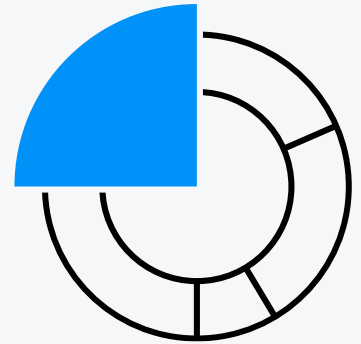


Meeting on August 2, 2023

JPMorgan Global Fixed Income, Currency & Commodities

Core Bond Strategy



FRESNO COUNTY
EMPLOYEES' RETIREMENT ASSOCIATION

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Today's Presenters



Akash Patel

Akash Patel, CFA, *executive director*, is a Client Advisor within J.P. Morgan Asset Management. He oversees client and business development efforts providing tailored investment solutions for U.S. institutional investors across public and corporate pension plans. In his previous role at Ivy Investments, Akash led marketing activities directed towards institutional investment consultants and centralized research teams at key intermediaries across the west coast. Prior to Ivy Investments, Akash served as FTSE Russell's primary liaison to western region investment consultants, delivering highly customized indexing solutions across a variety of equity and fixed income vehicles. Before shifting into Consultant Relations, Akash held investment-related roles as Assistant Portfolio Manager and Senior Research Analyst for various equity strategies at Fisher Investments. Akash received a B.A. in International Economics from the University of Colorado, holds the FINRA Series 3, 7, 63 and 65 licenses and is a CFA charterholder.



Richard Figuly

Richard Figuly, *managing director*, is Head of Core Strategy within our Global Fixed Income, Currency & Commodities (GFICC) group. Based in Columbus, Rick leads a group of portfolio managers on the Core Strategy team who are responsible for managing institutional taxable bond portfolios and fund vehicles. Rick is the Lead Portfolio Manager on the Core Bond Fund and Mortgaged Backed Securities Fund. An employee since 1993, Rick previously served as a fixed income trader trading all taxable fixed income securities while specializing in structured products. Prior to joining the firm, Rick was a fiduciary tax accountant at the Bank One Ohio Trust Company. Rick is also a retired Major of the Ohio Army National Guard. He holds a B.S. in finance from The Ohio State University.



Joe Hisdorf

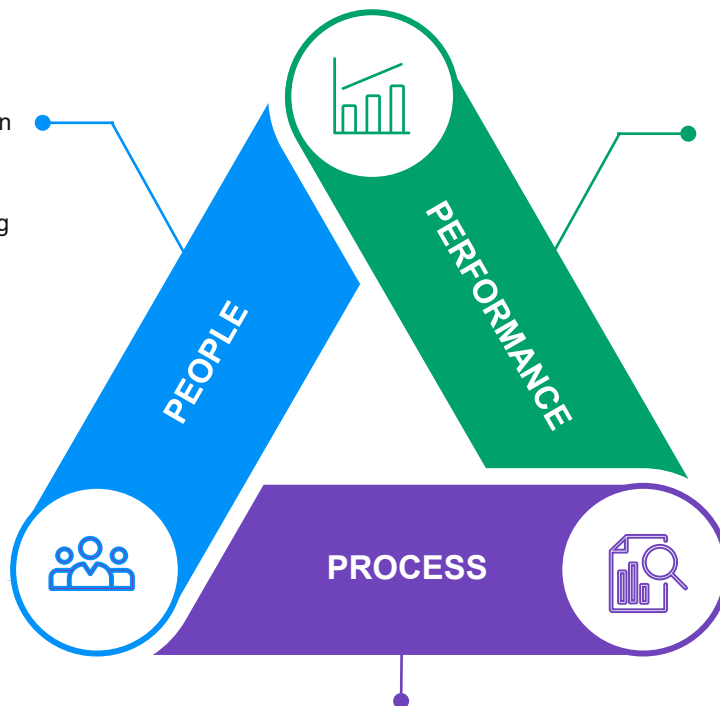
Joe Hisdorf, *executive director*, is a member of the Global Fixed Income, Currency & Commodities (GFICC) group. Based in Columbus, Joe is an investment specialist for the U.S. Broad Markets team and is responsible for communicating investment strategy, decisions and performance across various fixed income products to clients, consultants, prospects and internal partners. An employee since 2003, Joe has served in various positions within Asset Management which include business analyst, consultant analyst and project manager. Previously, he worked for Bisys Fund Services as a senior mutual fund accountant. Joe holds a B.B.A in finance from the College of Business at Ohio University and holds FINRA Series 7, 63, and 65 licenses.

Core Bond Strategy

Executive Summary

PEOPLE

- Stable investment team with over 20 years on average of industry experience
- Team leverages the broader resources of GFICC through a common language focusing on Fundamental, Quantitative and Technical research
- Collaborative focus towards portfolio management and idea generation
- Portfolio manager generalist model provides enhanced visibility across sectors



PERFORMANCE

- Top quartile performance across 3, 5, 15-, 20-, and 25-year periods*
- Top quartile standard deviation across 3, 5, 10 year, and top decile across 15-, 20-, and 25-year periods*
- Top quartile information ratio across 3 year, and top decile across 5-, 10, 15-, 20-, and 25-year periods*
- Historically a low to negative correlation to equities

PROCESS

- Bottom-up, value driven mentality towards portfolio construction
- Emphasis on long term relative value and downside protection
- Historically focused on less efficient pockets of the market
- Range-bound duration and curve management
- A pure-play Core investment grade strategy

* eVestment Alliance Core Fixed Income Universe using Core Bond composite performance (gross of fees) as of 06/30/23, see pages 13 and 14 for performance and rankings detail

Our People

Core Bond Investment Team



Steve Lear, CFA* (1)†
U.S. CIO



Rick Figuly (1)
Lead Portfolio Manager, Core Bond Fixed Income

Portfolio Managers



Daniel Ateru, CFA
Portfolio Manager



Tim Eisel
Portfolio Manager



Scott Grimshaw, CFA
Portfolio Manager



Andy Melchiorre, CFA(1)
Portfolio Manager



Michael Pacca
Portfolio Manager



Susan Parekh
Portfolio Manager



Justin Rucker, CFA (1)
Portfolio Manager



Kent Weber, CFA
Portfolio Manager



Edward Fitzpatrick, CFA(1)
Portfolio Manager

Common Platform



Greg Tell*
Head of Investment
Specialists



Kay Herr, CFA**
Head of Research



Sam Soquar**
Head of Research



Vincent Kumaradja*
Head of Risk



Brian Lysiak*
Head of Trading

* Bob Michele direct report. (1) Listed Portfolio Managers according for JPMorgan Prospect filing for all JPMorgan Core Bond vehicles. † Steve Lear will be retiring in March 2024. Kay Herr will succeed Steve Lear as the new U.S. CIO in October 2023. Samrawit Soquar will succeed Kay Herr in October 2023 as the Head of Research. As of June 30, 2023, There can be no assurance that the professionals currently employed by J.P. Morgan Asset Management will continue to be employed by J.P. Morgan Asset Management or that the past performance or success of any such professional serves as an indicator of such professional's future performance or success.

