

Callan

October 28, 2020



**Alaska Industrial Development
and Export Authority**

Review of the Enterprise
Development Account

Gordon Weightman, CFA
Senior Vice President

Alexander Ford
Vice President

Agenda

Market Environment

Enterprise Development Account

Performance Measurement

- Alaska Permanent Capital Management
- Barrow, Hanley, Mewhinney & Strauss

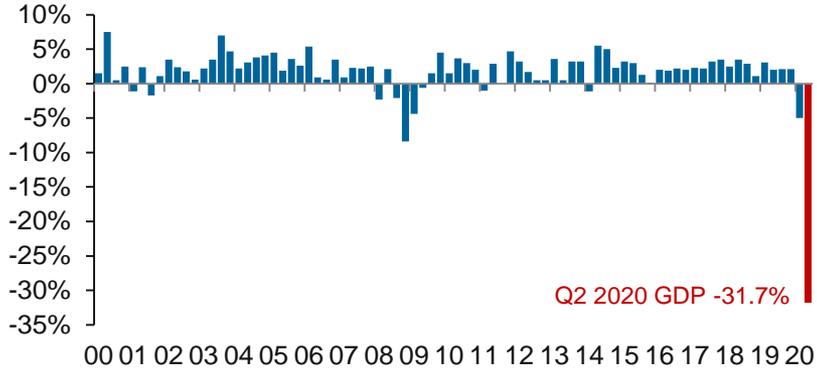
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Market Update

