DB	Sponsor DB
40.004	40.007													0.00/			2.20/		
19.2%	13.9%	13.4%	1.7%	-3.1%	-8.9%	21.6%	11.0%	7.2%	13.1%	8.0%	-25.1%	20.2%	12.9%	0.9%	12.6%	14.7%	6.0%	-0.7%	7.5%
Callan Total	Callan	Callan Total	Callan	Callan	Callan	Callan	Callan Total	Callan	Callan Total	Callan	Callan	Callan Mid	Callan Taft-	Callan Total	Callan	Callan Mid	Callan Total	Callan	Callan
Fund Sponsor DB	Small Fund Sponsor DB	Fund Sponsor DB	Corporate Funds DB	Endowment/ Foundation	Large Fund Sponsor DB	Public Funds DB	Fund Sponsor DB	Corporate Funds DB	Fund Sponsor DB	Public Funds DB	Public Funds DB	Fund Sponsor DB	Hartley DB	Fund Sponsor DB	Endowment/ Foundation	Fund Sponsor DB	Fund Sponsor DR	Small Fund Sponsor DB	Public Funds DB
oponsor DB	оронзог ББ	оронзог БВ	T unus DD	DB	оронзог ББ	T dilus DD	оронзог ББ	T unus DD	Оронзог ББ	T unus DD	T unus DD	Oponsor DD		оронзог БВ	DB	оронзог ББ	оронзог ББ	оронзог дд	T unus DD
19.1%	13.7%	13.2%	1.4%	-3.3%	-9.1%	21.4%	11.0%	7.1%	13.1%	8.0%	-25.4%	20.2%	12.8%	0.8%	12.3%	14.7%	6.0%	-1.0%	7.5%
Callan	Callan Mid	Callan	Callan	Callan	Callan	Callan	Callan	Callan Taft-	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan	Callan
Large Fund	Fund	Small Fund	Public	Corporate	Corporate	Small Fund	Small Fund	Hartley DB	Small Fund	Small Fund		Large Fund	Small Fund	Small Fund	Small Fund	Large Fund	Small Fund	Corporate	Small Fund
Sponsor DB		Sponsor DB	Funds DB	Funds DB	Funds DB	Sponsor DB	Sponsor DB		Sponsor DB			Sponsor DB	Sponsor DB	Sponsor DB		Sponsor DB		Funds DB	Sponsor DB
									·	i i	·		i i						
18.9%	13.7%	11.6%	1.4%	-3.6%	-9.4%	20.4%	10.4%	6.8%	12.5%	7.8%	-26.0%	19.4%	12.6%	0.2%	12.2%	14.3%	5.4%	-1.1%	7.3%
Callan	Callan	Callan Taft-	Callan	Callan	Callan	Callan Taft-	Callan Taft-	Callan	Callan Taft-	Callan Taft-	Callan	Callan Taft-	Callan	Callan	Callan Taft-	Callan	Callan	Callan	Callan
Public	Endowment/		Large Fund		Endowment/	Hartley DB	Hartley DB	Small Fund	Hartley DB	Hartley DB	Endowment/		Endowment/	Endowment/	Hartley DB	Corporate	Endowment/	Endowment/	Endowment/
Funds DB	Foundation		Sponsor DB	Sponsor DB				Sponsor DB			Foundation		Foundation	Foundation		Funds DB	Foundation	Foundation	Foundation
	DB				DB						DB		DB	DB			DB	DB	DB
18.4%	13.0%	8.9%	0.1%	-4.1%	-9.7%	18.8%	9.8%	6.6%	11.8%	7.6%	-26.5%	15.3%	12.6%	-0.4%	12.0%	12.8%	4.8%	-1.4%	7.1%
18.4%	13.0%	8.9%	0.1%	-4.1%	-9.7%	18.8%	9.8%	6.6%	11.8%	7.6%	-26.5%	15.3%	12.6%	-0.4%	12.0%	12.8%	4.8%	-1.4%	7.1%

# Callan Periodic Table of U.S. Equity Investment Returns

Annual Returns for U.S. Equity Indices Ranked in Order of Performance (1997–2016)

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
S&P 500	S&P 500	Russell	S&P 400	S&P 600	S&P 400	Russell	S&P 600	Russell	Russell	S&P 400	S&P 600	Russell	Russell	S&P 500	S&P 400	S&P 600	S&P 500	S&P 500	S&P 600
		2500				2000		Midcap	2000			Midcap	2000						
33.36%	28.58%	24.14%	17.50%	6.54%	-14.51%	47.25%	22.65%	12.65%	18.37%	7.98%	-31.07%	40.48%	26.85%	2.11%	17.88%	41.31%	13.69%	1.38%	26.56%
S&P 1500	Russell	Russell	S&P 1000	Russell	S&P 1000	Russell	Russell	S&P 400	Russell	Russell	Russell	S&P 400	Russell	S&P 1500	Russell	Russell	Russell	S&P 1500	S&P 1000
	1000	2000		2000		2500	Midcap		2500	1000	2000		2500		2500	2000	1000		
20.070/	07.000/	04.000/	15.86%	0.400/	-14.54%	45.51%	00.00%	40.500/	40.470/	5.77%	00.700/	07.00%	00.749/	4.750/	47.000/	38.82%	13.24%	4.040/	22.49%
32.87% Russell	27.02% S&P 1500	<b>21.26%</b> S&P 500	S&P 600	<b>2.49</b> % S&P 1000	S&P 600	Russell	20.22% S&P 1000	<b>12.56%</b> S&P 1000	16.17% S&P 500	Russell	-33.79% S&P 1000	37.38% Russell	26.71% S&P 400	1.75% Russell	17.88% S&P 1000	Russell	Russell	1.01% Russell	Russell
	30F 1300	30F 300	3&F 000	3&F 1000	3&F 000	Midcap	30F 1000	3&F 1000	30F 300	Midcap	3&F 1000	2500	30F 400	1000	3&F 1000	2500	Midcap	1000	2000
32.85%	26.33%	21.04%	11.80%	1.45%	-14.63%	40.06%	18.39%	10.93%	15.79%	5.60%	-34.67%	34.39%	26.64%	1.50%	17.40%	36.80%	13.22%	0.92%	21.31%
S&P 400	Russell	Russell	Russell	Russell	Russell	S&P 600	Russell	Russell	Russell	S&P 500	S&P 400	S&P 1000	S&P 1000	Russell	Russell	S&P 1000	S&P 1500	Russell	S&P 400
	3000	1000	Midcap	2500	Midcap		2000	2500	3000					3000	Midcap			3000	
32.25%	24.14%	20.91%	8.25%	1.22%	-16.19%	38.79%	18.33%	8.11%	15.72%	5.49%	-36.23%	33.48%	26.55%	1.03%	17.28%	35.87%	13.08%	0.48%	20.74%
Russell	S&P 400	Russell	Russell	S&P 400	Russell	S&P 1000	Russell	S&P 600	Russell	S&P 1500	S&P 1500	Russell	S&P 600	S&P 600	Russell	Russell	Russell	S&P 600	Russell
3000		3000	2500		2500		2500		1000			1000			1000	Midcap	3000		2500
31.78%	19.11%	20.90%	4.27%	-0.60%	-17.80%	36.61%	18.29%	7.68%	15.46%	5.47%	-36.72%	28.43%	26.31%	1.02%	16.42%	34.76%	12.56%	-1.97%	17.59%
S&P 1000	S&P 1000	S&P 1500	Russell	Russell	Russell	S&P 400	S&P 400	Russell	S&P 1500	S&P 1000	Russell	Russell	Russell	S&P 1000	Russell	Russell	S&P 400	S&P 1000	Russell
			2000	Midcap	2000			1000			2500	3000	Midcap		3000	3000			Midcap
30.26%	13.20%	20.27%	-3.02%	-5.62%	-20.48%	35.62%	16.48%	6.27%	15.34%	5.18%	-36.79%	28.34%	25.48%	-0.92%	16.42%	33.55%	9.77%	-2.11%	13.80%
Russell Midcap	Russell Midcap	Russell Midcap	S&P 1500	S&P 1500	S&P 1500	Russell 3000	Russell 3000	Russell 3000	Russell Midcap	Russell 3000	S&P 500	S&P 1500	Russell 3000	Russell Midcap	Russell 2000	S&P 400	S&P 1000	S&P 400	S&P 1500
iviidoap	wiiddap	wildoap				0000	0000	0000	wiidoap	0000			0000	wiiddap	2000				
29.01%	10.09%	18.23%	-6.98%	-10.64%	-21.31%	31.06%	11.95%	6.12%	15.26%	5.14%	-37.00%	27.25%	16.93%	-1.55%	16.35%	33.50%	8.54%	-2.18%	13.03%
S&P 600	Russell	S&P 400	Russell	Russell	Russell	Russell	S&P 1500	S&P 1500	S&P 600	Russell	Russell	Russell	S&P 1500	S&P 400	S&P 600	Russell	Russell	Russell	Russell
	2500		3000	3000	3000	1000				2500	3000	2000				1000	2500	Midcap	3000
25.58%	0.38%	14.73%	-7.46%	-11.46%	-21.54%	29.89%	11.78%	5.66%	15.11%	1.38%	-37.31%	27.17%	16.38%	-1.73%	16.33%	33.11%	7.07%	-2.44%	12.74%
Russell	S&P 600	S&P 1000	Russell	S&P 500	Russell	S&P 1500	Russell	S&P 500	S&P 1000	S&P 600	Russell	S&P 500	Russell	Russell	S&P 1500	S&P 1500	S&P 600	Russell	Russell
2500			1000		1000		1000				1000		1000	2500				2500	1000
04.0004	4.000			44.000	04.050	00 500/	44.400	4.040/	44.000		a= aaa	22.4704	10.1001	2.540/	40.4704	20 500	·	0.000	40.050
24.36% Russell	-1.30% Russell	14.11% S&P 600	-7.79% S&P 500	-11.89% Russell	-21.65% S&P 500	29.59% S&P 500	11.40% S&P 500	4.91% Russell	11.89% S&P 400	-0.30% Russell	-37.60% Russell	26.47% S&P 600	16.10% S&P 500	-2.51% Russell	<b>16.17%</b> S&P 500	<b>32.59%</b> S&P 500	5.76% Russell	-2.90% Russell	12.05% S&P 500
2000	2000	3ar 000	3ar 300	1000	3&F 300	3ar 300	3ar 300	2000	3AP 400	2000	Midcap	3ar 000	3&F 300	2000	3ar 300	3&F 300	2000	2000	3&F 300
22.36%	-2.55%	12.40%	-9.11%	-12.45%	-22.10%	28.68%	10.88%	4.55%	10.31%	-1.57%	-41.46%	25.57%	15.06%	-4.18%	16.00%	32.39%	4.89%	-4.41%	11.96%

# **Callan Periodic Table of Global Equity Investment Returns**

Annual Returns for Global Equity Indices Ranked in Order of Performance (1997–2016)

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Europe	Europe	Emerging	Europe	Emerging	MSCI ACWI	MSCI ACWI	MSCI ACWI	Emerging	Europe	Emerging	Japan	Emerging	MSCI ACWI	MSCI World	Pacific ex	Japan	MSCI World	Japan	Emerging
		Markets		Markets	ex USA SC	ex USA SC	ex USA SC	Markets		Markets			ex USA SC		Japan				Markets
23.80%	28.51%	66.84%	-8.40%	-2.62%	-5.69%	57.72%	29.10%	34.00%	33.72%	39.38%	-29.21%	78.51%	25.20%	-5.54%	24.57%	27.16%	4.94%	9.57%	11.19%
MSCI World	MSCI World	Japan	MSCI World	Pacific ex	Emerging	Emerging	Pacific ex	Japan	Emerging	Pacific ex	Pacific	Pacific ex	Emerging	ACWI	Europe	MSCI World	ACWI	Pacific	ACWI
				Japan	Markets	Markets	Japan		Markets	Japan		Japan	Markets						
15.76%	24.33%	61.53%	-13.17%	-9.88%	-6.16%	55.82%	28.46%	25.52%	32.17%	30.73%	-36.42%	72.81%	18.88%	-7.35%	19.12%	26.68%	4.16%	2.96%	7.86%
MSCI World	MSCI World	Pacific	MSCI World	MSCI ACWI	Pacific ex	Pacific ex	Emerging	MSCI ACWI	Pacific ex	ACWI ex	MSCI World	MSCI ACWI	Pacific ex	Europe	MSCI ACWI	Europe	Pacific ex	MSCI ACWI	Pacific ex
ex USA			ex USA	ex USA SC	Japan	Japan	Markets	ex USA SC		USA		ex USA SC	Japan		ex USA SC		Japan	ex USA SC	
2.26%	18.76%	57.64%	-13.37%	-14.40%	-6.42%	45.77%	25.55%	22.97%	32.02%	16.65%	-40.71%	62.91%	16.91%	-11.06%	18.52%	25.23%	-0.47%	2.60%	7.85%
Emerging Markets	MSCI ACWI ex USA SC	Pacific ex Japan	Pacific ex Japan	ACWI	Pacific	ACWI ex USA	ACWI ex USA	Pacific	MSCI ACWI ex USA SC	Europe	ACWI	ACWI ex USA	Pacific	MSCI World ex USA	Emerging Markets	ACWI	Emerging Markets	MSCI World	MSCI World
IVIAINGIS	6X 00A 00	Japan	Japan			USA	USA		EX 03A 3C			USA		ex osk	IVIAIREIS		Markets		
-11.59%	5.13%	42.58%	-15.57%	-16.21%	-9.29%	40.83%	20.91%	22.64%	26.70%	13.86%	-42.20%	41.45%	15.92%	-12.21%	18.23%	22.80%	-2.19%	-0.87%	7.51%
MSCI ACWI	Japan	MSCI ACWI	MSCI ACWI	MSCI World	Japan	MSCI World	Europe	ACWI ex	ACWI ex	MSCI World	MSCI World	Europe	Japan	Pacific ex	ACWI ex	MSCI World	Pacific	ACWI	ACWI ex
ex USA SC		ex USA SC	ex USA SC			ex USA		USA	USA	ex USA	ex USA			Japan	USA	ex USA			USA
40.040/	5.04%	32.26%	40.040/	-16.82%	-10.28%	20.420/	20.000/	40.000/	20.050/	12.44%	-43.56%	35.83%	15.44%	40.700/	40.000/	24.020/	2.700/	-2.36%	4.500/
-18.84% Japan	Pacific	MSCI World	-18.24% Pacific	ACWI ex	ACWI ex	<b>39.42%</b> Europe	20.88% MSCI World	16.62% MSCI World	26.65% MSCI World	ACWI	ACWI ex	ACWI	ACWI	-12.79% ACWI ex	16.83% MSCI World	21.02% MSCI ACWI	-2.70% ACWI ex	Europe	4.50% Pacific
Japan		ex USA	1 acinc	USA	USA	Luiope	ex USA	ex USA	ex USA	AOWI	USA	AOWI	AOWI	USA	ex USA	ex USA SC		Luiope	1 donic
-23.67%	2.45%	27.92%	-25.77%	-19.73%	-14.95%	38.54%	20.38%	14.47%	25.71%	11.66%	-45.53%	34.63%	12.67%	-13.71%	16.41%	19.73%	-3.87%	-2.84%	4.18%
Pacific	Pacific ex	MSCI World	Japan	Europe	MSCI World	Pacific	Pacific	Pacific ex	ACWI	MSCI ACWI	Europe	MSCI World	MSCI World	Pacific	ACWI	Pacific	Japan	MSCI World	MSCI ACWI
	Japan				ex USA			Japan		ex USA SC								ex USA	ex USA SC
-25.49%	-6.64%	24.94%	-28.16%	-19.90%	-15.80%	38.48%	18.98%	13.81%	20.95%	10.74%	-46.42%	33.67%	11.76%	-13.74%	16.13%	18.27%	-4.02%	-3.04%	3.91%
Pacific ex	Emerging	Europe	Emerging	MSCI World	Europe	Japan	Japan	ACWI	MSCI World	MSCI World	MSCI ACWI	MSCI World	ACWI ex	Japan	MSCI World	ACWI ex	MSCI ACWI	ACWI ex	MSCI World
Japan			Markets	ex USA							ex USA SC		USA			USA	ex USA SC	USA	ex USA
24 000/	05.049/	45.00%	00.740/	04.400/	40.000/	35.91%	45.000/	10.84%	00.070/	0.049/	-50.23%	00.000/	44.450/	44.000/	45 000/	45.00%	4.000/	F 000/	0.75%
-31.00%	-25.34%	15.90%	-30.71%	-21.40% Pacific	-18.38% ACWI	35.91% ACWI	<b>15.86%</b> ACWI	MSCI World	20.07% Pacific	9.04% Pacific	Pacific ex	29.99% Pacific	11.15% MSCI World	-14.33% Emerging	15.83% Pacific	15.29% Pacific ex	-4.03% MSCI World	-5.66% Pacific ex	2.75% Japan
					AOWI	AOWI	AOWI	WOOT WONG	1 acinc	1 dollo	Japan		ex USA	Markets	1 aoine	Japan	ex USA	Japan	Japan
				-25.40%	-19.32%	33.99%	15.23%	9.49%	12.20%	5.30%	-50.50%	24.18%	8.95%	-18.42%	14.42%	5.49%	-4.32%	-8.47%	2.38%
				Japan	MSCI World	MSCI World	MSCI World	Europe	Japan	Japan	Emerging	Japan	Europe	MSCI ACWI ex USA SC	Japan	Emerging	Europe	Emerging	Europe
											Markets			ex USA SC		Markets		Markets	
				-29.40%	-19.89%	33.11%	14.72%	9.42%	6.24%	-4.23%	-53.33%	6.25%	3.88%	-18.50%	8.18%	-2.60%	-6.18%	-14.92%	-0.40%