Our Process

Fundamental tenets of our philosophy

- We believe in a disciplined value-driven approach based on **bottom-up, fundamental analysis**
- **Longer term investing** versus trading mentality
- Style emphasized research and **individual security analysis**, rather than large macro bets
- Portfolios are **well diversified** and of **high average credit quality**, helping to minimize individual security risk
- **Many small decisions** drive overall portfolio strategy, making us less dependent on a few top-down decisions
- **Low turnover** minimizes trading costs
- Risk management, embedded throughout the process, seeks to **limit downside risk** relative to a benchmark

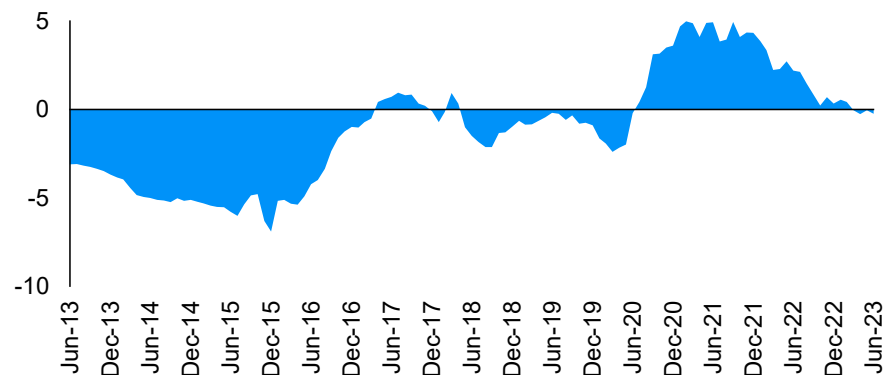
**This approach has resulted in consistent, long-term outperformance of the benchmark
in a variety of market environments**

The manager seeks to achieve the stated objectives. There can be no guarantee the objectives will be met.

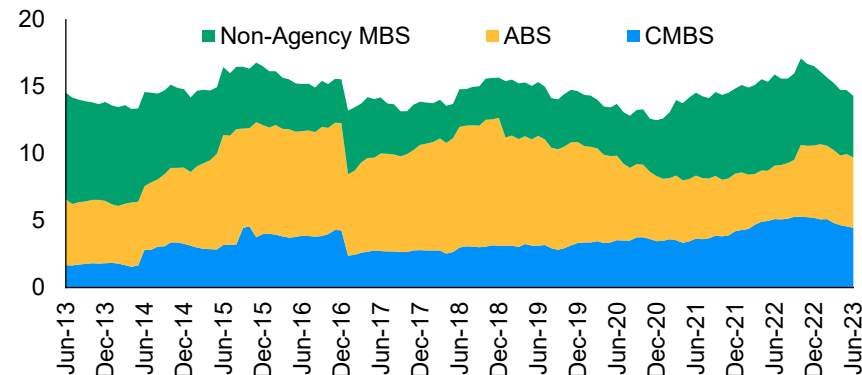
Sector Weight Comparison

Core Bond Composite vs. Bloomberg US Aggregate (% Market Value)

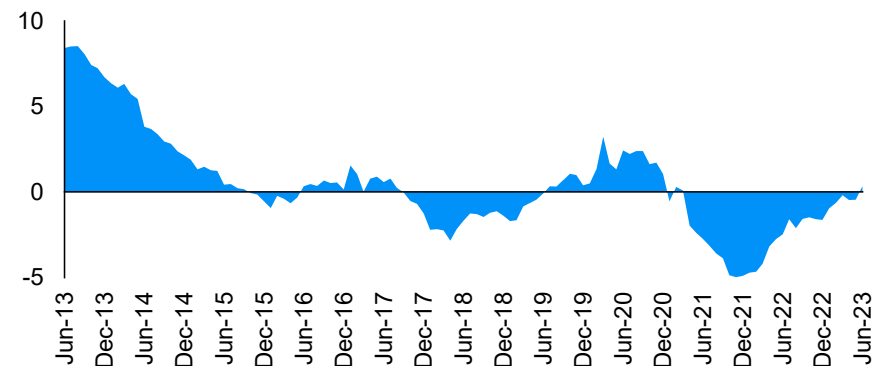
Corporate Credit



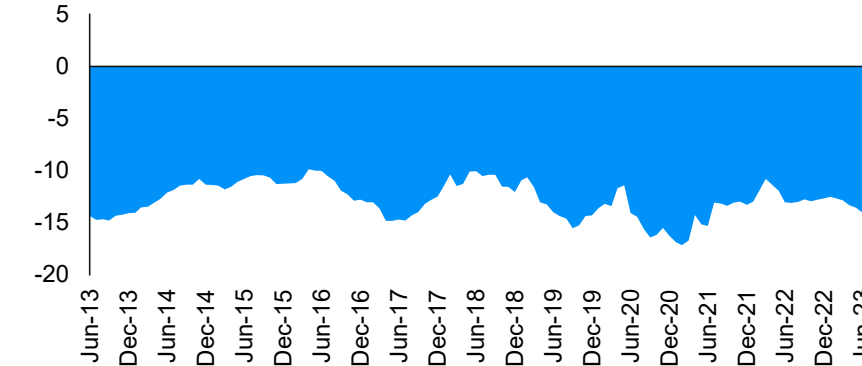
Securitized Credit*



Agency Mortgage-backed Securities



Treasury



Source: J.P. Morgan Investment Management Inc. Corporate and MBS graphs display net subsector exposures versus the index. Updated through June 30, 2023.

*CMBS= Commercial Mortgage-Backed Securities; ABS=Asset-Backed Securities

Since 1/1/17, sector classifications have been updated within Global Fixed Income to provide greater consistency, transparency, granularity, and alignment with current industry conventions.

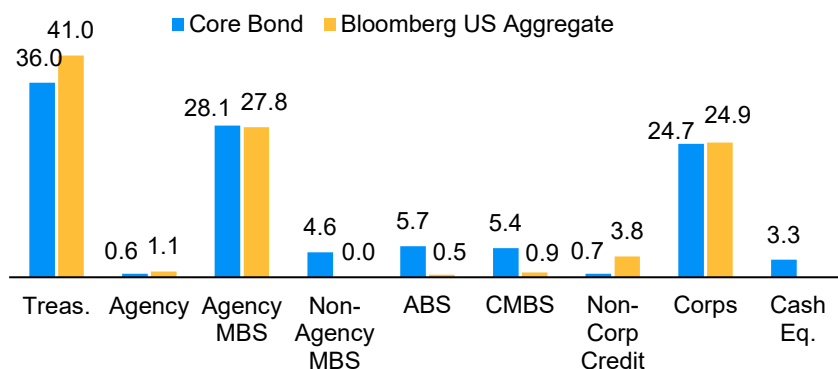
Core Bond Composite Snapshot

All data as of June 30, 2023 – Discretionary Assets: USD 73.3 billion

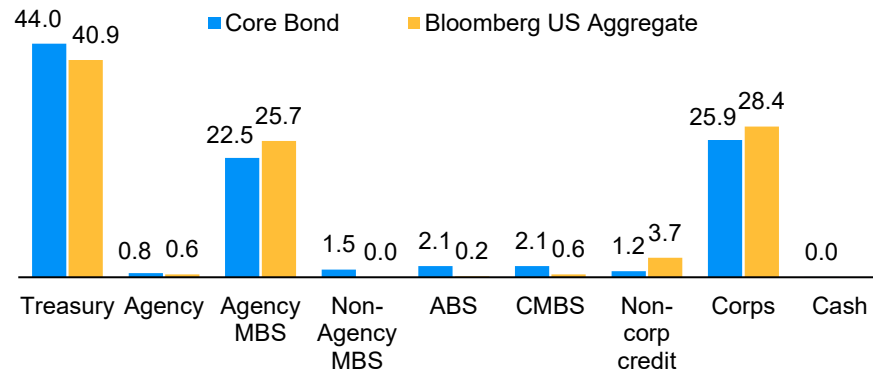
Portfolio statistics	Core Bond	Bloomberg US Agg	Diff.
Yield to Maturity	5.45%	4.79%	+0.66%
OAS (bps)	113	48	+65
Duration (yrs)	6.37	6.21	+0.17
Spread Duration (yrs)	3.79	3.73	+0.06
Convexity	0.70	0.53	+0.17
Average Quality	AA-	AA	-
Turnover	46.00%***	-	-
Average # of Holdings	300-500**	13,358	-