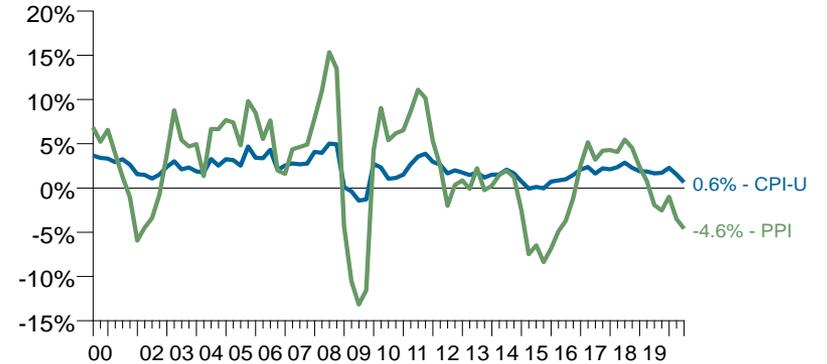
U.S. Economy—Summary

For periods ended June 30, 2020

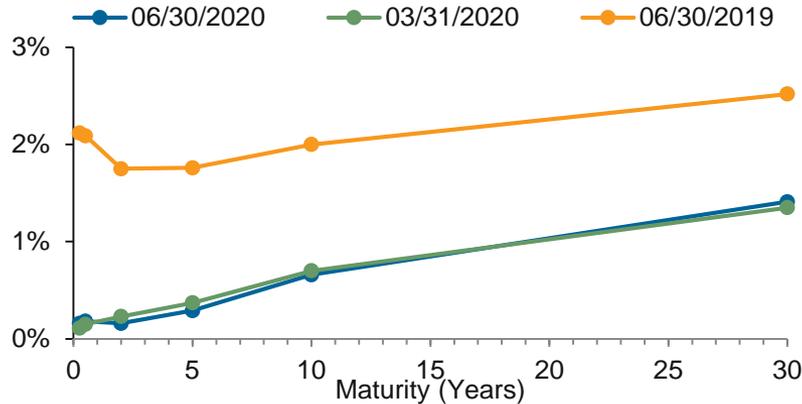
Quarterly Real GDP Growth



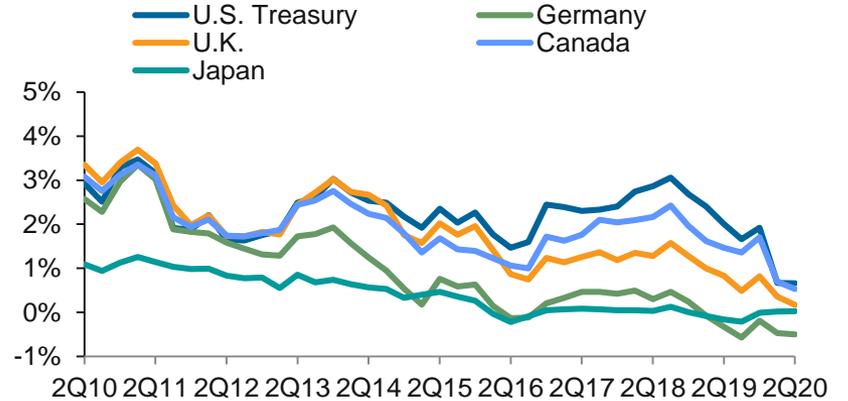
Inflation Year-Over-Year



U.S. Treasury Yield Curves



10-Year Global Government Bond Yields

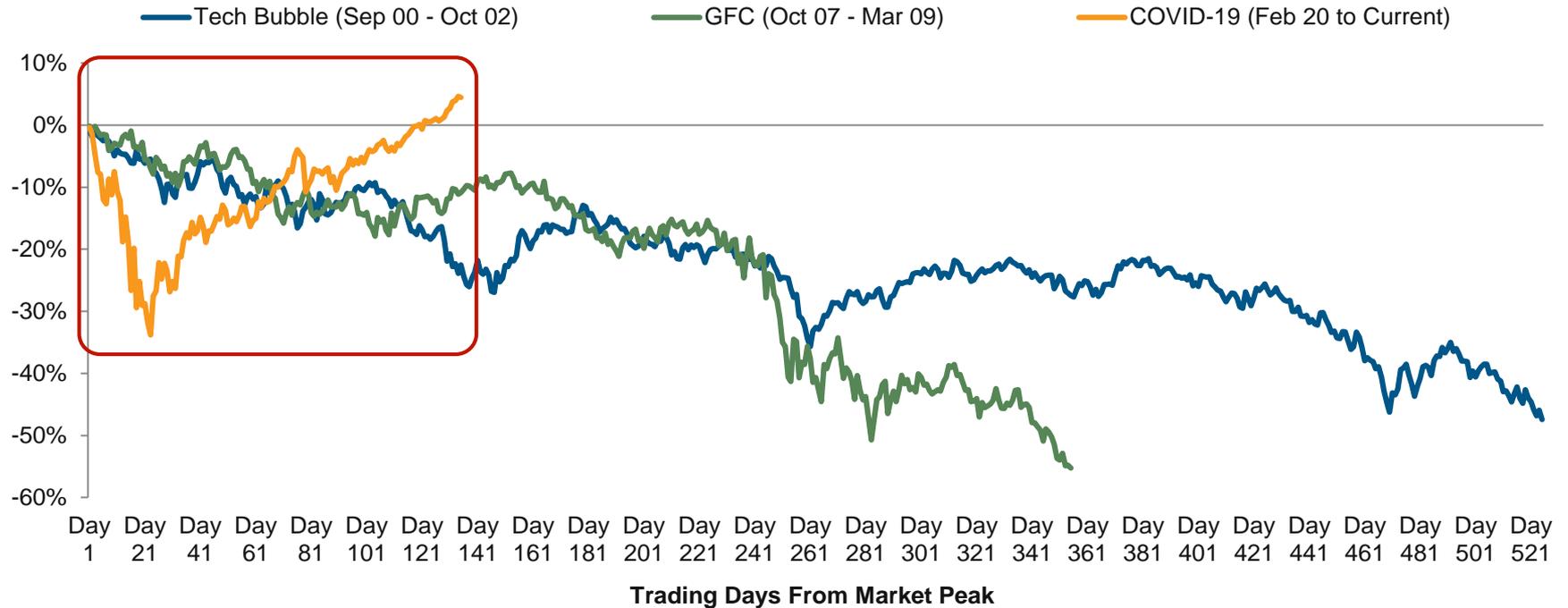


Sources: Bloomberg, Bureau of Labor Statistics, Callan

Unprecedented Shock to Global Capital Markets

'Global Hurricane' in the form of a pandemic

S&P 500 Index Cumulative Returns Market Peak-to-Trough for Recent Corrections vs. Current Path of COVID-19 Correction Through 8/31/20



The sharpest equity market decline ever: 16 trading days to reach bear market; -33% after just 23 days

