

**AGENDA**  
**INVESTMENT COMMITTEE MEETING**  
**MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION (MCERA)**

**One McInnis Parkway, 1st Floor**  
**Retirement Board Chambers**  
**San Rafael, CA**

**January 19, 2022 – 9:00 a.m.**

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This meeting will be held via videoconference pursuant to MCERA Board of Retirement Resolution 2021/22-01, which invoked Government Code section 54953(e) for all MCERA Board and standing committee meetings through February 11, 2022.

Instructions for watching the meeting and/or providing public comment, as well as the links for access, are available on the [Watch & Attend Meetings](https://www.mcera.org/retirementboard/agendas-minutes/watchmeetings) page of MCERA's website. Please visit <https://www.mcera.org/retirementboard/agendas-minutes/watchmeetings> for more information.

The Board of Retirement encourages a respectful presentation of public views to the Board. The Board, staff and public are expected to be polite and courteous, and refrain from questioning the character or motives of others. Please help create an atmosphere of respect during Board meetings.

**CALL TO ORDER**

**ROLL CALL**

**A. OPEN TIME FOR PUBLIC EXPRESSION**

Note: The public may also address the Committee regarding any agenda item when the Committee considers the item.

Open time for public expression, from three to five minutes per speaker, on items not on the Committee Agenda. While members of the public are welcome to address the Committee during this time on matters within the Committee's jurisdiction, except as otherwise permitted by the Ralph M. Brown Act (Government Code Sections 54950 et seq.), no deliberation or action may be taken by the Committee concerning a non-agenda item. Members of the Committee may (1) briefly respond to statements made or questions posed by persons addressing the Committee, (2) ask a question for clarification, or (3) provide a reference to staff for factual information.

**B. MANAGER REPORTS**

1. Manager Overview – Jim Callahan, Callan LLC
2. Wellington Management Company – Core Plus Fixed Income – Campe Goodman, Jeremy Forster, Anand Dharan, and Molly Conway  
TIME CERTAIN: 9:05 a.m.

3. Parametric – Futures Overlay Program – Alex Braun, Heather Wolf, and Dan Ryan  
TIME CERTAIN: 9:35 a.m.

**C. NEW BUSINESS**

1. Investment Manager Reporting Schedule (Action)
2. Future Meetings

**D. INVESTMENT CONSULTANT PERFORMANCE UPDATE**

1. Flash Performance Update as of December 31, 2021

**Note on Process:** Items designated for information are appropriate for Committee action if the Committee wishes to take action.

**Note on Voting:** As provided by statute, the Alternate Safety Member votes in the absence of the Elected General or Safety Member, and in the absence of both the Retired and Alternate Retired Members. The Alternate Retired Member votes in the absence of the Elected Retired Member. If both Elected General Members, or the Safety Member and an Elected General Member, are absent, then the Elected Alternate Retired Member may vote in place of one absent Elected General Member.



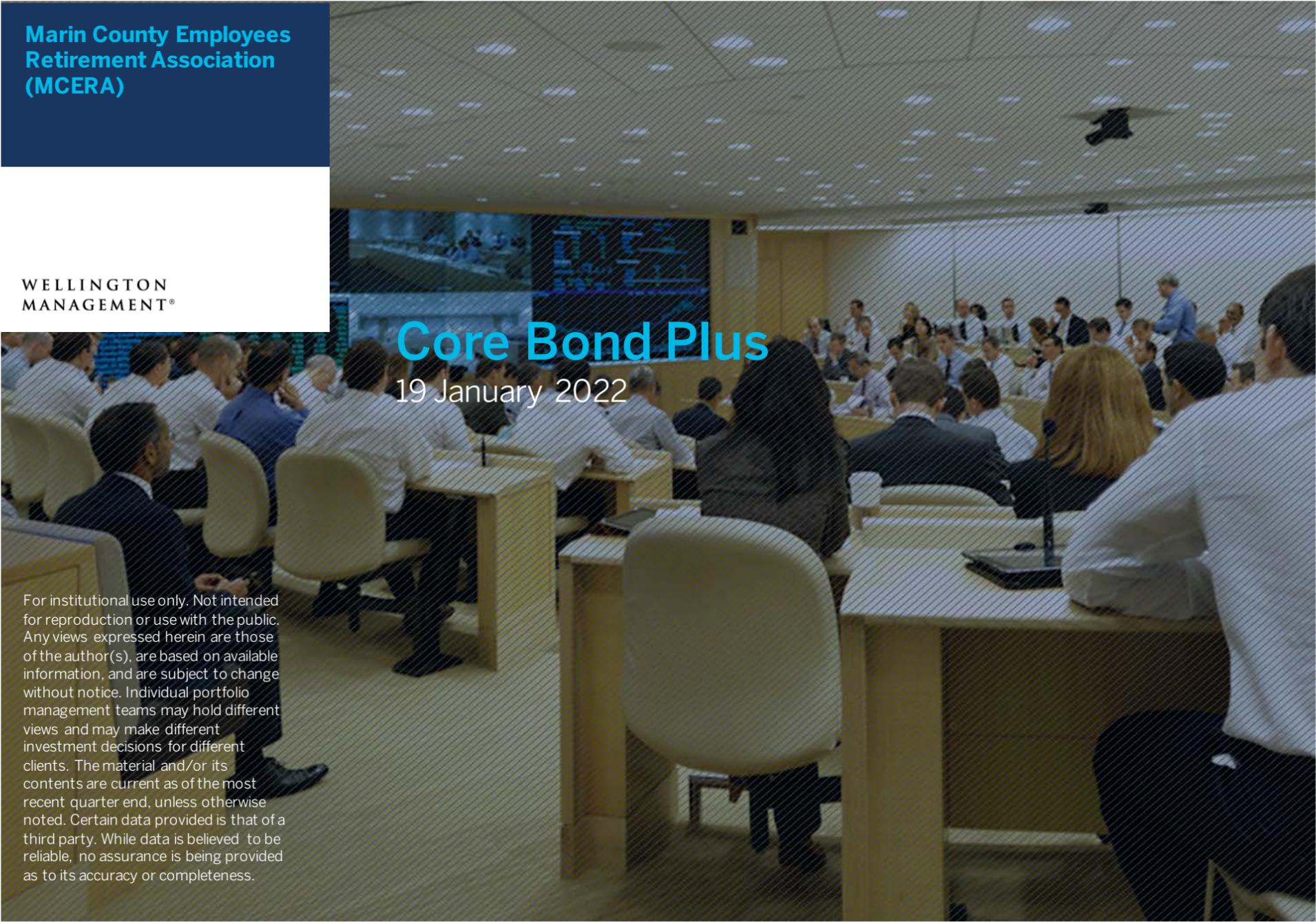
Agenda material is provided upon request. Requests may be submitted by email to [MCERABoard@marincounty.org](mailto:MCERABoard@marincounty.org), or by phone at (415) 473-6147.

MCERA is committed to assuring that its public meetings are accessible to persons with disabilities. If you are a person with a disability and require an accommodation to participate in a County program, service, or activity, requests may be made by calling (415) 473-4381 (Voice), Dial 711 for CA Relay, or by email at least five business days in advance of the event. We will do our best to fulfill requests received with less than five business days' notice. Copies of documents are available in alternative formats upon request.

The agenda is available on the Internet at <http://www.mcera.org>

## **B.1 Manager Overview**

There is no backup for this agenda item.



**Marin County Employees  
Retirement Association  
(MCERA)**

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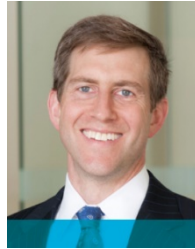
## Core Bond Plus

19 January 2022

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## Biography



### **Campe Goodman, CFA**

Senior Managing Director, Partner, and Fixed Income Portfolio Manager

Campe is a portfolio manager on the Broad Markets Team and lead portfolio manager on the Multi Sector Credit and Impact Bond portfolios. His focus is sector rotation — asset allocation across the major fixed income sectors — and he leads the specialist team responsible for the development of the top-down sector rotation strategy that is utilized in the Core Bond, Core Bond Plus, Impact Bond, Intermediate Bond, Long Bond, and Multi Sector Credit portfolios.

Prior to joining Wellington Management in 2000, Campe spent four years at the Massachusetts Institute of Technology studying macroeconomics and finance in a doctoral program in economics.

He received his AB in mathematics, magna cum laude, from Harvard College (1995). In addition, he holds the Chartered Financial Analyst designation.

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## Biography



### Jeremy Forster

#### Managing Director and Fixed Income Portfolio Manager

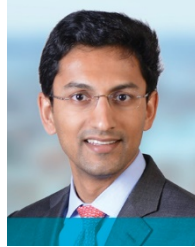
Jeremy is a fixed income portfolio manager on the Broad Markets Team. He focuses on global macro and US rates strategies, including developing fundamental and market-driven valuation models and determining relative value across sectors.

Prior to joining Wellington Management in 2011, Jeremy worked as a fixed income portfolio manager and trader on the Open Market Desk at the Federal Reserve Bank of New York (2006 – 2011). He began his career there as an assistant economist in the Research Group (2004 – 2006).

Jeremy earned his MBA from New York University (2008) and his BS in economics and finance, magna cum laude, from the University of Wyoming (2004).

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## Biography



### **Anand R. Dharan, CFA**

#### **Managing Director and Investment Director**

As an investment director in Investment Product & Fund Strategies, Anand is responsible for covering the Core Bond, Core Bond Plus, and Multi-Sector Credit approaches managed by the Broad Markets Fixed Income Team. He works closely with the fixed income investment teams to help ensure the integrity of their investment approaches. This includes meeting regularly with the teams and overseeing portfolio positioning, performance, and risk exposures, as well as developing new products and client solutions and managing business issues such as capacity, fees, and guidelines. He also meets with clients, prospects, and consultants to communicate our investment philosophy, strategy, positioning, and performance.

Prior to joining Wellington Management in 2015, Anand was an engagement manager at McKinsey & Company (2011 – 2015), where he served a variety of broker-dealers and asset managers, focusing on strategy and risk-management topics. Prior to business school, he was at Lehman Brothers (and subsequently Barclays Capital), where he structured derivative solutions to help corporate clients hedge fixed income market risk (2007 – 2009).

Anand earned his MBA, with distinction, from Harvard Business School (2011), and his AB in molecular biology, cum laude, from Princeton University (2007). Additionally, he holds the Chartered Financial Analyst designation and is a member of the CFA Institute and the CFA Society Boston.

## Biography



### **Molly Conway, CFA**

#### Vice President and Relationship Manager

Molly is a Relationship Manager based in Wellington's San Francisco office. In this role, she works with clients in the western US, including endowments, foundations, public funds, corporate pension plans, private wealth firms and family offices to understand their objectives, provide pertinent research and analysis and identify solutions to their evolving investment needs.

Previously, Molly was a member of our US Financial Intermediaries Group, serving as a portfolio advisor. In this role, she worked closely with Portfolio Managers, Macroanalysts, and Asset Allocation Strategists to articulate our investment strategies to clients and prospects on behalf of our Subadvisory Partners.

Before joining the firm in 2016, Molly spent nine years at Pioneer Investments in several capacities. Most recently, she worked on subadvisory and retirement consultant business development efforts (2012 – 2016), managing many of Pioneer's largest recordkeeper relationships. Prior to that, she held the roles of portfolio consultant supporting Pioneer's defined contribution investment-only business (2011 – 2012) and regional sales specialist supporting Pioneer's independent and broker/dealer presence in Georgia and South Carolina (2008 – 2011). She joined Pioneer in 2007 as a divisional sales associate.

Molly received her BA in psychology, magna cum laude, from Boston College (2007). Additionally, she holds the Chartered Financial Analyst (CFA) designation and is a member of the CFA Society San Francisco.

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## BY THE NUMBERS

### Business

USD 1,385 billion of client assets under management

2,444 clients

61 countries in which clients are based

### People and portfolios

920 investment professionals

17 years of experience, on average

174 partners all active at the firm

### Heritage: key dates

**1928** Wellington Fund – the first US balanced fund

**1979** Establishment of our private partnership

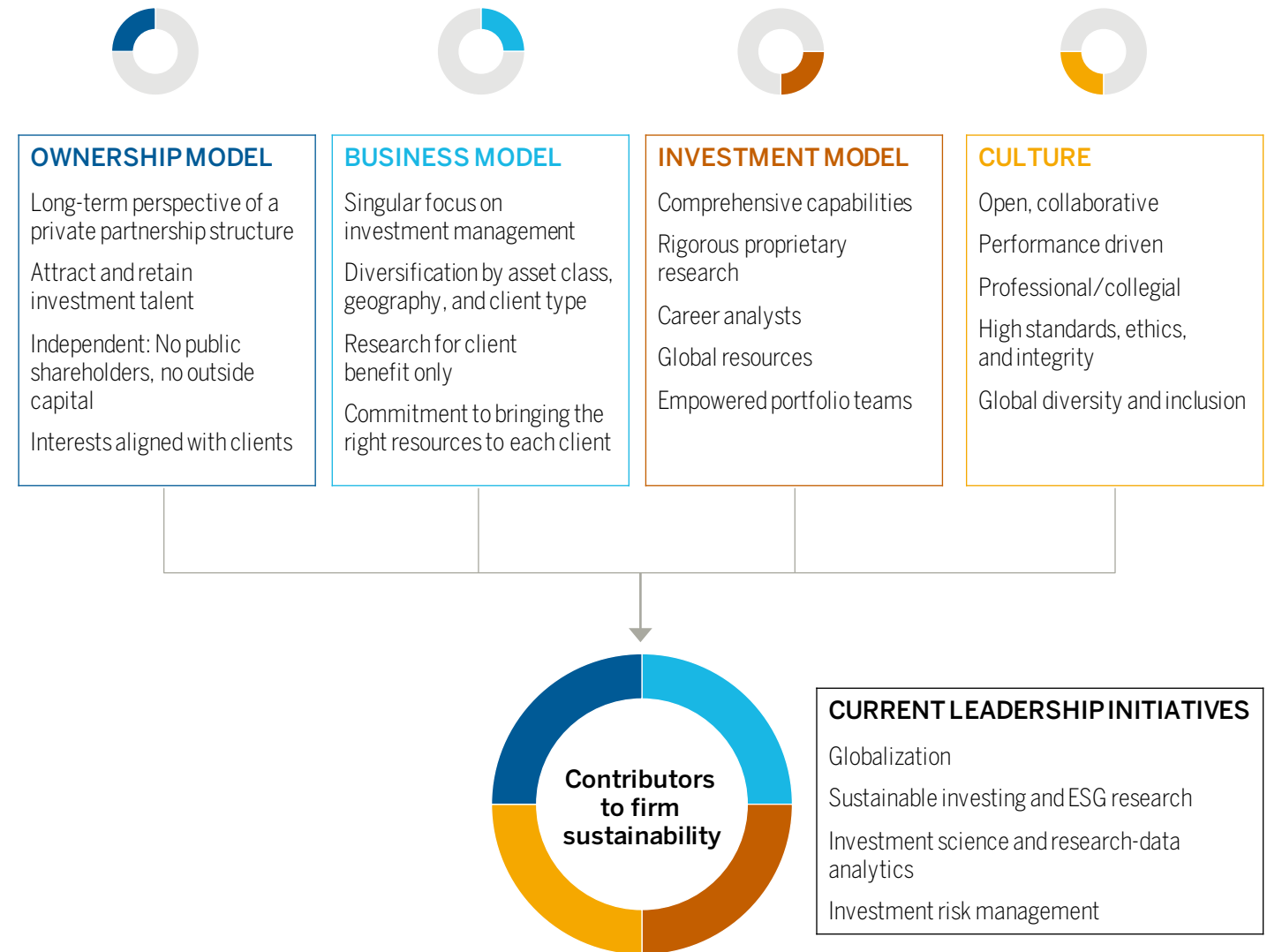
**1994** Our first long – short strategy

**2014** Our first dedicated private equity strategy

**2015** Global Impact: Our first diversified impact investing strategy in public equities

# Wellington Management today

A trusted advisor and strategic partner to clients worldwide



As of 30 September 2021

## Core Bond Plus

### Investment strategy

#### Objective

We seek to consistently outperform the broad fixed income market as represented by the Bloomberg US Aggregate Bond Index with equivalent or lower levels of risk

#### Philosophy

We believe a diversity of high quality investment ideas managed in a risk-controlled framework may lead to superior investment results

#### Approach

We seek to provide consistent excess returns through all market environments by

- Diversifying sources of return across multiple perspectives, investment styles, and time horizons
- Identifying skilled investors and allowing them to focus exclusively on their area of expertise
- Measuring and controlling the aggregation of risks

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## Core Bond Plus

### Investment returns

	As of 31 December 2021 (% , USD)					
	4Q21	1 yr	3 yrs	5 yrs	10 yrs	SI
<b>MCERA CBP (gross)</b>	<b>0.13</b>	<b>-0.56</b>	<b>6.46</b>	<b>4.83</b>	<b>4.26</b>	<b>4.98</b>
Bloomberg US Aggregate Bond	0.01	-1.54	4.79	3.57	2.90	4.10
Active return (gross vs benchmark)	0.12	0.98	1.67	1.26	1.36	0.88

	2021	2020	2019	2018	2017	2016
<b>MCERA CBP (gross)</b>	<b>-0.56</b>	<b>10.14</b>	<b>10.17</b>	<b>-0.17</b>	<b>5.11</b>	<b>4.92</b>
Bloomberg US Aggregate Bond	-1.54	7.51	8.72	0.01	3.54	2.65
Active return (gross vs benchmark)	0.98	2.64	1.45	-0.18	1.57	2.28

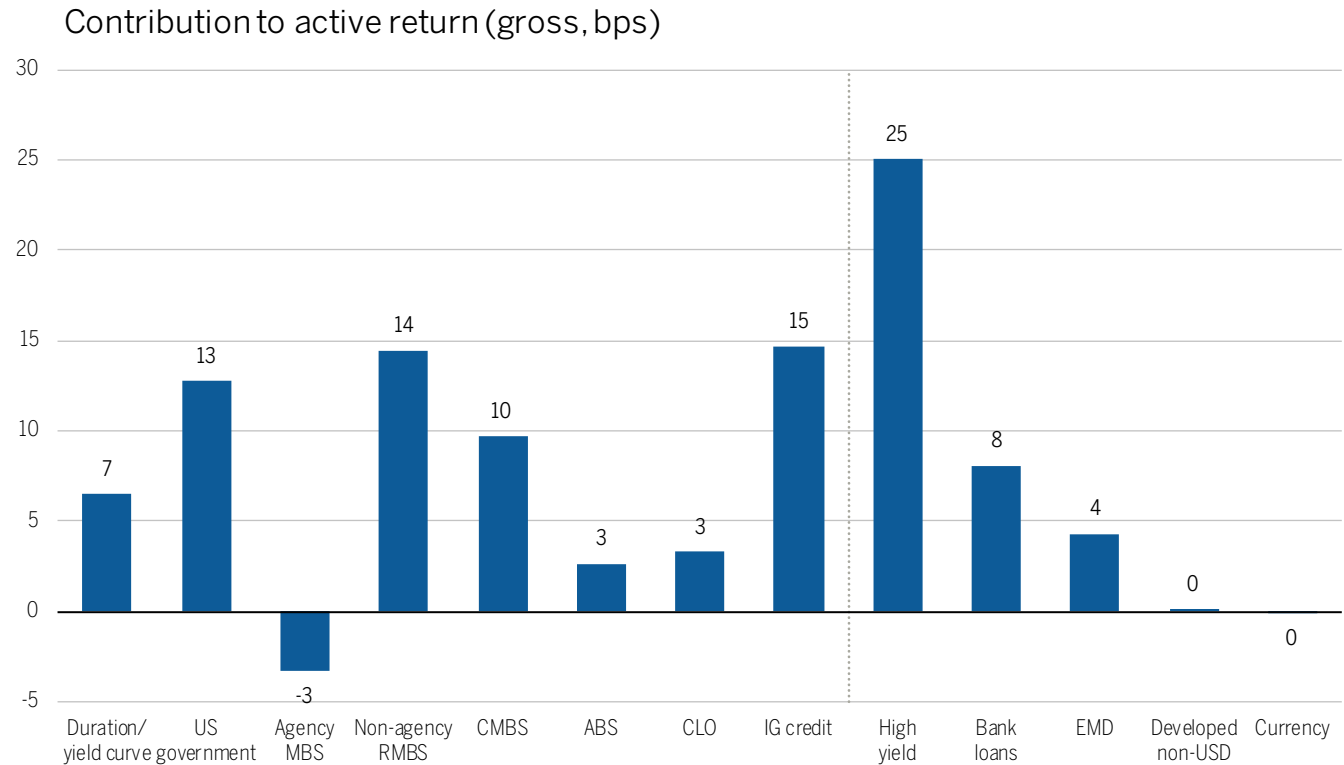
	2015	2014	2013	2012
<b>MCERA CBP (gross)</b>	<b>0.30</b>	<b>6.47</b>	<b>-0.76</b>	<b>7.83</b>
Bloomberg US Aggregate Bond	0.55	5.97	-2.02	4.21
Active return (gross vs benchmark)	-0.25	0.50	1.26	3.61