Quality Distribution (MV%)*	Core Bond	Bloomberg US Agg
AAA	62.09%	73.56%
AA	4.80%	5.08%
A	13.16%	11.01%
BBB	15.43%	10.35%
BB and Below	0.25%	0.00%
Not Rated	4.28%	0.00%
Total	100.0%	100.0%

Sector Distribution¹ Exposure Market Value (%)



Sector Distribution¹ Duration Contribution (%)



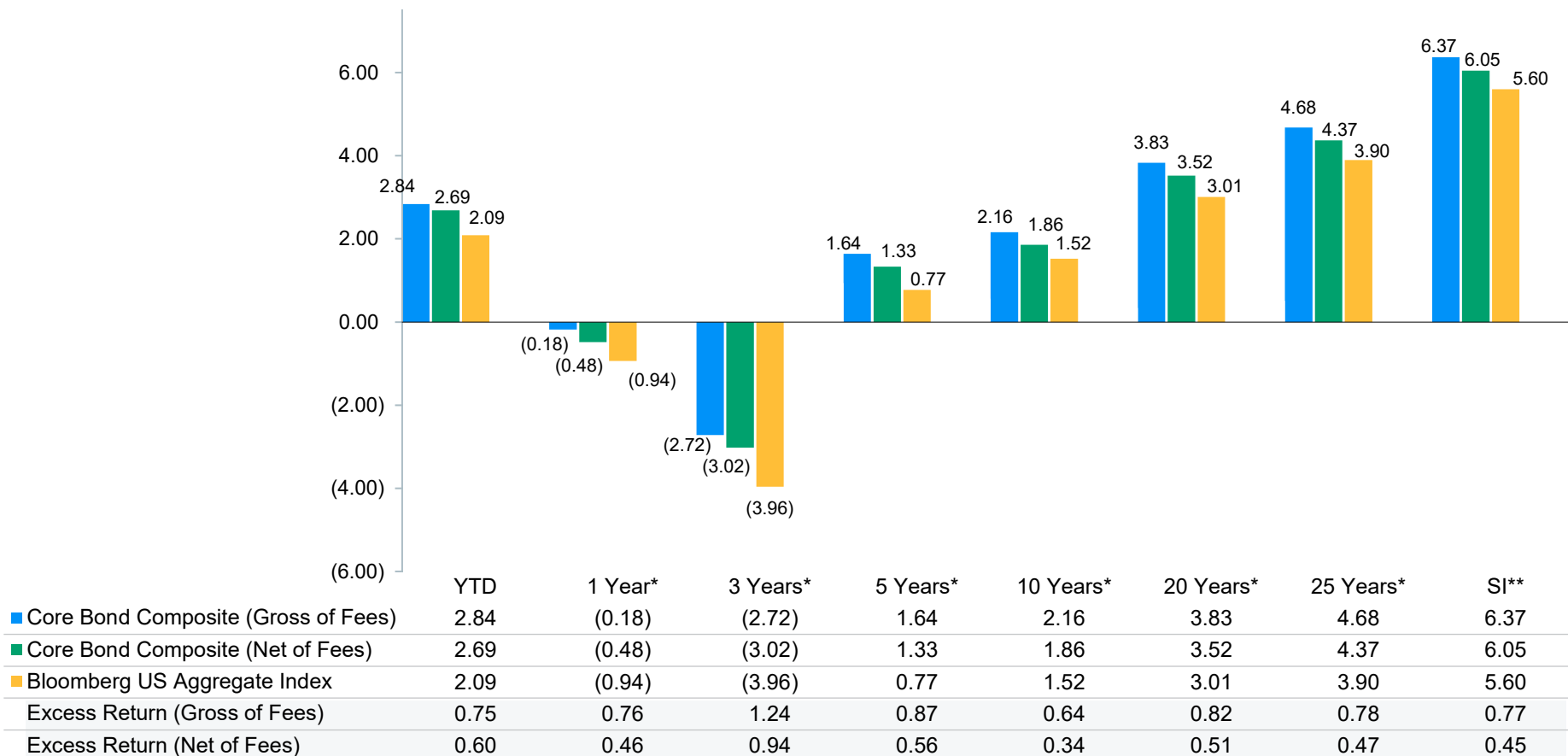
*Credit quality distribution compiled using the highest applicable rating from any Nationally Recognized Statistical Rating Organization (NRSRO). Securities that are not rated by any NRSRO are reflected as such. Cash is being treated as a AAA-rated asset. ***Annual Turnover (Trailing 12 Months) as of 2/28/2023. **Portfolio holdings vary based on account size, tenure, and investment guidelines. Measurements in percent. statistics are compiled by running vendor data through J.P. Morgan's internal analytic models. % of allocation information includes notional derivative exposure and as such may not total to 100%.

Please see performance disclosures which accompany this presentation. Actual account characteristics may differ. Since 1/1/17, sector classifications have been updated within Global Fixed Income to provide greater consistency, transparency, granularity, and alignment with current industry conventions. Turnover will vary by account size, tenure, and investment guidelines

Performance and Positioning

Core Bond Composite Investment Performance - Preliminary

Period Ending June 30, 2023 – Gross & Net of Fees (%) Supplemental to annual performance report



Past performance is not indicative of future returns. Performance includes the reinvestment of income. *Annualized **Inception Date: 12/31/1985. Please note, the “net of fee” composite performance returns is calculated using a model investment management fee. It is based on a representative fee applicable to institutional clients looking to invest in the strategy and it is higher or equal to the weighted average investment management fee of the underlying accounts within the composite at year end. Actual fees may be lower based on assets under management and other factors. Where fees are lower, “net of fees” performance returns will be higher. As such, “net of fees” performance for actual accounts may differ significantly from the “net of fees” performance shown above.

Since 1/1/17, sector classifications have been updated within Global Fixed Income to provide greater consistency, transparency, granularity, and alignment with current industry conventions.