Callan Periodic Table of Investment Returns

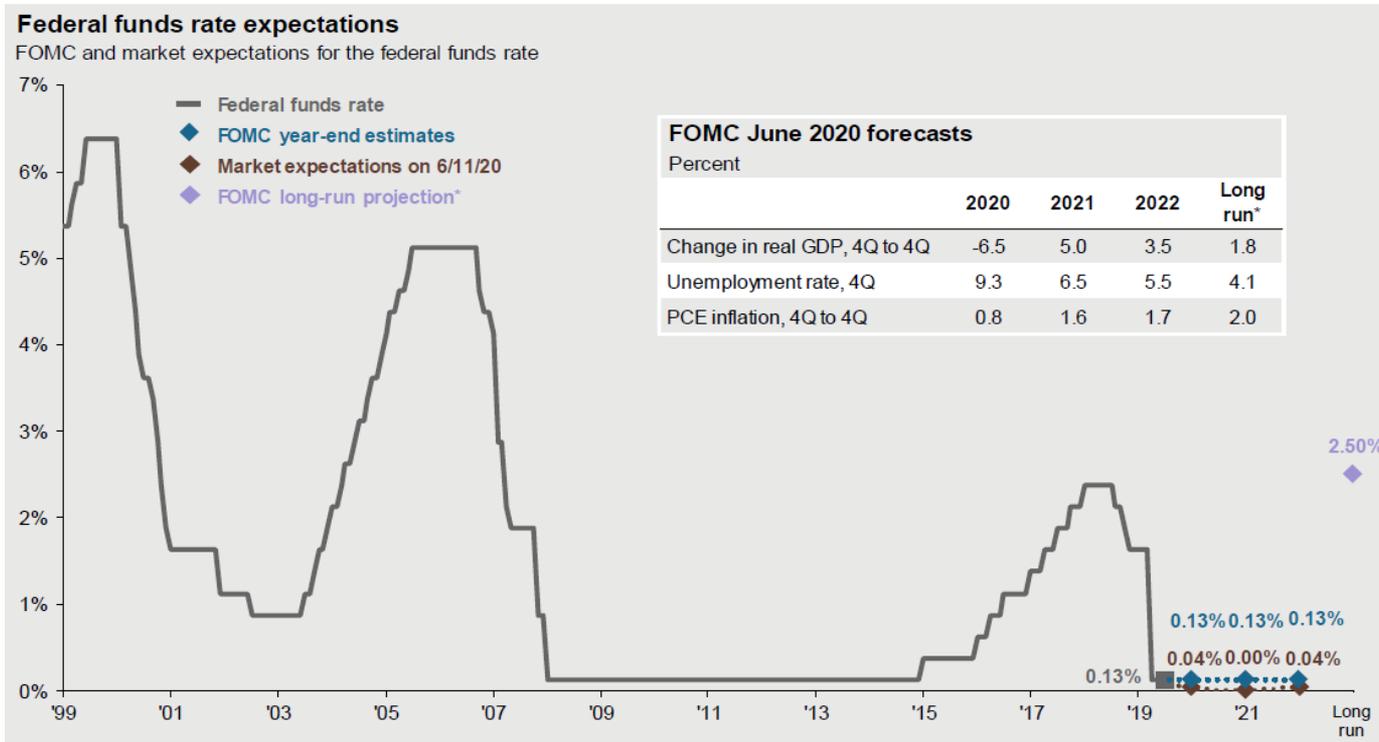
Trailing periods as of June 30, 2020

Annual Returns					Trailing Periods				Quarterly Returns		
2015	2016	2017	2018	2019	1-Year	3-Year	5-Year	10-Year	1Q20	2Q20	YTD 2020
Large Cap Equity 1.38%	Small Cap Equity 21.31%	Emerging Market Equity 37.28%	U.S. Fixed Income 0.01%	Large Cap Equity 31.49%	U.S. Fixed Income 8.74%	Large Cap Equity 10.73%	Large Cap Equity 10.73%	Large Cap Equity 13.99%	U.S. Fixed Income 3.15%	Small Cap Equity 25.42%	U.S. Fixed Income 6.14%
U.S. Fixed Income 0.55%	High Yield 17.13%	Dev ex-U.S. Equity 24.21%	High Yield -2.08%	Small Cap Equity 25.52%	Large Cap Equity 7.51%	U.S. Fixed Income 5.32%	High Yield 4.79%	Small Cap Equity 10.50%	Global ex-U.S. Fixed Income -2.68%	Large Cap Equity 20.54%	Global ex-U.S. Fixed Income 0.61%
Real Estate -0.79%	Large Cap Equity 11.96%	Large Cap Equity 21.83%	Global ex-U.S. Fixed Income -2.15%	Dev ex-U.S. Equity 22.49%	Global ex-U.S. Fixed Income 0.71%	High Yield 3.33%	U.S. Fixed Income 4.30%	High Yield 6.68%	High Yield -12.68%	Emerging Market Equity 18.08%	Large Cap Equity -3.08%
Dev ex-U.S. Equity -3.04%	Emerging Market Equity 11.19%	Small Cap Equity 14.65%	Large Cap Equity -4.38%	Real Estate 21.91%	High Yield 0.03%	Global ex-U.S. Fixed Income 2.52%	Small Cap Equity 4.29%	Real Estate 6.30%	Large Cap Equity -19.60%	Dev ex-U.S. Equity 15.34%	High Yield -3.80%
Small Cap Equity -4.41%	Real Estate 4.06%	Global ex-U.S. Fixed Income 10.51%	Real Estate -5.63%	Emerging Market Equity 18.44%	Emerging Market Equity -3.39%	Small Cap Equity 2.01%	Global ex-U.S. Fixed Income 2.89%	Dev ex-U.S. Equity 5.43%	Dev ex-U.S. Equity -23.26%	High Yield 10.18%	Emerging Market Equity -9.78%
High Yield -4.47%	Dev ex-U.S. Equity 2.75%	Real Estate 10.36%	Small Cap Equity -11.01%	High Yield 14.32%	Dev ex-U.S. Equity -5.42%	Emerging Market Equity 1.90%	Emerging Market Equity 2.86%	U.S. Fixed Income 3.82%	Emerging Market Equity -23.60%	Real Estate 10.07%	Dev ex-U.S. Equity -11.49%
Global ex-U.S. Fixed Income -6.02%	U.S. Fixed Income 2.65%	High Yield 7.50%	Dev ex-U.S. Equity -14.09%	U.S. Fixed Income 8.72%	Small Cap Equity -6.63%	Dev ex-U.S. Equity 0.84%	Dev ex-U.S. Equity 2.01%	Emerging Market Equity 3.27%	Real Estate -28.53%	Global ex-U.S. Fixed Income 3.38%	Small Cap Equity -12.98%
Emerging Market Equity -14.92%	Global ex-U.S. Fixed Income 1.49%	U.S. Fixed Income 3.54%	Emerging Market Equity -14.57%	Global ex-U.S. Fixed Income 5.09%	Real Estate -16.25%	Real Estate -1.60%	Real Estate 1.27%	Global ex-U.S. Fixed Income 1.98%	Small Cap Equity -30.61%	U.S. Fixed Income 2.90%	Real Estate -21.33%

Sources: ● Bloomberg Barclays Aggregate ● Bloomberg Barclays Corp High Yield ● Bloomberg Barclays Global Aggregate ex US
● FTSE EPRA Nareit Developed ● MSCI World ex USA ● MSCI Emerging Markets ● Russell 2000 ● S&P 500

Government Intervention

Monetary Policy

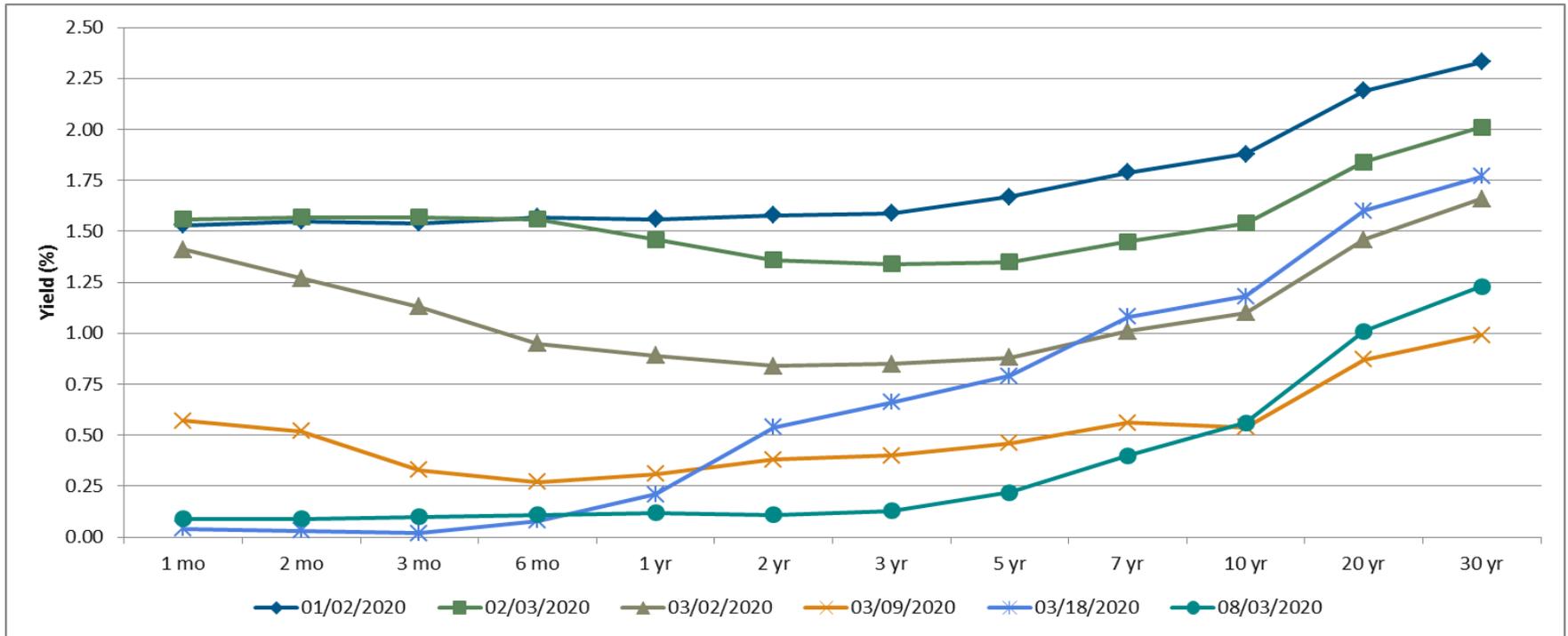


- The Federal Reserve Open Market Committee voted to continue 0% Fed Funds Rate at June meeting
- Median FOMC member forecast expect to continue the zero interest rate policy for years
- Markets do not expect the Fed to raise the rate in the near future
- The Fed announced a change to policy at August meeting, that will abandon the longstanding practice of preemptively increasing short rates to combat higher inflation.