Inception date: 31 October 2002. | Sums may not total due to rounding. | Performance returns for periods one year or less are not annualized. | **PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS AND AN INVESTMENT CAN LOSE VALUE.**

## Core Bond Plus

Performance review (USD): One year as of 31 December 2021

Active return: 98 bps

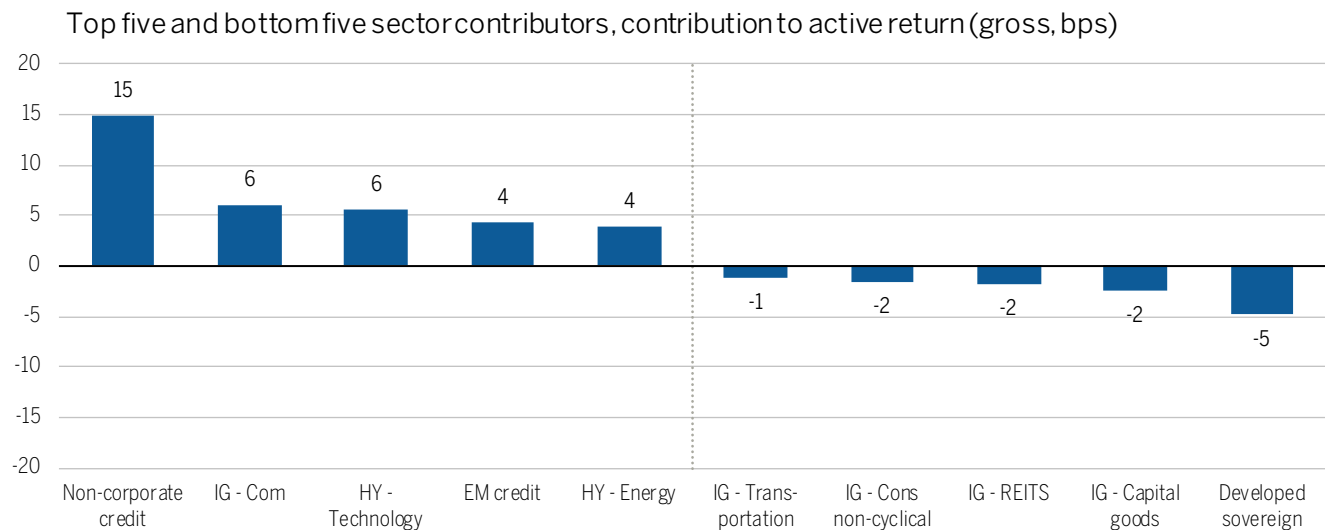


Benchmark used in the calculation of attribution data:  
Bloomberg US Aggregate Bond. | Sums may not total  
due to rounding. | The contribution from Cash & cash  
equivalents is 0 bps. | **PAST RESULTS ARE  
NOT NECESSARILY INDICATIVE OF  
FUTURE RESULTS AND AN  
INVESTMENT CAN LOSE VALUE.**

**Core Bond Plus**

Performance review (USD): One year as of 31 December 2021

## Credit detail

**Top relative contributors**

Issuer	Sector	Average benchmark relative positioning (MV%)	Contribution (gross, bps)
Metropolitan Tran NY	Non-corporate credit	0.5	9
Chicago, IL	Non-corporate credit	0.2	3
Charter Communications	Multiple	0.4	3
Riverside County	Non-corporate credit	0.5	2
Energy Transfer Equity LP	IG - Energy	0.2	2

**Bottom relative contributors**

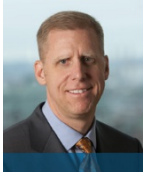
Issuer	Sector	Average benchmark relative positioning (MV%)	Contribution (gross, bps)
Romania	Dev sovereign	0.4	-4
Colombia Republic	Dev sovereign	0.2	-2
Panama Govt Intl Bd	Dev sovereign	0.2	-1
Arab Republic of Egypt	EM sovereign	0.1	-1
Oracle	IG - Tech	0.1	-1

Benchmark used in the calculation of attribution data:  
Bloomberg US Aggregate Bond. | **PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS AND AN INVESTMENT CAN LOSE VALUE.**

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## Broad Markets Investment team

### Broad markets team



**Joe Marvan, CFA**  
Portfolio Manager  
33 years of professional experience



**Campe Goodman, CFA**  
Portfolio Manager  
22 years of professional experience



**Jeremy Forster**  
Portfolio Manager  
16 years of professional experience



**Rob Burn, CFA**  
Portfolio Manager  
20 years of professional experience



**Brij Khurana**  
Portfolio Manager  
13 years of professional experience



**Allan Levin, CFA**  
Portfolio Manager  
25 years of professional experience

### Sector specialist portfolio managers

**Brian Conroy, CFA**  
Agency Mortgages  
14 years of professional experience

**Samuel Epee-Bounya**  
Emerging Markets  
21 years of professional experience

**Kyra Fecteau, CFA**  
Securitized Credit  
13 years of professional experience

**Tim Haney, CFA**  
Municipals  
32 years of professional experience

**Jeff Heuer, CFA**  
Bank Loans  
32 years of professional experience

**Michael Hong, CFA**  
Global High Yield  
25 years of professional experience

**Chris Jones, CFA**  
Global High Yield  
30 years of professional experience

**Kevin Murphy**  
Emerging Markets  
34 years of professional experience

**Cory D. Perry, CFA**  
Securitized Credit  
23 years of professional experience

**Scott St. John, CFA**  
Investment Grade Credit  
28 years of professional experience

### Research/Trading

**Global High Yield/Bank Loans**  
13 Credit analysts

**Emerging Markets Debt**  
4 Credit analysts

**Securitized**  
4 Credit analysts

**IG Credit/Taxable Municipals**  
18 Credit analysts

**Fixed Income Syndicate**  
5 traders

**Secondary Trading**  
38 traders

### Portfolio construction

**Lia Kirakossian**  
Solutions Portfolio Manager  
**Adam Chrissis, CFA, FRM**  
**Aaron Mayo, CFA**  
**Mihir Shah, FRM**

### Product Management

**Anand Dharan, CFA**  
Investment Director

**Sean Sullivan**  
Investment Specialist

### Additional resources

11 Macro strategists

53 Global Industry analysts

13 ESG/Sustainability research

25 Risk Professionals

18 Multi-Asset analysts

30 September 2021

## Core Bond Plus

### Investment process



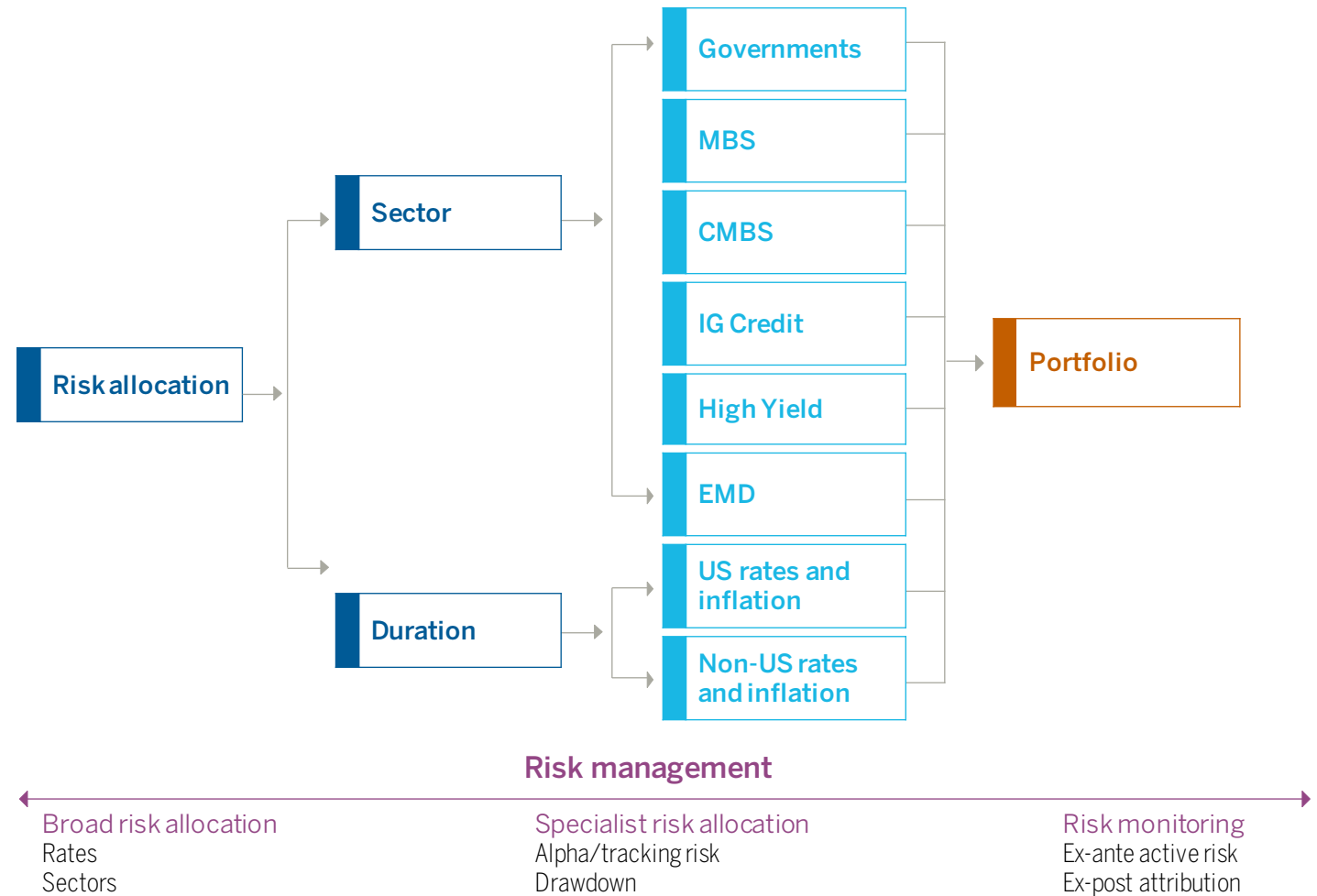
## Core Bond Plus

### Investment process

**Broad strategy**  
Broad markets team

**Sector strategy**  
Sector specialists

**Portfolio construction**  
Portfolio manager



## Investment risk oversight at Wellington Management

### Line Management

Team/resource focus  
High frequency interaction  
Assess resource needs  
Investment team reviews

### Product Management

Independent reporting line  
Trade and client portfolio level focus  
High frequency interaction  
Style consistency/capacity/risks

### Risk Advisory Council

Informal, tactical  
Small group of specialists  
Focus on investment risk topics

### Portfolio Manager

Philosophy  
Process  
Risk Approach

### Investment Review Group

Formal, strategic  
Senior Portfolio Manager peer oriented review  
Focus on fiduciary topics

### Global Risk and Analytics

Independent reporting line  
Lead independent oversight  
Strategy level across asset classes  
Match risk with conviction  
Set best practices for analytics/tools

## Core Bond Plus

### Outlook and strategy – First quarter 2022

	Outlook	Strategy
Economy/ Interest rates	Expect continued above trend growth, underpinned by healing labor market and resilient public health backdrop  Positive outlook largely priced into risk assets; bouts of market volatility will provide chances to buy at better valuations	Close to neutral risk posture; preserving cash/liquidity  Remaining tactical in duration
MBS	MBS spreads appear attractive relative to US Treasuries  Increased discussions around balance sheet normalization could pressure MBS spreads	Overweight to agency pass-throughs, focusing on relative value opportunities and income
Corporate bonds	Leverage has declined back to the lowest levels since 2015 but credit fundamental improvement has peaked  Shareholder-friendly activities remain low for now but we will be closely monitoring whether M&A activity picks up	Underweight IG corporate bonds  Focus on identifying inefficiencies in the pricing of risk
Structured finance	Attractive forbearance plans, low interest rates, and undersupply are tailwinds for US housing  CLOs are well-diversified across sectors; benefit from improving bank loan fundamentals	Own structured finance tied to residential mortgages, high quality CLOs, DUS, CMOs, and senior CMBS tranches with attractive collateral  Focus on income and manager quality
High yield	High yield default rate should continue to decline over the coming year  Spreads are at post-GFC tight, and much, but not all, good news is priced into bonds	Focus on high quality BBs that have very strong balance sheets in lieu of investment grade companies that have similar credit risk but less spread
EMD	Strong global growth and more accommodative EM central banks should improve EM fundamentals  EM corporates are improving their credit profiles  Valuation increasingly attractive in higher yielding EM	Maintain pro-risk lean in EM  Among frontier issuers, favor those with relatively low repayment needs over the next few years  Allocate to EM corporate issuers with prudent balance sheet management and low exposure to their home countries

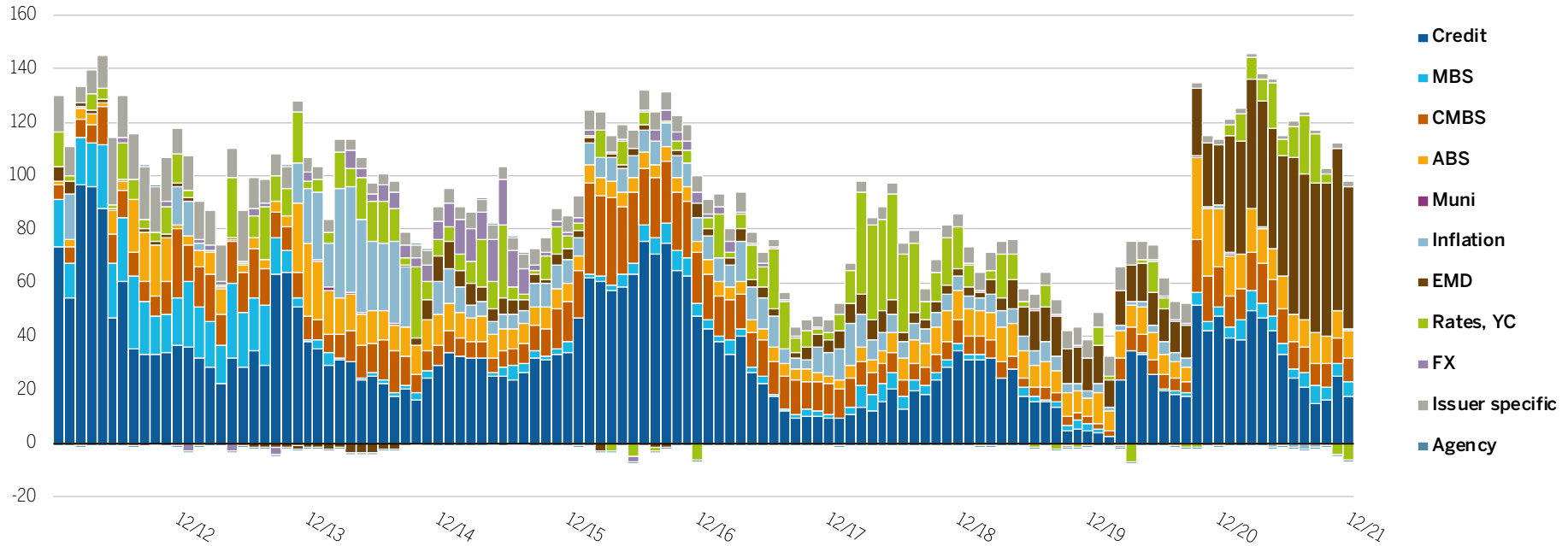
Information contained within Outlook section contains estimates and forecasts. Actual results may differ significantly from information shown. Forecasts rely upon assumptions and other expectations of future outcomes and is therefore subject to numerous limitations and biases. Future occurrences and results, which may also be formulated based on subjective inputs (i.e., strategist/analyst judgment), will differ, perhaps significantly, from those reflected in the charts and/or graphs within.

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## Core Bond Plus

### Active risk exposure over time

Contribution to active risk (bps)

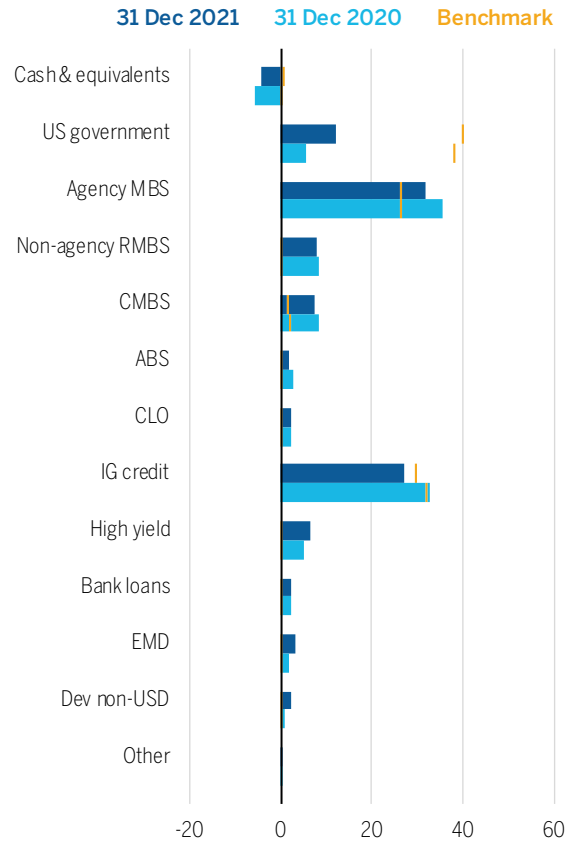


Benchmark: Bloomberg US Aggregate Bond | Source: Wellington Management Noether Risk Model. The model was implemented starting on 1 October 2020 and could result in significant one-time value changes as a result of the risk model change. Please refer to the Important Disclosures for more information. | The first data point displayed may not correspond to the inception date of the account and is based upon the account's configuration within the FIRE system. | Chart data: 31 January 2012 - 31 December 2021

## Core Bond Plus

### Portfolio positioning

Sector (MV %)



Sector detail (MV %)

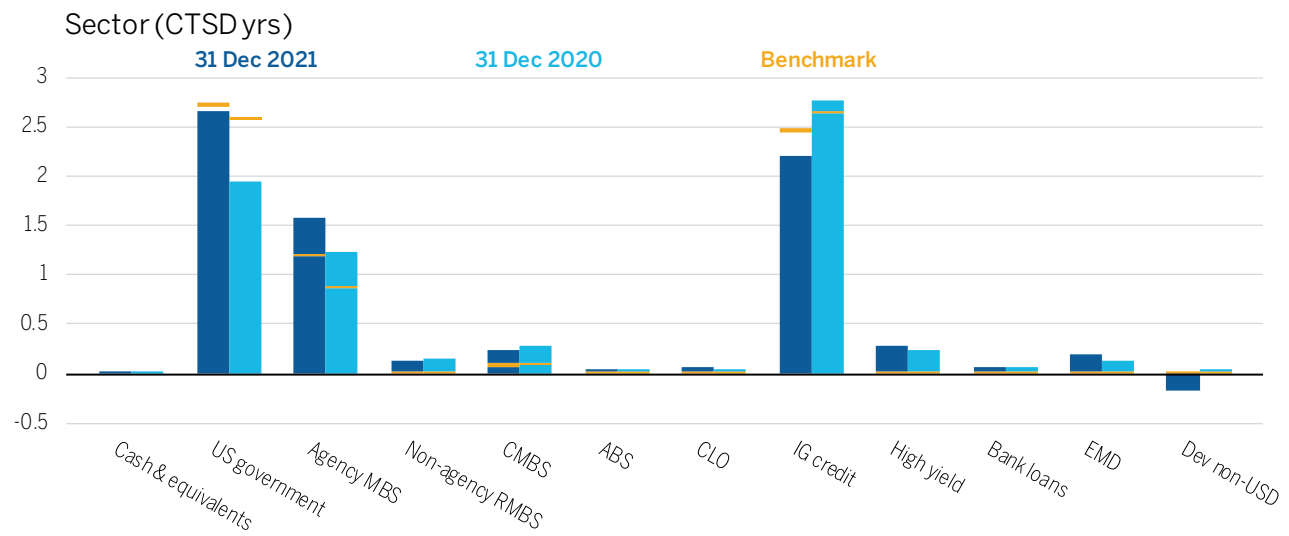
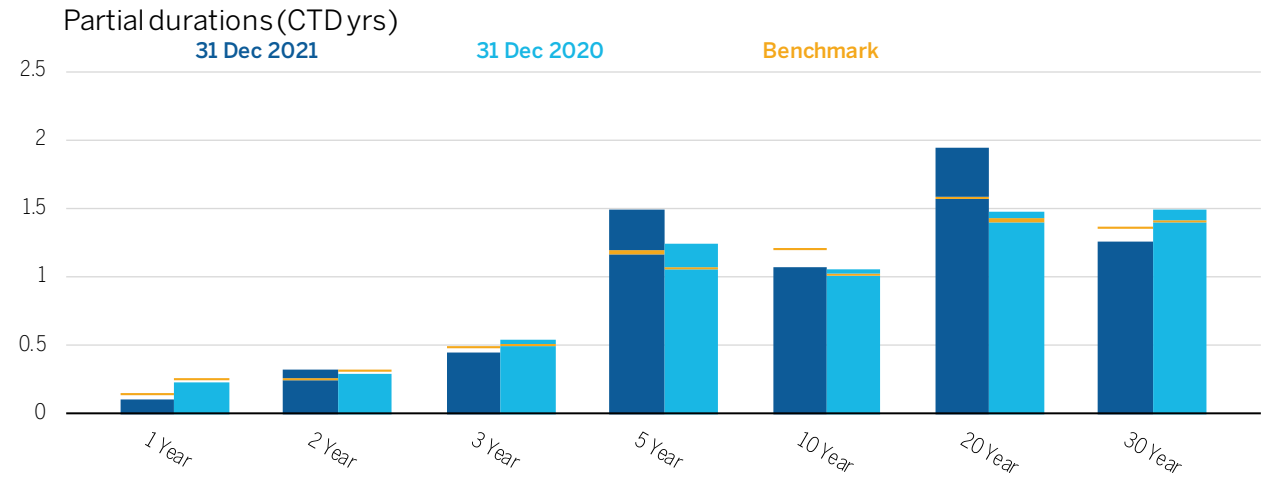
	Portfolio	Benchmark
<b>Cash &amp; equivalents</b>	<b>-4.32</b>	<b>0.85</b>
<b>US government</b>	<b>12.06</b>	<b>40.13</b>
Treasuries	11.22	38.77
TIPS	0.84	—
US agencies	—	1.36
<b>Agency MBS</b>	<b>31.76</b>	<b>26.71</b>
Pass-throughs	29.79	26.71
CMO	1.97	—
ARMs	0.00	—
<b>Non-agency RMBS</b>	<b>7.83</b>	<b>—</b>
<b>CMBS</b>	<b>7.38</b>	<b>2.02</b>
Cash bonds	7.38	2.02
<b>ABS</b>	<b>1.95</b>	<b>0.30</b>
Autos	0.93	0.20
Other ABS	1.02	0.10
<b>CLO</b>	<b>2.10</b>	<b>—</b>
<b>IG credit</b>	<b>27.15</b>	<b>29.93</b>
Industrials	11.36	15.09
Financials	9.28	8.11
Utilities	3.03	2.12
Taxable municipal	1.89	1.10
Non-corporates	1.49	3.51
Tax exempt municipal	0.10	—
<b>High yield</b>	<b>6.42</b>	<b>—</b>
Cash bonds	6.42	—
<b>Bank loans</b>	<b>2.40</b>	<b>—</b>
<b>EMD</b>	<b>3.01</b>	<b>0.07</b>
EM external	3.01	0.07
<b>Dev non-USD</b>	<b>2.25</b>	<b>—</b>
<b>Other</b>	<b>0.00</b>	<b>—</b>

Benchmark: Bloomberg US Aggregate Bond. | "Other" within Sector (when applicable) includes security types that do not fall within the displayed categories.