J.P.Morgan

Core Bond has favorable risk metrics

All data as of June 30, 2023

 = top decile  = top quartile

Performance & Risk Statistics	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
Performance						
Core Bond	(2.72)	1.64	2.16	3.63	3.83	4.68
Bloomberg US Aggregate	(3.96)	0.77	1.52	2.73	3.01	3.90
Excess Return Ranking	17	19	29	25	17	13
Standard Deviation (vs. Bloomberg US Aggregate Index)						
Core Bond	5.70	5.24	4.11	3.87	3.80	3.76
Bloomberg US Aggregate	6.17	5.48	4.30	4.14	4.00	3.91
Standard Deviation Ranking	16	15	13	6	9	5
Information Ratio (vs. Bloomberg US Aggregate Index)						
Core Bond	1.53	0.95	0.93	1.01	0.95	0.93
Information Ratio Ranking	12	7	10	5	3	2

Source: eVestment Alliance (US Core Fixed Income Universe) and J.P. Morgan Asset Management. ; eVestment data populated on 7/25/23 Performance results are gross of investment management fees. Calculations based on monthly returns. The deduction of an advisory fee reduces an investor's return. Actual account performance will vary depending on individual portfolio security selection and the applicable fee schedule. Past performance is not a guarantee of comparable future results. Fees are described in Part II of the Advisor's ADV which is available upon request.

Global Fixed Income, Currency & Commodities

Why fixed income with J.P. Morgan Asset Management

A powerful combination of expertise, deep resources and time-tested process focused on client outcomes



Philosophy

Invest as lenders of our clients' money

- Bank-owned asset manager with a **fiduciary** mindset and a 150-year heritage
- Team based and transparent approach with significant access to our investment teams
- Strive to deliver consistently strong risk-adjusted returns
- Risk management, a critical part of our culture, **is embedded on multiple levels**



Approach

Globally integrated, research-driven

- **310 fixed income investment professionals** across 5 countries benefit from **diverse views**
- Common **trading platform** creates scale and drives our goal of **best execution**
- Proprietary technology, **Spectrum**, including optimizers and trading tools
- Global research team with **73 quantitative and fundamental research analysts**



Process

Rigorous, disciplined, proprietary

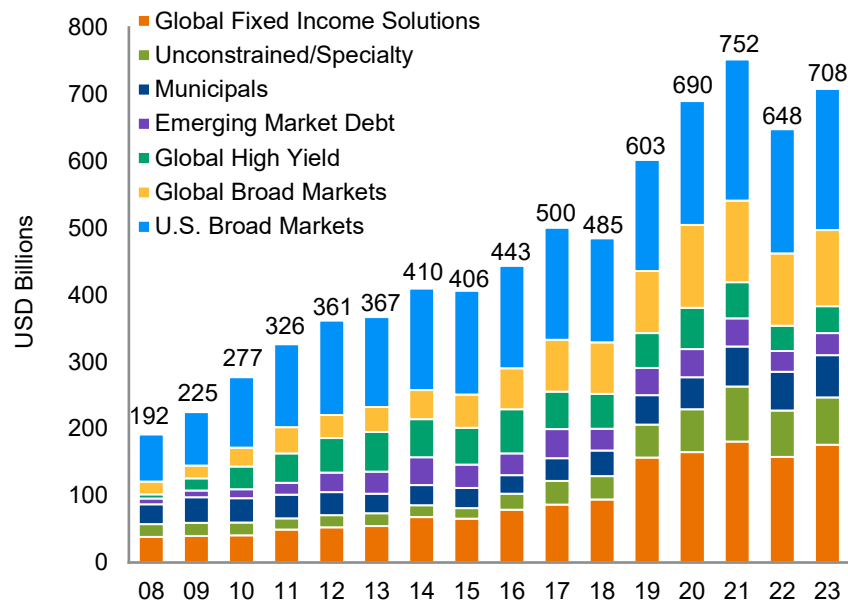
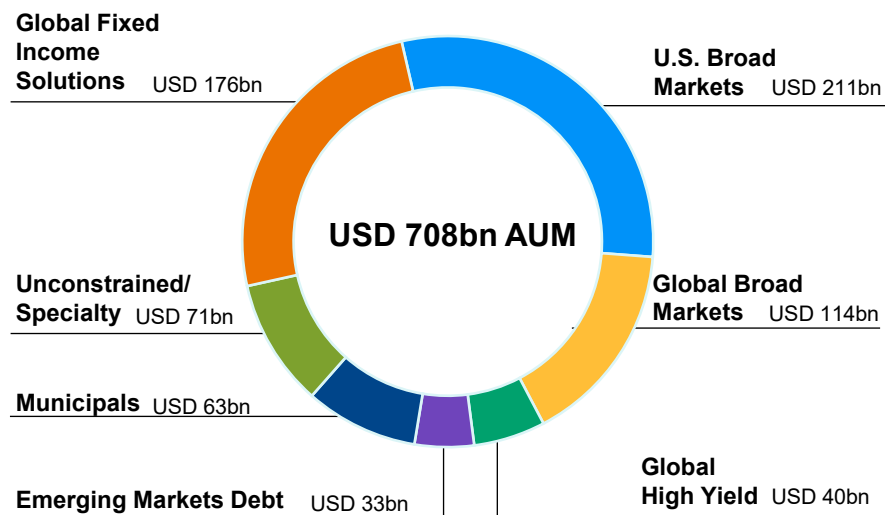
- **Fundamental, Quantitative, Technical (FQT)** inputs used to underwrite every investment
- **Financially material ESG factors** are **integrated** as part of our investment process¹
- Continuous collaboration including our weekly strategy meetings and our **Investment Quarterly (IQ)**
- Access to **key industry decision makers**, and strong relationships with financial institutions
- **Proprietary insights and data** with investments in Artificial Intelligence and machine learning to harness big data

Source: J.P. Morgan Asset Management; as of March 31, 2023. The manager seeks to achieve the stated objectives. There can be no guarantee the objectives will be met.

¹In actively managed assets deemed by J.P. Morgan Asset Management to be ESG integrated under our governance process, we systematically assess financially material ESG factors amongst other factors in our investment decisions with the goals of managing risk and improving long-term returns. ESG integration does not change a strategy's investment objective, exclude specific types of companies or constrain a strategy's investable universe.

Expertise to deliver superior client outcomes

Global Fixed Income, Currency & Commodities Assets Under Management



J.P. MORGAN CORE BOND STRATEGY (\$73.3B AUM)

Source: J.P. Morgan Asset Management. Data as April 30, 2023. Due to rounding, data may not always add up to the total AUM. AUM figures are representative of assets managed by the Global Fixed Income, Currency & Commodities group and include AUM managed on behalf of other J.P. Morgan Asset Management investment teams. The manager seeks to achieve the above stated objective. There can be no guarantee the objective will be met.

Global Fixed Income, Currency & Commodities: Operating Committee



Bob Michele, CFA
Head of Global Fixed Income, Currency & Commodities

Investment Leads



Steve Lear, CFA*
U.S. CIO



Debbie Fierro*
Customized Bond Portfolios
CIO



Iain Stealey, CFA*
International CIO



Pierre-Yves Bateau*
Emerging Markets CIO

Common Platform



Greg Tell*
Head of Investment
Specialists



Kay Herr, CFA*
Head of Research



Sam Soquar
Head of Emerging
Markets Corporate
Research



Vincent Kumaradjaja*
Head of Risk



Brian Lysiak*
Head of Trading

Business Management



Nitin Kulkarni
Middle Office/Operations



Jeff Shkreli
COO



Josh Ludmer
Technology



Jay Kim
Human Resources

* Bob Michele direct report. As of June 30, 2023, There can be no assurance that the professionals currently employed by J.P. Morgan Asset Management will continue to be employed by J.P. Morgan Asset Management or that the past performance or success of any such professional serves as an indicator of such professional's future performance or success.