Source: Federal Reserve, J.P. Morgan Guide to the Markets U.S.

US and Global Economic Conditions

Treasury yield curve shape shifting: a moving target



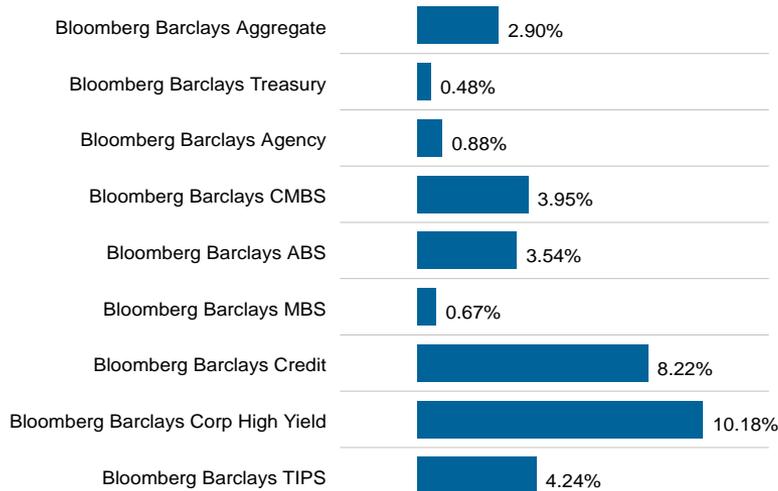
- The Treasury yield curve contains an implicit broad economic forecast
 - Steeper yield curves (long-term rates higher than short-term rates) suggest stronger anticipated growth
- The shape of the Treasury yield curve has varied quickly and substantially since the beginning of 2020
 - Curve shifted down dramatically early in crisis
 - Current yield curve still low on the short end and upward sloping but not steep

Source: U.S. Department of Treasury

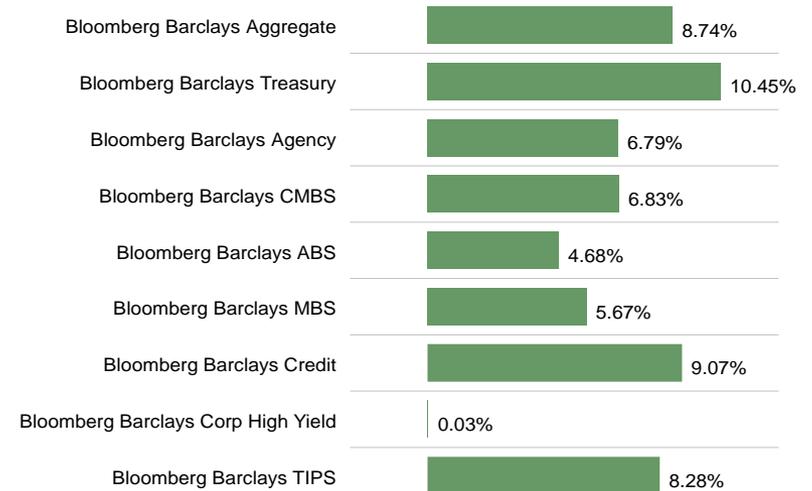
Total Rates of Return by Bond Sector

As of June 30, 2020

Trailing One-Quarter Returns



Trailing One-Year Returns



- The 10-year U.S. Treasury Yield reached a high of 0.91% in June before closing the quarter at 0.66%, down slightly from the 1Q20 quarter-end level of 0.70%.
- After strong performance in 1Q20, U.S. Treasury returns lagged other “spread” sectors as risk appetites rebounded, fueled by massive Fed stimulus programs as well as improved liquidity.
- The Fed left rates on hold at 0% - 0.25% for the foreseeable future, anchoring the low end of the yield curve.

Source: Bloomberg Barclays

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Enterprise Development Account

Enterprise Development Account

Assets as of June 30, 2020

	June 30, 2020		Net New Inv.	Inv. Return	March 31, 2020	
	Market Value	Weight			Market Value	Weight
Internal Managers	\$78,569,115	16.01%	\$1,758,282	\$20,039	\$76,790,795	15.22%
Enterprise Development Fund	78,569,115	16.01%	1,758,282	20,039	76,790,795	15.22%
External Managers	\$412,051,492	83.99%	\$(30,000,000)	\$14,251,550	\$427,799,942	84.78%
Alaska Permanent Cap. Mgmt.	203,267,194	41.43%	(15,000,000)	4,879,580	213,387,615	42.29%
Barrow, Hanley, Mewhinney & Strauss	208,784,298	42.56%	(15,000,000)	9,371,970	214,412,328	42.49%
Total Fund	\$490,620,607	100.0%	\$(28,241,718)	\$14,271,589	\$504,590,737	100.0%

Enterprise Development Account

Performance Results as of June 30, 2020

	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 20-3/4 Years
Internal Managers	1.32%	1.59%	1.07%	0.58%	2.04%
Treasury Bills	1.63%	1.77%	1.19%	0.64%	1.80%
External Managers	9.66%	5.52%	4.52%	4.12%	5.47%
Blmbg Aggregate Index	8.74%	5.32%	4.30%	3.82%	5.14%
Total Fund	8.18%	4.79%	3.76%	3.39%	4.64%
Target*	7.57%	4.75%	3.71%	3.22%	3.63%