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## Core Bond Plus

### Portfolio positioning



Benchmark: Bloomberg US Aggregate Bond. | "Other" within Sector (when applicable) includes security types that do not fall within the displayed categories.

## Core Bond Plus

### Portfolio characteristics

#### Statistics

	31 December 2021		31 December 2020	
	Portfolio	Benchmark	Portfolio	Benchmark
Yield to worst (%)	2.5	1.7	1.8	0.9
Option-adjusted spread (bps)	88	27	106	32
Average quality	AA-	AA	A+	AA
Duration - effective (yrs)	6.63	6.27	6.32	6.05
Duration - spread (yrs)	7.30	6.55	6.96	6.28
Duration - inflation-linked (yrs)	0.14	0	0.19	0
Convexity - effective	0.08	0.19	0.41	0.61
% TBAs (%)	23.0	0	20.7	0
% CoCos (%)	0.1	0.2	0.3	0.1
% Emerging (%)	8.4	1.5	4.8	1.7
Below investment grade (%)	11.9	0	10.8	0
Non-USD currency exposure (%)	3.2	0	0.9	0
Non-USD denominated holdings (%)	3.4	0	1.1	0

Benchmark: Bloomberg US Aggregate Bond. Quality ratings are based on the middle of Moody's, S&P, and Fitch (split low).



## US market outlook

### First quarter 2022

Expect growth to moderate from elevated level as fiscal and monetary support wane

High savings and low interest rates still supportive of consumer spending; earned incomes to drive spending as transfer payments roll off, though some workers will not return to the labor force

Fed to taper asset purchases and begin to hike policy rates

Inflation expected to peak in early to mid-2022

Credit fundamentals and technicals remain strong, which are reflected in rich valuations. Corporate credit conditions may start to deteriorate at the margin.

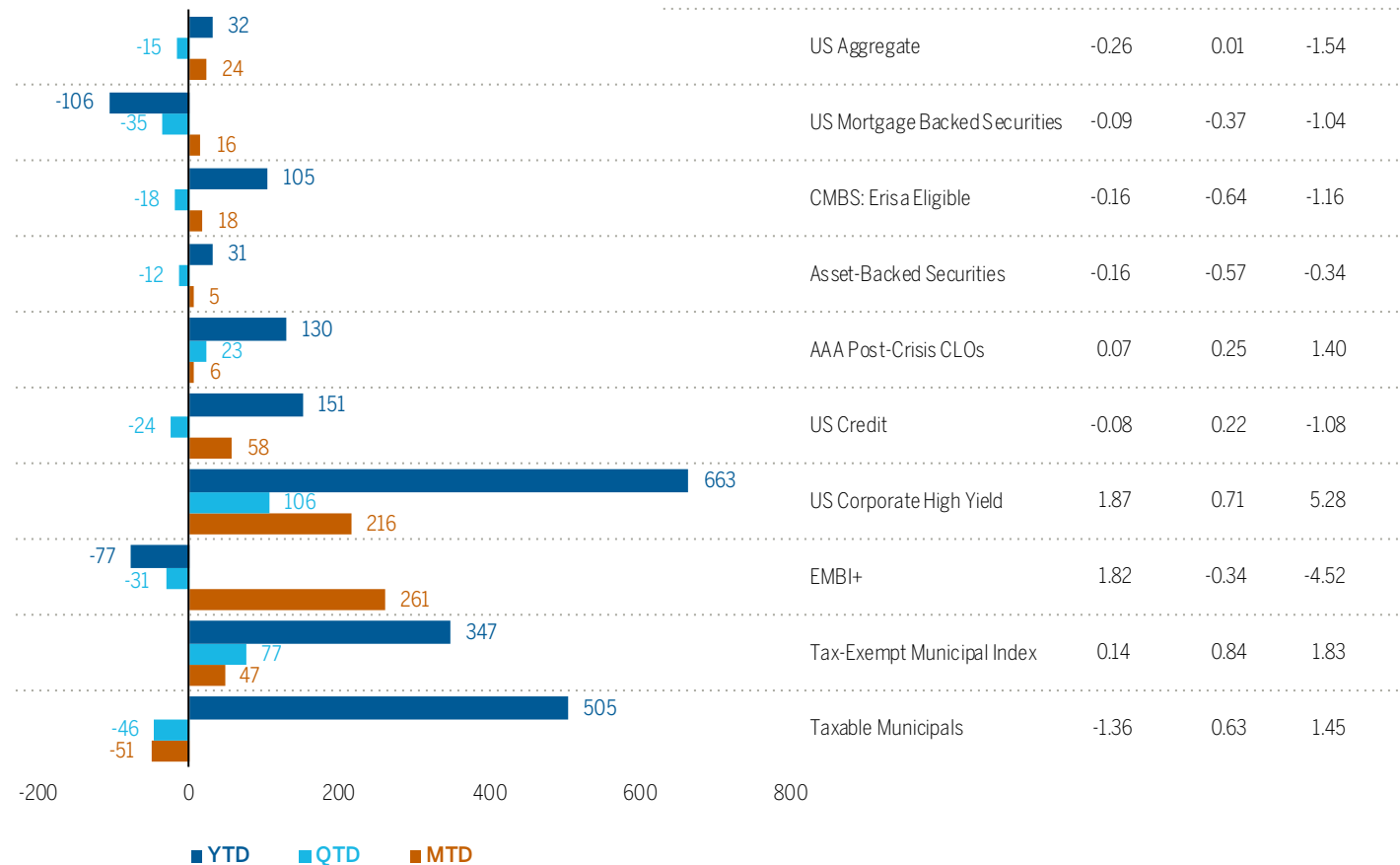
Risks we are monitoring: impact of tighter Fed policy, China deleveraging, persistent elevated inflation

Views expressed herein are those of the investment team, are based on available information, and are subject to change without notice. Individual portfolio management teams may hold different views and may make different investment decisions for different clients. This is not to be construed as investment advice, or a recommendation to buy or sell any specific security.

## Fixed income sector performance

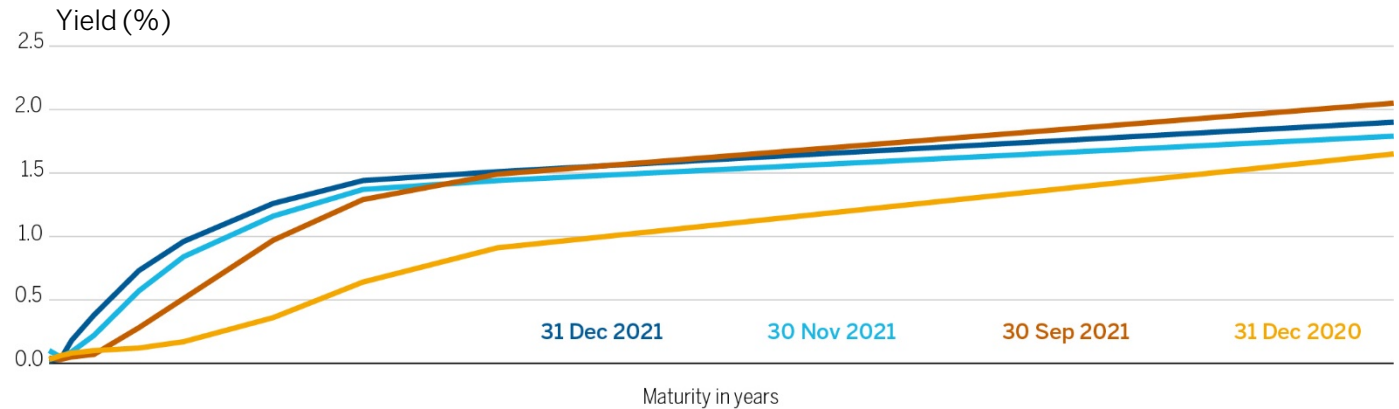
Excess returns to duration equivalent Treasuries (bps)

As of 31 December 2021



Sources: Bloomberg, JPMorgan, Merrill Lynch, Wellington Management | The EMBI+ is comprised of US dollar denominated debt instruments of the Emerging Markets | Return data presented based on representative indexes for each fixed income sector: Bloomberg US Treasury Index, Bloomberg US Aggregate Index, Bloomberg US Agency Index, Bloomberg US Fixed Rate Agency MBS Index, Bloomberg CMBS ERISA-Eligible Index, Bloomberg ABS Index, JPMorgan Post-Crisis AAA CLO Index, Bloomberg US Credit Index, Bloomberg US Corporate High Yield Index, JPMorgan EMBI+ Index, Bloomberg Taxable Municipal Index, BofA Merrill Lynch US Municipal Securities Index. MBS excess returns are based on an internally calculated proxy for the US MBS sector. Investments cannot be made directly into an index. **PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS AND AN INVESTMENT CAN LOSE VALUE.**

## US Treasury curve



		3 mos	2 yrs	5 yrs	10 yrs	30 yrs
<b>Curve data</b> (yield %)	31 Dec 2021	0.03	0.73	1.26	1.51	1.90
	30 Nov 2021	0.05	0.57	1.16	1.44	1.79
	30 Sep 2021	0.03	0.28	0.97	1.49	2.05
	31 Dec 2020	0.06	0.12	0.36	0.91	1.65
<b>Changes</b> (bps)	MTD (30 Nov 2021 – 31 Dec 2021)	-2	17	10	7	11
	QTD (30 Sep 2021 – 31 Dec 2021)	0	46	30	2	-14
	YTD/TTM (31 Dec 2020 – 31 Dec 2021)	-3	61	90	60	26

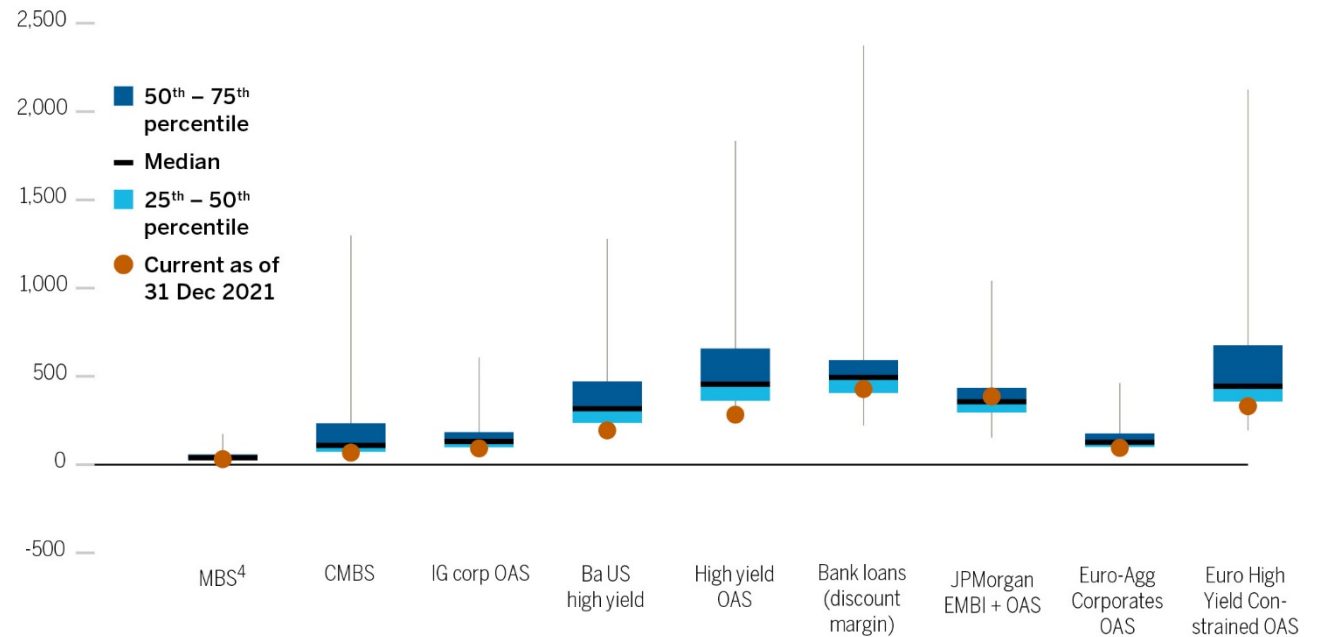
Forward curve matrix<sup>1</sup>

		Treasury maturity					
Forward time period	31 Dec 2021	1 mo	3 mos	2 yrs	5 yrs	10 yrs	30 yrs
		0.02	0.03	0.73	1.26	1.51	1.90
3 mos		0.31	0.31	0.91	1.35	1.58	1.92
1 yr		1.09	1.08	1.27	1.57	1.73	1.97
2 yrs		1.44	1.43	1.58	1.73	1.86	2.00
3 yrs		1.73	1.71	1.72	1.78	1.96	2.02
5 yrs		1.90	1.88	1.89	1.80	2.11	2.04
10 yrs		2.45	2.45	2.45	2.45	2.44	2.07

<sup>1</sup>The analysis presented contains forward looking estimates/projections. Actual results may vary, perhaps significantly, from data shown. | Source: Bloomberg | As of 31 December 2021

## Fixed income spread sectors

### Historical spread analysis

Historical spreads (OAS, bps)<sup>1</sup>

<sup>1</sup>Historical spread analysis based on trailing 20 years (unless otherwise noted) of month-end option adjusted spreads, as of 31 December 2021 | <sup>2</sup>Effective yield for bank loans | <sup>3</sup>JPMorgan EMBI+ is comprised of US dollar denominated debt instruments of the Emerging Markets | <sup>4</sup>In April 2020 and May 2021, MBS Index spreads were impacted by updates to the Bloomberg prepayment model | **PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS AND AN INVESTMENT CAN LOSE VALUE.** | Sources: JPMorgan, Bloomberg, S&P LSTA Leveraged Loan Index

**Current**

Spread rank (%)	33	13	15	5	3	34	64	21	18
Yield (%) <sup>2</sup>	1.98	1.88	2.33	3.30	4.21	3.94	5.49	0.52	2.88

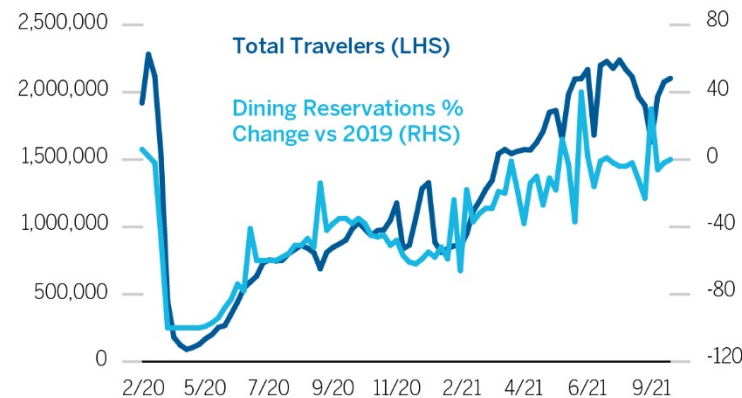
**Spread**

31 Dec 2021	31	68	92	194	283	428	386	95	331
30 Nov 2021	34	69	99	241	337	432	415	108	371
30 Sep 2021	27	61	84	203	289	413	373	84	304
31 Dec 2020	39	81	96	264	360	475	339	92	355

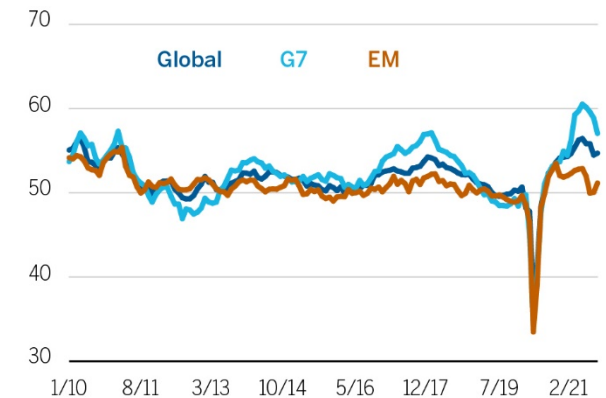
## Fixed Income Outlook

### Economic environment

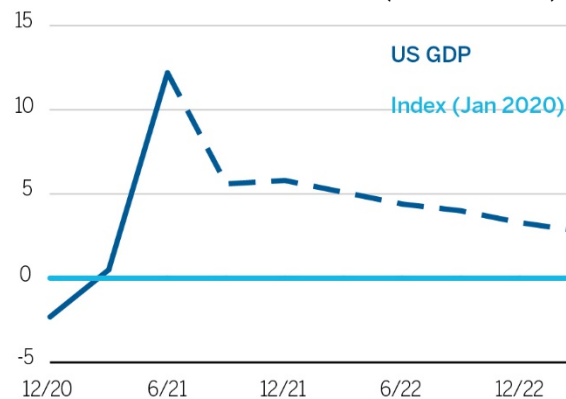
US travel/dining picking up with vaccination rates<sup>1</sup>



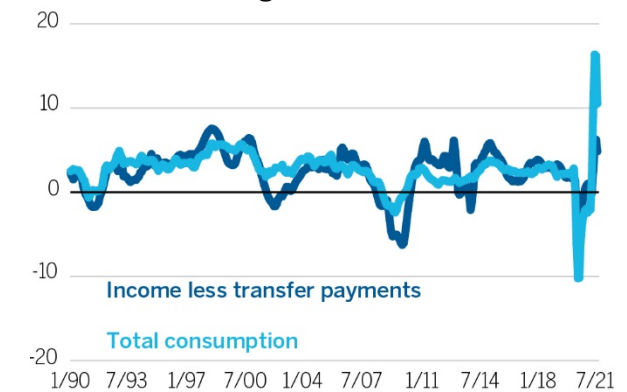
Convergence in global manufacturing PMIs (> 50 = increasing, index level)<sup>2</sup>



Near term expectations remain elevated for US GDP – US Real GDP (YoY% SAAR)<sup>3</sup>