All Indices are MSCI.



# Callan Periodic Table of Investment Returns (Including Alternatives)

Annual Returns for Key Indices Ranked in Order of Performance (1997–2016)

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
S&P 500	S&P 500	Cambridge	Bloombera	Bloombera	Bloombera	MSCI	MSCI	MSCI	Cambridge	MSCI	Bloombera	MSCI	Russell	NFI-ODCE	MSCI	Russell	S&P 500	NFI-ODCE	Russell
Cai 000	<b>5</b> 00	Private Eq	Commodity	Barclays	Commodity	Emerging	Emerging	Emerging	Private Eq	Emerging	Barclays	Emerging	2000	Val Wt	Emerging	2000	Oui 000	Val Wt	2000
			ĺ	Agg		Markets	Markets	Markets	· ·	Markets	Agg	Markets			Markets				
33.36%	28.58%	90.13%	24.21%	8.43%	23.86%	55.82%	25.55%	34.00%	32.22%	39.38%	5.24%	78.51%	26.85%	14.96%	18.23%	38.82%	13.69%	13.95%	21.31%
Cambridge	Cambridge	MSCI	NFI-ODCE	Bloomberg	Bloomberg	Russell	Cambridge	Cambridge	MSCI	Cambridge	3 Month T-	Bloomberg	MSCI	NCREIF	MSCI ACWI	S&P 500	NCREIF	NCREIF	Bloomberg
Private Eq	Private Eq	Emerging Markets	Val Wt	Barclays	Barclays	2000	Private Eq	Private Eq	Emerging Markets	Private Eq	Bills	Barclays HY	Emerging Markets	Property	ex USA		Property	Property	Barclays HY
28.44%	19.00%	66.84%	13.19%	U.S. TIPS 7.90%	U.S. TIPS 16.57%	47.25%	24.32%	21.78%	32.17%	22.59%	2.06%	58.21%	18.88%	14.26%	16.83%	32.39%	11.82%	13.33%	17.13%
CS Hedge	NCREIF	CS Hedge	Bloomberg	NCREIF	Bloomberg	MSCI ACWI	MSCI ACWI	NFI-ODCE	MSCI ACWI	MSCI ACWI	Bloomberg	MSCI ACWI	Cambridge	Bloomberg	Russell	Cambridge	Cambridge	Cambridge	S&P 500
Fund	Property	Fund	Barclays	Property	Barclays	ex USA	ex USA	Val Wt	ex USA	ex USA	Barclays	ex USA	Private Eq	Barclays	2000	Private Eq	Private Eq	Private Eq	
			U.S. TIPS		Agg						U.S. TIPS			U.S. TIPS					
25.94%	16.24%	23.43%	13.17%	7.28%	10.26%	40.83%	20.91%	20.15%	26.65%	16.65%	-2.35%	41.45%	18.76%	13.56%	16.35%	21.14%	11.78%	8.53%	11.96%
Russell	NFI-ODCE Val Wt	Russell	NCREIF	Bloomberg	NCREIF	Bloomberg	Russell	NCREIF	Russell	NCREIF	NCREIF	Russell	Bloomberg	Bloomberg	S&P 500	MSCI ACWI ex USA	NFI-ODCE	S&P 500	Bloomberg
2000	vai vvi	2000	Property	Barclays HY	Property	Barclays HY	2000	Property	2000	Property	Property	2000	Commodity	Barclays Agg		ex USA	Val Wt		Commodity
22.36%	15.29%	21.26%	12.24%	5.28%	6.74%	28.97%	18.33%	20.06%	18.37%	15.85%	-6.46%	27.17%	16.67%	<b>7.84</b> %	16.00%	15.29%	11.46%	1.38%	11.40%
NFI-ODCE	Bloomberg	S&P 500	Cambridge	NFI-ODCE	NFI-ODCE	S&P 500	NCREIF	Bloomberg	NCREIF	NFI-ODCE	NFI-ODCE	S&P 500	NFI-ODCE	Cambridge	Bloomberg	NFI-ODCE	Bloomberg	Bloomberg	MSCI
Val Wt	Barclays		Private Eq	Val Wt	Val Wt		Property	Commodity	Property	Val Wt	Val Wt		Val Wt	Private Eq	Barclays	Val Wt	Barclays	Barclays	Emerging
13.94%	Agg <b>8.70</b> %	24 040/	11.85%	4.64%	4.57%	28.68%	4.4.400/	17.54%	16.59%	14.84%	-10.70%	26.47%	15.26%	7.400/	HY	12.90%	Agg <b>5.97%</b>	Agg <b>0.55</b> %	Markets
		21.04%					14.48% NFI-ODCE	MSCI ACWI	S&P 500		CS Hedge			7.12%	15.81%				11.19%
NCREIF Property	3 Month T- Bills	Bloomberg Commodity	Bloomberg Barclays	3 Month T- Bills	CS Hedge Fund	Bloomberg Commodity	Val Wt	ex USA	5&P 500	CS Hedge Fund	Fund	Bloomberg Commodity	Bloomberg Barclays	Bloomberg Barclays	Cambridge Private Eq	NCREIF Property	Russell 2000	3 Month T- Bills	NCREIF Property
rioperty	Dillo	Commodity	Agg	Dillo	i una	Commodity	vai vvi	CX OOA		i uliu	i unu	Commodity	HY	HY	1 IIVale Lq	Troperty	2000	Dillo	rioperty
13.91%	5.25%	18.60%	11.63%	4.42%	3.04%	22.66%	12.00%	16.62%	15.79%	12.56%	-19.07%	18.72%	15.12%	4.98%	13.98%	10.98%	4.89%	0.05%	7.97%
Bloomberg	Bloomberg	NFI-ODCE	3 Month T-	CS Hedge	3 Month T-	Cambridge	Bloomberg	CS Hedge	NFI-ODCE	Bloomberg	Bloomberg	CS Hedge	S&P 500	S&P 500	NCREIF	CS Hedge	CS Hedge	CS Hedge	NFI-ODCE
Barclays	Barclays	Val Wt	Bills	Fund	Bills	Private Eq	Barclays	Fund	Val Wt	Barclays	Barclays	Fund			Property	Fund	Fund	Fund	Val Wt
HY 12.76%	U.S. TIPS 3.95%	12.05%	6.18%	4.42%	1.78%	18.52%	HY 11.13%	7.61%	15.27%	U.S. TIPS 11.63%	HY -26.16%	18.57%	15.06%	2.11%	10.54%	9.73%	4.13%	-0.71%	7.79%
Bloomberg	Bloomberg	NCREIF	CS Hedge	Russell	Bloomberg	CS Hedge	S&P 500	S&P 500	CS Hedge	Bloomberg	Cambridge	Cambridge	NCREIF	3 Month T-	NFI-ODCE	Bloomberg	Bloomberg	Bloomberg	Bloomberg
Barclays	Barclays	Property	Fund	2000	Barclays	Fund			Fund	Commodity	Private Eq	Private Eq	Property	Bills	Val Wt	Barclays	Barclays	Barclays	Barclays
Agg	HY				HY											HY	U.S. TIPS	U.S. TIPS	U.S. TIPS
9.64%	1.87%	11.36%	4.85%	2.49%	-1.41%	15.44%	10.88%	4.91%	13.86%	11.08%	-26.70%	17.33%	13.11%	0.10%	9.79%	7.44%	3.64%	-1.44%	4.68%
3 Month T- Bills	CS Hedge	3 Month T- Bills	Russell 2000	MSCI	MSCI	NCREIF	CS Hedge	Russell	Bloomberg	Bloomberg	Russell 2000	Bloomberg Barclays	MSCI ACWI ex USA	CS Hedge	CS Hedge Fund	3 Month T- Bills	Bloomberg	Russell 2000	MSCI ACWI ex USA
DIIIS	Fund		2000	Emerging Markets	Emerging Markets	Property	Fund	2000	Barclays HY	Barclays Agg	2000	U.S. TIPS	ex USA	Fund	Fullu	DIIIS	Barclays HY	2000	ex USA
5.32%	-0.36%	4.85%	-3.02%	-2.62%	-6.16%	8.99%	9.64%	4.55%	11.85%	6.97%	-33.79%	11.41%	11.15%	-2.52%	7.67%	0.07%	2.45%	-4.41%	4.50%
Bloomberg	Russell	Bloomberg	Bloomberg	S&P 500	Cambridge	Bloomberg	Bloomberg	3 Month T-	3 Month T-	S&P 500	Bloomberg	Bloomberg	CS Hedge	Russell	Bloomberg	Bloomberg	3 Month T-	Bloomberg	Bloomberg
Commodity	2000		Barclays		Private Eq	Barclays	Barclays	Bills	Bills		Commodity	Barclays	Fund	2000	Barclays	Barclays	Bills	Barclays	Barclays
-8.24%	-2.55%	U.S. TIPS 2.40%	HY -5.86%	-11.89%	-10.78%	U.S. TIPS 8.40%	U.S. TIPS 8.46%	3.07%	4.85%	5.49%	-36.61%	Agg <b>5.93%</b>	10.95%	-4.18%	U.S. TIPS 6.98%	Agg <b>-2.02%</b>	0.03%	HY <b>-4.47</b> %	Agg <b>2.65%</b>
MSCI	MSCI	Bloombera	S&P 500	MSCI ACWI	MSCI ACWI	NFI-ODCE	Bloombera	Bloombera	Bloomberg	3.49 % 3 Month T-	S&P 500	3 Month T-	Bloombera	Bloombera	Bloombera	MSCI	MSCI	MSCI ACWI	CS Hedge
Emerging	Emerging	Barclays	- 301 300	ex USA	ex USA	Val Wt	Commodity	Barclays	Barclays	Bills	- 300 - 300	Bills	Barclays	Commodity	Barclays	Emerging	Emerging	ex USA	Fund
Markets	Markets	HY					ĺ	U.S. TIPS	Agg <b>4.33%</b>				Agg	,	Agg <b>4.21%</b>	Markets	Markets		
-11.59%	-25.34%	2.39%	-9.11%	-19.73%	-14.95%	8.28%	7.64%	2.84%	4.33%	5.00%	-37.00%	0.21%	6.54%	-13.37%		-2.60%	-2.19%	-5.66%	1.25%
	Bloomberg	Bloomberg	MSCI	Cambridge	Russell	Bloomberg	Bloomberg	Bloomberg	Bloomberg	Bloomberg	MSCI ACWI	NCREIF	Bloomberg	MSCI ACWI	3 Month T-	Bloomberg	MSCI ACWI	MSCI	3 Month T-
	Commodity	Barclays	Emerging Markets	Private Eq	2000	Barclays	Barclays	Barclays HY	Barclays U.S. TIPS	Barclays HY	ex USA	Property	Barclays U.S. TIPS	ex USA	Bills	Barclays U.S. TIPS	ex USA	Emerging Markets	Bills
	-30.52%	Agg <b>-0.82%</b>	-30.71%	-19.87%	-20.48%	Agg <b>4.10%</b>	Agg <b>4.34%</b>	2.74%	0.5. TIPS 0.41%	1.87%	-45.53%	-16.86%	6.31%	-13.71%	0.11%	-8.61%	-3.87%	-14.92%	0.33%
1				Bloomberg	S&P 500	3 Month T-	3 Month T-	Bloomberg	Bloomberg	Russell	MSCI	NFI-ODCE	3 Month T-	MSCI	Bloomberg	Bloomberg	Bloomberg	Bloomberg	
				Commodity		Bills	Bills	Barclays	Commodity	2000	Emerging	Val Wt	Bills	Emerging	Commodity	Commodity	Commodity	Commodity	
								Agg			Markets			Markets					
				-22.32%	-22.10%	1.15%	1.33%	2.43%	-2.71%	-1.57%	-53.33%	-30.40%	0.13%	-18.42%	-1.14%	-9.58%	-17.04%	-24.70%	ļ

Cambridge Private Equity Index full year 2016 performance unavailable at time of reporting.