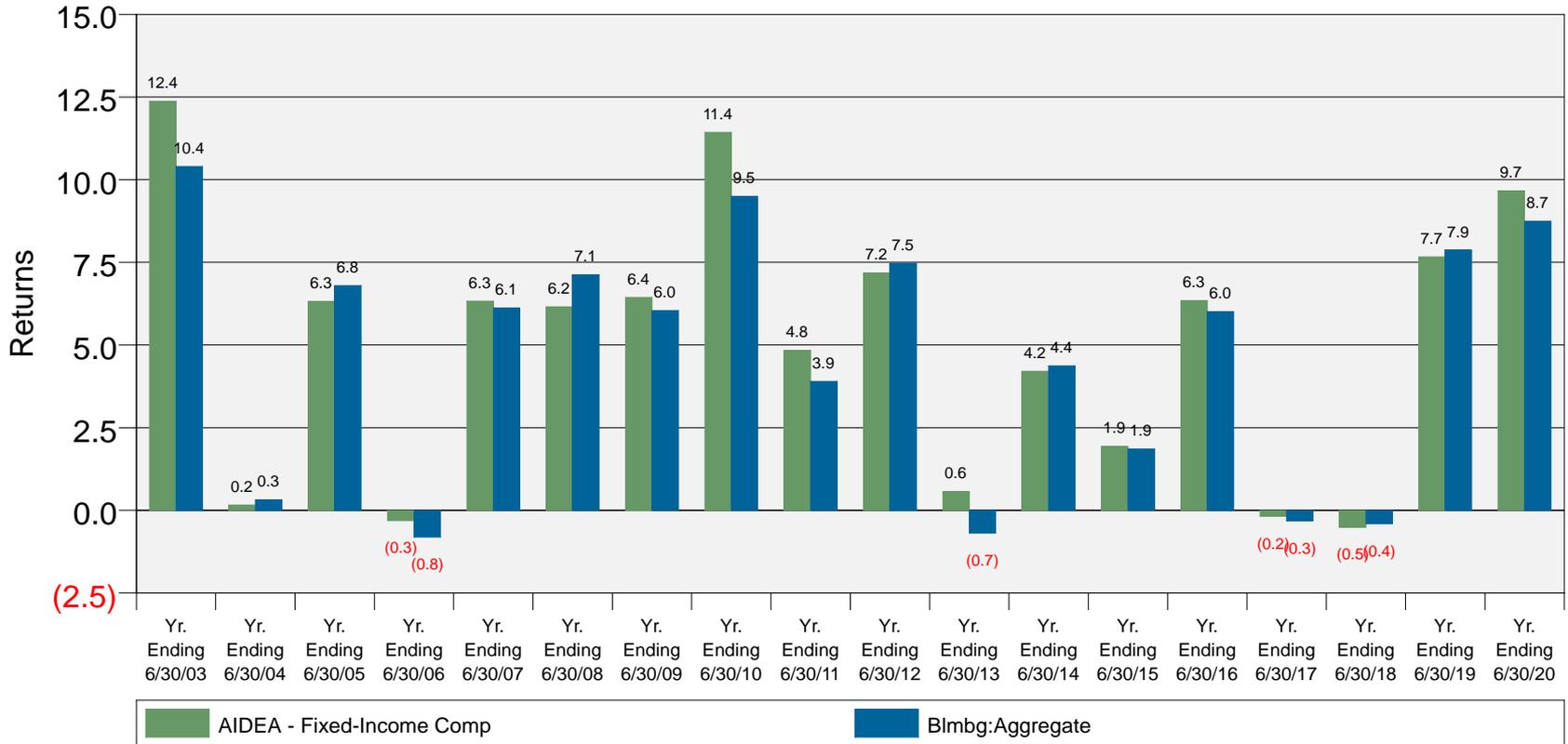
* Current quarter target = 84.8% Blmbg Aggregate and 15.2% 3-month Treasury Bill

- AIDEA has outperformed both the benchmark and inflation over all measured periods.
- Absolute returns were strong over the course of the 2020 fiscal year.

External Investment Managers

Fiscal Year Returns

Returns for Various Time Periods

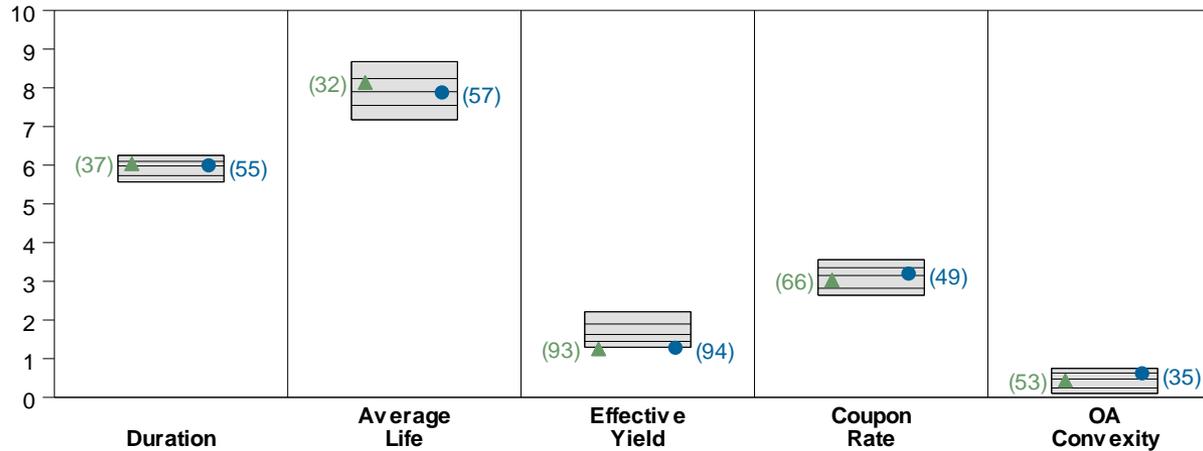


- Fiscal year results historically have been strong. 2020 was the strongest fiscal year since 2010
- There have been fiscal years when the externally managed portfolio has had a negative return

External Investment Managers

Portfolio Characteristics

Fixed Income Portfolio Characteristics Rankings Against Callan Core Bond Fixed Income as of June 30, 2020