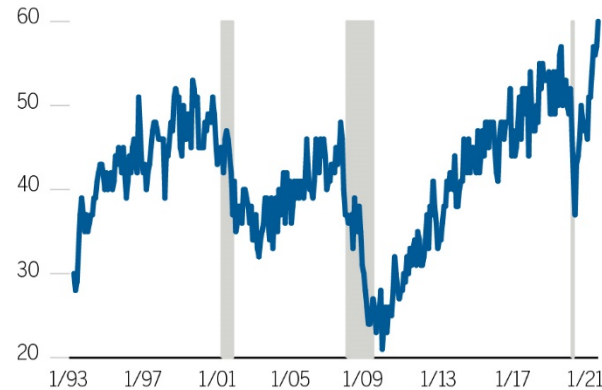
Consumer spending should normalize toward income gains, around 2.5 – 3.0%<sup>4</sup>



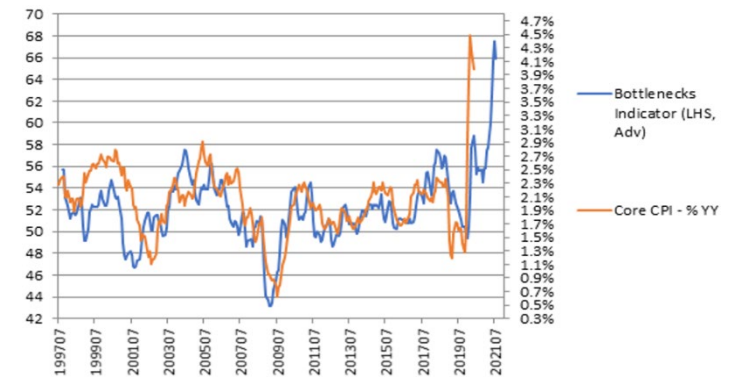
<sup>1</sup>Source: TSA, OpenTable. Chart data: 23 February 2020 – 26 September 2021. | <sup>2</sup>Sources: Bloomberg, Wellington Management. Chart data: monthly, 31 January 2010 – 30 September 2021. **PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.** | <sup>3</sup>Source: Bloomberg Economic Forecasts. Chart data: 4Q20 – 1Q23E. | <sup>4</sup>Source: Haver. Chart data: January 1990 – August 2021

## Economic environment (continued)

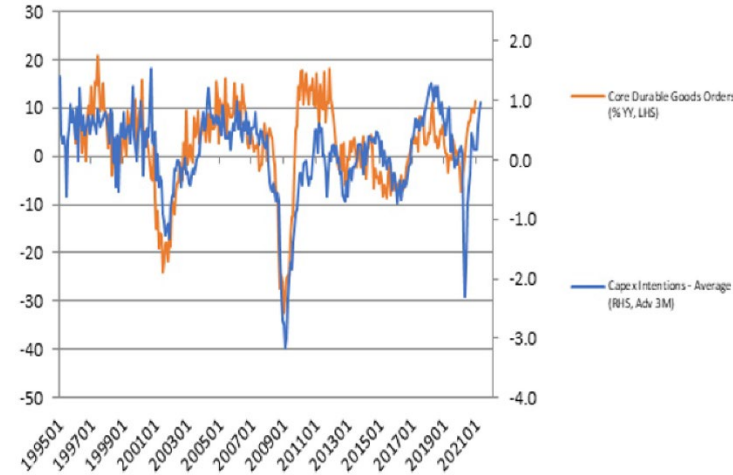
Shortage of labor remains a consistent theme – % businesses with few or no qualified applicants for job openings<sup>1</sup>



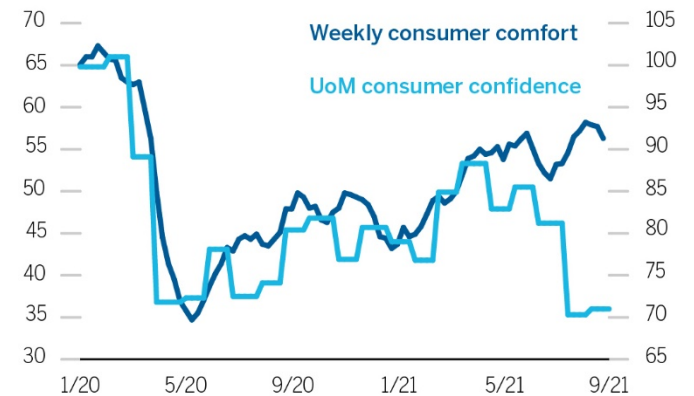
US Supply disruptions remain notable<sup>2</sup>



US Capex intentions remain favorable<sup>3</sup>



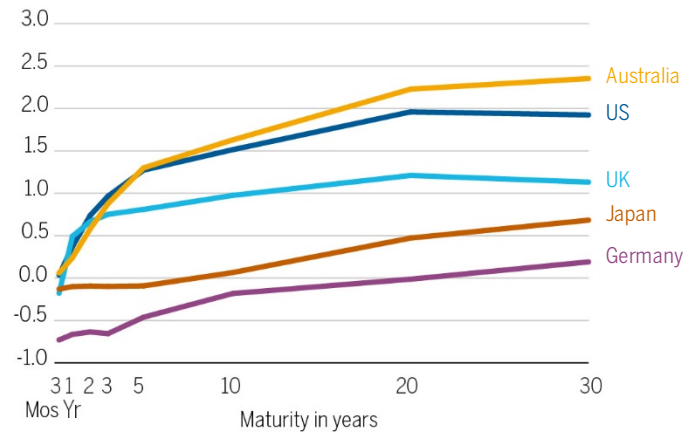
Consumer confidence gauges diverging<sup>4</sup>



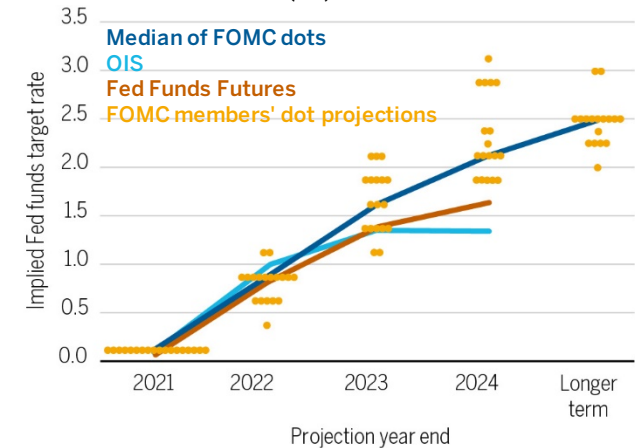
<sup>1</sup>Chart data: 30 April 1993 – 31 August 2021. Source: National Federation of Independent Business. Recessions shaded. | <sup>2</sup>US Economy wide bottlenecks indicator; Source: Haver, WMC. Chart data July 1997 – August 2021 | <sup>3</sup>US Core durable goods orders vs Capex intentions; Sources: Commerce Dept, WMC. Chart data: January 1995 – March 2021 | <sup>4</sup>Sources: Conference Board, University of Michigan. Chart data: 1 January 2020 – 30 September 2021 | **PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

## US interest rate policy

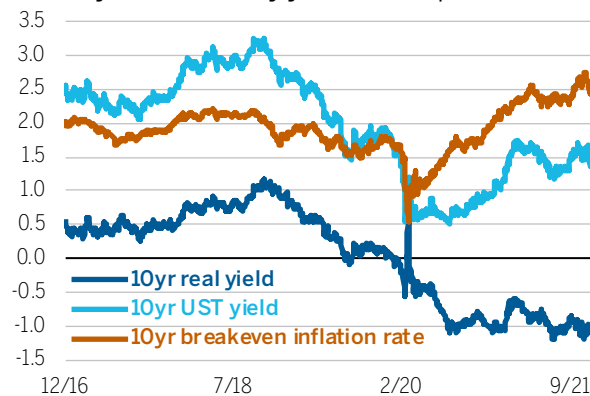
Global yield curves have flattened<sup>1</sup> (%)



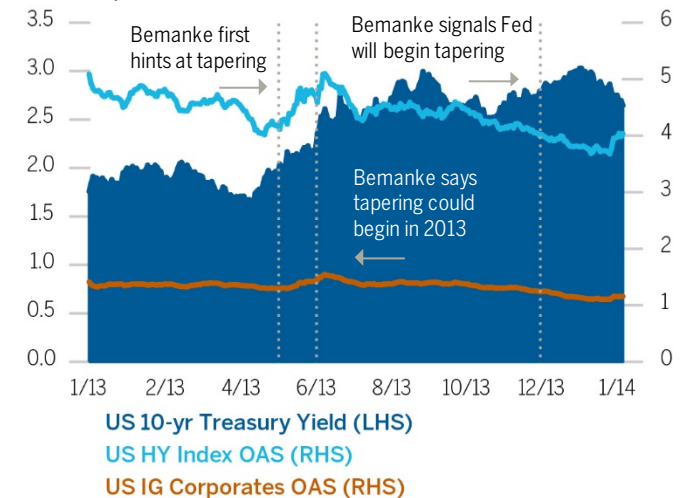
Market vs Fed<sup>2</sup> (%)



10yr US Treasury yield decomposition<sup>3</sup>



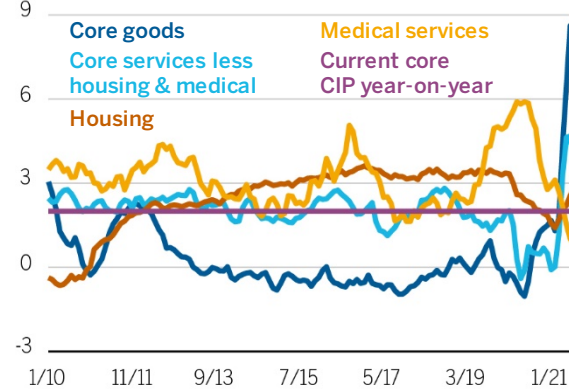
Credit markets fairly well-behaved in 2013 taper tantrum<sup>4</sup>



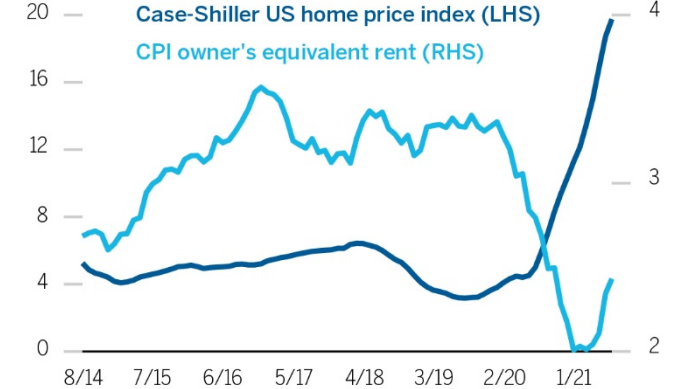
<sup>1</sup>Source: Bloomberg. Chart data as of 30 December 2021. | <sup>2</sup>Each shaded circle indicated the value (rounded to the nearest 1/8 percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer term. Sources: Bloomberg, US Federal Reserve. Released 15 December 2021. Longer-term – the peak for the fed funds rate once the Fed has finished tightening (or "normalizing") policy from its current levels. | <sup>3</sup>Source: Bloomberg. Chart data: 23 December 2016 – 22 December 2021. | <sup>4</sup>Source: Bloomberg. Chart data: 1 January 2013 – 31 January 2014.

## Inflation environment

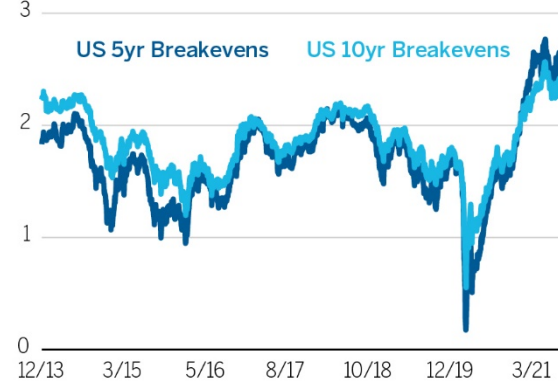
Core goods pushing inflation persistently higher (%)<sup>1</sup>



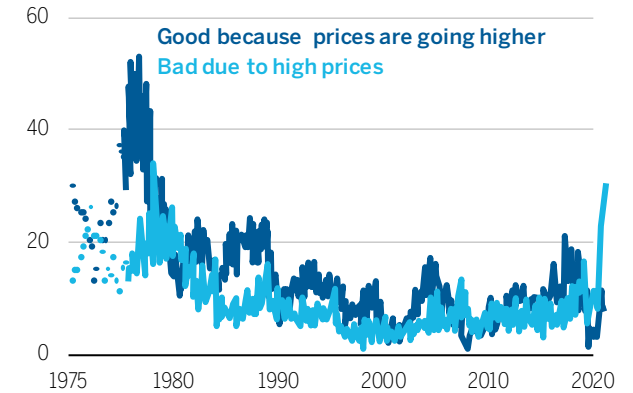
Home prices have surged; rents turning higher (% change Y/Y)<sup>2</sup>



Inflation expectations remain elevated (%)<sup>3</sup>

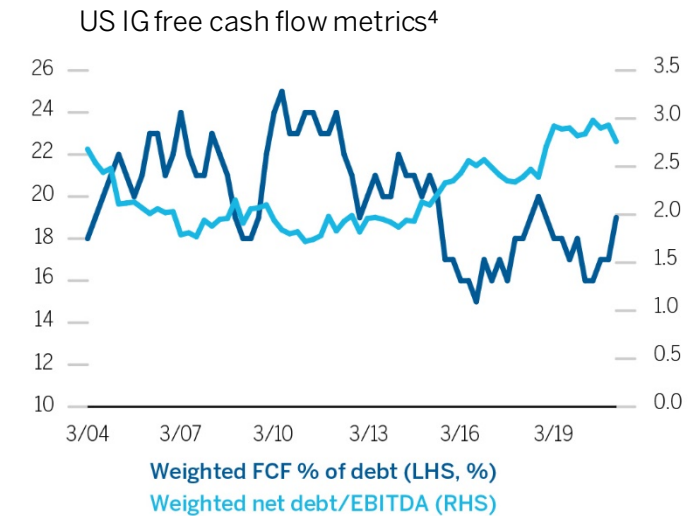
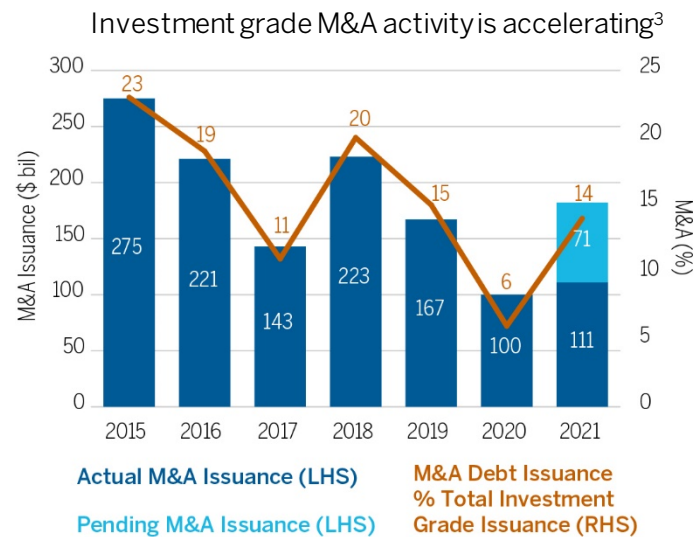
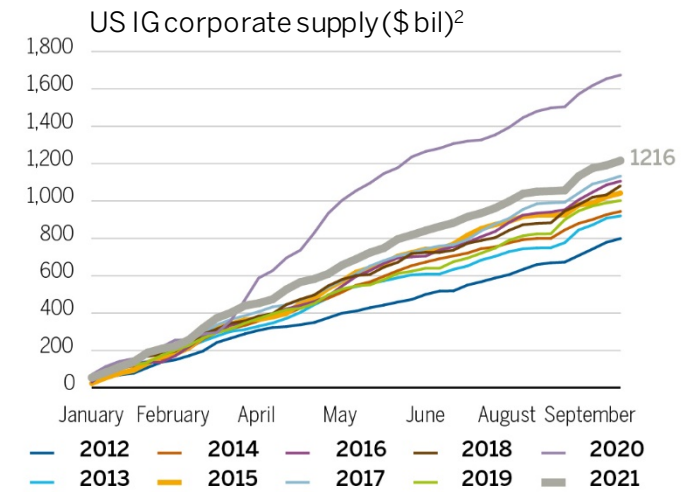
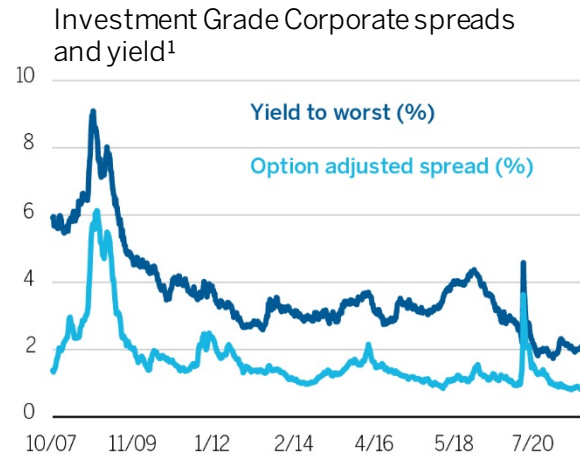


Current conditions for buying large household goods<sup>4</sup>



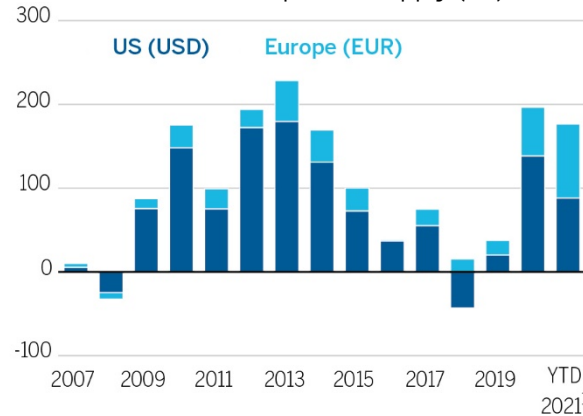
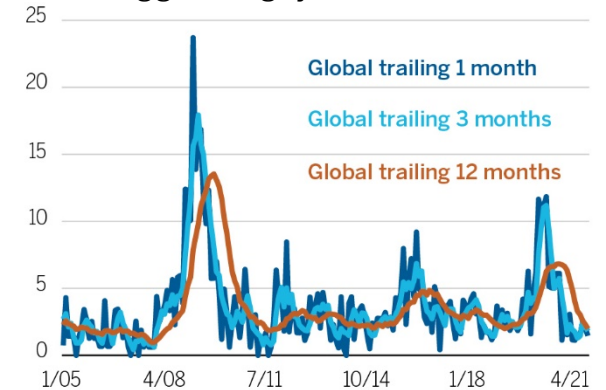
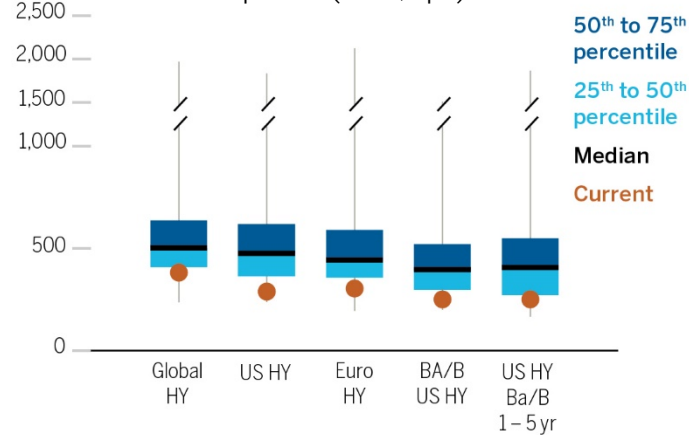
<sup>1</sup>Source: Bloomberg. Chart data January 2010 – August 2021 | <sup>2</sup>Sources: Bloomberg, Haver Analytics. Chart data: August 2014 – August 2021 | <sup>3</sup>Source: Bloomberg. Chart data: December 2013 – September 2021 | <sup>4</sup>Source: University of Michigan/Haver Analytics. Chart data: 1973 – 2022(E) | **PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