Global Research: an experienced team of specialists with sector expertise

Bob Michele, CFA

Head of Global Fixed Income, Currency & Commodities

Kay Herr, CFA

Head of Research

Russell Klein
U.S. Investment Grade
Communications

Beate Muenstermann
Non-U.S. Investment Grade
Banking, Insurance

Jeff Lovell, CFA
High Yield

Samrawit Soquar
EM Corporate Research
Financials

Erik Brewer, CFA
Basic Materials
Jenny Feng, CFA
Capital Goods
Amanda McCluskey, CFA
Consumer Cyclical
Prerit Jain
REITs
Michael Kolster
Banking
Warren Leonard, CFA
Energy, Basic Industry
Jesse Liu
Technology
Edward Mui
Consumer Non-Cyclical, Transportation
Balakrishnan Prakash, CFA
Insurance
Thomas Socha
Utilities
Steve Sun
Consumer Cyclical, Consumer Non-Cyclical
Manases Zarco, CFA
Consumer Cyclical, Mid-stream Energy

Andy Chang, CFA
Asian Financials, Communications, Technology
Robert Emes
Utilities, Energy, Communications, Transportation
Will Essayan, CFA
Banking, REITs
Theodorus Hadiwidjaja, CFA
Asian Financials & Industrials Communications, Media & Entertainment, Transportation, Utilities, REITs
Mary Nnachi
Basic Industry, Capital Goods, Transportation
Natalie Peers
Banking, Insurance
Vishal Singhal, CA
Consumer Cyclical, Consumer Non-Cyclical

NORTH AMERICA
Samuel Castell, CFA
Airlines, Midstream
Andrew Clouse, CFA
Aero/Defense, Bldg. Materials, Industrials, Transportation
Mark Dunbar, CFA
Cable, Wireless, Wirelines
Patrick Goff, CFA
Chemicals, Gaming, Leisure, Lodging
Andrew Guest
Autos, Health Insurance, Home Construction, Retail
Jeffrey Hutz, CFA
Consumer Products, Technology, Converts
Kyle Lanphear
Food & Beverage, Packaging, Restaurants
Matthew Nelson, CFA
Healthcare, Pharma
Mark Prenger, CFA
Exploration & Production, Refining, Oil Field Services
Ryan Sapp
Environmental, Media & Entertainment, Satellite
Greg J Seketa
Distressed Securities

Will Smith, CFA
Generalist
Scott Telford III, CFA
Financials, Utilities
Kenneth Williamson, CFA
Consumer Cyclical Services, Metals & Mining, Supermarkets
Jacob Shamion
Generalist
Trenton Zoeller
Generalist
Laura Watanabe
Generalist
EUROPE
Lily Baik, CFA
Euro Food & Beverage, Media, Leisure, Telecom, Transportation
Giles Haworth, CFA
Euro Bldg. Mats, Cap Goods, Paper, Packaging, Utilities Construction
Irem Sukan
Euro Chemicals, Autos, Energy, Healthcare, Metals & Mining, Euro
Russell Taylor
Euro Consumer Goods, Retail

ASIA
Stanley Chan
Metals and Mining, Oil and Gas, Utilities, Consumer
Andrew Chong, CFA
Real Estate, Consumer
Nitesh Kathuria
Asian Corporates, Banks
Douglas Ng, CFA
Infrastructure, Utilities, TMT, Transport, Diversified, LGFV

EMEA
Abbas Ali
Consumer, Diversified, Industrial, Infrastructure, Metals and Mining, Oil and Gas, Real estate, TMT, Utilities
Divya Poojary, CFA
LCC - Industrials, Energy, Financials, TMT, Utilities
LATAM
Janina Magnasco
Metals & Mining, Pulp & Paper, Consumer & retail, Chemicals, and Corporates
Ricardo Schiavinato, CFA
Financials, Protein, Oil & Gas, Real Estate, and Utilities
Reuben Weislogel, CFA
Autoparts, Cement, Infrastructure, Project Finance, TMT, Transportation, and Utilities

Neene Jenkins
Municipal

Senior Living, Charter, US Territories, Project Finance, Tax Supported

David Gao – IG Lead
Airports/ports, Non-Profit, Transportation, Tax Supported
Benjamin Grindle-deGraaf
Structured Municipal, Tax Supported

Robert Herndon
Water & Sewer, Revolving Loan, Development Districts, Tax Supported
Chris Hesselthaler
Higher Education, Housing, Public Utilities, Tax Supported

Greg Swisher
Housing, Healthcare, Student Loan, Tax Supported
Catie Tsao
Transportation, Independent Schools, Tax Supported
Matthew Sinni
Tobacco, US Territories, Healthcare

Mark Gannon – HY Lead
Higher Education, Charter Schools, Project Finance, Tax Supported
John Blakely
Healthcare, Senior Living, Tax Supported

Nicole Byrd
Water & Sewer, Tax Supported
Derek Petriello
Gas Pre-Pay, Housing, Tax Supported

Sajjad Hussain, CFA
Securitized

Shirley Cheng
CMBS and CRE
Jeniffer Lee, CFA
Agency/ Non-Agency MBS, ABS
Sameer Riaz
ABS and CLOs
Denise Hesser, CFA
ABS, CMBS, RMBS and CLOs
Danial Qureshi, CFA
Agency/Non-Agency MBS, ABS
Baishali Sen
ABCP, ABS and CLOs

Eric Isenberg
Quantitative Solutions

Bhupinder Bahra
Qiwei Zhu, CFA
Nick Handley, CFA
Jonathan Msika, CFA
Jian Cai
Naveen Kumar, CFA
Alvaro Quiros
Supreet Khandate
Niels Schuehle
Lisa Wang
Paresh Tayade
Vinod L