10th Percentile
25th Percentile
Median
75th Percentile
90th Percentile

Duration

Average
Life

Effective
Yield

Coupon
Rate

OA
Convexity

6.25

6.10

5.98

5.73

5.57

8.68

8.24

7.90

7.55

7.17

2.21

1.90

1.62

1.45

1.29

3.56

3.35

3.15

2.82

2.64

0.75

0.63

0.47

0.24

0.10

External Managers

●

5.96

7.84

1.24

3.16

0.58

Blmbg Aggregate Index

▲

6.04

8.14

1.25

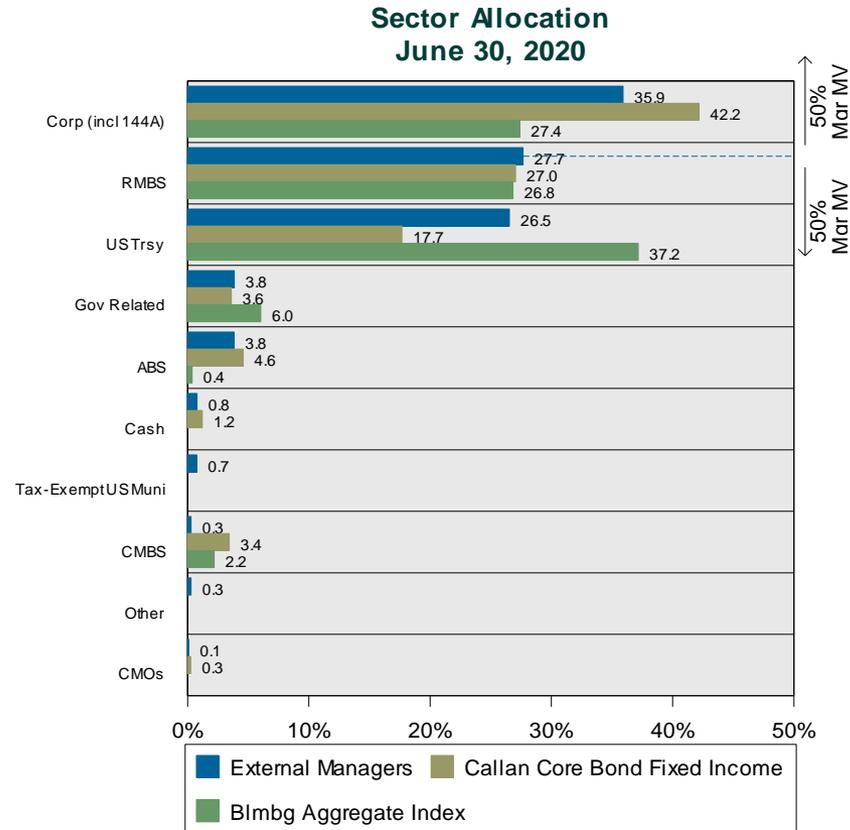
3.03

0.44

- AIDEA's externally managed fixed income portfolio is broadly in line with the characteristics of peers, with the exception of yield.
- The lower yield is a result of more conservative portfolio positioning, driven by the investment guidelines of the external managers

External Investment Managers

Portfolio Characteristics



- The external managers, in combination, provide AIDEA well diversified investment grade bond exposure.

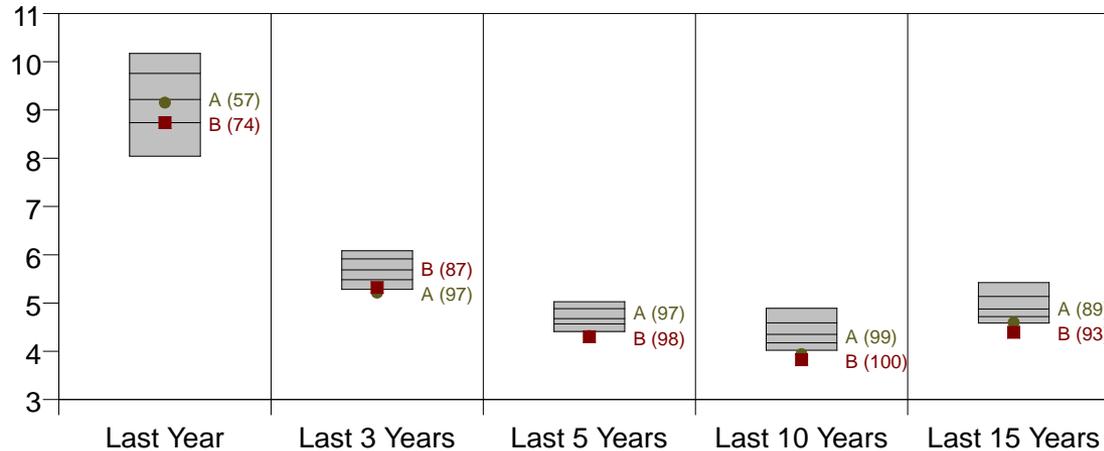
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Performance Measurement

Alaska Permanent Capital Management

Performance Results

Returns for Periods Ended June 30, 2020 Group: Callan Core Bond Fixed Income



	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 15 Years
10th Percentile	10.17	6.09	5.03	4.89	5.43
25th Percentile	9.76	5.92	4.88	4.59	5.14
Median	9.22	5.69	4.68	4.35	4.88
75th Percentile	8.74	5.48	4.57	4.18	4.72
90th Percentile	8.04	5.28	4.41	4.02	4.59

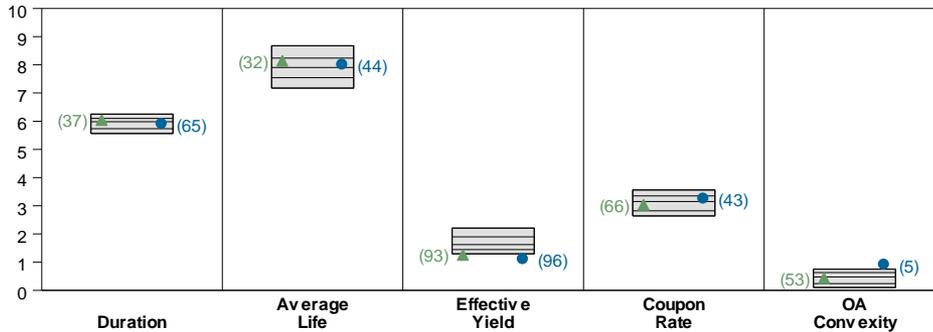
Alaska Permanent	● A	9.15	5.21	4.32	3.94	4.59
Blmbg:Aggregate	■ B	8.74	5.32	4.30	3.82	4.39

- APCM is the more conservative of AIDEA's two external bonds managers.

Alaska Permanent Capital Management

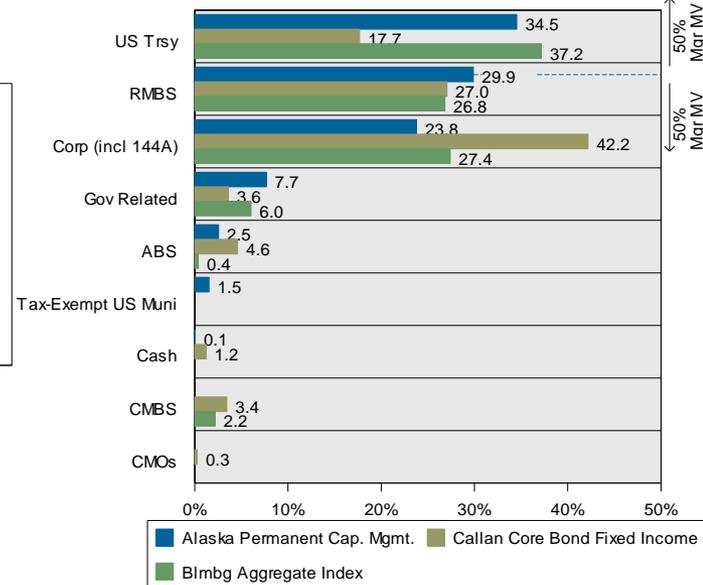
Portfolio characteristics

Fixed Income Portfolio Characteristics
Rankings Against Callan Core Bond Fixed Income
as of June 30, 2020