## Investment grade corporate environment

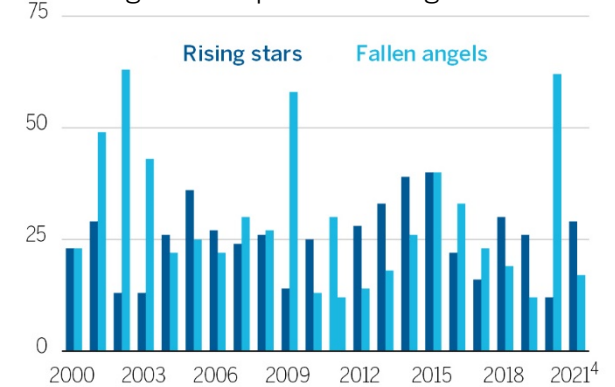


<sup>1</sup>Source: Bloomberg US IG Corporate Index. Chart data: 1 October 2007 – 30 September 2021. | <sup>2</sup>Source: Bloomberg. Chart data: 1 January 2012 – 30 September 2021. | <sup>3</sup>Source: Courtesy JPMorgan Chase & Co., Copyright 2021. As of 30 September 2021. | <sup>4</sup>Sources: S&P Global Market Intelligence, Wellington Management. Chart data: 31 March 2004 – 31 March 2021. | **PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

## High yield Market Outlook

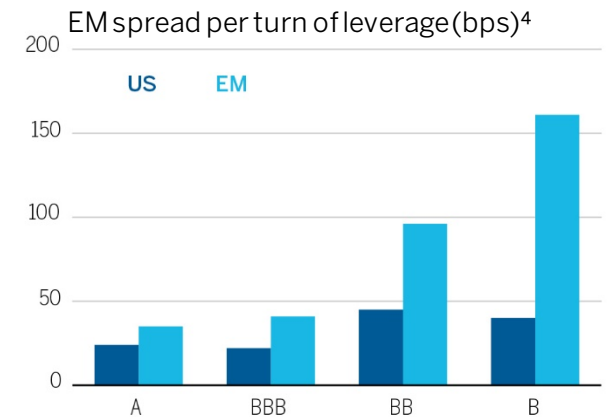
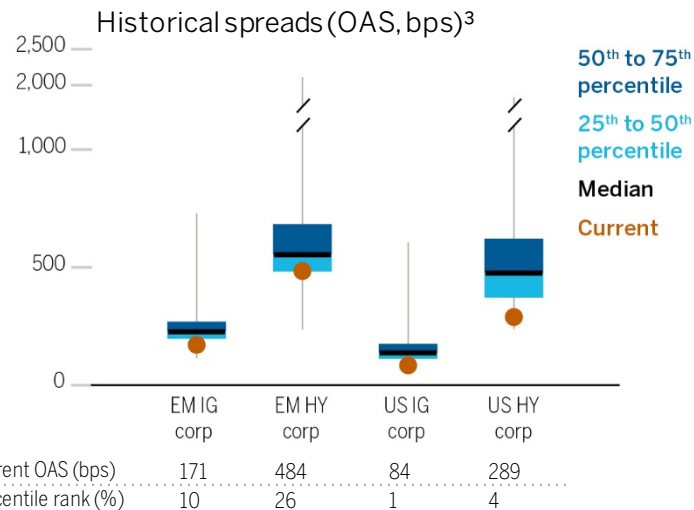
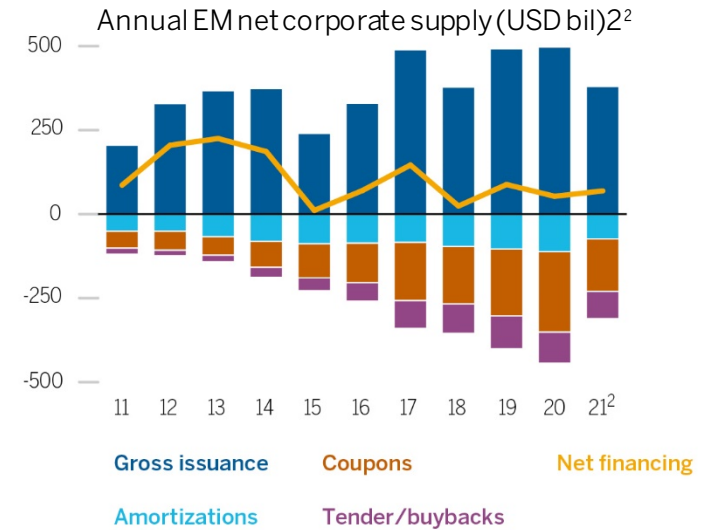
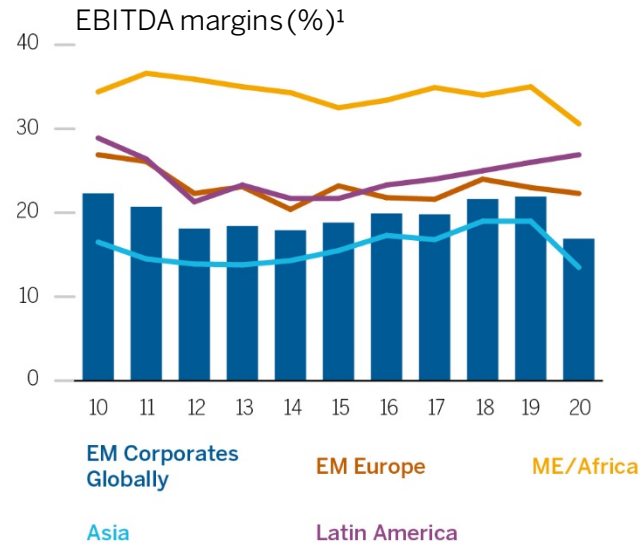
Annual net HY corporate supply (bil)<sup>1</sup>Trailing global high yield default rates<sup>2</sup>Historical spreads (OAS, bps)<sup>3</sup>

Current OAS (bps)	381	282	331	242	238
Percentile rank (%)	14	4	20	4	7

Rising stars outpace fallen angels<sup>4</sup>

<sup>1</sup>Chart data: 1 January 2007 – 31 December 2021. Source: JPMorgan. Europe includes high yield and leveraged loans. | <sup>2</sup>Chart data: January 2005 – November 2021. Source: Bloomberg. | <sup>3</sup>Based on monthly historical data for 15 years from 31 October 2006 – 31 December 2021: BofA Merrill Lynch Global High Yield Constrained Index; Bloomberg US High Yield Index; BofA Merrill Lynch Euro High Yield Constrained Index; Bloomberg US High Yield All Ba/B Rated 2% Capped Index; Bloomberg US High Yield Ba/B 1 – 5 Year Index | <sup>4</sup>Source: JPMorgan. As of 31 December 2021. | **PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

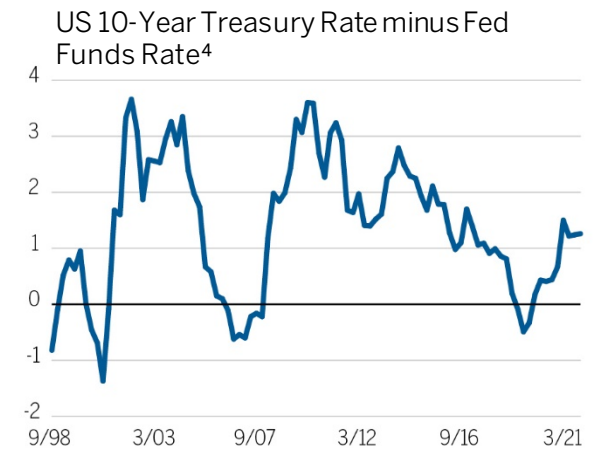
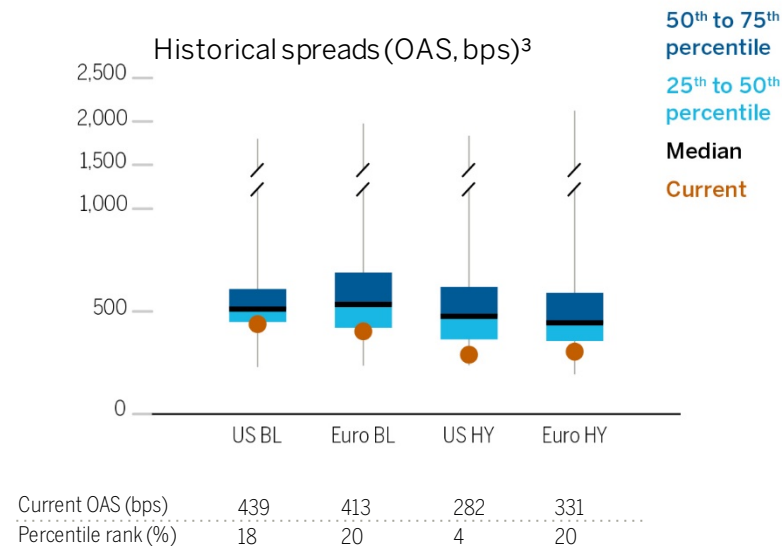
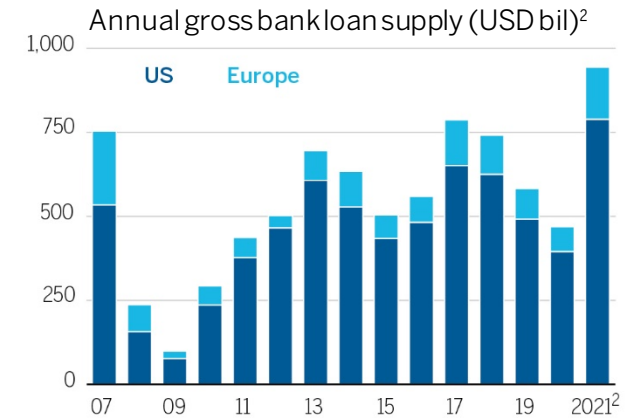
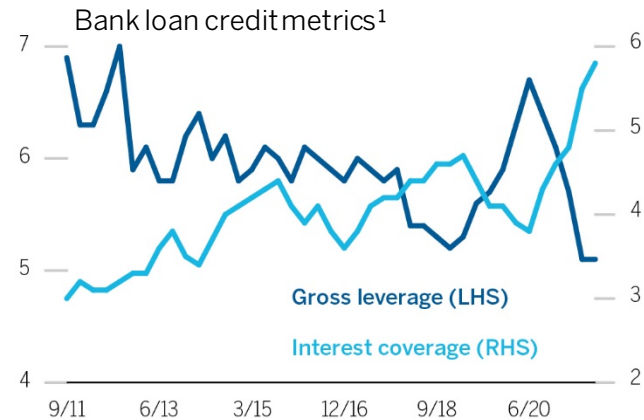
## Emerging markets corporate environment



<sup>1</sup>Source: JPMorgan. Chart data: 1 January 2010 – 31 December 2020. Based on a sample of about 150 EM corporate bond issuers where estimates are available. | <sup>2</sup>Source: JPMorgan. As of 30 September 2021. | <sup>3</sup>Based on monthly historical data for 15 years from 31 October 2006 – 30 September 2021: JPMorgan CEMBI; Bloomberg US Corporate Index; Bloomberg BUS High Yield Index | <sup>4</sup>Leverage as of 31 December 2020. Spreads as of 30 September 2021.

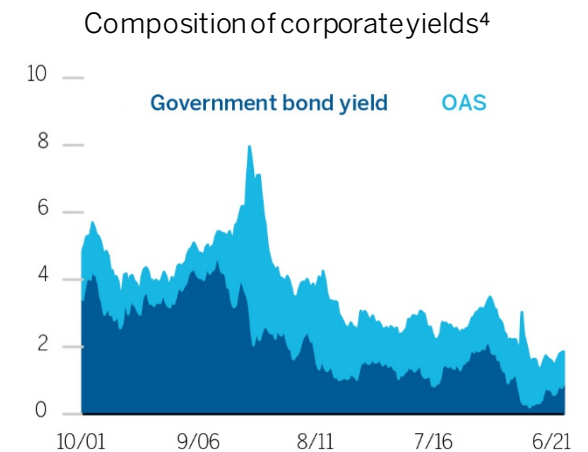
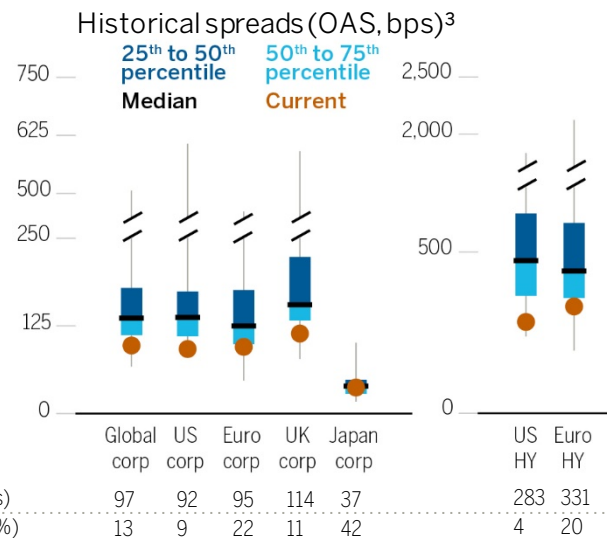
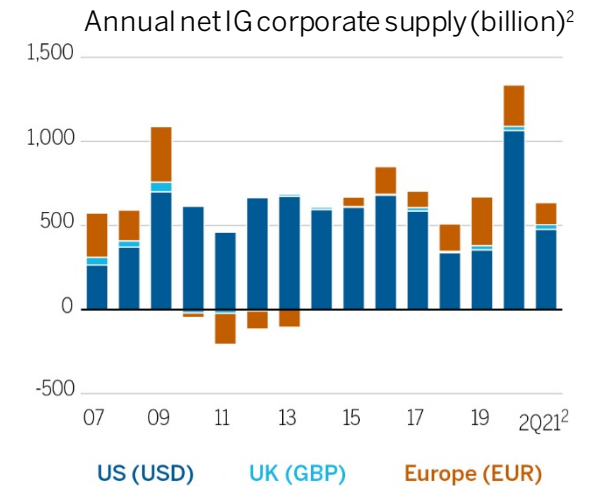
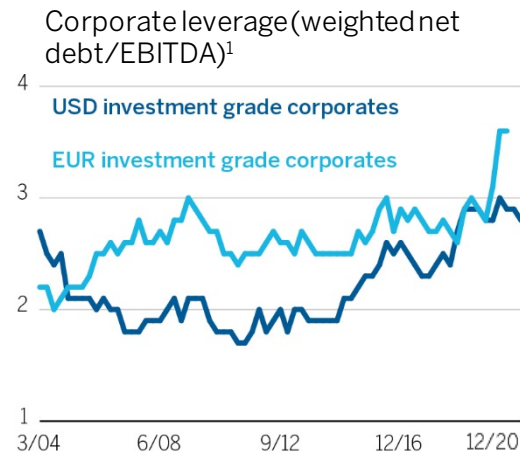
Source: Bank of America Merrill Lynch. | **PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

## Bank loans environment



<sup>1</sup>Trailing 10 years from 30 September 2011 – 31 December 2021. Source: S&P Global Market Intelligence. Gross leverage = Weighted-average total/LTM EBITDA. Interest coverage = LTM EBITDA/LTM Interest expense. | <sup>2</sup>Chart data: 1 January 2007 – 31 December 2021. Source: S&P Global Market Intelligence. | <sup>3</sup>Based on monthly historical data for 15 years from 31 October 2006 – 31 December 2021. Sources: Credit Suisse Leveraged Loan Index, Credit Suisse Western European Leveraged Loan Index, Bloomberg US High Yield Index, and BofA Merrill Lynch Euro Constrained Index. Spreads based on Discount Margin (3-year life). | <sup>4</sup>Chart data: 30 September 1998 – 31 December 2021. Source: Bloomberg | **PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

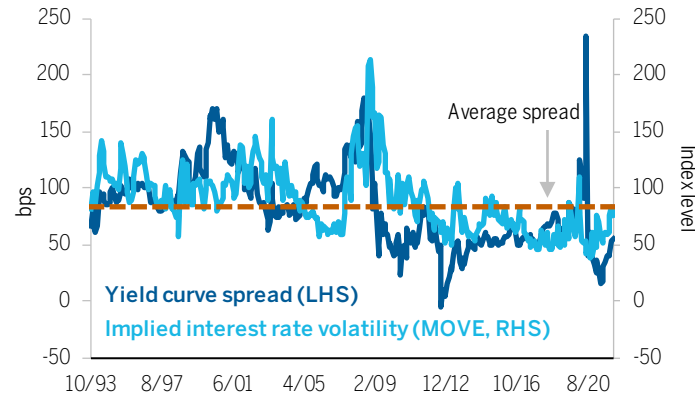
## Global Credit Market outlook



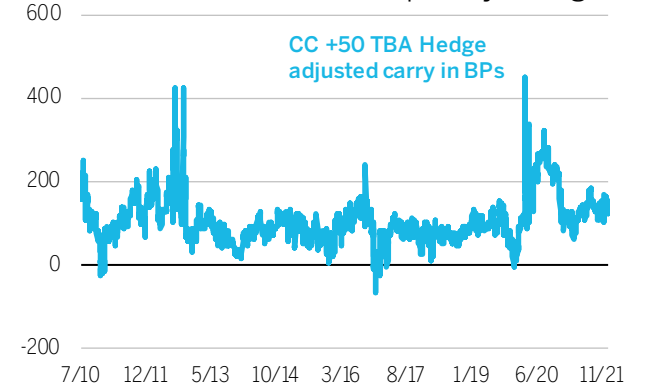
<sup>1</sup>Sources: JPMorgan, Capital IQ. Chart data: 31 March 2004 – 30 June 2021. EUR investment grade corporates through 30 September 2020. | <sup>2</sup>Source: Barclays Credit Research. Chart data: 1 January 2007 – 31 December 2021. | <sup>3</sup>Based on monthly historical data for 15 years from 31 October 2006 – 31 December 2021: Bloomberg Global Aggregate Corporate Index; Bloomberg US Corporate Index; Bloomberg Euro Aggregate Corporate Index; Bloomberg UK Aggregate Corporate Index; Bloomberg Japan Aggregate Corporate Index; Bloomberg US High Yield Index; BofAMerrill Lynch Euro High Yield Constrained Index | <sup>4</sup>Source: Bloomberg Global Aggregate Corporate Index. Chart Data: 31 October 2001 – 31 December 2021. | **PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

## Agency MBS Sector outlook

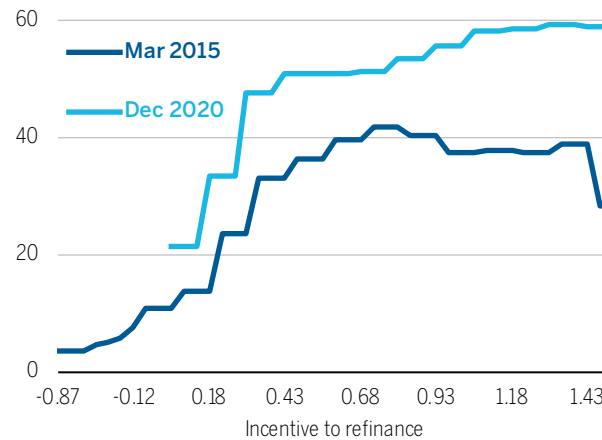
Mortgage spreads have widened with higher vol and less Fed support<sup>1</sup>



MBS income attractive, especially through TBA<sup>2</sup>



Prepays by incentive to refinance (CPR)<sup>3</sup>

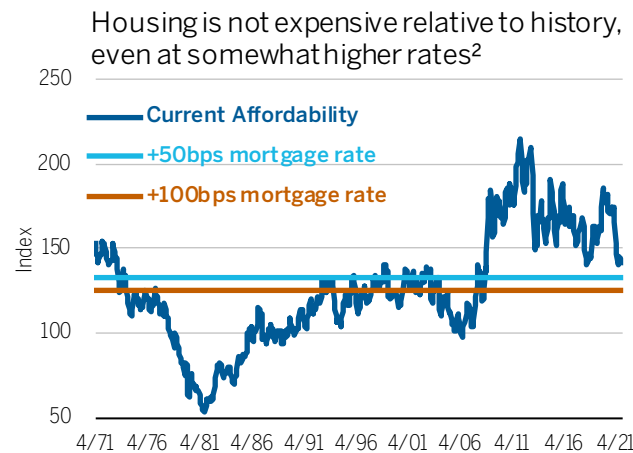
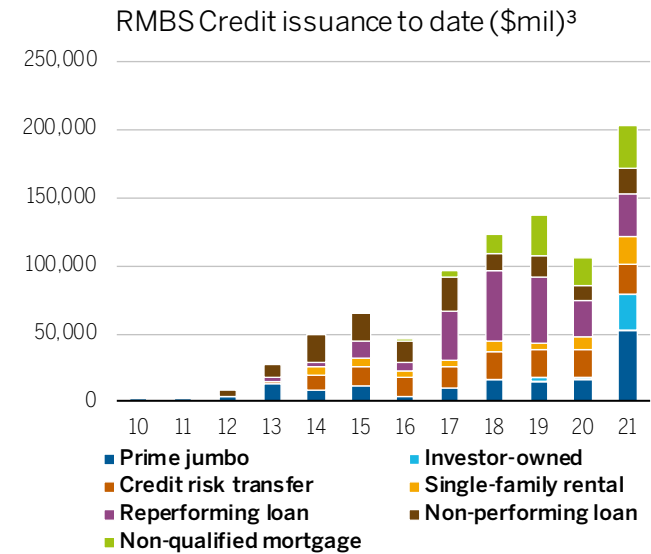
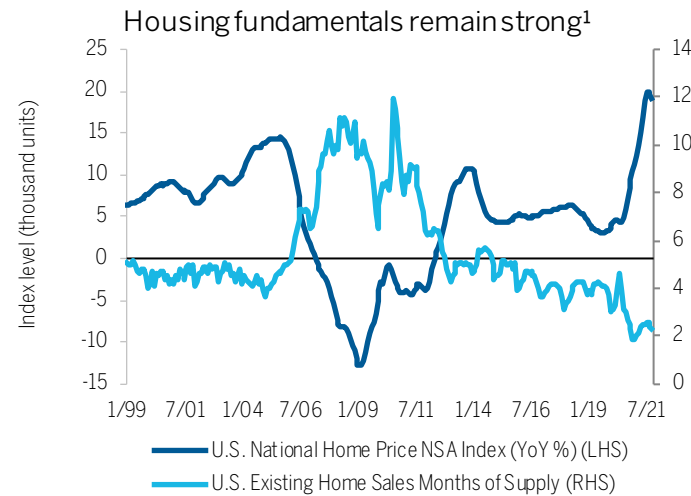


Bank lending looks set to rebound, creating risk for MBS in 2022<sup>4</sup>

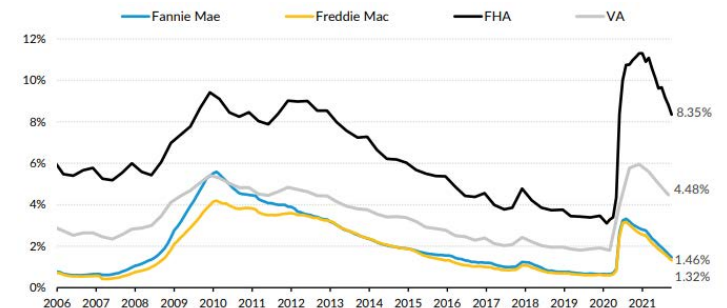


<sup>1</sup>Sources: Bloomberg, Barclays LIVE. Chart data: 29 October 1993 – 31 December 2021. | <sup>2</sup>Source: JPMorgan Markets. Chart data: 2 July 2010 – 30 December 2021. | <sup>3</sup>Sources: Fannie Mae, Freddie Mac TBA like/cheapest to deliver collateral | <sup>4</sup>Sources: Federal Reserve Board, Haver Analytics. Chart data: 31 March 1991 – December 2021.