# Callan Periodic Table of Investment Returns (Including Real Estate)

Annual Returns for Key Indices Ranked in Order of Performance (1997–2016)

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
S&P 500	S&P 500	MSCI	NAREIT	NAREIT	Bloomberg	MSCI	EPRA/	MSCI	EPRA/	MSCI	Bloomberg	MSCI	NAREIT	NFI-ODCE	EPRA/	Russell	NAREIT	NFI-ODCE	Russell
		Emerging	Equity	Equity	Barclays	Emerging	NAREIT	Emerging	NAREIT	Emerging	Barclays	Emerging	Equity	Val Wt	NAREIT	2000	Equity	Val Wt	2000
		Markets			Agg	Markets	Dev REIT	Markets	Dev REIT	Markets	Agg	Markets			Dev REIT				
33.36%	28.58%	66.84%	26.37%	13.93%	10.26%	55.82%	37.96%	34.00%	42.35%	39.38%	5.24%	78.51%	27.96%	14.96%	28.65%	38.82%	30.14%	13.95%	21.31%
Russell	NCREIF	Russell	EPRA/	Bloomberg	NCREIF	Russell	NAREIT	NFI-ODCE	NAREIT	MSCI ACWI	NCREIF	Bloomberg	Russell	NCREIF	MSCI	S&P 500	EPRA/	NCREIF	Bloomberg
2000	Property	2000	NAREIT	Barclays	Property	2000	Equity	Val Wt	Equity	ex USA	Property	Barclays	2000	Property	Emerging		NAREIT	Property	Barclays
			Dev REIT	Agg								High Yield			Markets		Dev REIT		High Yield
22.36%	16.24%	21.26%	13.84%	8.43%	6.74%	47.25%	31.58%	20.15%	35.06%	16.65%	-6.46%	58.21%	26.85%	14.26%	18.23%	32.39%	15.89%	13.33%	17.13%
NAREIT	NFI-ODCE	S&P 500	NFI-ODCE	NCREIF	NFI-ODCE	MSCI ACWI	MSCI	NCREIF	MSCI	NCREIF	NFI-ODCE	MSCI ACWI	EPRA/	NAREIT	NAREIT	MSCI ACWI	S&P 500	NAREIT	S&P 500
Equity	Val Wt		Val Wt	Property	Val Wt	ex USA	Emerging Markets	Property	Emerging Markets	Property	Val Wt	ex USA	NAREIT Dev REIT	Equity	Equity	ex USA		Equity	
20.26%	15.29%	21.04%	13.19%	7.28%	4.57%	40.83%	25.55%	20.06%	32.17%	15.85%	-10.70%	41.45%	20.40%	8.29%	18.06%	15.29%	13.69%	3.20%	11.96%
NFI-ODCE Val Wt	Bloomberg	NFI-ODCE Val Wt	NCREIF	Bloomberg	NAREIT	EPRA/ NAREIT	MSCI ACWI ex USA	MSCI ACWI ex USA	MSCI ACWI ex USA	NFI-ODCE Val Wt	Bloomberg	EPRA/ NAREIT	MSCI	Bloomberg	MSCI ACWI ex USA	NFI-ODCE Val Wt	NCREIF	S&P 500	MSCI
vai vvi	Barclays Agg	vai vvi	Property	Barclays High Yield	Equity	Dev REIT	ex USA	ex USA	ex USA	vai vvi	Barclays High Yield	Dev REIT	Emerging Markets	Barclays Agg	ex USA	vai vvi	Property		Emerging Markets
13.94%	8.70%	12.05%	12.24%	5.28%	3.82%	40.69%	20.91%	16.62%	26.65%	14.84%	-26.16%	38.26%	18.88%	7.84%	16.83%	12.90%	11.82%	1.38%	11.19%
NCREIF	Bloombera	NCREIF	Bloombera	NFI-ODCE	EPRA/	NAREIT	Russell	EPRA/	Russell	Bloombera	Russell	NAREIT	NFI-ODCE	Bloombera	Russell	NCREIF	NFI-ODCE	Bloombera	NAREIT
Property	Barclays	Property	Barclays	Val Wt	NAREIT	Equity	2000	NAREIT	2000	Barclays	2000	Equity	Val Wt	Barclays	2000	Property	Val Wt	Barclays	Equity
. reporty	High Yield	. ropony	Agg	70.771	Dev REIT	Equity	2000	Dev REIT	2000	Agg	2000	= quity	70.771	High Yield	2000			Agg	_qa.,,
13.91%	1.87%	11.36%	11.63%	4.64%	2.82%	37.13%	18.33%	15.35%	18.37%	6.97%	-33.79%	27.99%	15.26%	4.98%	16.35%	10.98%	11.46%	0.55%	8.52%
Bloomberg	Russell	EPRA/	Russell	Russell	Bloombera	Bloomberg	NCREIF	NAREIT	NCREIF	S&P 500	S&P 500	Russell	Bloomberg	S&P 500	S&P 500	Bloomberg	Bloomberg	EPRA/	NCREIF
Barclays	2000	NAREIT	2000	2000	Barclays	Barclays	Property	Equity	Property			2000	Barclays			3		NAREIT	
High Yield												2000	Daiciays			Barclays	Barclays	NAKEII	Flopelty
		Dev REIT			High Yield	High Yield	11.7					2000	High Yield			Barciays High Yield	Barclays Agg	Dev REIT	Property
12.76%	-2.55%	8.87%	-3.02%	2.49%	High Yield -1.41%	High Yield 28.97%	14.48%	12.15%	16.59%	5.49%	-37.00%	27.17%		2.11%	16.00%				7.97%
	<b>-2.55%</b> EPRA/		-3.02% Bloomberg	2.49% MSCI						5.49% Bloomberg	-37.00% NAREIT		High Yield	2.11% Russell	16.00% Bloomberg	High Yield	Agg	Dev REIT	
12.76%	EPRA/ NAREIT	8.87%			-1.41% MSCI Emerging	28.97%	14.48%	12.15%	16.59%	Bloomberg Barclays		27.17%	High Yield 15.12%			High Yield 7.44%  EPRA/ NAREIT	Agg <b>5.97%</b>	Dev REIT <b>0.05%</b>	7.97%
12.76% Bloomberg	EPRA/	8.87% Bloomberg	Bloomberg	MSCI	-1.41% MSCI	28.97%	14.48% NFI-ODCE	12.15%	16.59%	Bloomberg	NAREIT	27.17%	High Yield 15.12%	Russell	Bloomberg	High Yield 7.44% EPRA/	Agg 5.97% Russell	Dev REIT 0.05% Russell	7.97% NFI-ODCE
12.76% Bloomberg Barclays	EPRA/ NAREIT	8.87% Bloomberg Barclays	Bloomberg Barclays	MSCI Emerging	-1.41% MSCI Emerging	28.97%	14.48% NFI-ODCE	12.15%	16.59%	Bloomberg Barclays	NAREIT	27.17%	High Yield 15.12%	Russell	Bloomberg Barclays	High Yield 7.44%  EPRA/ NAREIT	Agg 5.97% Russell	Dev REIT 0.05% Russell	7.97% NFI-ODCE
12.76% Bloomberg Barclays Agg 9.64% EPRA/	EPRA/ NAREIT Dev REIT -8.18% NAREIT	8.87% Bloomberg Barclays High Yield 2.39% Bloomberg	Bloomberg Barclays High Yield	MSCI Emerging Markets -2.62% EPRA/	-1.41%  MSCI Emerging Markets -6.16%  MSCI ACWI	28.97% S&P 500 28.68% NCREIF	14.48%  NFI-ODCE Val Wt  12.00%  Bloomberg	12.15% S&P 500 4.91% Russell	16.59% S&P 500 15.79% NFI-ODCE	Bloomberg Barclays High Yield 1.87% Russell	NAREIT Equity -37.72% MSCI ACWI	27.17% S&P 500 26.47% Bloomberg	High Yield 15.12% S&P 500 15.06% NCREIF	Russell 2000 -4.18% EPRA/	Bloomberg Barclays High Yield 15.81% NCREIF	High Yield 7.44%  EPRA/ NAREIT Dev REIT 4.43%  NAREIT	Agg 5.97% Russell 2000 4.89% Bloomberg	Dev REIT 0.05% Russell 2000 -4.41% Bloomberg	7.97%  NFI-ODCE Val Wt  7.79%  EPRA/
12.76%  Bloomberg Barclays Agg 9.64%  EPRA/ NAREIT	EPRA/ NAREIT Dev REIT -8.18%	8.87% Bloomberg Barclays High Yield 2.39% Bloomberg Barclays	Bloomberg Barclays High Yield -5.86%	MSCI Emerging Markets -2.62% EPRA/ NAREIT	-1.41%  MSCI Emerging Markets -6.16%	28.97% S&P 500 28.68%	14.48%  NFI-ODCE Val Wt  12.00%  Bloomberg Barclays	12.15% S&P 500 4.91%	16.59% S&P 500 15.79%	Bloomberg Barclays High Yield 1.87%	NAREIT Equity -37.72%	27.17% S&P 500 26.47% Bloomberg Barclays	High Yield 15.12% S&P 500 15.06%	Russell 2000 -4.18% EPRA/ NAREIT	Bloomberg Barclays High Yield 15.81%	High Yield 7.44% EPRA/ NAREIT Dev REIT 4.43%	Agg 5.97% Russell 2000 4.89% Bloomberg Barclays	Dev REIT 0.05% Russell 2000 -4.41% Bloomberg Barclays	7.97% NFI-ODCE Val Wt 7.79% EPRA/ NAREIT
12.76% Bloomberg Barclays Agg 9.64% EPRA/ NAREIT Dev REIT	EPRA/ NAREIT Dev REIT -8.18% NAREIT Equity	8.87% Bloomberg Barclays High Yield 2.39% Bloomberg Barclays Agg	Bloomberg Barclays High Yield -5.86% S&P 500	MSCI Emerging Markets -2.62% EPRA/ NAREIT Dev REIT	-1.41%  MSCI Emerging Markets -6.16%  MSCI ACWI ex USA	28.97% S&P 500 28.68% NCREIF Property	14.48%  NFI-ODCE Val Wt  12.00%  Bloomberg	12.15% S&P 500 4.91% Russell 2000	16.59% S&P 500 15.79% NFI-ODCE Val Wt	Bloomberg Barclays High Yield 1.87% Russell 2000	NAREIT Equity -37.72% MSCI ACWI ex USA	27.17% S&P 500 26.47% Bloomberg Barclays Agg	High Yield 15.12% S&P 500  15.06% NCREIF Property	Russell 2000 -4.18% EPRA/ NAREIT Dev REIT	Bloomberg Barclays High Yield 15.81% NCREIF Property	High Yield 7.44% EPRA/ NAREIT Dev REIT 4.43% NAREIT Equity	Agg 5.97% Russell 2000 4.89% Bloomberg Barclays High Yield	Dev REIT 0.05% Russell 2000 -4.41% Bloomberg Barclays High Yield	7.97% NFI-ODCE Val Wt 7.79% EPRA/ NAREIT Dev REIT
12.76% Bloomberg Barclays Agg 9.64% EPRA/ NAREIT Dev REIT -7.38%	EPRA/ NAREIT Dev REIT -8.18% NAREIT Equity -17.50%	8.87% Bloomberg Barclays High Yield 2.39% Bloomberg Barclays Agg -0.82%	Bloomberg Barclays High Yield -5.86% S&P 500	MSCI Emerging Markets -2.62% EPRA/ NAREIT Dev REIT -3.81%	-1.41% MSCI Emerging Markets -6.16% MSCI ACWI ex USA -14.95%	28.97% S&P 500 28.68% NCREIF Property 8.99%	14.48% NFI-ODCE Val Wt 12.00% Bloomberg Barclays High Yield 11.13%	12.15% S&P 500 4.91% Russell 2000	16.59% S&P 500 15.79% NFI-ODCE Val Wt 15.27%	Bloomberg Barclays High Yield 1.87% Russell 2000	NAREIT Equity  -37.72%  MSCI ACWI ex USA  -45.53%	27.17% S&P 500 26.47% Bloomberg Barclays Agg 5.93%	High Yield 15.12% S&P 500  15.06% NCREIF Property 13.11%	Russell 2000 -4.18% EPRA/ NAREIT Dev REIT -5.82%	Bloomberg Barclays High Yield 15.81% NCREIF Property	High Yield 7.44% EPRA/ NAREIT Dev REIT 4.43% NAREIT Equity 2.47%	Agg 5.97% Russell 2000 4.89% Bloomberg Barclays High Yield 2.45%	Dev REIT 0.05% Russell 2000 -4.41% Bloomberg Barclays High Yield -4.47%	7.97%  NFI-ODCE Val Wt  7.79%  EPRA/ NAREIT Dev REIT 4.99%
12.76% Bloomberg Barclays Agg 9.64% EPRA/ NAREIT Dev REIT -7.38% MSCI	EPRA/ NAREIT Dev REIT -8.18% NAREIT Equity -17.50% MSCI	8.87% Bloomberg Barclays High Yield 2.39% Bloomberg Barclays Agg -0.82% NAREIT	Bloomberg Barclays High Yield -5.86% S&P 500 -9.11% MSCI	MSCI Emerging Markets -2.62% EPRA/ NAREIT Dev REIT	-1.41% MSCI Emerging Markets -6.16% MSCI ACWI ex USA -14.95% Russell	28.97% S&P 500  28.68% NCREIF Property 8.99% NFI-ODCE	14.48%  NFI-ODCE Val Wt  12.00%  Bloomberg Barclays High Yield	12.15% S&P 500 4.91% Russell 2000 4.55% Bloomberg	16.59% S&P 500 15.79% NFI-ODCE Val Wt 15.27% Bloomberg	Bloomberg Barclays High Yield 1.87% Russell 2000 -1.57% EPRA/	NAREIT Equity  -37.72%  MSCI ACWI ex USA  -45.53%  EPRA/	27.17% S&P 500  26.47% Bloomberg Barclays Agg 5.93% NCREIF	High Yield 15.12% S&P 500  15.06% NCREIF Property 13.11% MSCI ACWI	Russell 2000 -4.18% EPRA/ NAREIT Dev REIT -5.82% MSCI ACWI	Bloomberg Barclays High Yield 15.81% NCREIF Property 10.54% NFI-ODCE	High Yield 7.44%  EPRA/ NAREIT Dev REIT 4.43%  NAREIT Equity  2.47%  Bloomberg	Agg 5.97% Russell 2000 4.89% Bloomberg Barclays High Yield 2.45% MSCI	Dev REIT 0.05% Russell 2000 -4.41% Bloomberg Barclays High Yield -4.47% MSCI ACWI	7.97%  NFI-ODCE Val Wt  7.79%  EPRA/ NAREIT Dev REIT 4.99%  MSCI ACWI