	Duration	Average Life	Effective Yield	Coupon Rate	OA Convexity
10th Percentile	6.25	8.68	2.21	3.56	0.75
25th Percentile	6.10	8.24	1.90	3.35	0.63
Median	5.98	7.90	1.62	3.15	0.47
75th Percentile	5.73	7.55	1.45	2.82	0.24
90th Percentile	5.57	7.17	1.29	2.64	0.10
Alaska Permanent Cap. Mgmt.	5.88	7.98	1.08	3.22	0.89
Blmbg Aggregate Index	6.04	8.14	1.25	3.03	0.44

Sector Allocation
June 30, 2020

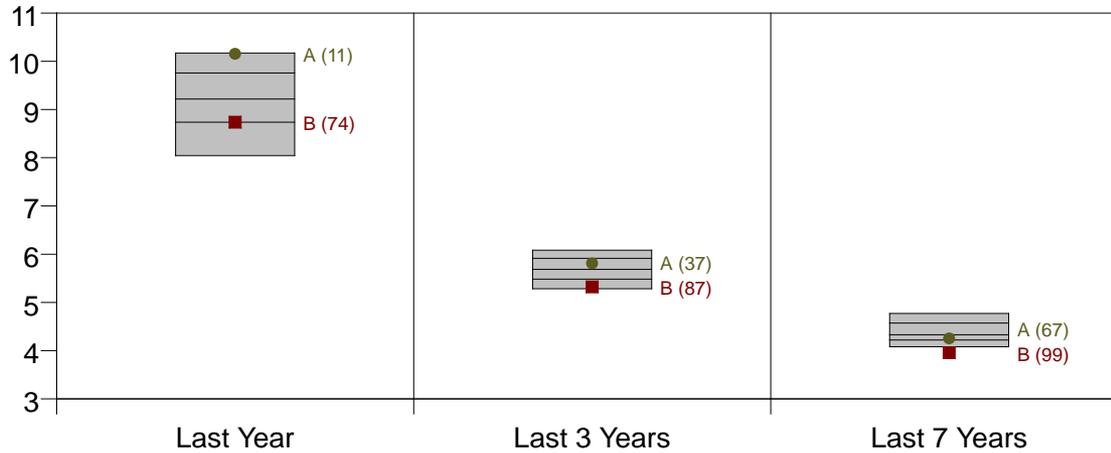


- Owing to its conservative positioning, the APCM portfolio is concentrated in Treasury and other government-related debt, in addition to mortgage-backed securities.
- Relative to the Bloomberg Aggregate U.S. Bond Index (benchmark) and the core bond universe of managers, the APCM portfolio is underweight corporate credit.

Barrow, Hanley, Mewhinney & Strauss

Performance Results

Returns for Periods Ended June 30, 2020 Group: Callan Core Bond Fixed Income



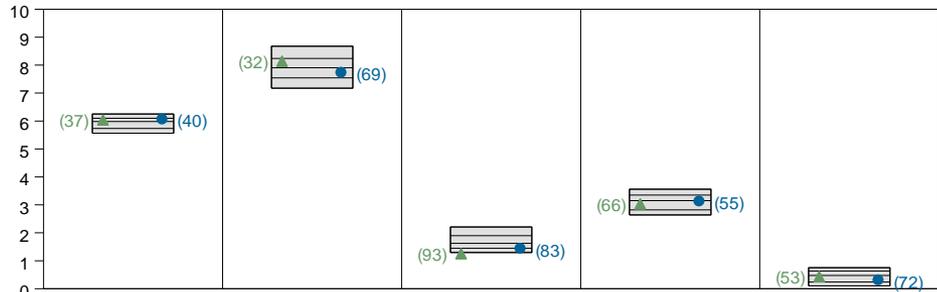
	Last Year	Last 3 Years	Last 7 Years
10th Percentile	10.17	6.09	4.77
25th Percentile	9.76	5.92	4.57
Median	9.22	5.69	4.33
75th Percentile	8.74	5.48	4.22
90th Percentile	8.04	5.28	4.08
Barrow Hanley ● A	10.16	5.81	4.25
Blmbg:Aggregate ■ B	8.74	5.32	3.96

- Barrow Hanley has a relative value philosophy with strong risk controls.
- They seek to add value through sector and security selection.

Barrow, Hanley, Mewhinney & Strauss

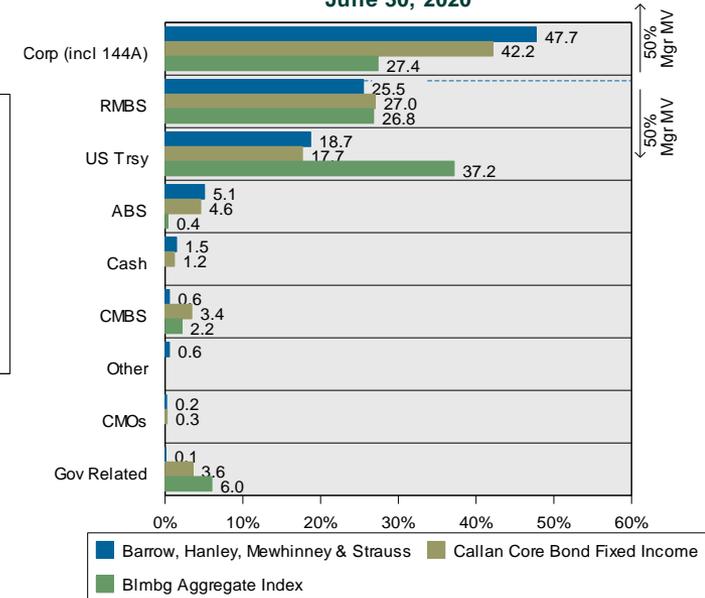
Portfolio characteristics

Fixed Income Portfolio Characteristics
Rankings Against Callan Core Bond Fixed Income
as of June 30, 2020



	Duration	Average Life	Effective Yield	Coupon Rate	OA Convexity
Barrow, Hanley, Mewhinney & Strauss	6.03	7.70	1.40	3.09	0.27
Blmbg Aggregate Index	6.04	8.14	1.25	3.03	0.44

Sector Allocation
June 30, 2020



- Barrow Hanley matches the duration of the Bloomberg Aggregate U.S. Bond Index; duration is a measure of sensitivity to changes in interest rates.
- The Barrow Hanley portfolio has greater exposure to corporate credit; they seek to add value over the benchmark through sector and security selection.