## Non-Agency Residential MBS (RMBS) Sector outlook



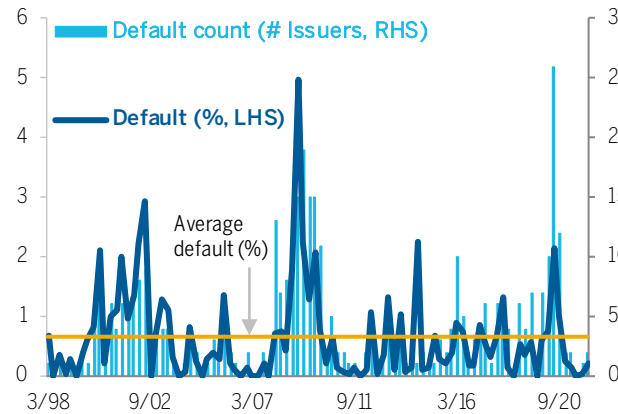
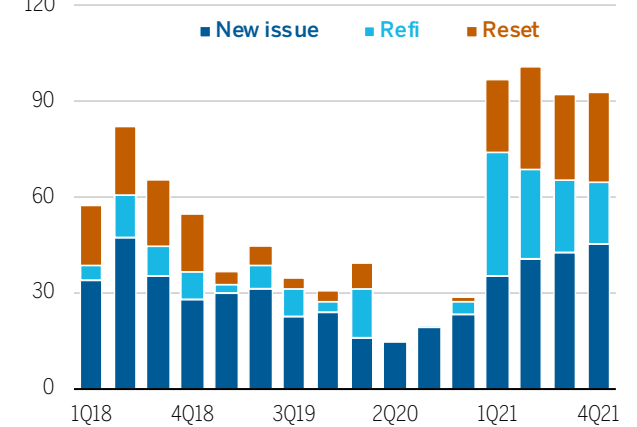
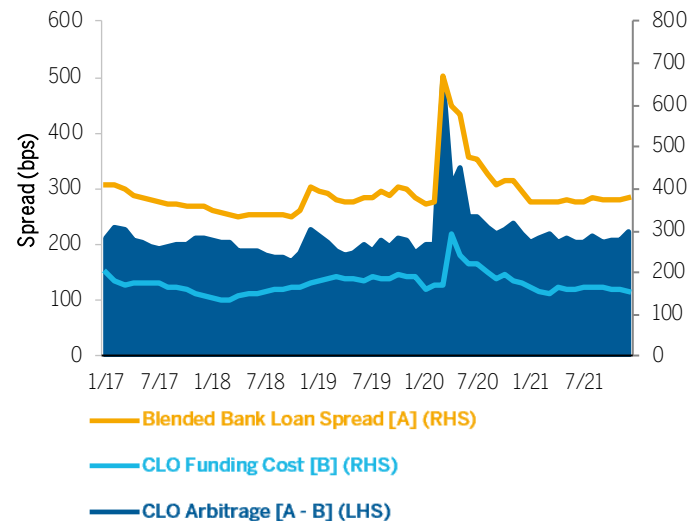
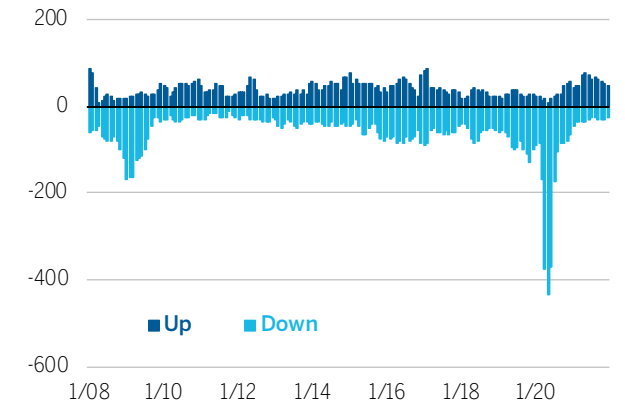
Agency residential delinquency rates continue to recover<sup>4</sup>



<sup>1</sup>Sources: Bloomberg. Chart data: 31 January 1999 – 31 October 2021 | <sup>2</sup>Sources: Bloomberg, NAR, Census. Chart data: April 1971 – October 2021. Current affordability is the NAR housing affordability index | <sup>3</sup>As of 31 December 2021. Source: J.P. Morgan | <sup>4</sup>As of November 2021. Single-family loans. Sources: Fannie Mae, Federal Housing Administration (FHA), MBA Delinquency Survey and Urban Institute. Serious delinquency is defined as 90 days or more past due or in the foreclosure process. VA is the U.S. Department of Veterans Affairs.

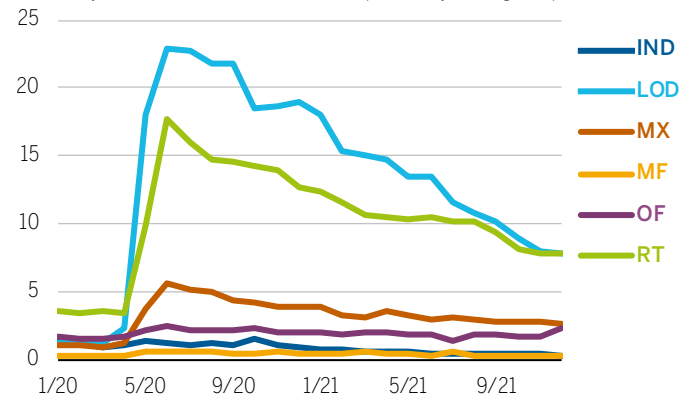
## Collateralized Loan Obligations (CLOs)

### Sector outlook

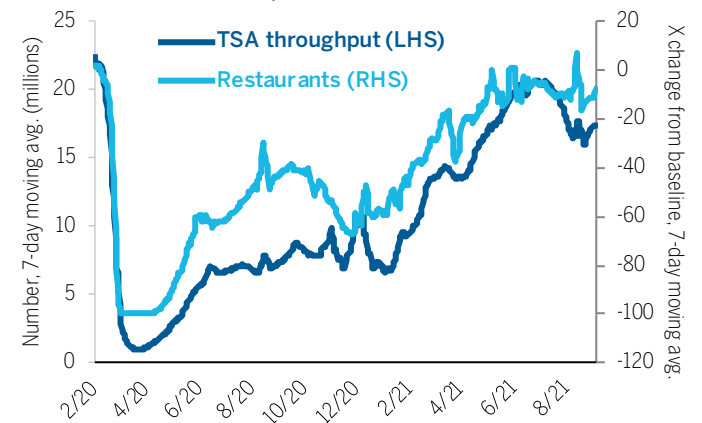
Leveraged loan defaults below long-term average<sup>1</sup>CLO issuance volume at all-time highs<sup>2</sup>CLO "Arbitrage" remains attractive<sup>3</sup>Loan upgrades are outpacing downgrades<sup>4</sup><sup>1</sup>Source: S&P LASTA. Chart data: 1Q98 – 4Q21 |<sup>2</sup>Sources: Intex, Bloomberg. Chart data: 1Q18 – 4Q21 |<sup>3</sup>Source: Bloomberg, LCD, S&P, Intex. Chart data: January 2017 – December 2021 | <sup>4</sup>Source: LCD, an offering of S&P Global Market Intelligence; S&P/LSTA Leveraged Loan Index. Chart data: January 2008 – December 2021. Data series calculated as rolling 3-month count of loan upgrades and downgrades.

## Commercial MBS (CMBS) Sector outlook

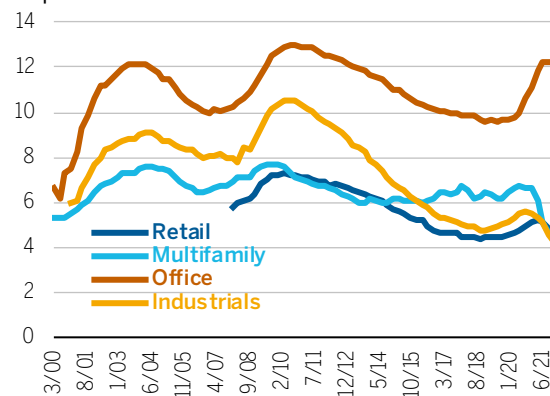
COVID impact greatest in lodging/retail but improvement continues (delinquency %)<sup>1</sup>



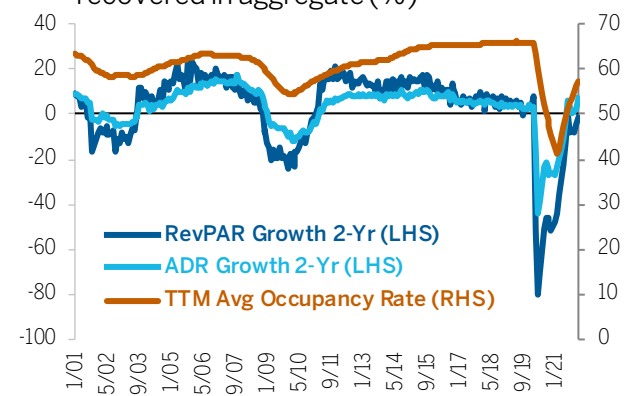
Dining and travel recovered significantly, but remain below pre-COVID levels<sup>2</sup>



Vacancy rates recovering but office is under pressure<sup>3</sup>



Lodging rates and revenue have recovered in aggregate (%)<sup>4</sup>

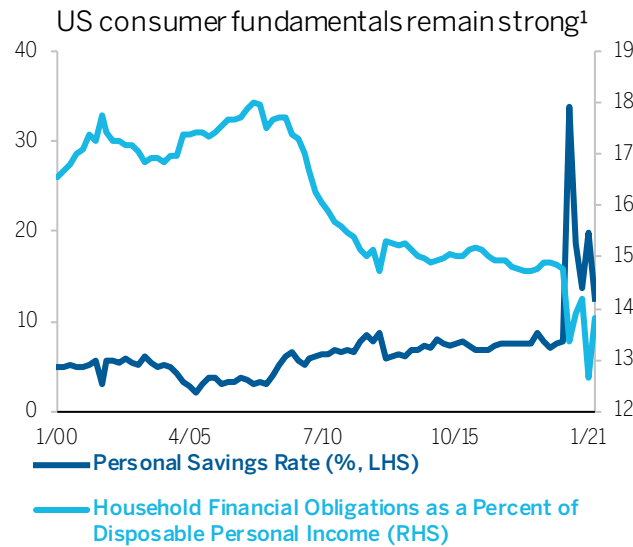


<sup>1</sup>IND – Industrial, LOD – Lodging, MX – Mixed Use, MF – Multifamily, OF – Office, RT – Retail. Source: Trepp. Chart data: January 2020 – December 2021

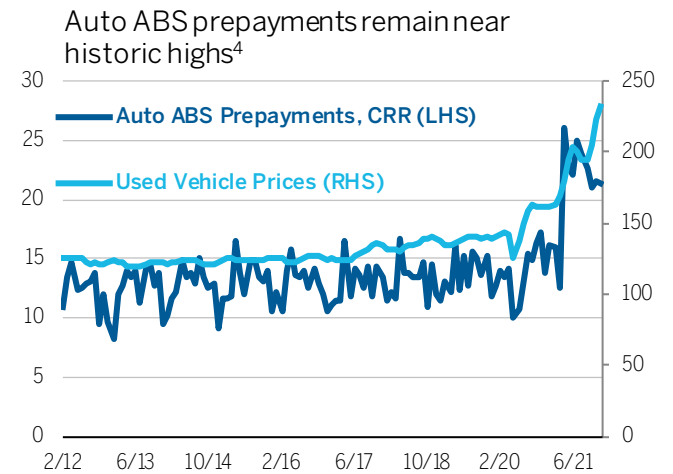
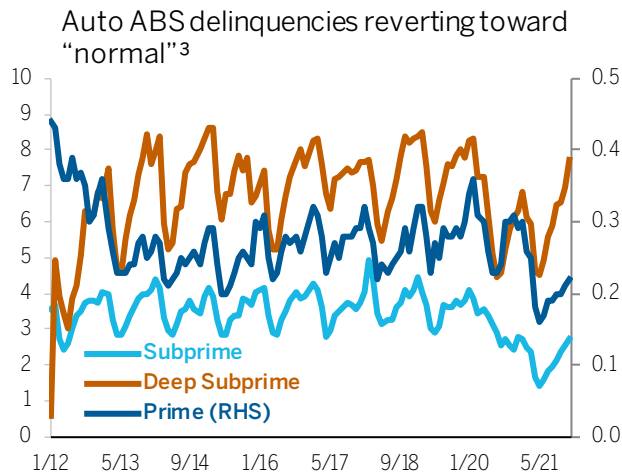
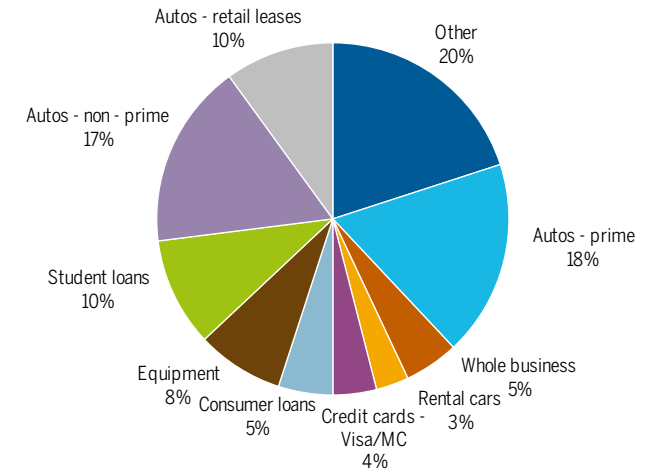
<sup>2</sup>Sources: OpenTable, Transport Security Administration. Chart data: February 2020 – June 2021 | <sup>3</sup>Source:CoStar. Data as of: March 2000 – December 2021 | <sup>4</sup>Source:CoStar. Data as of: January 2001 – December 2021. RevPar is revenue per available room and ADR is average daily rate. |

## Asset-Backed Securities (ABS)

### Sector outlook



ABS issuance by subsector  
2021 YTD: USD 179 billion<sup>2</sup>

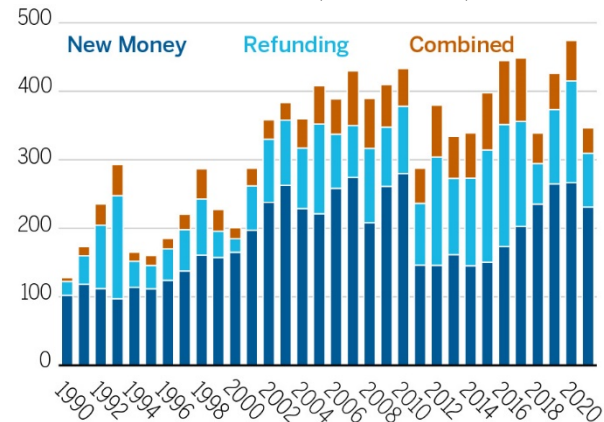


<sup>1</sup>Source: Federal Reserve Bank of St. Louis. As of March 2021 | <sup>2</sup>Source: US Federal Reserve. Chart data as of September 2021. Other is comprised of ~24 different subsectors; the top 5 are: Shipping Containers, Fleet Leasing, Triple-net Lease, Rail Lease, and Aircraft Leases. | <sup>3</sup>Source: Intex. Data as of January 2012 - December 2021. 60+ days delinquency | <sup>4</sup>Source: Intex, Bloomberg. Data as of February 2012 - December 2021. Auto ABS Prepayments is calculated by taking the average of prime, subprime, and deep subprime prepayments. CRR = Voluntary prepayments. Used Vehicle Prices is the Manheim Used Vehicle Index. |

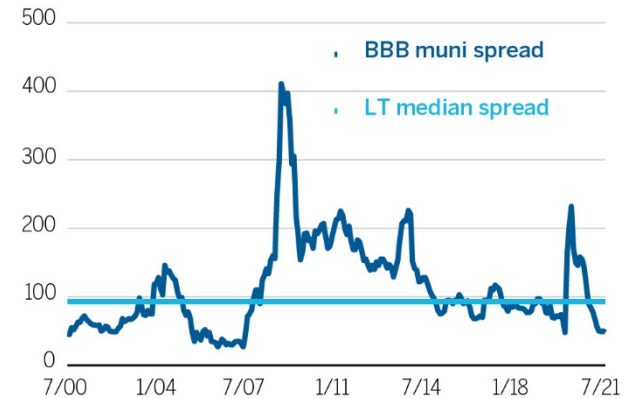
## Fixed Income Sector

### Municipal environment

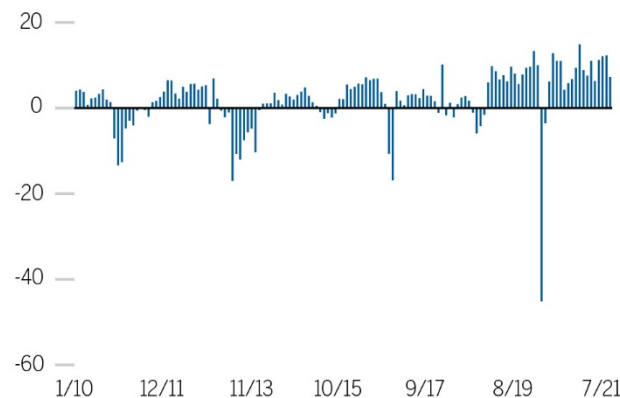
YTD 2021 issuance slowed down following record 2020 volume (USD, billion)<sup>1</sup>



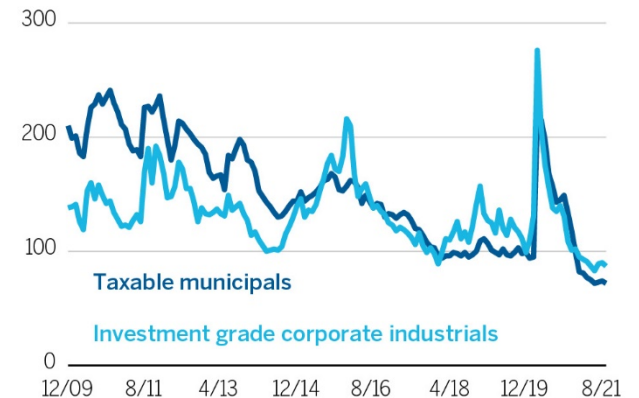
BBB muni spreads have further tightened (OAS, in bps)<sup>2</sup>



Municipal bond fund flows (USD bil)<sup>3</sup>



Taxable municipals tightened relative to corporates (OAS, in bps)<sup>4</sup>



<sup>1</sup>Data series begins in 1987. Sources: The Bond Buyer, Merrill Lynch, Wellington Management. Chart data: December 1990 – September 2021. | <sup>2</sup>Source: Bloomberg. BofA Merrill Lynch BBB Municipal Index. Chart data: July 2000 – September 2021. | <sup>3</sup>Source: EPFR. Chart data: January 2010 – September 2021. | <sup>4</sup>Sources: BofA Merrill Lynch Taxable Municipal Index, Bloomberg Barclays Investment Grade Corporate Industrials Index. Chart data: December 2009 – September 2021. | **PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

## Important disclosures

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### Additional performance information

**PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.** There can be no assurance nor should it be assumed that future investment performance of any strategy will conform to any performance examples set forth in this material or that the portfolio's underlying investments will be able to avoid losses. The investment results and any portfolio compositions set forth in this material are provided for illustrative purposes only and may not be indicative of the future investment results or future portfolio composition. The composition, size of, and risks associated with an investment in the strategy may differ substantially from the examples set forth in this material. An investment can lose value.