12.76% Bloomberg Barclays Agg 9.64% EPRA/ NAREIT Dev REIT -7.38% MSCI Emerging	EPRA/ NAREIT Dev REIT -8.18% NAREIT Equity -17.50% MSCI Emerging	8.87% Bloomberg Barclays High Yield 2.39% Bloomberg Barclays Agg -0.82%	Bloomberg Barclays High Yield -5.86% S&P 500 -9.11% MSCI Emerging	MSCI Emerging Markets -2.62% EPRA/ NAREIT Dev REIT -3.81%	-1.41% MSCI Emerging Markets -6.16% MSCI ACWI ex USA -14.95%	28.97% S&P 500 28.68% NCREIF Property 8.99%	14.48% NFI-ODCE Val Wt 12.00% Bloomberg Barclays High Yield 11.13%	12.15% S&P 500 4.91% Russell 2000 4.55% Bloomberg Barclays	16.59% S&P 500  15.79% NFI-ODCE Val Wt  15.27% Bloomberg Barclays	Bloomberg Barclays High Yield 1.87% Russell 2000 -1.57% EPRA/ NAREIT	NAREIT Equity  -37.72%  MSCI ACWI ex USA  -45.53%  EPRA/ NAREIT	27.17% S&P 500 26.47% Bloomberg Barclays Agg 5.93%	High Yield 15.12% S&P 500  15.06% NCREIF Property 13.11%	Russell 2000 -4.18% EPRA/ NAREIT Dev REIT -5.82%	Bloomberg Barclays High Yield 15.81% NCREIF Property	High Yield 7.44% EPRA/ NAREIT Dev REIT 4.43% NAREIT Equity 2.47% Bloomberg Barclays	Agg 5.97% Russell 2000 4.89% Bloomberg Barclays High Yield 2.45% MSCI Emerging	Dev REIT 0.05% Russell 2000 -4.41% Bloomberg Barclays High Yield -4.47%	7.97% NFI-ODCE Val Wt 7.79% EPRA/ NAREIT Dev REIT 4.99%
12.76% Bloomberg Barclays Agg 9.64% EPRA/ NAREIT Dev REIT -7.38% MSCI Emerging Markets	EPRA/ NAREIT Dev REIT -8.18% NAREIT Equity -17.50% MSCI Emerging Markets	8.87% Bloomberg Barclays High Yield 2.39% Bloomberg Barclays Agg -0.82% NAREIT Equity	Bloomberg Barclays High Yield -5.86% S&P 500 -9.11% MSCI Emerging Markets	MSCI Emerging Markets -2.62% EPRA/ NAREIT Dev REIT -3.81% S&P 500	-1.41% MSCI Emerging Markets -6.16% MSCI ACWI ex USA -14.95% Russell 2000	28.97% S&P 500  28.68% NCREIF Property 8.99% NFI-ODCE Val Wt	14.48% NFI-ODCE Val Wt  12.00% Bloomberg Barclays High Yield 11.13% S&P 500	12.15% S&P 500  4.91% Russell 2000  4.55% Bloomberg Barclays High Yield	16.59% S&P 500  15.79% NFI-ODCE Val Wt  15.27% Bloomberg Barclays High Yield	Bloomberg Barclays High Yield 1.87% Russell 2000 -1.57% EPRA/ NAREIT Dev REIT	NAREIT Equity  -37.72%  MSCI ACWI ex USA  -45.53%  EPRA/ NAREIT Dev REIT	27.17% S&P 500  26.47% Bloomberg Barclays Agg 5.93% NCREIF Property	High Yield 15.12% S&P 500  15.06% NCREIF Property 13.11% MSCI ACWI ex USA	Russell 2000 -4.18% EPRA/ NAREIT Dev REIT -5.82% MSCI ACWI ex USA	Bloomberg Barclays High Yield 15.81% NCREIF Property 10.54% NFI-ODCE Val Wt	High Yield 7.44% EPRA/ NAREIT Dev REIT 4.43% NAREIT Equity 2.47% Bloomberg Barclays Agg	Agg 5.97% Russell 2000 4.89% Bloomberg Barclays High Yield 2.45% MSCI Emerging Markets	Dev REIT 0.05% Russell 2000 -4.41% Bloomberg Barclays High Yield -4.47% MSCI ACWI ex USA	7.97% NFI-ODCE Val Wt  7.79% EPRA/ NAREIT Dev REIT 4.99% MSCI ACWI ex USA
12.76% Bloomberg Barclays Agg 9.64% EPRA/ NAREIT Dev REIT -7.38% MSCI Emerging	EPRA/ NAREIT Dev REIT -8.18% NAREIT Equity -17.50% MSCI Emerging	8.87% Bloomberg Barclays High Yield 2.39% Bloomberg Barclays Agg -0.82% NAREIT	Bloomberg Barclays High Yield -5.86% S&P 500 -9.11% MSCI Emerging	MSCI Emerging Markets -2.62% EPRA/ NAREIT Dev REIT -3.81% S&P 500	-1.41% MSCI Emerging Markets -6.16% MSCI ACWI ex USA -14.95% Russell 2000	28.97% S&P 500  28.68% NCREIF Property  8.99% NFI-ODCE Val Wt  8.28%	14.48% NFI-ODCE Val Wt  12.00% Bloomberg Barclays High Yield 11.13% S&P 500	12.15% S&P 500  4.91% Russell 2000  4.55% Bloomberg Barclays High Yield 2.74%	16.59% S&P 500  15.79% NFI-ODCE Val Wt  15.27% Bloomberg Barclays High Yield 11.85%	Bloomberg Barclays High Yield 1.87% Russell 2000 -1.57% EPRA/ NAREIT Dev REIT -6.96%	NAREIT Equity  -37.72%  MSCI ACWI ex USA  -45.53%  EPRA/ NAREIT Dev REIT  -47.72%	27.17% S&P 500  26.47% Bloomberg Barclays Agg 5.93% NCREIF Property  -16.86%	High Yield 15.12% S&P 500  15.06% NCREIF Property 13.11% MSCI ACWI ex USA 11.15%	Russell 2000 -4.18% EPRA/ NAREIT Dev REIT -5.82% MSCI ACWI ex USA -13.71%	Bloomberg Barclays High Yield 15.81% NCREIF Property 10.54% NFI-ODCE Val Wt	High Yield 7.44% EPRA/ NAREIT Dev REIT 4.43% NAREIT Equity 2.47% Bloomberg Barclays Agg -2.02%	Agg 5.97% Russell 2000 4.89% Bloomberg Barclays High Yield 2.45% MSCI Emerging Markets -2.19%	Dev REIT 0.05% Russell 2000 -4.41% Bloomberg Barclays High Yield -4.47% MSCI ACWI ex USA -5.66%	7.97% NFI-ODCE Val Wt  7.79% EPRA/ NAREIT Dev REIT 4.99% MSCI ACWI ex USA 4.50%
12.76% Bloomberg Barclays Agg 9.64% EPRA/ NAREIT Dev REIT -7.38% MSCI Emerging Markets	EPRA/ NAREIT Dev REIT -8.18% NAREIT Equity -17.50% MSCI Emerging Markets	8.87% Bloomberg Barclays High Yield 2.39% Bloomberg Barclays Agg -0.82% NAREIT Equity	Bloomberg Barclays High Yield -5.86% S&P 500 -9.11% MSCI Emerging Markets	MSCI Emerging Markets -2.62% EPRA/ NAREIT Dev REIT -3.81% S&P 500	-1.41% MSCI Emerging Markets -6.16% MSCI ACWI ex USA -14.95% Russell 2000	28.97% S&P 500  28.68% NCREIF Property  8.99% NFI-ODCE Val Wt  8.28% Bloomberg	14.48% NFI-ODCE Val Wt  12.00% Bloomberg Barclays High Yield 11.13% S&P 500  10.88% Bloomberg	12.15% S&P 500  4.91% Russell 2000 4.55% Bloomberg Barclays High Yield 2.74% Bloomberg	16.59% S&P 500  15.79% NFI-ODCE Val Wt  15.27% Bloomberg Barclays High Yield 11.85% Bloomberg	Bloomberg Barclays High Yield 1.87% Russell 2000 -1.57% EPRA/ NAREIT Dev REIT -6.96% NAREIT	NAREIT Equity  -37.72%  MSCI ACWI ex USA  -45.53%  EPRA/ NAREIT Dev REIT  -47.72%  MSCI	27.17% S&P 500  26.47% Bloomberg Barclays Agg 5.93% NCREIF Property -16.86% NFI-ODCE	High Yield 15.12% S&P 500  15.06% NCREIF Property 13.11% MSCI ACWI ex USA 11.15% Bloomberg	Russell 2000  -4.18%  EPRAV NAREIT Dev REIT -5.82%  MSCI ACWI ex USA  -13.71%  MSCI	Bloomberg Barclays High Yield 15.81% NCREIF Property 10.54% NFI-ODCE Val Wt 9.79% Bloomberg	High Yield 7.44% EPRA/ NAREIT Dev REIT 4.43% NAREIT Equity  2.47% Bloomberg Barclays Agg -2.02% MSCI	Agg 5.97% Russell 2000 4.89% Bloomberg Barclays High Yield 2.45% MSCI Emerging Markets -2.19% MSCI ACWI	Dev REIT 0.05% Russell 2000 -4.41% Bloomberg Barclays High Yield -4.47% MSCI ACWI ex USA -5.66% MSCI	7.97% NFI-ODCE Val Wt 7.79% EPRA/ NAREIT Dev REIT 4.99% MSCI ACWI ex USA 4.50% Bloomberg
12.76% Bloomberg Barclays Agg 9.64% EPRA/ NAREIT Dev REIT -7.38% MSCI Emerging Markets	EPRA/ NAREIT Dev REIT -8.18% NAREIT Equity -17.50% MSCI Emerging Markets	8.87% Bloomberg Barclays High Yield 2.39% Bloomberg Barclays Agg -0.82% NAREIT Equity	Bloomberg Barclays High Yield -5.86% S&P 500 -9.11% MSCI Emerging Markets	MSCI Emerging Markets -2.62% EPRA/ NAREIT Dev REIT -3.81% S&P 500	-1.41% MSCI Emerging Markets -6.16% MSCI ACWI ex USA -14.95% Russell 2000	28.97% S&P 500  28.68% NCREIF Property  8.99% NFI-ODCE Val Wt  8.28% Bloomberg Barclays	14.48% NFI-ODCE Val Wt  12.00% Bloomberg Barclays High Yield 11.13% S&P 500  10.88% Bloomberg Barclays	12.15% S&P 500  4.91% Russell 2000  4.55% Bloomberg Barclays High Yield 2.74% Bloomberg Barclays	16.59% S&P 500  15.79% NFI-ODCE Val Wt  15.27% Bloomberg Barclays High Yield 11.85% Bloomberg Barclays	Bloomberg Barclays High Yield 1.87% Russell 2000 -1.57% EPRA/ NAREIT Dev REIT -6.96%	NAREIT Equity  -37.72%  MSCI ACWI ex USA  -45.53%  EPRA/ NAREIT Dev REIT  -47.72%	27.17% S&P 500  26.47% Bloomberg Barclays Agg 5.93% NCREIF Property  -16.86%	High Yield 15.12% S&P 500  15.06% NCREIF Property  13.11% MSCI ACWI ex USA  11.15% Bloomberg Barclays	Russell 2000 -4.18% EPRA/ NAREIT Dev REIT -5.82% MSCI ACWI ex USA -13.71%	Bloomberg Barclays High Yield 15.81% NCREIF Property 10.54% NFI-ODCE Val Wt 9.79% Bloomberg Barclays	High Yield 7.44% EPRA/ NAREIT Dev REIT 4.43% NAREIT Equity 2.47% Bloomberg Barclays Agg -2.02%	Agg 5.97% Russell 2000 4.89% Bloomberg Barclays High Yield 2.45% MSCI Emerging Markets -2.19%	Dev REIT 0.05% Russell 2000 -4.41% Bloomberg Barclays High Yield -4.47% MSCI ACWI ex USA -5.66%	7.97% NFI-ODCE Val Wt 7.79% EPRA/ NAREIT Dev REIT 4.99% MSCI ACWI ex USA 4.50% Bloomberg Barclays
12.76% Bloomberg Barclays Agg 9.64% EPRA/ NAREIT Dev REIT -7.38% MSCI Emerging Markets	EPRA/ NAREIT Dev REIT -8.18% NAREIT Equity -17.50% MSCI Emerging Markets	8.87% Bloomberg Barclays High Yield 2.39% Bloomberg Barclays Agg -0.82% NAREIT Equity	Bloomberg Barclays High Yield -5.86% S&P 500 -9.11% MSCI Emerging Markets	MSCI Emerging Markets -2.62% EPRA/ NAREIT Dev REIT -3.81% S&P 500	-1.41% MSCI Emerging Markets -6.16% MSCI ACWI ex USA -14.95% Russell 2000	28.97% S&P 500  28.68% NCREIF Property  8.99% NFI-ODCE Val Wt  8.28% Bloomberg	14.48% NFI-ODCE Val Wt  12.00% Bloomberg Barclays High Yield 11.13% S&P 500  10.88% Bloomberg	12.15% S&P 500  4.91% Russell 2000 4.55% Bloomberg Barclays High Yield 2.74% Bloomberg	16.59% S&P 500  15.79% NFI-ODCE Val Wt  15.27% Bloomberg Barclays High Yield 11.85% Bloomberg	Bloomberg Barclays High Yield 1.87% Russell 2000 -1.57% EPRA/ NAREIT Dev REIT -6.96% NAREIT	NAREIT Equity  -37.72%  MSCI ACWI ex USA  -45.53%  EPRA/ NAREIT Dev REIT  -47.72%  MSCI Emerging	27.17% S&P 500  26.47% Bloomberg Barclays Agg 5.93% NCREIF Property -16.86% NFI-ODCE	High Yield 15.12% S&P 500  15.06% NCREIF Property 13.11% MSCI ACWI ex USA 11.15% Bloomberg	Russell 2000  -4.18%  EPRA/ NAREIT DEV REIT -5.82%  MSCI ACWI ex USA  -13.71%  MSCI Emerging	Bloomberg Barclays High Yield 15.81% NCREIF Property 10.54% NFI-ODCE Val Wt 9.79% Bloomberg	High Yield 7.44% EPRA/ NAREIT Dev REIT 4.43% NAREIT Equity  2.47% Bloomberg Barclays Agg -2.02% MSCI Emerging	Agg 5.97% Russell 2000 4.89% Bloomberg Barclays High Yield 2.45% MSCI Emerging Markets -2.19% MSCI ACWI	Dev REIT 0.05% Russell 2000 -4.41% Bloomberg Barclays High Yield -4.47% MSCI ACWI ex USA -5.66% MSCI Emerging	7.97% NFI-ODCE Val Wt 7.79% EPRA/ NAREIT Dev REIT 4.99% MSCI ACWI ex USA 4.50% Bloomberg