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J.P.Morgan

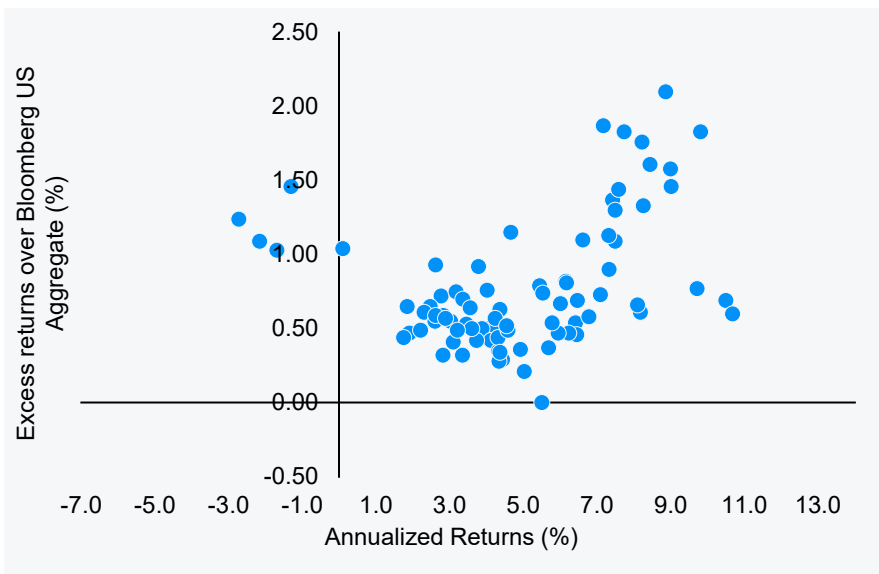
Appendix

Consistency is the hallmark of our investment approach

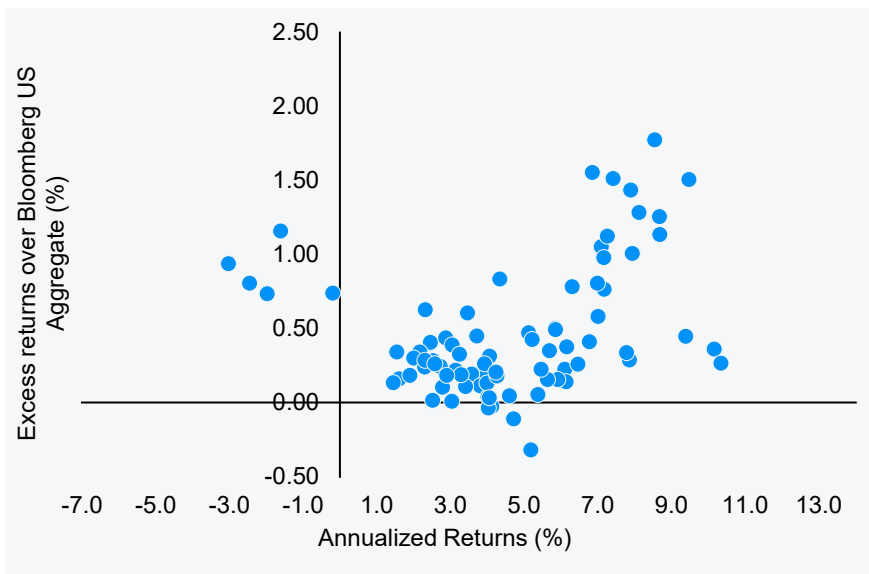
Core Bond Composite three-year rolling returns supplemental to annual performance report

Quarterly periods ending 3/31/2003 through 6/30/2023

Gross of Fees



Net of Fees⁵




Goal: Outperform the index by 50-100 bps (Gross of Fees) annually over a full market cycle

1. The charts and/or graphs shown above and throughout the presentation are for illustration and discussion purposes only.
2. Past performance is not indicative of future returns. Performance includes the reinvestment of income.
3. Performance results are gross of investment management fees. The deduction of an advisory fee reduces an investor's return. Actual account performance will vary depending on individual portfolio security selection and the applicable fee schedule. Fees are described in Part II of the Advisor's ADV which is available upon request. (Please see back for additional performance disclosure)
4. Because this strategy primarily invests in bonds, it is subject to interest rate risks. Bond prices generally fall when interest rates rise. This may make the strategy more volatile. Please see addition risks on the back disclosure page.
5. Please note, the "net of fee" composite performance returns is calculated using a model investment management fee. It is based on a representative fee applicable to institutional clients looking to invest in the strategy and it is higher or equal to the weighted average investment management fee of the underlying accounts within the composite at year end. Actual fees may be lower based on assets under management and other factors. Where fees are lower, "net of fees" performance returns will be higher. As such, "net of fees" performance for actual accounts may differ significantly from the "net of fees" performance shown above.

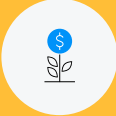
Proprietary research on every security in portfolios

Security selection based on our fundamental rankings is the key to this process




Fundamentals

- Corporate Health: cash flow, leverage ratings expectations, etc.
- ESG Profile: Greenhouse gas emissions, labor practices, board culture etc.¹



Quantitative (Valuations)

- Inter-sectional valuations: OAS, yield
- Absolute, relative, historical valuations



Technical

- Issuance calendar
- Investor positioning and overall demand

Fundamental Issuer Rating	Security rating	Analyst view	Positioning
AAA	4	Strong Outperform	Overweight
AA			
A+	3	Moderate Outperform	Overweight
A			
A-	2	Moderate Underperform	Underweight
BBB+			
BBB	1	Strong Underperform	Limited holdings
BBB-			
BB+	1S	Sell	None
BB			
BB-			

Source: J.P. Morgan Asset Management. To illustrate current process. ¹In the research process described above, we systematically assess financially material ESG factors amongst other factors in our investment decisions with the goals of managing risk and improving long-term returns. ESG integration does not change a strategy's investment objective, exclude specific types of companies or constrain a strategy's investable universe. ESG factors will not be considered for each and every security

Fixed income risk management: core responsibilities

- Ongoing independent oversight of the investment teams, closely aligned with business.
- A single global team providing comprehensive oversight.

Fiduciary Oversight

- Representing the interests of customers internally and safeguarding JPMAM's fiduciary responsibilities
- Oversight of Portfolio Managers on investment issues, objectives, and guidelines.
- Quarterly reviews of all portfolios in context of portfolio implementation, investment performance, investment objectives, sustainability, peer group.

Embedded Risk Oversight

- Developed consistent internal risk framework for each investment strategy
- Broad set of internal risk measures and reporting to assess ex-ante and ex-post exposures.
- Frequent meetings with each investment team.

Governance and Policy

- Quarterly reporting to Fund boards – investment reviews and governance.
- Corporate Oversight committees and working groups – policy, performance, product steering, liquidity forum.
- Product underwriting and approval of new instruments and funds.
- Report to the head of global business

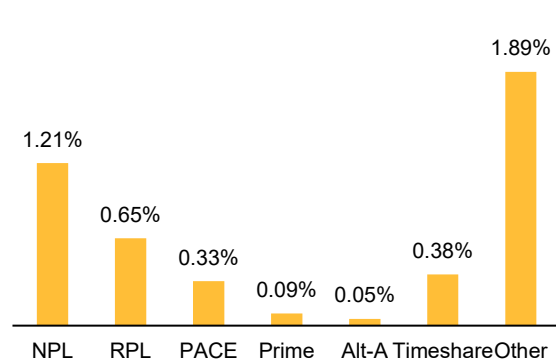
The portfolio risk management process includes an effort to monitor and manage risk, but does not imply low risk.

Core Bond Composite Structured Securities Analysis

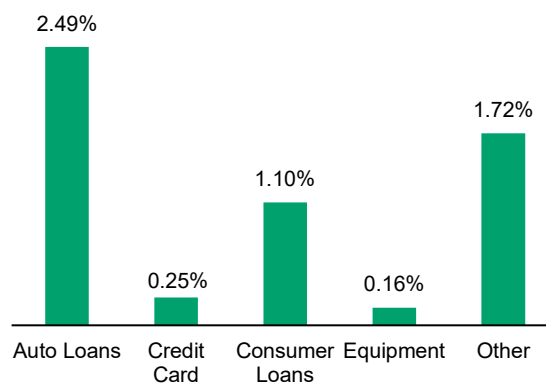
All data as of June 30, 2023

Sub-sector Statistics ¹	Agency Pass-Through	Agency CMO	Agency CMBS	Non-Agency RMBS	ABS	Non-Agency CMBS
Market Value (%)	13.40%	3.43%	11.23%	4.60%	5.72%	5.37%
Yield to Maturity	4.86%	5.48%	4.78%	9.21%	7.59%	8.09%
OAS (bps)	59	101	74	419	276	332
WAL (yrs)	8.93	5.57	7.04	2.70	2.96	2.85
Duration (yrs)	4.91	3.90	5.90	2.03	2.34	2.41
Convexity	(0.34)	0.00	0.47	0.10	0.12	0.10