### Impact of fees

Illustration of impact of fees: If USD100,000 was invested and experienced a 10% annual return compounded monthly for ten years, its ending value, without giving effect to the deduction of advisory fees, would be USD270,704 with an annualized compounded return of 10.47%. If an advisory fee of 0.95% of average net assets per year were deducted monthly for the ten-year period, the annualized compounded return would be 9.43% and the ending USD value would be USD246,355. Information regarding the firm's advisory fees is available upon request.

### Selection of representative account

The current representative account became effective on 1 October 2014 because it was the least restrictive account at the time of selection. For data shown prior to the current representative account effective date, data of the representative account(s) deemed appropriate for the time period was used. Further information regarding former representative accounts can be provided upon request. Each client account is individually managed; individual holdings will vary for each account and there is no guarantee that a particular account will have the same characteristics as described. Actual results may vary for each client due to specific client guidelines, holdings, and other factors. In limited circumstances, the designated representative account may have changed over time, for reasons including, but not limited to, account termination, imposition of significant investment restrictions, or material asset size fluctuations.

### Access products

If access products are held by the portfolio they may not be included in the calculation of characteristic data. Access products are instruments used to gain access to equity markets not otherwise available and may include (but are not limited to) instruments such as warrants, total return swaps, p-notes, or zero strike options.

### Additional disclosures

Securities indices are unmanaged and are not subject to fees and expenses typically associated with managed accounts or investment funds. Investments cannot be made directly into an index.

### Risk model

Noether is an internal proprietary system that comprises a risk model, a stress testing and scenario framework, associated software and infrastructure to calibrate the model, and to perform risk calculations. Noether provides comprehensive and internally calibrated absolute return and benchmark relative ex ante risk measurement across all portfolios managed at Wellington along with an integrated stress testing and scenario analysis capability that leverages Noether's statistical risk model, which is a multi-asset class, globally specified multi factor risk model and covers all asset classes managed at Wellington, including equity, fixed income, multi-asset, and commodities. The model was implemented starting on 1 October 2020 and could result in significant one-time value changes as a result of the risk model change. Prior to this date, the statistical model underlying the risk system is based on Barclays Capital POINT and is fully integrated with Wellington Management's pricing and analytics to provide complete coverage for all securities in Wellington Management's investable universe. The projected tracking risk for portfolios is estimated by calculating the exposures of portfolios to the risk factors in the model, which include factors such as currency, yield curve, and credit spreads, based on the historical volatilities and correlations of these risk factors. For portfolios with a history prior to 1 October 2020, over time risk data presented will have data points from both the Barclays Capital POINT model and the Noether model. Additional information is available upon request.

### Benchmark definition

Bloomberg US Aggregate Bond: The Index measures the performance of the U.S. investment grade bond market.

## LIBOR risk

**The U.K. Financial Conduct Authority has announced cessation and non-representative dates on 35 London Inter-Bank Offered Rate (LIBOR) settings across various tenors and currencies after 2021. Notably, certain widely used US dollar (USD) LIBOR rate settings (overnight, 1-, 3-, 6-, and 12-month) will continue to be published in representative forms until 30 June 2023, enabling a smoother transition to alternative reference rates by allowing more time for “difficult-to-amend” legacy contracts/securities to mature. The elimination of LIBOR may adversely affect the interest rates on, as well as the liquidity and value of, certain portfolio investments.**

Wellington has established a working group of stakeholders from key areas across the firm to manage the transition away from IBORs. Our LIBOR Replacement Working Group oversees work streams covering all aspects of the management of client assets that we anticipate could be impacted by LIBOR transition to help ensure that our client portfolios are well prepared for this upcoming change. Wellington is utilizing a multi-step implementation framework for transitioning from IBORs to alternative rates, including:

- Establishing a transition program
- Implementing a communication strategy with internal and external constituents, including several white papers
- Identifying and validating exposures across instruments, portfolios, and products as well as contractual and derivatives agreement language
- Developing operational and technology readiness plans to address the large-scale operating model, data, and technology implications required for IBOR transition
- Assessing the potential accounting and reporting implications associated with the transition away from IBORs

When IBORs are discontinued, securities that contain fallback language will transition to an alternative reference rate, depending on the deal documents. Fallback language can vary significantly for cash products based on product type, contract originator, and even origination date, as industry practices have evolved over time. For example, fallback language may provide that the replacement rate be determined based on reference bank quotations, remain permanently fixed from the previous interest period, or be determined by reference to another rate. Some securities lack any fallback language, or contain fallback language that differs from current industry standards. As a result, the liquidity and value of these securities may be adversely impacted in advance of the discontinuation of IBORs. In the event that securities lacking adequate fallback language become illiquid, clients may be forced to hold these securities to maturity.



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# Marin County Employees Retirement Association (MCERA)

## Overlay Solutions Performance Review

**January 19, 2021**

**Dan Ryan**

*Senior Director – Client Relationship Management*  
Parametric Portfolio Associates® LLC  
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**Alex Braun, CFA**

*Senior Portfolio Manager*  
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ABraun@paraort.com

**Heather Wolf, CFA**

*Associate Portfolio Manager*  
Parametric Portfolio Associates® LLC  
(952) 767 7759  
HWolf@paraort.com

# Parametric Attendees



**Dan Ryan**

*Senior Director – Client Relationship Management*

Dan is responsible for managing client relationships throughout the western US. Prior to joining Parametric in 2013, Dan was vice president and senior relationship manager at State Street Global Advisors. He earned a BA in history from the University of Michigan.



**Alex Braun, CFA**

*Senior Portfolio Manager*

Alex leads a team of investment professionals responsible for designing, trading, and managing overlay portfolios. Prior to joining Parametric in 2010 (originally as an employee of the Clifton Group, which was acquired by Parametric in 2012), Alex interned at Imperial Capital (formerly Mercanti Group). He earned a BS degree in finance and accounting from the Carlson School of Management at the University of Minnesota. A CFA charterholder, Alex is a member of the CFA Society of Minnesota.



**Heather Wolf, CFA**

*Associate Portfolio Manager*

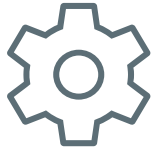
Heather is responsible for designing, trading, and managing overlay portfolios. Prior to joining Parametric full-time in 2016, Heather was an investment analyst intern at Parametric. She earned a BA in both religion and economics with an emphasis in finance from St. Olaf College. A CFA charterholder, Heather is a member of the CFA Society of Minnesota.

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# Firm Overview

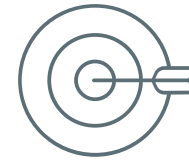
# Our Difference



Rigorous, disciplined,  
and rules-based approach



Transparent, cost-effective  
implementation expertise



Customizable, flexible  
solutions

**\$404B+**

assets under management<sup>1</sup>,  
with \$195B across  
institutional

**30+**

years of experience across  
equity, fixed income and  
derivative strategies

**150+**

investment professionals,  
including 108 CFA charter holders  
and 9 PhDs

**500+**

institutional client  
relationships

## Parametric in the Overlay Space

**\$125B+**

overlay assets under management

**42**

dedicated investment personnel, including  
24 PM's and 18 investment support

**240+**

institutional investors

All numbers are approximate as of 9/30/2021.

<sup>1</sup>AUM includes both discretionary and non-discretionary assets of Parametric Portfolio Associates® LLC (the Firm). Fixed Income assets previously offered by Eaton Vance Management and managed by Parametric as of January 1, 2020 were transferred throughout the first quarter of 2020.

Please refer to the disclosures for additional information regarding the Firm.

# A Focus on DEI and Responsible Investing

Parametric's commitment to corporate citizenship and Diversity, Equity & Inclusion is built into our culture and the many ways we invest for our clients

- > Our Diversity, Equity & Inclusion infrastructure is progressive and top of mind – building an internal culture representative of those we serve
- > Our corporate partnerships and community impact initiatives are purposeful – helping to educate the population on ways to invest responsibly
- > We offer our clients customizable ways to pursue their portfolio objectives through responsible investing strategies that incorporate integration options supportive of DEI initiatives.

## ESG Integration



# Institutional Multi-Asset Capabilities

Parametric provides customizable offerings across **alternative, equity, and fixed income** that can help solve implementation challenges, portfolio risks, and asset allocation needs



## Custom Solutions

- Overlay solutions
- Liability-driven investing
- Equity & fixed income indexing
- Centralized portfolio management
- Cross-asset portfolio solutions



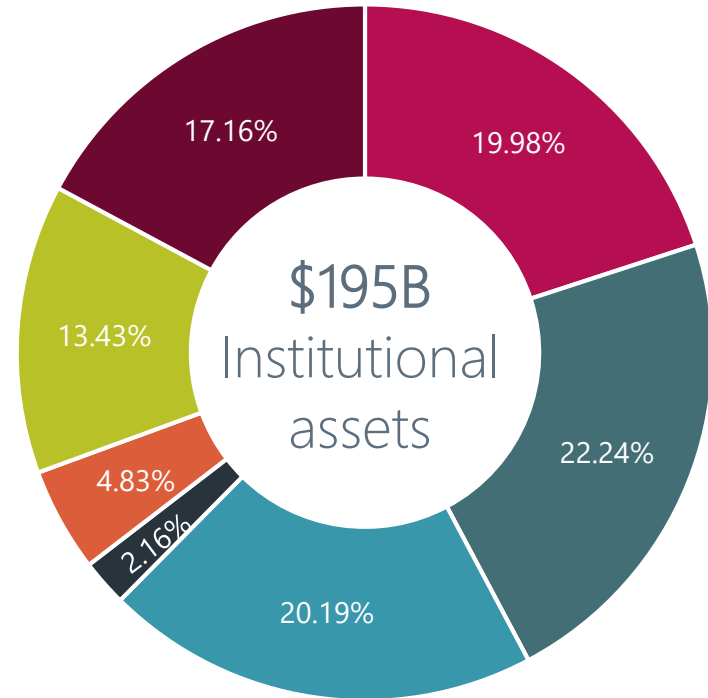
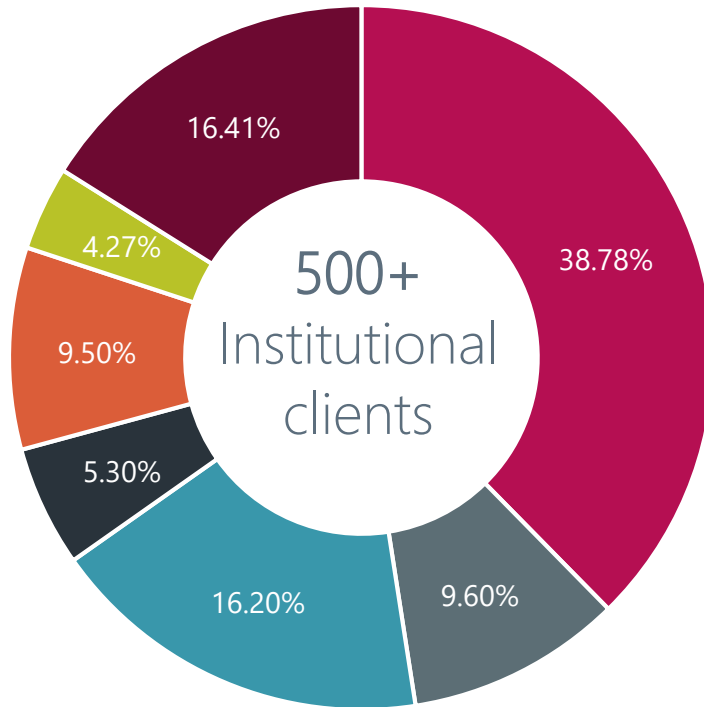
## Systematic Strategies

- Developed international
- Emerging markets
- Volatility risk premium
- Commodities

---

*Responsible investing, factors, and other themes can be applied across strategies and solutions*

# Diversified Institutional Client Base



Endowment/ Foundation
  Public
  Sub-Advisory
  Corporate
  Other<sup>1</sup>
 Healthcare
  Taft-Hartley

All numbers are approximate as of 9/30/2021 and include both discretionary and non-discretionary assets of the Firm.

<sup>1</sup>Other includes: Charity, Commingled, Individual, LP, Wrap, Superannuation, Insurance, Internal Account, Mutual Fund

# Representative Client List as of September 30, 2021

B.3

## > **Public**

East Bay Municipal Utility District  
Fairfax County Retirement Systems  
Houston Police Officers' Pension System  
Manhattan & Bronx Surface Transit Operating Authority Pension Plan  
Marin County Employees' Retirement Association  
Massachusetts Pension Reserves Investment Management Board  
New Mexico Public Employees' Retirement Association  
Oakland Police and Fire Retirement System  
Orange County Employees Retirement System  
San Mateo County Employees' Retirement Association  
Teachers Retirement System of Louisiana  
Utah School & Institutional Trust Funds Office  
Wisconsin Investment Board

## > **Endowments**

Carnegie Institution of Washington  
Florida State University  
Indiana University Foundation  
Pepperdine University  
Texas Christian University  
University of Michigan  
University of Minnesota

## > **Faith Based**

Catholic Diocese of Fort Worth  
Covenant Ministries of Benevolence  
Ministers & Missionaries' Benefit Board of American Baptist Churches  
Pension Fund of the Christian Church  
YMCA Retirement Fund

## > **Healthcare**

Advocate Aurora Health, Inc.  
North Memorial Health Care  
Trinity Health

## > **Taft-Hartley**

Board of Trustees ABC-NABET Retirement Trust Fund  
Boilermaker-Blacksmith National Pension Trust  
Carpenters, Regional Council, Greater Pennsylvania  
Central Laborers' Pension Fund  
Chicago Laborers' Pension & Welfare Funds  
International Union of Painters and Allied Trades  
SEIU Benefit Funds  
Teamsters, Western Pennsylvania

## > **Foundations**

The John D. & Catherine T. MacArthur Foundation  
The McKnight Foundation  
Strada Education Network, Inc.  
Wisconsin Alumni Research Foundation

## > **Corporate**

The Boeing Company  
Eversource Energy  
3M Company  
Target Corporation  
Raytheon Technologies Corporation

It is not known whether the listed clients approve or disapprove of the adviser. The partial list of clients included herein were selected as being representative of the different types of institutional clients and businesses serviced by Parametric. Performance-based data was not a determining factor in their selection.

# Program Review for MCERA

# Overlay Services - Big Picture

- > Overlay strategies offer a convenient, low cost means for:
  - > Enhancing expected return
  - > Managing risk
  - > Increasing efficiency
  
- > Institutional investors employ overlay strategies to help them better implement and achieve their policy objectives
  
- > Exchanged-traded futures are often utilized to add or remove exposure to a variety of asset classes
  - > Integrate seamlessly into a fund's existing framework
  - > Non-disruptive to existing manager portfolios

Investing in a derivatives strategy involves risk. Please refer to the Risks and other Disclosures for additional information.

# Parametric Overlay Solutions

Parametric has over three decades of experience in delivering overlay services to the institutional marketplace.



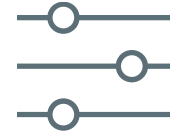
## Partnership

Dedicated and client-focused investment team to complement your staff and act as fiduciaries.



## Expertise

A strategic focus of the organization, supported by significant investment in people, processes, and technology.



## Proprietary technology

Developed and maintained in house, allowing for program customization tailored to a client's specific needs.

# MCERA Overlay Structure

- > Overlay cash held for ongoing fund liquidity needs
  - > Benefit payments
  - > Capital calls
  - > Operating cash flow
  - > Funding obligations
- > Overlay cash within certain manager portfolios
  - > DFA Small Cap Core
- > Maintain asset allocation and rebalance only after pre-defined thresholds are breached
- > Maintain exposure throughout transition events

# Portfolio Management Process

MCERA account data is delivered into proprietary investment management system<sup>1</sup>



Proprietary technology validates portfolio data and generates custom overlay analytics



Overlay team evaluates and confirms overlay analytics



Necessary overlay adjustments are executed after system and multiperson verification



Comprehensive overlay program reporting is published to secure client portal

<sup>1</sup> In some cases data may not be available on a daily basis or is not accessible because the balance is held by a manager who does not make information available electronically. For illustrative purposes only.

# MCERA Cash Overlay Overview

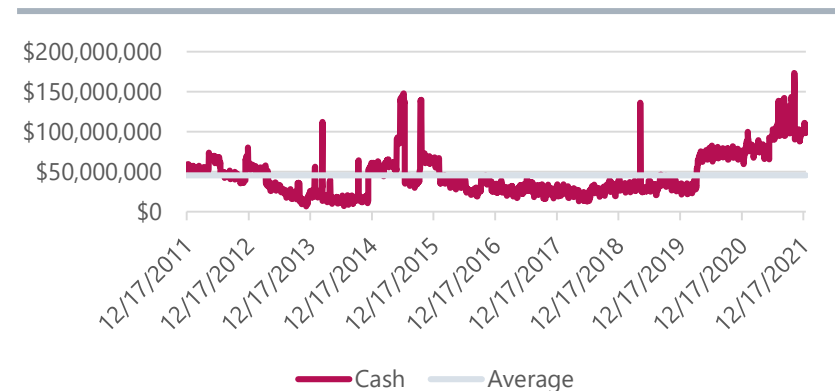
Parametric monitors cash exposure in the MCERA portfolio. Overlay exposures are utilized to securitize cash exposure into capital market exposure

- > Fund cash is securitized via the policy mix below
- > Manager cash is securitized into the manager's asset class benchmark

## MCERA Fund Level Policy Mix

Asset Class	Target %	Benchmark Index
Domestic Equity – Large Cap	41.25%	Russell 1000
Domestic Equity – Small Cap	13.75%	Russell 2000
International Equity	22.00%	MSCI ACWI ex U.S. IMI
Fixed Income	23.00%	Barclays Capital Aggregate

## MCERA Cash Exposure



## Key Benefits:

- > Increase expected returns
- > Reduce transactions costs
- > Increase liquidity

As of 12/31/2021. Information subject to change.  
Source: Parametric; 12/21/2021

Cash Levels	Actual		Effective	
	Cash	%	Cash	%
Average	\$45,227,730	2.06%	\$1,341,749	0.06%
Maximum	\$173,203,115	7.13%		
Minimum	\$6,894,340	0.37%		

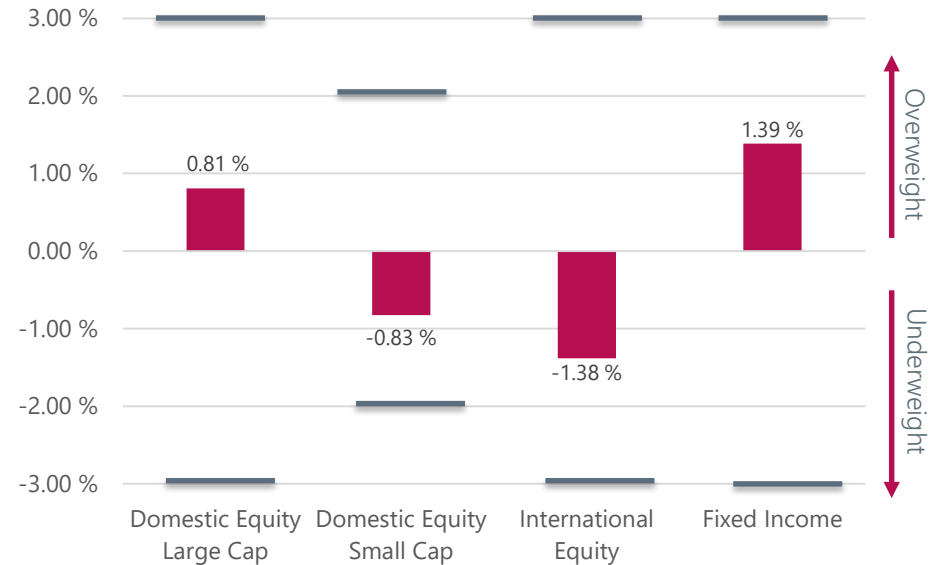
# MCERA Rebalancing Overlay Overview

Parametric monitors asset class exposures relative to MCERA's rebalancing ranges

## MCERA Rebalancing Ranges

Public Market Asset Class	Target %	Rebalancing Range
Domestic Equity – Large Cap	24.00%	±3%
Domestic Equity – Small Cap	8.00%	±2%
International Equity	22.00%	±3%
Fixed Income	23.00%	±3%

## Portfolio Exposures Relative to Target Allocation (12/31/2021)



Parametric rebalances portfolio exposures back to asset class targets once asset class exposures have exceeded one or more rebalancing ranges

As of 12/31/2021. Information subject to change.  
Source: Parametric; Date: 12/21/2021

# MCERA Transition Overlay Overview

Parametric maintains continuous market exposure via the overlay program during transition events such as manager terminations/hirings

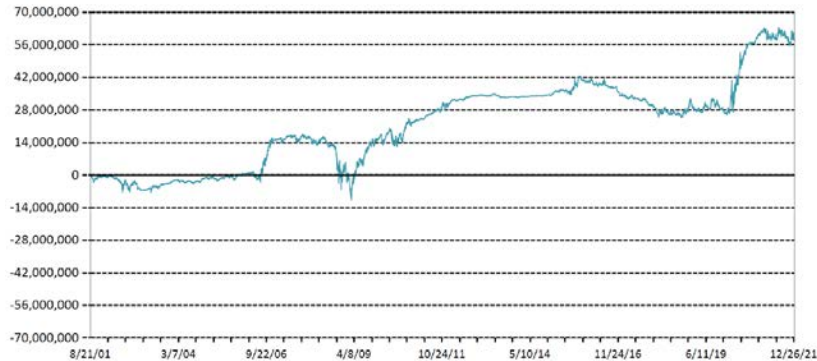
## Recent Transition Example

- > Emerging Markets Transition
- > MCERA initiated a 5-tranche transition to a new emerging markets manager which began in early August and completed in mid October
- > Through each tranche, Parametric coordinated with the Callan and MCERA teams to add MSCI Emerging markets exposure via futures. Parametric bought to correspond with the redemption date and sold positions when the new manager was funded, bridging the market exposure gap in the portfolio.