## **Callan Periodic Table of Fixed Income Investment Returns**

Annual Returns for Fixed Income Indices Ranked in Order of Performance (1997–2016)

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Long	Global	JPM EMBI	Long	Long Credit	Long	Corp High	JPM EMBI	JPM EMBI	Corp High	Long	Long	Corp High	Corp High	Long	JPM EMBI	Corp High	Long	JPM EMBI	Corp High
Treasury	Aggregate	GI Div	Treasury		Treasury	Yield	GI Div	GI Div	Yield	Treasury	Treasury	Yield	Yield	Treasury	GI Div	Yield	Treasury	GI Div	Yield
15.08%	13.71%	19.56%	20.27%	12.16%	16.79%	28.97%	11.62%	10.25%	11.85%	9.81%	24.03%	58.21%	15.12%	29.93%	17.44%	7.44%	25.07%	1.18%	17.13%
Long Credit	Long	CS	JPM EMBI	Intermediate	Global	JPM EMBI	Corp High	Long	JPM EMBI	Global	Global	CS	JPM EMBI	Long Credit	Corp High	CS	Long Credit	Global	Long Credit
	Treasury	Leveraged	GI Div	Credit	Aggregate	GI Div	Yield	Treasury	GI Div	Aggregate	Aggregate	Leveraged	GI Div		Yield	Leveraged		Aggregate	
		Loans									(hdg)	Loans				Loans		(hdg)	
13.47%	13.53%	4.69%	12.68%	9.76%	16.53%	22.21%	11.13%	6.50%	9.86%	9.48%	5.58%	44.86%	12.24%	17.13%	15.81%	6.12%	16.39%	1.02%	10.22%
Corp High Yield	Global	Gov/Credit 1-3 Yr	Bloomberg Barclays	JPM EMBI GI Div	JPM EMBI GI Div	Global	Long Credit	CS	CS	Bloomberg Barclays	Bloomberg Barclays	JPM EMBI GI Div	Long Credit	Bloomberg Barclays	Long Credit	Gov/Credit 1-3 Yr	Global	Intermediate Credit	JPM EMBI GI Div
rieid	Aggregate (hdg)	1-5 11	Agg	GI DIV	GI DIV	Aggregate		Leveraged Loans	Leveraged Loans	Agg	Agg	GI DIV		Agg		1-5 11	Aggregate (hdg)	Credit	GI DIV
12.76%	9.77%	3.16%	11.63%	9.70%	13.65%	12.51%	9.38%	5.69%	7.33%	6.97%	5.24%	29.82%	10.69%	7.84%	12.73%	0.64%	7.59%	0.90%	10.15%
JPM EMBI	Long Credit	Corp High	Global	Gov/Credit	Long Credit	CS CS	Global	Global	Global	Gov/Credit	Gov/Credit	Long Credit	CS	JPM EMBI	CS	Global	JPM EMBI	Gov/Credit	CS
GI Div	Long Orean	Yield	Aggregate	1-3 Yr	Long Ordan	Leveraged	Aggregate	Aggregate	Aggregate	1-3 Yr	1-3 Yr	Long Orean	Leveraged	GI Div	Leveraged	Aggregate	GI Div	1-3 Yr	Leveraged
5,5,1			(hdg)			Loans	99 9	(hdg)	1.333				Loans		Loans	(hdg)	5		Loans
10.81%	9.04%	2.39%	10.34%	8.78%	11.92%	11.02%	9.27%	4.28%	6.64%	6.83%	4.97%	16.80%	9.99%	7.35%	8.74%	-0.14%	7.43%	0.65%	9.88%
Global	Bloomberg	Global	Intermediate	Bloomberg	Bloomberg	Long Credit	Long	Long Credit	Intermediate	JPM EMBI	Global	Intermediate	Long	Global	Intermediate	Intermediate	Bloomberg	Bloomberg	Global
Aggregate	Barclays	Aggregate	Credit	Barclays	Barclays		Treasury		Credit	GI Div	Aggregate	Credit	Treasury	Aggregate	Credit	Credit	Barclays	Barclays	Aggregate
(hdg)	Agg	(hdg)		Agg	Agg												Agg	Agg	(hdg)
10.17%	8.70%	0.79%	9.47%	8.43%	10.26%	10.43%	7.70%	3.76%	4.49%	6.15%	4.79%	15.93%	9.38%	5.64%	8.10%	-0.17%	5.97%	0.55%	3.95%
Bloomberg	to the same and the tra-	Intermediate	Lance One die	Global	Intermediate	Laterania alterna				and the second second	and the second second								
	Intermediate	mediale	Long Credit	Global		Intermediate	CS	Corp High	Bloomberg	Intermediate	Intermediate	Global	Intermediate	Global	Global	Bloomberg	Intermediate	CS	Intermediate
Barclays	Credit	Credit	Long Credit	Aggregate	Credit	Credit	Leveraged	Corp High Yield	Barclays	Intermediate Credit	Intermediate Credit	Global Aggregate	Intermediate Credit	Aggregate	Aggregate	Barclays	Intermediate Credit	Leveraged	Intermediate Credit
Barclays Agg	Credit			Aggregate (hdg)	Credit	Credit	Leveraged Loans	Yield	Barclays Agg	Credit	Credit	Aggregate	Credit	Aggregate (hdg)	Aggregate (hdg)	Barclays Agg	Credit	Leveraged Loans	Credit
Barclays	Credit 8.29%	Credit <b>0.16%</b>	9.21%	Aggregate (hdg) 7.24%	Credit 10.14%	Credit 6.91%	Leveraged Loans 5.60%	Yield 2.74%	Barclays Agg <b>4.33</b> %	Credit <b>5.60%</b>	Credit -2.76%	Aggregate 6.93%	Credit <b>7.76</b> %	Aggregate	Aggregate (hdg) 5.72%	Barclays Agg -2.02%	Credit 4.16%	Leveraged Loans -0.39%	Credit <b>3.68%</b>
Barclays Agg 9.64% Intermediate	Credit  8.29%  Gov/Credit	Credit  0.16%  Bloomberg	9.21% Gov/Credit	Aggregate (hdg) 7.24% Corp High	Credit 10.14% Global	Credit 6.91% Bloomberg	Leveraged Loans 5.60% Global	Yield  2.74%  Bloomberg	Barclays Agg 4.33% Gov/Credit	Credit 5.60% Global	Credit	Aggregate 6.93% Bloomberg	Credit 7.76% Bloomberg	Aggregate (hdg) 5.40% Intermediate	Aggregate (hdg) 5.72% Global	Barclays Agg -2.02% Global	Credit 4.16% Corp High	Leveraged Loans -0.39% Long	Credit  3.68%  Bloomberg
Barclays Agg 9.64%	Credit 8.29%	O.16%  Bloomberg Barclays	9.21%	Aggregate (hdg) 7.24%	Credit  10.14%  Global Aggregate	Credit 6.91% Bloomberg Barclays	Leveraged Loans 5.60% Global Aggregate	Yield  2.74%  Bloomberg  Barclays	Barclays Agg <b>4.33</b> %	5.60% Global Aggregate	Credit -2.76%	Aggregate  6.93%  Bloomberg Barclays	7.76% Bloomberg Barclays	Aggregate (hdg) 5.40%	Aggregate (hdg) 5.72%	Barclays Agg -2.02%	Credit 4.16%	Leveraged Loans -0.39%	3.68% Bloomberg Barclays
Barclays Agg 9.64% Intermediate Credit	Credit  8.29%  Gov/Credit 1-3 Yr	O.16%  Bloomberg Barclays Agg	9.21% Gov/Credit 1-3 Yr	Aggregate (hdg) 7.24% Corp High Yield	Credit  10.14%  Global Aggregate (hdg)	6.91% Bloomberg Barclays Agg	Leveraged Loans 5.60% Global Aggregate (hdg)	Yield  2.74%  Bloomberg  Barclays  Agg	Barclays Agg 4.33% Gov/Credit 1-3 Yr	5.60% Global Aggregate (hdg)	Credit -2.76% Long Credit	6.93% Bloomberg Barclays Agg	7.76%  Bloomberg Barclays Agg	Aggregate (hdg) 5.40% Intermediate Credit	Aggregate (hdg) 5.72% Global Aggregate	Barclays Agg -2.02% Global Aggregate	Credit 4.16% Corp High Yield	Leveraged Loans -0.39% Long Treasury	3.68% Bloomberg Barclays Agg
Barclays Agg 9.64% Intermediate Credit 8.35%	Credit  8.29%  Gov/Credit 1-3 Yr  6.97%	O.16%  Bloomberg Barclays Agg -0.82%	9.21% Gov/Credit 1-3 Yr 8.08%	Aggregate (hdg) 7.24% Corp High Yield 5.28%	Credit  10.14%  Global Aggregate (hdg) 8.45%	6.91% Bloomberg Barclays Agg 4.10%	Leveraged Loans 5.60% Global Aggregate (hdg) 4.89%	Yield  2.74%  Bloomberg Barclays Agg 2.43%	Barclays Agg 4.33% Gov/Credit 1-3 Yr 4.25%	5.60% Global Aggregate (hdg) 5.32%	Credit -2.76% Long Credit -3.92%	Aggregate 6.93% Bloomberg Barclays Agg 5.93%	7.76%  Bloomberg Barclays Agg 6.54%	Aggregate (hdg) 5.40% Intermediate Credit 5.37%	Aggregate (hdg) 5.72% Global Aggregate 4.32%	Barclays Agg -2.02% Global Aggregate -2.60%	Credit 4.16% Corp High Yield 2.45%	Leveraged Loans -0.39% Long Treasury -1.21%	3.68% Bloomberg Barclays Agg 2.65%
Barclays Agg 9.64% Intermediate Credit 8.35% CS	Credit  8.29%  Gov/Credit 1-3 Yr  6.97%  CS	O.16% Bloomberg Barclays Agg -0.82% Global	9.21% Gov/Credit 1-3 Yr 8.08%	Aggregate (hdg) 7.24% Corp High Yield 5.28% Long	Credit  10.14% Global Aggregate (hdg) 8.45% Gov/Credit	6.91% Bloomberg Barclays Agg 4.10% Global	Leveraged Loans 5.60% Global Aggregate (hdg) 4.89% Bloomberg	2.74%  Bloomberg Barclays Agg 2.43%  Gov/Credit	Barclays Agg 4.33% Gov/Credit 1-3 Yr 4.25% Global	5.60% Global Aggregate (hdg)	-2.76% Long Credit -3.92% JPM EMBI	Aggregate  6.93%  Bloomberg  Barclays  Agg  5.93%  Global	7.76% Bloomberg Barclays Agg 6.54% Global	Aggregate (hdg) 5.40% Intermediate Credit 5.37% Corp High	Aggregate (hdg) 5.72% Global Aggregate 4.32% Bloomberg	Barclays Agg -2.02% Global Aggregate -2.60% JPM EMBI	Credit  4.16%  Corp High Yield  2.45%  CS	Leveraged Loans -0.39% Long Treasury -1.21% Global	3.68% Bloomberg Barclays Agg 2.65% Global
Barclays Agg 9.64% Intermediate Credit 8.35%	Credit  8.29%  Gov/Credit 1-3 Yr  6.97%	O.16%  Bloomberg Barclays Agg -0.82%	9.21% Gov/Credit 1-3 Yr 8.08%	Aggregate (hdg) 7.24% Corp High Yield 5.28%	Credit  10.14%  Global Aggregate (hdg) 8.45%	6.91% Bloomberg Barclays Agg 4.10%	Leveraged Loans 5.60% Global Aggregate (hdg) 4.89%	Yield  2.74%  Bloomberg Barclays Agg 2.43%	Barclays Agg 4.33% Gov/Credit 1-3 Yr 4.25%	5.60% Global Aggregate (hdg) 5.32%	Credit -2.76% Long Credit -3.92%	Aggregate 6.93% Bloomberg Barclays Agg 5.93%	7.76%  Bloomberg Barclays Agg 6.54%	Aggregate (hdg) 5.40% Intermediate Credit 5.37%	Aggregate (hdg) 5.72% Global Aggregate 4.32%	Barclays Agg -2.02% Global Aggregate -2.60%	Credit 4.16% Corp High Yield 2.45%	Leveraged Loans -0.39% Long Treasury -1.21%	3.68% Bloomberg Barclays Agg 2.65%
Barclays Agg 9.64% Intermediate Credit 8.35% CS Leveraged	Credit  8.29%  Gov/Credit 1-3 Yr  6.97%  CS Leveraged	O.16% Bloomberg Barclays Agg -0.82% Global	9.21% Gov/Credit 1-3 Yr 8.08% CS Leveraged	Aggregate (hdg) 7.24% Corp High Yield 5.28% Long	Credit  10.14% Global Aggregate (hdg) 8.45% Gov/Credit	6.91% Bloomberg Barclays Agg 4.10% Global Aggregate	Leveraged Loans 5.60% Global Aggregate (hdg) 4.89% Bloomberg Barclays	2.74%  Bloomberg Barclays Agg 2.43%  Gov/Credit	Barclays Agg 4.33% Gov/Credit 1-3 Yr 4.25% Global Aggregate	5.60% Global Aggregate (hdg) 5.32%	-2.76% Long Credit -3.92% JPM EMBI	Aggregate  6.93%  Bloomberg Barclays Agg 5.93%  Global Aggregate	7.76% Bloomberg Barclays Agg 6.54% Global	Aggregate (hdg) 5.40% Intermediate Credit 5.37% Corp High	Aggregate (hdg) 5.72% Global Aggregate 4.32% Bloomberg Barclays	Barclays Agg -2.02% Global Aggregate -2.60% JPM EMBI	4.16% Corp High Yield 2.45% CS Leveraged	Leveraged Loans -0.39% Long Treasury -1.21% Global	3.68% Bloomberg Barclays Agg 2.65% Global
Barclays Agg 9.64% Intermediate Credit 8.35% CS Leveraged Loans	S.29% Gov/Credit 1-3 Yr 6.97% CS Leveraged Loans 5.31%	O.16%  Bloomberg Barclays Agg -0.82% Global Aggregate -5.17%	9.21% Gov/Credit 1-3 Yr 8.08% CS Leveraged Loans	Aggregate (hdg) 7.24% Corp High Yield 5.28% Long Treasury	Credit  10.14% Global Aggregate (hdg) 8.45% Gov/Credit 1-3 Yr	6.91% Bloomberg Barclays Agg 4.10% Global Aggregate (hdg)	Leveraged Loans 5.60% Global Aggregate (hdg) 4.89% Bloomberg Barclays Agg	Yield  2.74%  Bloomberg Barclays Agg 2.43%  Gov/Credit 1-3 Yr	Barclays Agg 4.33% Gov/Credit 1-3 Yr 4.25% Global Aggregate (hdg) 3.64%	5.60% Global Aggregate (hdg) 5.32% Long Credit	Credit -2.76% Long Credit -3.92% JPM EMBI GI Div -12.03%	6.93% Bloomberg Barclays Agg 5.93% Global Aggregate (hdg)	7.76%  Bloomberg Barclays Agg 6.54%  Global Aggregate	Aggregate (hdg) 5.40% Intermediate Credit 5.37% Corp High Yield	Aggregate (hdg) 5.72% Global Aggregate 4.32% Bloomberg Barclays Agg 4.21%	Barclays Agg -2.02% Global Aggregate -2.60% JPM EMBI Gl Div	4.16% Corp High Yield 2.45% CS Leveraged Loans	Leveraged Loans -0.39% Long Treasury -1.21% Global Aggregate -3.15%	3.68% Bloomberg Barclays Agg 2.65% Global Aggregate