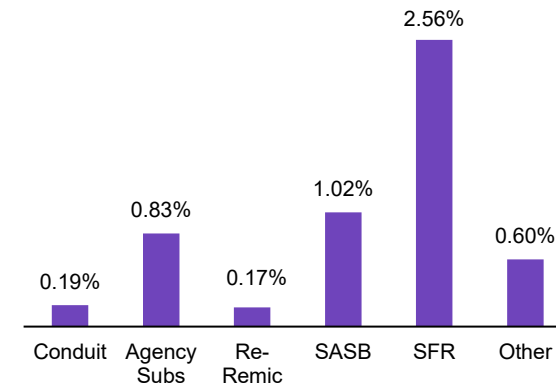
Non-Agency RMBS Sub-sector Distribution¹



ABS Sub-sector Distribution¹



CMBS Sub-sector Distribution¹



Portfolio and Benchmark statistics calculated with Prism/FI Reporting. Since 1/1/17, sector classifications have been updated within Global Fixed Income to provide greater consistency, transparency, granularity, and alignment with current industry conventions. Please see performance disclosures which accompany this presentation. Actual account characteristics may differ. * Securities must be investment grade at time of purchase. Securities downgraded to below investment can be held at manager discretion unless guidelines dictate otherwise.

Example – Agency CMBS

Diligent research to identify relative value opportunities

Collateral profile of the DUS Bond

Issuer	Fannie Mae
Coupon	2.15% (variable)
Original Term	10 Years
Lockout Term	9.5 Years
Vintage	2022
Deal Size	308,504,371
Total Units	3418
WA Original LTV	71.2
ESG	Social Bond

Fannie Mae DUS bonds come with strong prepay protection due to steep prepay penalties and loss sharing measures if a loan defaults

Security analysis example (12-month horizon stress test)

Security	Description	Price	Yield	Duration	Convex	OAS
Fannie Mae TBA	FNCL 2.0% 9/2022	85-25+	3.84%	7.14 yrs.	(0.46) yrs.	5
Fannie Mae DUS	FNA 2022-M1S A2	85-18	3.97%	8.28 yrs.	0.78 yrs.	67

Change in interest rates

	-150	-100	-50	0	+50	+100	+150
Fannie Mae TBA	12.85	10.15	7.05	3.70	0.21	(3.38)	(7.07)
Fannie Mae DUS	14.09	10.67	7.42	4.27	1.20	(1.79)	(4.71)
DUS advantage	1.24	0.52	0.37	0.57	0.99	1.59	2.36

Key point:

- Fannie Mae DUS can exhibit strong structural attributes and attractive relative value versus high quality alternatives

Snapshot	1 Year	2 Year	3 Year	5 Year	7 year	10 Year	30 Year
Treasury Curve	3.46	3.47	3.53	3.39	3.36	3.36	3.40

Source: J.P. Morgan Investment Management Inc.; Citigroup Yield book data as of 9/06/2022;

Analysis run using off-the-run Treasury curve, parallel & gradual shifts, no change in OAS, and a reinvestment rate at current YTM +/- the scenario

The above example is shown for illustrative purposes only and is not representative of any specific portfolio. The manager seeks to achieve the stated objective. There can be no guarantee the objective will be met.

Example - ABS Auto: Diligent research to identify relative value opportunities

Issuer Characteristics

- Flagship Credit Acceptance “Flagship” and its predecessor companies have been in the business of making auto loans to subprime borrowers since 2005. Perella Weinberg is the equity sponsor and has a ~\$281mm investment in the company. Flagship originates both indirect (85%) and direct (15%) loans. Indirect loans are sourced through a network of ~12k primarily franchise dealers across 49 states. The company currently has a \$3.5B managed portfolio. All underwriting and servicing functions are centralized. Income and employment are verified for all borrowers.
- Flagship maintained profitability through the pandemic. It earned ~\$65.5mm in net income in 2021 and through 1H22 has earned 22.9mm. The company retains sufficient liquidity through balance sheet reserves, unrestricted cash, and multiple warehouse lines (totaling \$900mm).
- Flagship has been a regular ABS issuer, bringing transactions to market 4 times per year on average. The FCAT 2022-4 transaction will be the company's 40th ABS securitization since 2012.

Collateral Characteristics

Auto Loan Originator	Flagship
Avg. Orig. Loan Size	\$26,456
FICO	586
LTV	120%
APR	18.46%
Original Term (months)	71 months
S&P Loss Expectation (CNL)	11.50%
Excess Ann. Spread	7.40%
Cumulative Loss Trigger	No

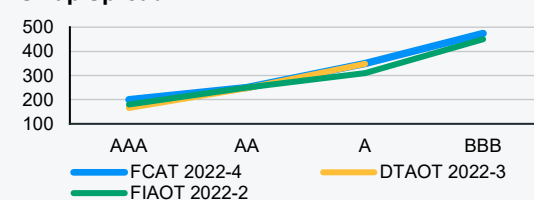
Structure Summary of FCAT 2022-4

Structure Summary of FCAT 2022-4							Pricing at 1.50% ABS			
Class	Description	S&P Rating	Coupon	Size (000)	Target CE (Net of Excess Spread)	Break Even Loss Multiple S&P	WAL	Principal Window	Spread over Treasuries	
Class A3	Senior	AAA	6.32%	50,020	43.10%	3.68x	2.25	23-31	+200	
Class B	Sub.	AA	6.78%	26,730	36.40%	3.19x	2.77	31-35	+250	
Class C	Sub.	A	7.71%	43,490	25.50%	2.43x	3.31	35-44	+350	
Class D	Sub.	BBB	8.86%	24,330	19.40%	1.95x	3.93	44-50	+475	
Class E	Sub.	BB-	12.66%	33,910	10.90%	1.52x	4.49	50-55	+900	

Sector Relative Value

Deal	S&P/Fitch Rating	Pricing Speed	Spread and Avg. Life
FCAT 2022-4 C	A/-	1.5 ABS	+350 3.31 yrs.
EART 2022-5 C	A/-	1.5 ABS	+250 2.56 yrs.
FIAOT 2022-2 C	A/-	1.5 ABS	+310 3.36 yrs.

Swap Spread



Fixed Income Relative Value (As of 11/15/22)

Description	S&P Rating	Capital Structure	Rank	Price	Yield	WAL	Eff. Dur.	OAS
FCAT 2022-4 Class C	A	Secured Auto loan	ABS	100.77	7.56%	3.31	2.82	+342
Lowes (LOW) 3.375 09/15/25	BBB+	Senior Unsecured Corp.		96.4	4.82%	2.83	2.65	+63

Horizon Total Return (As of 11/15/22)

12 Month Total Return Forecast*						
(+ or – basis point Yield Shift & -25 basis point tightening of FCAT credit spreads)						
Description	-50	-25	0	+25	+50	+75
FCAT 2022-4 Class C	8.24%	7.73%	7.22%	6.72%	6.21%	5.72%
Lowes (LOW) 3.375 09/15/25	5.76%	5.32%	4.88%	4.44%	4.00%	3.56%

Source: J.P. Morgan Investment Management Inc.; data as of November 2022; The above example is shown for illustrative purposes only and is not representative of any specific portfolio. The manager seeks to achieve the stated objective. There can be no guarantee the objective will be met.