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Appendix

Fixed Income Going Forward

- Future unlikely to look like the past
 - Bloomberg Barclays US Aggregate +7.3% y-t-d through 7/27; +10.0% trailing twelve months
 - Yield-to-worst is 1.15% (and drives future returns)
 - Duration is 6.1 years
 - Rates would need to fall 160 bps to generate the same return over the next year
- In pursuit of income, other risks emerge
 - Credit
 - Illiquidity
 - Leverage
 - Implementation
- Why hold fixed income?
 - Diversify equity
 - Flight to quality
 - Hedge against deflation
 - Generate income, and a small positive return
 - What else can serve as an equity diversifier? Willing to “pay” for the benefit of fixed income with little return/income?

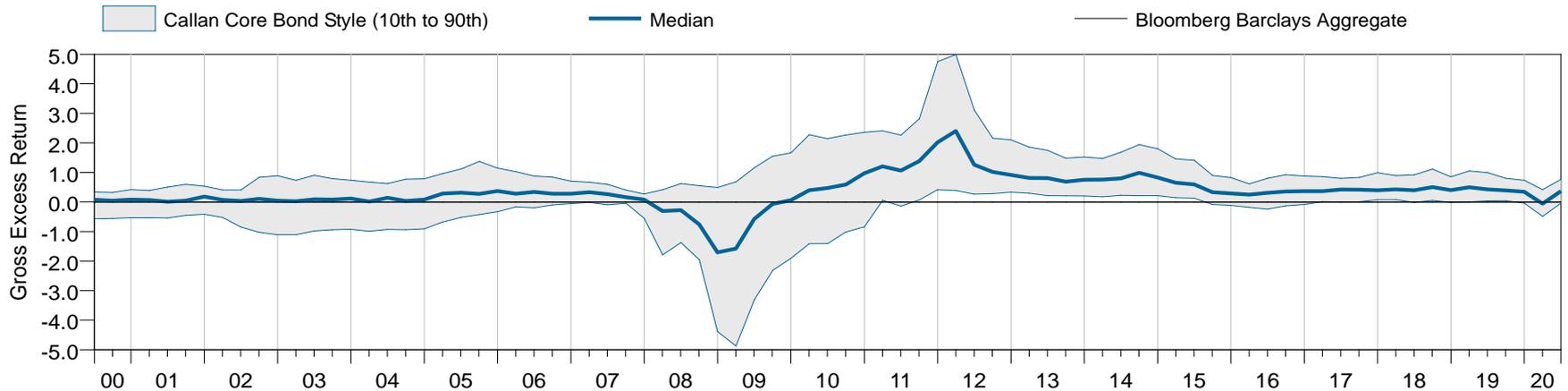
Core Bond Style vs. Bloomberg Barclays Aggregate

How often Manager Beat Benchmark by more than Fee Hurdle in Rolling 3-Year Periods over last 20 Years

Fee Hurdle	0.20%	0.25%	0.30%	0.35%	0.40%	0.45%	0.50%	0.55%	0.60%	0.65%
Median	64%	64%	54%	46%	35%	29%	26%	25%	23%	23%
45th Percentile	65%	65%	61%	55%	48%	34%	31%	29%	28%	25%
40th Percentile	74%	68%	65%	61%	56%	46%	38%	30%	28%	28%
35th Percentile	83%	75%	71%	63%	60%	55%	50%	39%	34%	28%
30th Percentile	89%	81%	75%	68%	64%	60%	56%	53%	45%	40%
25th Percentile	93%	88%	81%	76%	71%	68%	64%	61%	55%	49%

Average Annualized 3-Year Excess Return (gross) – Median Manager: 0.35%

Rolling 3-Year Gross Excess Return relative to Bloomberg Barclays Aggregate for 20 Years ended June 30, 2020



The ABC(&D)s of Bonds

- Bonds are debt securities whereby the purchaser of the bond is lending money to the issuer in exchange for a specified rate of interest during the life of the bond and for the face value (or, principal amount) to be repaid upon maturity
- **Maturity** – the number of years before the bond comes due and the bond issuer must repay the principal to the bond holder
- **Coupon Rate** – the interest rate that the issuer pays the lender (calculated as a percentage of the face value of the bond).
- **Bond Prices** – have an inverse relationship with interest rates. If interest rates rise, a bond's price must fall to keep yield constant.
- **Duration** – expressed as a number of years, tells you how much of a bond's price will change given a 1.00% change in interest rates
 - For example, if interest rates rise (fall) 1.00%, the price of a bond with a duration of 5 years will fall (rise) by 5.00%
- Bond managers seek to add value with these three basic levers
 - Duration management
 - Sector rotation
 - Issue selection

Biographies



Gordon M. Weightman, is a Senior Vice President in Callan's Denver Fund Sponsor Consulting office. He joined the firm in 2006 and works with a variety of fund sponsor clients including defined contribution plans, defined benefit plans, and foundations providing consulting services in strategic planning, implementation, performance evaluation, education and research. Gordie is a member of Callan's Defined Contribution Committee and is a shareholder of the firm.

Prior to joining Callan, Gordie worked at State Street Corporation in Boston as a Senior Custody Specialist where he gained experience in the mutual fund division working closely with investment managers and clients. He earned his BA in Psychology from Middlebury College. Gordie is a holder of the right to use the Chartered Financial Analyst® designation. He is a member of CFA Institute and the CFA Society of Colorado.



Alexander W. Ford is a Vice President in Callan's Denver Fund Sponsor Consulting office. Alex joined the firm in 2019 after having spent more than 11 years with Wilshire Associates. He brings a wealth of consulting expertise to a diverse mix of institutional investor clients, including defined benefit plans, defined contribution plans, endowments, and foundations. Alex consults with clients on a range of issues that include strategic planning and asset allocation, investment structure, manager search and selection, performance evaluation, and continuing education and research.

Alex earned an MBA from the University of Denver and a BS in Finance from the University of Colorado. He is also a Level II candidate in the CFA program.

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