Barclays Agg 9.64% Intermediate Credit 8.35% CS Leveraged Loans 8.29%	S.29% Gov/Credit 1-3 Yr 6.97% CS Leveraged Loans	O.16%  Bloomberg Barclays Agg -0.82% Global Aggregate	9.21% Gov/Credit 1-3 Yr 8.08% CS Leveraged Loans 4.94%	Aggregate (hdg) 7.24% Corp High Yield 5.28% Long Treasury 4.21%	Credit  10.14% Global Aggregate (hdg) 8.45% Gov/Credit 1-3 Yr 6.28%	6.91% Bloomberg Barclays Agg 4.10% Global Aggregate (hdg) 3.11%	Leveraged Loans 5.60% Global Aggregate (hdg) 4.89% Bloomberg Barclays Agg 4.34%	Yield  2.74%  Bloomberg Barclays Agg 2.43%  Gov/Credit 1-3 Yr  1.77%	Barclays Agg 4.33% Gov/Credit 1-3 Yr 4.25% Global Aggregate (hdg)	5.60% Global Aggregate (hdg) 5.32% Long Credit	Credit -2.76% Long Credit -3.92% JPM EMBI GI Div	Aggregate 6.93% Bloomberg Barclays Agg 5.93% Global Aggregate (hdg) 5.09%	7.76%  Bloomberg Barclays Agg 6.54%  Global Aggregate 5.54%	Aggregate (hdg) 5.40% Intermediate Credit 5.37% Corp High Yield 4.98%	Aggregate (hdg) 5.72% Global Aggregate 4.32% Bloomberg Barclays Agg	Barclays Agg -2.02% Global Aggregate -2.60%  JPM EMBI GI Div	Credit  4.16%  Corp High Yield  2.45%  CS Leveraged Loans 2.05%	Leveraged Loans -0.39% Long Treasury -1.21% Global Aggregate	3.68% Bloomberg Barclays Agg 2.65% Global Aggregate 2.09%
Barclays Agg 9.64% Intermediate Credit  8.35% CS Leveraged Loans 8.29% Gov/Credit	Credit 8.29% Gov/Credit 1-3 Yr 6.97% CS Leveraged Loans 5.31% Corp High	O.16%  Bloomberg Barclays Agg -0.82% Global Aggregate -5.17%	9.21% Gov/Credit 1-3 Yr 8.08% CS Leveraged Loans 4.94% Global	Aggregate (hdg) 7.24% Corp High Yield 5.28% Long Treasury 4.21% CS	Credit  10.14% Global Aggregate (hdg) 8.45% Gov/Credit 1-3 Yr 6.28% CS	General Control Contro	Leveraged Loans 5.60% Global Aggregate (hdg) 4.89% Bloomberg Barclays Agg 4.34% Intermediate	Yield  2.74%  Bloomberg Barclays Agg 2.43%  Gov/Credit 1-3 Yr  1.77%  Intermediate	Barclays Agg 4.33% Gov/Credit 1-3 Yr 4.25% Global Aggregate (hdg) 3.64%	Credit 5.60% Global Aggregate (hdg) 5.32% Long Credit 3.60% CS	Credit -2.76% Long Credit -3.92% JPM EMBI GI Div -12.03% Corp High	Aggregate 6.93% Bloomberg Barclays Agg 5.93% Global Aggregate (hdg) 5.09% Gov/Credit	7.76%  Bloomberg Barclays Agg 6.54% Global Aggregate 5.54% Global	Aggregate (hdg) 5.40% Intermediate Credit 5.37% Corp High Yield 4.98% CS	Aggregate (hdg) 5.72% Global Aggregate  4.32% Bloomberg Barclays Agg 4.21% Long	Barclays Agg -2.02% Global Aggregate -2.60% JPM EMBI Gl Div	4.16% Corp High Yield  2.45% CS Leveraged Loans 2.05% Gov/Credit	Leveraged Loans -0.39% Long Treasury -1.21% Global Aggregate -3.15% Corp High	3.68% Bloomberg Barclays Agg 2.65% Global Aggregate 2.09% Long
Barclays Agg 9.64% Intermediate Credit  8.35% CS Leveraged Loans 8.29% Gov/Credit	Credit 8.29% Gov/Credit 1-3 Yr 6.97% CS Leveraged Loans 5.31% Corp High	O.16%  Bloomberg Barclays Agg -0.82% Global Aggregate -5.17%	9.21% Gov/Credit 1-3 Yr 8.08% CS Leveraged Loans 4.94% Global	Aggregate (hdg) 7.24% Corp High Yield 5.28% Long Treasury 4.21% CS Leveraged	Credit  10.14% Global Aggregate (hdg) 8.45% Gov/Credit 1-3 Yr 6.28% CS Leveraged	General Control Contro	Leveraged Loans 5.60% Global Aggregate (hdg) 4.89% Bloomberg Barclays Agg 4.34% Intermediate	Yield  2.74%  Bloomberg Barclays Agg 2.43%  Gov/Credit 1-3 Yr  1.77%  Intermediate	Barclays Agg 4.33% Gov/Credit 1-3 Yr 4.25% Global Aggregate (hdg) 3.64%	5.60% Global Aggregate (hdg) 5.32% Long Credit 3.60% CS Leveraged	Credit -2.76% Long Credit -3.92% JPM EMBI GI Div -12.03% Corp High	Aggregate 6.93% Bloomberg Barclays Agg 5.93% Global Aggregate (hdg) 5.09% Gov/Credit	7.76%  Bloomberg Barclays Agg 6.54% Global Aggregate 5.54% Global Aggregate	Aggregate (hdg) 5.40% Intermediate Credit 5.37% Corp High Yield 4.98% CS Leveraged	Aggregate (hdg) 5.72% Global Aggregate  4.32% Bloomberg Barclays Agg 4.21% Long	Barclays Agg -2.02% Global Aggregate -2.60% JPM EMBI Gl Div	4.16% Corp High Yield  2.45% CS Leveraged Loans 2.05% Gov/Credit	Leveraged Loans -0.39% Long Treasury -1.21% Global Aggregate -3.15% Corp High	3.68% Bloomberg Barclays Agg 2.65% Global Aggregate 2.09% Long
Barclays Agg 9.64% Intermediate Credit  8.35% CS Leveraged Loans 8.29% Gov/Credit 1-3 Yr	Credit  8.29%  Gov/Credit 1-3 Yr  6.97%  CS Leveraged Loans 5.31%  Corp High Yield  1.87%  JPM EMBI	Credit  0.16%  Bloomberg Barclays Agg -0.82% Global Aggregate -5.17%  Long Credit	9.21% Gov/Credit 1-3 Yr 8.08% CS Leveraged Loans 4.94% Global Aggregate 3.18% Corp High	Aggregate (hdg) 7.24% Corp High Yield 5.28% Long Treasury 4.21% CS Leveraged Loans	Credit  10.14% Global Aggregate (hdg) 8.45% Gov/Credit 1-3 Yr 6.28% CS Leveraged Loans 1.11% Corp High	Credit  6.91%  Bloomberg Barclays Agg 4.10% Global Aggregate (hdg) 3.11%  Gov/Credit 1-3 Yr  2.82% Long	Leveraged Loans 5.60% Global Aggregate (hdg) 4.89% Bloomberg Barclays Agg 4.34% Intermediate Credit 4.08% Gov/Credit	Yield  2.74%  Bloomberg Barclays Agg 2.43%  Gov/Credit 1-3 Yr  1.77%  Intermediate Credit	Barclays Agg 4.33% Gov/Credit 1-3 Yr 4.25% Global Aggregate (hdg) 3.64% Long Credit 3.47% Long	5.60% Global Aggregate (hdg) 5.32% Long Credit 3.60% CS Leveraged Loans 1.88% Corp High	Credit -2.76% Long Credit -3.92% JPM EMBI GI Div -12.03% Corp High Yield	Aggregate 6.93% Bloomberg Barclays Agg 5.93% Global Aggregate (hdg) 5.09% Gov/Credit 1-3 Yr 3.83% Long	7.76% Bloomberg Barclays Agg 6.54% Global Aggregate 5.54% Global Aggregate (hdg) 4.61% Gov/Credit	Aggregate (hdg) 5.40% Intermediate Credit 5.37% Corp High Yield 4.98% CS Leveraged Loans 1.82% Gov/Credit	Aggregate (hdg) 5.72% Global Aggregate 4.32% Bloomberg Barclays Agg 4.21% Long Treasury 3.56% Gov/Credit	Barclays Agg -2.02% Global Aggregate -2.60% JPM EMBI GI Div -5.24% Long Credit	4.16% Corp High Yield  2.45% CS Leveraged Loans 2.05% Gov/Credit 1-3 Yr	Leveraged Loans -0.39% Long Treasury -1.21% Global Aggregate -3.15% Corp High Yield	3.68% Bloomberg Barclays Agg 2.65% Global Aggregate 2.09% Long Treasury 1.33% Gov/Credit
Barclays Agg 9.64% Intermediate Credit  8.35% CS Leveraged Loans 8.29% Gov/Credit 1-3 Yr 6.65%	Credit 8.29% Gov/Credit 1-3 Yr 6.97% CS Leveraged Loans 5.31% Corp High Yield 1.87%	Credit  0.16%  Bloomberg Barclays Agg -0.82% Global Aggregate -5.17%  Long Credit	9.21% Gov/Credit 1-3 Yr 8.08% CS Leveraged Loans 4.94% Global Aggregate 3.18%	Aggregate (hdg) 7.24% Corp High Yield 5.28% Long Treasury 4.21% CS Leveraged Loans 2.65%	Credit  10.14% Global Aggregate (hdg) 8.45% Gov/Credit 1-3 Yr 6.28% CS Leveraged Loans 1.11%	Credit  6.91%  Bloomberg Barclays Agg 4.10%  Global Aggregate (hdg) 3.11%  Gov/Credit 1-3 Yr  2.82%	Leveraged Loans 5.60% Global Aggregate (hdg) 4.89% Bloomberg Barclays Agg 4.34% Intermediate Credit 4.08%	Yield  2.74%  Bloomberg Barclays Agg 2.43%  Gov/Credit 1-3 Yr  1.77%  Intermediate Credit  1.42%	Barclays Agg 4.33% Gov/Credit 1-3 Yr 4.25% Global Aggregate (hdg) 3.64% Long Credit	5.60% Global Aggregate (hdg) 5.32% Long Credit 3.60% CS Leveraged Loans 1.88%	Credit  -2.76%  Long Credit  -3.92%  JPM EMBI GI Div  -12.03%  Corp High Yield  -26.16%  CS Leveraged	Aggregate 6.93% Bloomberg Barclays Agg 5.93% Global Aggregate (hdg) 5.09% Gov/Credit 1-3 Yr 3.83%	7.76%  Bloomberg Barclays Agg 6.54% Global Aggregate 5.54% Global Aggregate (hdg) 4.61%	Aggregate (hdg) 5.40% Intermediate Credit 5.37% Corp High Yield 4.98% CS Leveraged Loans 1.82%	Aggregate (hdg) 5.72% Global Aggregate 4.32% Bloomberg Barclays Agg 4.21% Long Treasury 3.56%	Barclays Agg -2.02% Global Aggregate -2.60% JPM EMBI GI Div -5.24% Long Credit	Credit  4.16%  Corp High Yield  2.45%  CS  Leveraged Loans 2.05%  Gov/Credit 1-3 Yr  0.77%	Leveraged Loans -0.39% Long Treasury -1.21% Global Aggregate -3.15% Corp High Yield -4.47%	3.68% Bloomberg Barclays Agg 2.65% Global Aggregate 2.09% Long Treasury
Barclays Agg 9.64% Intermediate Credit  8.35% CS Leveraged Loans 8.29% Gov/Credit 1-3 Yr  6.65% Global	Credit  8.29%  Gov/Credit 1-3 Yr  6.97%  CS Leveraged Loans 5.31%  Corp High Yield  1.87%  JPM EMBI	O.16% Bloomberg Barclays Agg -0.82% Global Aggregate -5.17% Long Credit	9.21% Gov/Credit 1-3 Yr 8.08% CS Leveraged Loans 4.94% Global Aggregate 3.18% Corp High	Aggregate (hdg) 7.24% Corp High Yield 5.28% Long Treasury 4.21% CS Leveraged Loans 2.65% Global	Credit  10.14% Global Aggregate (hdg) 8.45% Gov/Credit 1-3 Yr 6.28% CS Leveraged Loans 1.11% Corp High	Credit  6.91%  Bloomberg Barclays Agg 4.10% Global Aggregate (hdg) 3.11%  Gov/Credit 1-3 Yr  2.82% Long	Leveraged Loans 5.60% Global Aggregate (hdg) 4.89% Bloomberg Barclays Agg 4.34% Intermediate Credit 4.08% Gov/Credit	Yield  2.74%  Bloomberg Barclays Agg 2.43%  Gov/Credit 1-3 Yr  1.77%  Intermediate Credit  1.42% Global	Barclays Agg 4.33% Gov/Credit 1-3 Yr 4.25% Global Aggregate (hdg) 3.64% Long Credit 3.47% Long	5.60% Global Aggregate (hdg) 5.32% Long Credit 3.60% CS Leveraged Loans 1.88% Corp High	Credit  -2.76%  Long Credit  -3.92%  JPM EMBI GI Div  -12.03%  Corp High Yield  -26.16%  CS	Aggregate 6.93% Bloomberg Barclays Agg 5.93% Global Aggregate (hdg) 5.09% Gov/Credit 1-3 Yr 3.83% Long	7.76% Bloomberg Barclays Agg 6.54% Global Aggregate 5.54% Global Aggregate (hdg) 4.61% Gov/Credit	Aggregate (hdg) 5.40% Intermediate Credit 5.37% Corp High Yield 4.98% CS Leveraged Loans 1.82% Gov/Credit	Aggregate (hdg) 5.72% Global Aggregate 4.32% Bloomberg Barclays Agg 4.21% Long Treasury 3.56% Gov/Credit	Barclays Agg -2.02% Global Aggregate -2.60% JPM EMBI GI Div -5.24% Long Credit	Credit  4.16%  Corp High Yield  2.45%  CS  Leveraged Loans 2.05%  Gov/Credit 1-3 Yr  0.77%  Global	Leveraged Loans -0.39% Long Treasury -1.21% Global Aggregate -3.15% Corp High Yield -4.47%	3.68% Bloomberg Barclays Agg 2.65% Global Aggregate 2.09% Long Treasury 1.33% Gov/Credit

All indices are Bloomberg Barclays unless otherwise indicated.