GIPS® Report: Core Bond Composite

December 31, 2021

Year	Composite Gross of Fees Return %	Composite Net of Fees Return %	Benchmark Return %	Number of Accounts	Internal Dispersion	Composite 3Yr Annualized Std Dev (%)	Benchmark 3Yr Annualized Std Dev (%)	Composite Assets (\$Millions)	Firm Assets (\$ Billions)
2021	-0.68	-1.58	-1.54	34	0.11	3.65	3.40	72,353	2,076
2020	8.69	7.71	7.51	27	0.07	3.65	3.40	59,719	1,830
2019	8.88	8.39	8.72	33	0.06	2.93	2.91	66,855	1,492
2018	0.67	0.37	0.01	35	0.05	2.79	2.88	61,401	1,230
2017	4.26	3.94	3.54	41	0.13	2.77	2.81	61,049	1,165
2016	2.92	2.61	2.65	53	0.15	2.90	3.02	58,229	1,068
2015	1.34	1.03	0.55	65	0.11	2.62	2.92	65,433	834
2014	5.84	5.52	5.97	63	0.10	2.37	2.67	64,279	845
2013	-1.32	-1.61	-2.02	66	0.16	2.42	2.75	55,315	775
2012	5.73	5.41	4.21	64	0.30	2.15	2.42	56,824	701

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Internal Dispersion: The internal dispersion of annual returns is measured by the asset-weighted standard deviation of gross account returns included in the composite for the full year. For periods with less than 6 accounts included for the entire year, internal dispersion is not presented (n/a) as it is not considered meaningful.

Standard Deviation: The 3 year annualized standard deviation measures the variability of the composite gross returns and the benchmark returns over the preceding 36-month period. The standard deviation of the Composite and benchmark are not presented (n/a) for periods where the composite does not have a 36-month history.

Composite Listing: A listing of composite descriptions, policies for valuing investments, calculating performance, and preparing GIPS Reports are available upon request.

Past and Future Performance: Past performance is no guarantee of future results. As with any investment vehicle, there is always the potential for gains as well as the possibility of losses.

Composite Description: The Core Bond strategy seeks to outperform the Bloomberg U.S. Aggregate Bond Index over a market cycle while maintaining a risk profile similar to the index. The strategy focuses on adding value through a bottom-up, value-oriented approach, that emphasizes security selection. Security selection is generally guided by the benchmark and can include corporate bonds, mortgage-backed securities, asset-backed securities, treasuries and agency bonds. Since July 1, 2018, a composite-specific minimum asset level of \$100 million has been applied. Prior to July 1, 2018, the composite-specific minimum was \$50 million. Prior to April 1, 2005, the composite-specific minimum was \$25 million. Prior to April 1, 2004, the composite-specific minimum was \$10 million. The composite was created in January 1986, and the inception date is 01 January 1986.

Fee Schedule: Both gross and net returns reflect the reinvestment of income, deduction of transaction costs, and are net of withholding taxes where applicable. All returns are expressed in U.S. dollars. Gross returns do not reflect the deduction of investment advisory fees or any other expenses that may be incurred in the management of the account. Net-of-fees returns are calculated by deducting a model management fee from the monthly gross composite return on a monthly basis. The model fee is either the highest tier of the fee schedule in effect for the period, or a higher value, whichever is required to ensure the composite model net of fee return is lower than or equal to the composite net of fee return calculated using actual fees. As of December 31, 2021, the model fee applied is 0.30%. The standard annual fee schedule is as follows: 0.30% on the first \$75 million of assets managed; 0.25% on the next \$75 million; 0.225% on the next \$150 million; 0.15% thereafter. The composite contains Commingled Pension Trust Funds where the assets may represent internal sleeves of other J.P. Morgan or sub-advised funds, and apportioning of investment management fees is not readily available. Funds within this strategy are subject to additional performance fees that are not included in the model net returns. Actual advisory fees charged, and actual account minimum size may vary by account due to various conditions described in Part IIA of Form ADV

Compliance Statement: J.P. Morgan Investment Management Inc. claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. J.P. Morgan Investment Management Inc. has been independently verified for the periods 2001-2020. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. The Core Bond Composite has been examined for the periods January 1994 to December 2020. The verification and performance examination reports are available upon request.

Benchmark Description: The benchmark is the Bloomberg U.S. Aggregate Bond Index. The index returns are provided to represent the investment environment existing during the time periods shown and are not covered by the report of independent verifiers. For comparison purposes the index is fully invested, which includes the reinvestment of income. The returns for the index do not include any transaction costs, management fees or other costs.

Significant Cash Flow Policy: Beginning January 1, 2005, an account is temporarily removed from the composite if it experiences a cash and/or securities inflow or outflow greater than or equal to 10% of the account's beginning market value.

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Publication Date: 10/11/2022

J.P. Morgan Asset Management

RISKS ASSOCIATED WITH INVESTING:

Interest Rate Risk. The Strategy mainly invests in bonds and other debt securities. These securities will increase or decrease in value based on changes in interest rates. If rates increase, the value of the Strategy's investments generally declines. On the other hand, if rates fall, the value of the investments generally increases. Your investment will decline in value if the value of the investments decreases. Securities with greater interest rate sensitivity and longer maturities tend to produce higher yields, but are subject to greater fluctuations in value. Usually, the changes in the value of fixed income securities will not affect cash income generated, but may affect the value of your investment.

Mortgage-related and asset-backed securities are subject to certain other risks. The value of these securities will be influenced by the factors affecting the housing market and the assets underlying such securities. As a result, during periods of declining asset value, difficult or frozen credit markets, swings in interest rates, or deteriorating economic conditions, mortgage-related and asset-backed securities may decline in value, face valuation difficulties, become more volatile and/or become illiquid. Additionally, during such periods and also under normal conditions, these securities are also subject to prepayment and call risk. When mortgages and other obligations are prepaid and when securities are called, the strategy may have to reinvest in securities with a lower yield or fail to recover additional amounts (i.e., premiums) paid for securities with higher interest rates, resulting in an unexpected capital loss. Some of these securities may receive little or no collateral protection from the underlying assets and are thus subject to the risk of default described under "Credit Risk". The risk of such defaults is generally higher in the case of mortgage-backed investments that include so-called "sub-prime" mortgages. The structure of some of these securities may be complex and there may be less available information than other types of debt securities.

Credit Risk. There is a risk that issuers and counterparties will not make payments on securities and investments held by the portfolio. Such default could result in losses to an investment in the portfolio. In addition, the credit quality of securities held by a portfolio may be lowered if an issuer's financial condition changes. Lower credit quality may lead to greater volatility in the price of a security. Lower credit quality also may affect liquidity and make it difficult for the portfolio to sell the security. The portfolio may invest in securities that are rated in the lowest investment grade category. Such securities are considered to have speculative characteristics similar to high yield securities, and issuers of such securities are more vulnerable to changes in economic conditions than issuers of higher grade securities.

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Past performance does not guarantee future results. Total returns assumes reinvestment of any income. The deduction of an advisory fee reduces an investor's return. Actual account performance will vary on individual portfolio security selection and the applicable fee schedule. Fees are available upon request.

The Bloomberg U.S. Aggregate Index (formerly Lehman Brothers U.S. Aggregate Index) is an unmanaged index that represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. The performance of the index does not reflect the deduction of expenses associated with a mutual fund, such as investment management fees. By contrast, the performance of the Fund reflects the deduction of the mutual fund expenses, including sales charges if applicable. An individual cannot invest directly in an index.

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