## Callan Periodic Table of Non-U.S. Fixed Investment Returns

Annual Returns for Non-U.S. Fixed Income Indices Ranked in Order of Performance (1997–2016)

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Bloomberg	Bloomberg	JPM EMBI	JPM EMBI	JPM EMBI	Bloomberg	Bloomberg	JPM GBI-	JPM EMBI	JPM GBI-	JPM GBI-	Bloomberg	Bloomberg	JPM GBI-	JPM EMBI	Bloomberg	Bloomberg	Bloomberg	JPM EMBI	Bloomberg
Barclays	Barclays	Global	Global	Global	Barclays	Barclays	EM Global	Global	EM Global	EM Global	Barclays	Barclays	EM Global	Global	Barclays	Barclays	Barclays	Global	Barclays
Global High	Global Agg	Diversified	Diversified	Diversified	Global Agg	Global High	Diversified	Diversified	Diversified	Diversified	Global Agg	Global High	Diversified	Diversified	Global High	Global High	Global Agg	Diversified	Global High
Yield	ex US				ex US	Yield					(hdg)	Yield			Yield	Yield	(hdg)		Yield
12.84%	18.44%	19.56%	12.68%	9.70%	22.37%	32.42%	22.97%	10.25%	15.22%	18.11%	5.58%	59.40%	15.68%	7.35%	19.60%	7.33%	7.59%	1.18%	14.27%
JPM EMBI	Bloomberg	Bloomberg	Bloomberg	Bloomberg	Bloomberg	JPM EMBI	Bloomberg	JPM	Bloomberg	Bloomberg	Bloomberg	JPM	Bloomberg	Bloomberg	JPM EMBI	Bloomberg	JPM EMBI	Bloomberg	JPM
Global	Barclays	Barclays	Barclays	Barclays	Barclays	Global	Barclays	Corporate	Barclays	Barclays	Barclays	Corporate	Barclays	Barclays	Global	Barclays	Global	Barclays	Corporate
Diversified	Global Agg	Global High	Global Agg	Global Agg	Global Agg	Diversified	Global High	EMBI	Global High	Global Agg	Global Agg	EMBI	Global High	Global Agg	Diversified	Global Agg	Diversified	Global Agg	EMBI
		Yield	(hdg)	(hdg)			Yield		Yield	ex US			Yield			(hdg)		(hdg)	
10.81%	13.71%	10.43%	10.34%	7.24%	16.53%	22.21%	13.17%	6.62%	13.69%	11.03%	4.79%	41.73%	14.82%	5.64%	17.44%	-0.14%	7.43%	1.02%	11.11%
Bloomberg	Bloomberg	Bloomberg	Bloomberg	Bloomberg	JPM	Bloomberg	Bloomberg	JPM GBI-	JPM EMBI	Bloomberg	Bloomberg	JPM EMBI	JPM	Bloomberg	JPM GBI-	JPM	JPM	JPM	JPM EMBI
Barclays	Barclays	Barclays	Barclays	Barclays	Corporate	Barclays	Barclays	EM Global	Global	Barclays	Barclays	Global	Corporate	Barclays	EM Global	Corporate	Corporate	Corporate	Global
Global Agg	Global Agg	Global Agg	Global Agg	Global High	EMBI	Global Agg	Global Agg	Diversified	Diversified	Global Agg	Global Agg	Diversified	EMBI	Global Agg	Diversified	EMBI	EMBI	EMBI	Diversified
(hdg)	(hdg)	(hdg)		Yield		ex US	ex US				ex US			(hdg)					
10.17%	9.77%	0.79%	3.18%	2.26%	15.64%	19.36%	12.54%	6.27%	9.86%	9.48%	4.39%	29.82%	13.07%	5.40%	16.76%	-2.37%	4.14%	0.99%	10.15%
Bloomberg	Bloomberg	Bloomberg	Bloomberg	Bloomberg	ЈРМ ЕМВІ	JPM GBI-	JPM EMBI	Bloomberg	Bloomberg	JPM EMBI	JPM GBI-	JPM GBI-	JPM EMBI	Bloomberg	JPM	Bloomberg	Bloomberg	Bloomberg	JPM GBI-
Barclays	Barclays	Barclays	Barclays	Barclays	Global	EM Global	Global	Barclays	Barclays	Global	EM Global	EM Global	Global	Barclays	Corporate	Barclays	Barclays	Barclays	EM Global
Global Agg	Global High	Global Agg	Global High	Global Agg	Diversified	Diversified	Diversified	Global Agg	Global Agg	Diversified	Diversified	Diversified	Diversified	Global Agg	EMBI	Global Agg	Global Agg	Global High	Diversified
	Yield		Yield					(hdg)	ex US					ex US				Yield	
3.79%	-4.82%	-5.17%	1.04%	1.57%	13.65%	16.92%	11.62%	4.28%	8.16%	6.15%	-5.22%	21.98%	12.24%	4.36%	16.74%	-2.60%	0.59%	-2.72%	9.94%
Bloomberg	JPM EMBI	Bloomberg	Bloomberg	Bloomberg	Bloomberg	Bloomberg	JPM	Bloomberg	Bloomberg	Bloomberg	JPM EMBI	Bloomberg	Bloomberg	JPM	Bloomberg	Bloomberg	Bloomberg	Bloomberg	Bloomberg
Barclays	Global	Barclays	Barclays	Barclays	Barclays	Barclays	Corporate	Barclays	Barclays	Barclays	Global	Barclays	Barclays	Corporate	Barclays	Barclays	Barclays	Barclays	Barclays
Global Agg ex US	Diversified	Global Agg ex US	Global Agg ex US	Global Agg ex US	Global Agg (hdg)	Global Agg	EMBI	Global High Yield	Global Agg	Global Agg (hdg)	Diversified	Global Agg ex US	Global Agg	EMBI	Global Agg (hdg)	Global Agg ex US	Global High Yield	Global Agg	Global Agg (hdg)
		CX 00	CX 00	CX 00	(riug)			Heid		(Hug)		CX 00			(nag)	CX 00	Heid		(riug)
-4.01%	-8.12%	-8.83%	-3.91%	-3.75%	8.45%	12.51%	9.77%	3.59%	6.64%	5.32%	-12.03%	7.53%	5.54%	3.49%	5.72%	-3.08%	0.01%	-3.15%	3.95%
					Bloomberg	JPM	Bloomberg	Bloomberg	JPM	JPM	JPM	Bloomberg	Bloomberg	Bloomberg	Bloomberg	JPM EMBI	Bloomberg	Bloomberg	Bloomberg
					Barclays Global High	Corporate EMBI	Barclays Global Agg	Barclays Global Agg	Corporate EMBI	Corporate EMBI	Corporate EMBI	Barclays Global Agg	Barclays Global Agg	Barclays Global High	Barclays Global Agg	Global Diversified	Barclays Global Agg	Barclays Global Agg	Barclays Global Agg
					Yield	LIVIDI	Global Agg	Global Agg	LIVIDI	LIVIDI	LIVIDI	Global Agg	ex US	Yield	Global Agg	Diversilled	ex US	ex US	Global Agg
					4.14%	11.88%	9.27%	-4.49%	6.63%	3.77%	-16.24%	6.93%	4.95%	3.12%	4.32%	-5.24%	-3.09%	-6.02%	2.09%
						Bloomberg	Bloomberg	Bloomberg	Bloomberg	Bloomberg	Bloomberg	Bloomberg	Bloomberg	JPM GBI-	Bloomberg	JPM GBI-	JPM GBI-	JPM GBI-	Bloomberg
						Barclays Global Agg	Barclays Global Agg	Barclays Global Agg	Barclays Global Agg	Barclays Global High	Barclays Global High	Barclays Global Agg	Barclays Global Agg	EM Global Diversified	Barclays Global Agg	EM Global Diversified	EM Global Diversified	EM Global Diversified	Barclays Global Agg
						(hdg)	(hdg)	ex US	(hdg)	Yield	Yield	(hdg)	(hdg)	Diversified	ex US	Diversilled	Diversified	Diversified	ex US
						(1149)	(1149)		(1149)			(1149)	(1149)						- ox oo
						3.11%	4.89%	-8.65%	3.64%	3.16%	-26.88%	5.09%	4.61%	-1.75%	4.09%	-8.98%	-5.72%	-14.92%	1.49%

# Callan Periodic Table of Hedge Fund Strategy Returns

Annual Returns for Credit Suisse Hedge Fund Sub Strategies Ranked in Order of Performance (1997–2016)

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Global	Managed	Long/Short	Convertible	Distressed	Managed	Emerging	Distressed	Emerging	Emerging	Emerging	Managed	Convertible	Event-	Global	Distressed	Long/Short	Managed	Multi	Convertible
Macro 37.11%	Futures <b>20.64</b> %	Equity 47.23%	Arb <b>25.64</b> %	20.01%	Futures 18.33%	Markets 28.75%	15.62%	Markets 17.39%	Markets <b>20.49</b> %	Markets <b>20.26%</b>	Futures 18.33%	Arb <b>47.35</b> %	Driven Multi 14.36%	Macro 6.44%	11.77%	Equity 17.73%	Futures <b>18.36%</b>	Strategy 3.84%	Arb <b>6.60</b> %
Emerging	Long/Short	Emerging	Short Bias	Global	Short Bias	Distressed	Event-	Short Bias	Event-	Global	Short Bias	Emerging	Global	Fixed	Multi	Distressed	Multi	Long/Short	Distressed
Markets	Equity	Markets		Macro			Driven Multi		Driven Multi	Macro		Markets	Macro	Income Arb	Strategy		Strategy	Equity	
26.59%	17.18%	44.82%	15.76%	18.38%	18.14%	25.12%	14.04%	17.00%	16.38%	17.36%	14.87%	30.03%	13.47%	4.69%	11.19%	16.00%	6.09%	3.56%	6.38%
Long/Short	Market	Event-	Market	Convertible	Global	Global	Emerging	Distressed	Distressed	Event-	Risk Arb	Fixed	Fixed	Market	Fixed	Event-	Long/Short	Short Bias	Risk Arb
Equity	Neutral Eq.	Driven Multi	Neutral Eq.	Arb	Macro 14.66%	Macro	Markets	44 740/	15.58%	Driven Multi	0.070/	Income Arb	Income Arb	Neutral Eq.	Income Arb	Driven Multi	Equity <b>5.54</b> %	0.000/	5.89%
21.46% Distressed	13.31% Multi	23.00% Distressed	14.99% Risk Arb	14.58% Market	14.66% Market	17.99% Long/Short	12.49% Long/Short	11.74% Long/Short	15.58% Multi	16.82% Long/Short	-3.27% Global	27.41% Multi	Managed	4.49% Short Bias	11.04% Emerging	<b>15.28%</b> Multi	5.54% Fixed	2.38% Market	5.89% Emerging
5101100000	Strategy	2101100000	11.0.17.11.0	Neutral Eq.	Neutral Eq.	Equity	Equity	Equity	Strategy	Equity	Macro	Strategy	Futures	Ciloit Bido	Markets	Strategy	Income Arb	Neutral Eq.	Markets
20.73%	7.68%	22.18%	14.69%	9.31%	7.42%	17.27%	11.56%	9.68%	14.54%	13.66%	-4.62%	24.62%	12.22%	3.85%	10.28%	11.23%	4.37%	1.69%	4.47%
Event-	Risk Arb	Convertible	Event-	Fixed	Emerging	Event-	Global	Global	Long/Short	Multi	Event-	Distressed	Emerging	Multi	Event-	Market	Global	Convertible	Multi
Driven Multi		Arb	Driven Multi	Income Arb	Markets	Driven Multi	Macro	Macro	Equity	Strategy	Driven Multi		Markets	Strategy	Driven Multi	Neutral Eq.	Macro	Arb	Strategy
20.53%	5.58%	16.04%	11.84%	8.04%	<b>7.36%</b> Multi	17.19% Multi	<b>8.49%</b> Multi	<b>9.25%</b> Multi	14.38%	10.10%	-16.25%	20.95%	11.34%	1.83%	10.14%	9.27%	3.11%	0.81%	4.41%
Multi Strategy	Distressed	Market Neutral Eq.	Global Macro	Event- Driven Multi	Strategy	Strategy	Strategy	Strategy	Convertible Arb	Market Neutral Eq.	Long/Short Equity	Event- Driven Multi	Convertible Arb	Convertible Arb	Long/Short Equity	Emerging Markets	Distressed	Fixed Income Arb	Fixed Income Arb
18.28%	-1.68%	15.33%	11.67%	6.79%	6.31%	15.04%	7.53%	7.54%	14.30%	9.27%	-19.76%	19.94%	10.95%	1.13%	8.21%	8.81%	2.55%	0.59%	4.29%
Market	Global	Risk Arb	Multi	Emerging	Fixed	Managed	Fixed	Event-	Global	Risk Arb	Distressed	Long/Short	Distressed	Risk Arb	Convertible	Convertible	Emerging	Risk Arb	Global
Neutral Eq.	Macro		Strategy	Markets	Income Arb	Futures	Income Arb	Driven Multi	Macro			Equity			Arb	Arb	Markets		Macro
14.83%	-3.64%	13.23%	11.18%	5.84%	5.75%	14.13%	6.86%	7.21%	13.53%	8.77%	-20.48%	19.47%	10.27%	0.80%	7.82%	6.03%	1.52%	0.41%	3.58%
Convertible Arb	Convertible Arb	Fixed Income Arb	Fixed Income Arb	Risk Arb	Convertible Arb	Convertible Arb	Market Neutral Eq.	Market Neutral Eq.	Market Neutral Eq.	Distressed	Multi Strategy	Risk Arb	Multi Strategy	Managed Futures	Global Macro	Risk Arb	Event- Driven Multi	Global Macro	Event- Driven Multi
14.48%	-4.41%	12.11%	6.29%	5.68%	4.05%	12.90%	6.48%	6.14%	11.15%	8.35%	-23.63%	12.00%	9.29%	-4.19%	4.58%	4.92%	1.14%	0.17%	1.25%
Risk Arb	Short Bias	Multi	Managed	Multi	Event-	Risk Arb	Managed	Risk Arb	Fixed	Short Bias	Fixed	Global	Long/Short	Distressed	Risk Arb	Global	Market	Emerging	Long/Short
		Strategy	Futures	Strategy	Driven Multi		Futures		Income Arb		Income Arb	Macro	Equity			Macro	Neutral Eq.	Markets	Equity
9.84%	-6.00%	9.38%	4.24%	5.50%	1.22%	8.98%	5.96%	3.08%	8.66%	6.04%	-28.82%	11.55%	9.28%	-4.24%	2.82%	4.32%	-1.20%	-0.22%	-3.43%
Fixed Income Arb	Fixed Income Arb	Global Macro	Long/Short	Managed Futures	Distressed	Fixed Income Arb	Risk Arb	Fixed Income Arb	Risk Arb	Managed Futures	Emerging Markets	Market Neutral Eq.	Risk Arb	Emerging Markets	Market Neutral Eq.	Fixed Income Arb	Risk Arb	Managed Futures	Market Neutral Eq.
9.34%	-8.16%	5.81%	Equity 2.08%	1.90%	-0.69%	7.97%	5.45%	0.63%	8.15%	6.01%	-30.41%	4.05%	3.17%	-6.68%	0.85%	3.80%	-1.32%	-0.93%	-4.58%
Managed	Event-	Managed	Distressed	Short Bias	Long/Short	Market	Convertible	Managed	Managed	Convertible	Convertible	4.05% Managed	3.17% Market	Long/Short	Managed	Managed	Convertible	Distressed	-4.56% Managed
Futures	Driven Multi	Futures			Equity	Neutral Eq.	Arb	Futures	Futures	Arb	Arb	Futures	Neutral Eq.	Equity	Futures	Futures	Arb		Futures
3.12%	-8.98%	-4.69%	1.95%	-3.58%	-1.60%	7.07%	1.98%	-0.11%	8.05%	5.17%	-31.59%	-6.57%	-0.85%	-7.31%	-2.93%	-2.56%	-1.67%	-5.30%	-6.84%
Short Bias	Emerging	Short Bias	Emerging	Long/Short	Risk Arb	Short Bias	Short Bias	Convertible	Short Bias	Fixed	Market	Short Bias	Short Bias	Event-	Short Bias	Short Bias	Short Bias	Event-	Short Bias
0.400/	Markets	44.0006	Markets	Equity	0.400/	00 50%	7.700/	Arb	0.0404	Income Arb		05.0004	00.00%	Driven Multi	00.000	04.0494	F 040/	Driven Multi	40.070/
0.42%	-37.66%	-14.22%	-5.52%	-3.65%	-3.46%	-32.59%	-7.72%	-2.55%	-6.61%	3.83%	-40.32%	-25.03%	-23.00%	-11.96%	-20.39%	-24.94%	-5.61%	-6.67%	-16.87%
CS Hedge Fund Index	CS Hedge Fund Index	CS Hedge Fund Index																	
25.94%	-0.36%	23.43%	4.85%	4.42%	3.04%	15.44%	9.64%	7.61%	13.86%	12.56%	-19.07%	18.57%	10.95%	-2.52%	7.67%	9.73%	4.13%	-0.71%	1.25%

#### **Equity Indices**

**Russell 3000** measures the performance of the largest 3,000 U.S. companies representing approximately 98% of the investable U.S. equity market. These securities are traded on the NYSE, NYSE MKT, and NASDAQ.

**Russell 2000** measures the performance of small capitalization U.S. stocks. The Russell 2000 is a market-value-weighted index of the 2,000 smallest stocks (#1,001–3,000) in the broad-market Russell 3000 Index.

**Russell Midcap** measures the performance of mid capitalization U.S. stocks and includes companies #201–1,000 in the broad-market Russell 3000 Index.

**Russell 2500** measures the performance of small/mid capitalization U.S. stocks and includes the smallest 2500 companies (#501–3,000) in the broad-market Russell 3000 Index.

**Russell 1000** measures the performance of large capitalization U.S. stocks. The Russell 1000 is a market-value-weighted index of the 1,000 largest stocks (#1–1,000) in the broad-market Russell 3000 Index

**S&P 1500** is designed to track the performance of large, mid, and small cap U.S. equities and representing approximately 91% of the available U.S. market cap and includes the **S&P 500** (large cap), **S&P MidCap 400**, and the **S&P SmallCap 600**.

**S&P 1000** measures the performance of small/mid capitalization U.S. stocks and includes the **S&P SmallCap 600** and the **S&P MidCap 400**.

**S&P 500** measures the performance of large capitalization U.S. stocks. It is a market-value-weighted index of 500 stocks that are traded on the NYSE, NYSE MKT, and NASDAQ. The weightings make each company's influence on the Index performance directly proportional to that company's market value.

**MSCI ACWI Index** is a free float adjusted market capitalization weighted index that is designed to measure the equity market performance of 23 developed market countries and 23 emerging market countries.

MSCI ACWI ex USA Index captures large and mid cap representation across 22 of 23 developed market countries (excluding the U.S.) and 23 Emerging market countries covering approximately 85% of the global equity opportunity set outside the U.S.

**MSCI ACWI ex USA Small Cap** Index captures small cap representation across 22 of 23 developed market countries (excluding the U.S.) and 23 emerging market countries.

**MSCI Emerging Markets** is a free float adjusted market capitalization index that is designed to measure equity market performance of 23 emerging market countries.

**MSCI Europe Index** is a free float adjusted market capitalization weighted index that is designed to measure the equity market performance of the 15 developed market country indies.

**MSCI Japan Index** is designed to measure the performance of the large and mid cap segments of the Japanese market and covers approximately 85% of the free float-adjusted market capitalization in Japan.

**MSCI Pacific Index** is a free float adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in the Pacific region (Australia, Hong Kong, Japan, New Zealand, and Singapore).

**MSCI Pacific ex Japan Index** captures large and mid cap representation across four of five developed market countries in the Pacific region (excluding Japan) and covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI World** is a free float adjusted market capitalization weighted index that is designed to measure the equity market performance of 23 developed market country indexes.

#### **Fixed Income Indices**

**Bloomberg Barclays Aggregate Index** includes U.S. government, corporate, and mortgage-backed securities with maturities of at least one year.

Bloomberg Barclays Corporate High-Yield Index measures the market of USD-denominated, non-investment grade, fixed-rate, taxable corporate bonds. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below, excluding emerging market debt.

Bloomberg Barclays Global Aggregate Index is an unmanaged index that is comprised of several other Bloomberg Barclays indices that measure fixed income performance of regions around the world; and Bloomberg Barclays Global Aggregate (hedged) hedges the currency back to the U.S. dollar.

Bloomberg Barclays Global Aggregate ex US Index provides a broad-based measure of the global investment-grade fixed income markets. The three major components of this index are the U.S. Aggregate, the Pan-European Aggregate, and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian government, agency and corporate securities, and USD investment grade 144A securities.

Bloomberg Barclays Global High Yield Index is an unmanaged index that provides a broad-based measure of global high yield fixed income markets and represents that union of the U.S. High Yield, Pan-European High Yield,

U.S. Emerging Markets High Yield, CMBS High Yield, and Pan-European Emerging Markets High Yield Indices.

**Bloomberg Barclays Intermediate Credit Index** is an unmanaged index measuring the performance of investment-grade corporate debt and agency bonds that are dollar denominated and have a remaining maturity of greater than one year and less than ten years.

Bloomberg Barclays Long Credit Index is an unmanaged index measuring the performance of the long-term sector of the U.S. investment bond market, which as defined by the long credit index includes investment-grade corporate debt and sovereign, supranational, local authority and non-U.S. agency bonds that are dollar denominated and have a remaining maturity of greater than or equal to 10 years.

**Bloomberg Barclays Long Treasury Index** is an unmanaged index that includes all publicly issued U.S. Treasury securities that have ;a remaining maturity of 10 or more years, are rated investment grade, and have a \$250 million or more of outstanding face value.

Bloomberg Barclays Government/Credit 1-3 Year Index is an unmanaged index which is a component of the U.S. Government/Credit Bond Index, which includes Treasury and agency securities (U.S. Government Bond Index) and publicly issued U.S. corporate and foreign debentures and secured notes (U.S. Credit Bond Index) the bonds in the index are investment-grade with maturity between one and three years.

**Bloomberg Barclays U.S. TIPS Index** consists of inflation-protection securities issued by the U.S. Treasury and must have at least one year until final maturity and at least \$250 million par amount outstanding. They must be fixed rate, dollar denominated, and non-convertible.

**Credit Suisse Leveraged Loan Index** is designed to mirror the investable universe of the U.S.-denominated leveraged loan market.

- J.P. Morgan Corporate Emerging Markets Bond Index (CEMBI) is a market capitalization weighted index consisting of U.S. dollar denominated emerging market corporate bonds.
- J.P. Morgan Emerging Markets Bond Index Global Diversified (EMBI Global Diversified) Index tracks total returns for U.S. dollar-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, Eurobonds. The index limits the exposure of some of the larger countries.
- J.P. Morgan GBI-EM Global Diversified Index tracks the performance of local currency debt issued by emerging market governments, whose debt is accessible by most of the international investor base.

The **U.S. Treasury Index** is a component of the U.S. Government index.

#### Real Estate and Other/Alternative Indices

#### **Real Estate Indices**

The FTSE EPRA/NAREIT Developed REIT Index is designed to measure the stock performance of companies engaged in specific real estate activities of the North American, European and Asian real estate markets. Relevant real estate activities are defined as the ownership, trading and development of income-producing real estate.

**NAREIT Equity Index** measures the performance of real estate investment trusts (REITs) stocks traded on the NYSE, NYSE MKT, and NASDAQ.

**NFI-ODCE**, short for NCREIF Fund Index - Open End Diversified Core Equity, represents historical and current returns for 30 open-end commingled funds pursuing a core investment strategy. It is capitalization-weighted and reported gross of fees.

NCREIF Farmland Index is a quarterly time series composite return measure of investment performance of a large pool of individual farmland properties acquired in the private market for investment purposes only. All properties in the Farmland Index have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment.

NCREIF Property Index (NPI) measures the performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. All properties in the NPI have been acquired, at least in part, on behalf of tax-exempt institutional investors—the great majority being pension funds. We present both standard (unleveraged) and leveraged versions for comparison.

NCREIF Timberland Index is a quarterly time series composite return measure of investment performance of a large pool of individual timber properties acquired in the private market for investment purposes only. All properties in the Timberland Index have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment.

#### Other/Alternative Indices

Alerian MLP Index is a gauge of energy Master Limited Partnerships (MLPs). The float-adjusted, capitalization-weighted index, whose constituents represent approximately 85% of total float-adjusted market capitalization, is disseminated real-time on a price-return basis (AMZ) and on a total-return basis (AMZX).

The **Consumer Price Index (CPI)**, an inflation index produced by the Bureau of Labor Statistics, measures the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.

**Bloomberg Commodity Index** (formerly DJ UBS Commodity Index) is a broadly diversified index composed of futures contracts on physical commodities traded on U.S. exchanges. It allows investors to track commodity futures through a single, simple measure.

Cambridge Private Equity Index is an end-to-end calculation based on data compiled from 1,199 U.S. private equity funds (buyout, growth equity, private equity energy and mezzanine funds), including fully liquidated partnerships, formed between 1986 and 2014. Pooled end-to-end return, net of fees, expenses, and carried interest.

Dow Jones Brookfield (DJB) Global Infrastructure Index intends to measure the stock performance of pure-play infrastructure companies domiciled globally. The index covers all sectors of the infrastructure market required to have more than 70% of cash flows derived from infrastructure lines of business; must be domiciled in a country with a liquid listing and must meet minimum requirements for float-adjusted market capitalization and trading volume. The index is weighted by float-adjusted market capitalization.

#### Credit Suisse Hedge Fund Index and Sub Strategies

**Credit Suisse Hedge Fund Index** is an asset-weighted benchmark that measures hedge fund performance and seeks to provide the most accurate representation of the hedge fund universe.

#### **Credit Suisse Hedge Fund Index Sub Strategies**

Market Neutral Equity – Funds that are typically long common stock of one company and short the equivalent dollar amount of another company or share class of the same company, based on underlying fundamental and/or technical factors.

**Convertible Arb** – Funds that are typically long convertibles and short underlying stock, often benefiting from a positive carry (i.e., extra yield of the coupon income over the dividend expense).

Emerging Markets – Funds that typically invest in currencies, debt instruments, equities and other instruments of countries with "emerging" or developing markets (typically measured by GDP per capita). Such countries are considered to be in a transitional phase between developing and developed status. Examples of emerging markets include China, India, Latin America, much of Southeast Asia, parts of Eastern Europe, and parts of Africa. The index has a number of subsectors, including arbitrage, credit and event driven, fixed income bias, and equity bias.

**Fixed Income Arb** – Funds that are long fixed income securities offering excess returns from credit risk, prepayment risk, illiquidity risk, or capital structure risk (i.e., senior vs. junior debt) and short Treasuries or other similar overvalued securities.

**Distressed** – Funds that invest in defaulted bonds, bank loans, or other debt issues of companies in various stages of bankruptcy or financial distress.

**Risk Arb** – Funds that are typically long stocks of targeted takeover candidates and short stocks of the acquiring company, in order to capture time premium that accrues to the date of a completed acquisition.

**Long/Short Equity** – Bottom-up stock-pickers that are long undervalued stocks and short overvalued stocks, with top-down views expressed with a net long or short bias. This group historically has had a net long, however variable, bias.

**Short Bias** – Bottom-up stock-pickers with a strategically net short bias, profiting from declining stock prices of companies suffering from fraud or deteriorating financial condition.

**Global Macro** – Top-down asset allocators investing across liquid markets of stocks, bonds, currencies, and commodities, profiting from structural imbalances or inefficiencies caused by central banks, governments, and other market participants.

**Managed Futures** – Often using trend-following techniques, these funds buy and sell liquid futures on physical commodities, interest rate, fixed income, and equity markets, typically profiting from momentum and other predictable price patterns.

**Event-Driven Multi** – Funds that typically invest in a combination of event-driven equities and credit, including special situations and value equities with hard or soft catalysts, taking advantage of shifts in economic cycles.

**Multi-Strategy** – Funds that typically allocate capital opportunistically across various hedge fund strategies including, but not limited to, convertible bond arbitrage, market neutral equity, fixed income arbitrage, and risk arbitrage

# Callan

# Corporate Headquarters Regional Offices Callan Associates Atlanta Denver 600 Montgomery Street, Suite 800 800.522.9782 855.864.3377 San Francisco, CA 94111 Chicago New Jersey 415.974.5060 800.999.3536 800.274.5878

www.callan.com