## B.3

# Overlay Performance and Metrics (12/31/2021)

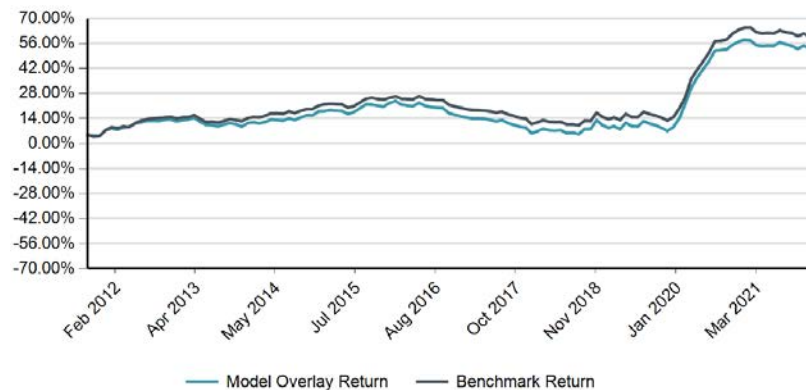
## Incremental Gain/Loss (8/22/2001– 12/31/2021)



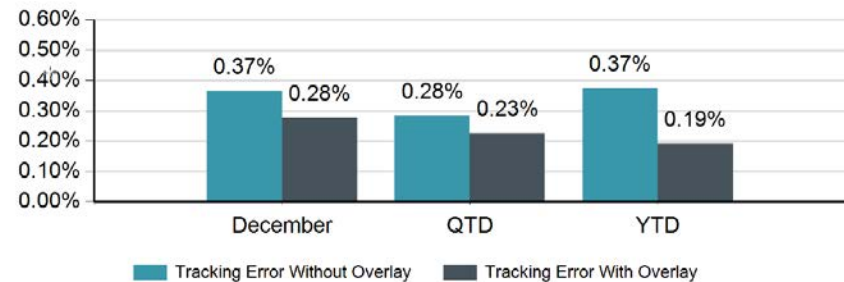
## Overlay Return Summary

Overlay Performance	Incremental Gain/Loss (Gross)	Return as a % of Total Fund (Gross)
MTD	-\$2,086,371	-0.06%
QTD	-\$1,501,792	-0.05%
YTD	-\$1,613,092	-0.05%
Inception (8/22/2001)	\$59,006,413	0.15%

## Synthetic Benchmark Return<sup>1</sup> vs. Benchmark Return



## Tracking Error Analysis



<sup>1</sup>Return streams are based on information provided by a third party.

Returns are gross of management fees unless otherwise noted. The deduction of an advisory fee would reduce investor's return. Information subject to change.

Past performance is not indicative of future results. Please refer to the disclosures at the end of this presentation.

Source: Bloomberg and Parametric; Date: 12/21/2021

# Parametric Analysis and Overlay Enhancements<sup>B.3</sup>

- > Examine various methods for portfolio rebalancing to evaluate if a change is desired
- > Review process for valuing private manager balances to keep daily reporting as accurate as possible
- > Explore alternative overlay instruments for non-public asset classes, inclusive of comprehensive tracking error estimations for each proposed solution

Risks

# Overlay Solutions: What Are the Risks?

Risk	Description	How Parametric mitigates
Market	Market performs in a way that was not anticipated. For example, cash outperforms capital markets.	Systematic market risk is an inherent part of the Overlay program and can neither be diversified away nor mitigated. Client specific policy guidelines are established to clearly define desired market risk based on client asset allocation targets.
Communication/ Information	Overlay index exposures are maintained based on underlying investment values provided by one or more third parties. There are often delays in the receipt of updated information which can lead to exposure imbalance risks. Inadequate communication regarding cash flow moves into and out of fund and manager changes can lead to unwanted asset class exposures and loss.	Parametric establishes communication links with custodial, manager, and other sources to obtain and verify positions and cash flow data as soon as it is available. Suspect data may be researched and staff notified.
Margin/Liquidity	Potential that the market moves in a manner adverse to the overlay position causing a mark-to-market loss of capital to the fund and a resulting need to raise liquidity or to close positions; this situation could happen at a time when underlying fund or positions are also declining in value.	Parametric strives to be aware of potential collateral and cash requirements to reduce the risk of needing to remove positions. Additional margin requirements are communicated via electronic mail and margin adequacy is available to the client daily.
Tracking Error	Futures (synthetic) index returns do not perfectly track benchmark index returns. This divergence between the price behavior of a position or portfolio and the price behavior of a benchmark is tracking error and impacts performance.	Parametric seeks to minimize tracking error by utilizing liquid futures contracts with sufficient daily trading volume and open interest. All derivative contracts will have some tracking error that cannot be mitigated by an overlay manager.
Leverage	Creation of market exposure in excess of underlying collateral value may lead to significant capital losses and result in position liquidation.	Parametric obtains daily collateral pool values and adjusts beta overlay positions to maintain the ratio of total exposure to collateral within a pre-defined client determined band.
Counterparty	Counterparty credit risk on OTC trading. Note: Bilateral centrally cleared OTC counterparty risk is similar to the clearing risk of holding futures investments.	Parametric can facilitate the negotiation of ISDA documentation that seeks to reduce the potential credit risk associated with OTC counterparties. Parametric monitors credit ratings and credit default swap spreads for all counterparties used and will inform staff of developments which may negatively impact credit risk.
Collateral	The program may experience losses on the underlying designated assets in addition to potential losses on the index market exposure overlaying these assets.	This risk cannot be mitigated by an overlay manager. Parametric discusses the potential for negative performance in the collateral used for the overlay prior to alpha transport applications with client.

# Appendices

# Biographies

B.3

## **Thomas Lee, CFA**

Chief Investment Officer

Tom is a member of Parametric's Executive Committee and leads Parametric's Research, Strategy, Portfolio Management, and Trading teams, coordinating resources, aligning priorities, and establishing processes for achieving clients' investment objectives. Tom has coauthored articles on topics ranging from liability-driven investing to the volatility risk premium. He is a voting member of all the firm's investment committees. Prior to joining Parametric in 1994 (originally as an employee of the Clifton Group, which was acquired by Parametric in 2012), Tom spent two years working for the Board of Governors of the Federal Reserve in Washington, DC. He earned a BS in economics and an MBA in finance from the University of Minnesota. A CFA charterholder, Tom is a member of the CFA Society of Minnesota.

## **Clint Talmo, CFA**

Director, Investment Strategy

Clint leads a team of investment professionals responsible for designing, trading, and managing customized overlay portfolios utilizing a wide spectrum of asset classes across global markets. Prior to joining Parametric in 2014, Clint was a partner at Aerwulf Asset Management. Previously, he worked for Interlachen Capital Group and EBF and Associates, where his responsibilities included research, trading, and portfolio management. He earned a BS in finance from the University of Colorado. A CFA charterholder, Clint is a member of the CFA Society of Minnesota.

## **Alex Braun, CFA**

Senior Portfolio Manager

Alex leads a team of investment professionals responsible for designing, trading, and managing overlay portfolios. Prior to joining Parametric in 2010, Alex interned at Imperial Capital (formerly Mercanti Group). He earned a BS degree in finance and accounting from the Carlson School of Management at the University of Minnesota. A CFA charterholder, Alex is a member of the CFA Society of Minnesota.

## **Richard Fong, CFA**

Senior Portfolio Manager

Ricky leads a team of investment professionals responsible for designing, trading, and managing overlay portfolios. Since joining Parametric in 2010, Ricky has become a valuable resource supporting management of client LDI and options-based risk management solutions. He earned a BA in financial economics from Gustavus Adolphus College. A CFA charterholder, Ricky is a member of the CFA Society of Minnesota.

## **Justin Henne, CFA**

Managing Director, Investment Management and Strategy

Justin leads the investment team responsible for the implementation and enhancement of Parametric's Overlay Services Strategy. He joined Parametric in 2004 (originally as an employee of the Clifton Group, which was acquired by Parametric in 2012) and has extensive experience managing overlay portfolios for institutional investors. He has traded a wide variety of derivative instruments to help his clients meet unique exposure and risk management objectives. Justin is a member of the CFA Society of Minnesota and holds a Series 3 license. He earned a BA in financial management from the University of St. Thomas.

## **Christopher Haskamp, CFA**

Director, Investment Strategy Government Securities

Chris is a Director of Investment Strategy with a focus on alternative risk premia and fixed income strategies. Prior to joining Parametric in 2006 (originally as a member of the Clifton Group, which was acquired by Parametric in 2012), he spent three years as a scientist at the medical device firm Beckman Coulter. Chris earned a BS in biochemistry from the University of Minnesota; an MS in chemistry from the University of California, San Diego; and an MBA in finance from the University of Minnesota's Carlson School of Management. A CFA charterholder, Chris is a member of the CFA Society of Minnesota.

## **Daniel Wamre, CFA**

Senior Portfolio Manager

Dan leads a team of investment professionals responsible for designing, trading, and managing overlay portfolios. He has extensive experience helping clients and consultants manage portfolio exposures and risk through futures and options-based strategies. Prior to joining Parametric in 1995 as an intern and full-time in 1998 (originally as an employee of the Clifton Group, which was acquired by Parametric in 2012), Dan spent four years as a platoon commander/executive officer in the US Marine Corps. Upon completion of graduate school, he spent 10 months working as a commercial banking credit analyst for US Bank in Minneapolis. He earned a BS from North Dakota State University and an MBA in finance from the University of Minnesota. A CFA charter holder, Dan is a member of the CFA Society of Minnesota.

# Biographies: Institutional Sales & Service

## Michi McDonough, CFA, CAIA

Managing Director, Head of Client & Consultant Relations

Michi is a member of Parametric's Executive Committee and leads Parametric's Consultant Relations and Institutional Client Relationship Management Teams. Prior to joining Parametric in 2013, she was vice president and consultant relations manager at Wellington Management. Michi earned a BA in economics from Emory University and an MBA, magna cum laude, from Babson College. A CFA charterholder, Michi is a member of the CFA Society of Boston and holds the CAIA designation.

## William Busch

Director, Consultant Relations

Bill is responsible for developing and maintaining relationships within the institutional investment consultant community. Prior to joining Parametric in 2015, Bill held positions at State Street Global Advisors in consultant relations and as a Product Analyst. Bill earned a BA in sociology and Spanish from Bowdoin College, and an MBA from the Carroll School of Management at Boston College.

## Jaylene Howard, CFA, CAIA

Director, Consultant Relations

Jaylene is responsible for developing and maintaining relationships with institutional investment consulting firms in the Western US. In her role, she partners with institutional consultants, building awareness of Parametric's capabilities in investment management and implementation services. Prior to joining Parametric in 2018, Jaylene worked at Canterbury Consulting as a consultant providing strategic investment advice to endowments, foundations, corporations, and ultra-high net worth families. Before that, she worked at Russell Investments as a Consulting Director where she was responsible for delivering market and economic insights and portfolio strategy advice to investment professionals and individual investors. She earned a BA in economics and history from Gonzaga University. A CFA charterholder and a CAIA charterholder, Jaylene is a member of the CFA Society of Seattle. Jaylene currently serves on the board of Seattle Preparatory School.

## Daniel Ryan

Senior Director, Client Relationship Management

Dan is responsible for managing client relationships throughout the Western US. Prior to joining Parametric in 2013, Dan was Vice President and Senior Relationship Manager at State Street Global Advisors. He earned a BA in history from the University of Michigan.

## Jason Chalmers

Director, Client Relationship Management

Jason is based in Boston and is responsible for managing client relationships throughout the Eastern United States. Prior to joining Parametric in 2014, Jason was a Vice President and Relationship Manager at Acadian Asset Management. He earned a BS in economics at Northeastern University and a MS in finance at Boston College Carroll School of Management.

## Jeremy Smith, CFA

Director, Client Relationship Management

Jeremy has lead client relationship management responsibilities for Parametric's Midwest clients. Prior to joining Parametric in May 2017, Jeremy worked for Allianz Life leading their investment management division's Business Development Team. During his tenure at Allianz Life, Jeremy also held positions leading the investment management division's Variable Annuity Advisory Management Team and worked as a Senior Investment Analyst. He earned a BA in business administration from the University of Minnesota Duluth. A CFA charterholder, Jeremy is a member of the CFA Society of Minnesota.

# Biographies: Institutional Sales & Service

## Christopher Uhas, CFA

Managing Director, Head of Institutional Business Development

Chris joined Parametric in 2007 (originally as an employee of the Clifton Group, which was acquired by Parametric in 2012) and is responsible for leading Parametric's institutional business development team, working closely with investors in the United States and Canada. Before entering the investment management industry, he was the director of New Product Launch for Seagate Technology, based in Singapore, and also served for five years as a nuclear-trained submarine officer in the US Navy. He earned a BS in electrical engineering from the University of Notre Dame and an MBA from the University of Chicago Booth School of Business. A CFA charterholder, Chris is a member of the CFA Society of Minnesota.

## Ben Lazarus, CFA

Senior Director, Institutional Relationships

Ben joined the firm in 2004 (originally as an employee of the Clifton Group, which was acquired by Parametric in 2012). He is responsible for developing, coordinating, and executing institutional business development strategies in the western US. In addition, he has developed new distribution partnerships for Parametric and has presented on the use of derivatives at different industry events. From 2015 to 2016, Ben was the senior vice president of US sales at Nuveen Investments. Ben earned a BA in psychology from the University of California, San Diego, and an MBA in marketing and strategic management from the University of Minnesota. A CFA charterholder, Ben is a member of the CFA Society of Minnesota.

## Christopher Powers, CFA, CAIA

Director, Institutional Relationships

Chris is responsible for developing, coordinating, and executing institutional business development strategies in the northeastern US and Canada. Prior to joining Parametric in 2018, Chris spent five years at RBC Global Asset Management as a director on the institutional sales team covering the northeastern US. Before RBC Chris spent three years at Eaton Vance. He earned a BS in economics from Trinity College in Connecticut. A CFA and CAIA charterholder, Chris is a member of the CFA Society of Boston.

## Greg Bauer, CFA, CAIA

Senior Director, Institutional Relationships

Greg is responsible for developing, coordinating, and executing institutional business development strategies in the southeastern US. Prior to joining Parametric in 2015, Greg worked at Crawford Investment Counsel, where he was the director of institutional services, responsible for leading the institutional sales and consultant relations efforts. Prior to Crawford, Greg worked for both Callan Associates and NEPC. Greg earned a BA from Brown University and an MBA from the Georgia Institute of Technology. A CFA charterholder, Greg is a member of the CFA Society of Atlanta and also holds a CAIA designation.

## Bryan Sandvig

Director, Institutional Relationships

Bryan is responsible for developing, coordinating, and executing institutional business development strategies in the central US. Prior to joining Parametric in 2017, Bryan worked at Cornerstone Capital Management as vice president of business development, where he managed institutional relationships and consultant relations. Bryan began his investment career at First Trust Portfolios as an internal consultant for exchange-traded funds and separately managed accounts in the southeast region of the United States. He earned a BA in business and economics from Wheaton College in Wheaton, Illinois.

# Other Portfolio Solutions

- > Index commodity exposure
- > Completion swaps
- > Completion portfolios
- > Credit exposure
- > Currency hedge management
- > Custom physical exposures
- > Custom synthetic exposures
- > Duration management
- > Equity hedging
- > Inflation hedges
- > Portable alpha
- > Swaptions management
- > Interest-rate management

For informational purposes only. This is not an offer to buy or sell securities. Risks vary per securities utilized in an application selected. The client should understand risks involved before selecting a particular application.

# Synthetic Indices<sup>1</sup>

The most often used index benchmarks are as follows:

## >Domestic Equity<sup>2</sup>

- S&P 500® Index
- S&P 400® Mid Cap Index
- MSCI USA IMI Index
- MSCI Small Cap USA Index
- Russell 1000® Index
- Russell 2000® Index
- Russell 3000® Index
- Wilshire 5000 Index

## >Fixed Income

- Bloomberg Barclays U.S. Aggregate Bond Index
- Bloomberg Barclays U.S. Aggregate Gov/Credit Index
- Bloomberg Barclays Intermediate U.S. Gov/Credit Index
- Bloomberg Barclays U.S. Long Gov/Credit Index
- Bloomberg Barclays U.S. Aggregate Long Treasury Index
- Bloomberg Barclays U.S. Long Treasury Index
- Bloomberg Barclays U.S. Universal Index
- Citi U.S. Broad Investment-Grade (USBIG) Bond Index
- BofA Merrill 1-3 Year U.S. Treasury Index
- Various Constant Duration Benchmarks

## >International Equity

- MSCI EAFE<sup>SM</sup> Index
- MSCI ACWI ex. U.S.<sup>SM</sup>
- MSCI ACWI ex. U.S. IMI
- MSCI Emerging Markets Index
- MSCI World ex. U.S.<sup>SM</sup>
- S&P Global Broad Market Index

## >Global Equity

- MSCI ACWI IMI
- MSCI World<sup>SM</sup>

## >Commodities

- S&P Goldman Sachs Commodity Index
- Bloomberg Commodities Index (BCOM)
- Custom Commodity Baskets

## >International Fixed Income

- Citigroup WGBI ex. US
- Bloomberg Barclays Global Aggregate Index ex. U.S.

## >Currency

- Indexes
- Individual Currency Exposure

<sup>1</sup>Please note that only broad market (e.g. versus style) futures are available and/or liquid enough for use. Individuals may not invest directly into indexes.

<sup>2</sup>In the case of style asset exposure needs (i.e. small cap growth), Parametric can manage ETF exposures to fulfill client needs. Customized nonstandard indexes can be replicated using swaps.

For informational purposes only. This is not an offer to buy or sell securities.

# Disclosure

Parametric Portfolio Associates® LLC ("Parametric"), headquartered in Seattle, is registered as an investment advisor with the Securities and Exchange Commission under the Investment Advisors Act of 1940. Parametric is a leading global asset management firm, providing investment strategies and customized exposure management directly to institutional investors and indirectly to individual investors through financial intermediaries. Parametric offers a variety of rules-based investment strategies, including alpha-seeking equity, fixed-income, alternative and options strategies. Parametric also offers implementation services, including customized equity, traditional overlay and centralized portfolio management. Parametric is an affiliate of Morgan Stanley Investment Management, the asset management division of Morgan Stanley, and offers these capabilities through offices located in Seattle, Boston, Minneapolis, New York City, and Westport, Connecticut. This material may not be forwarded or reproduced, in whole or in part, without the written consent of Parametric. Parametric and its affiliates are not responsible for its use by other parties.

This information is intended solely to report on investment strategies and opportunities identified by Parametric. Opinions and estimates offered constitute our judgment and are subject to change without notice, as are statements of financial market trends, which are based on current market conditions. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. Past performance is not indicative of future results. The views and strategies described may not be suitable for all investors. Investing entails risks and there can be no assurance that Parametric will achieve profits or avoid incurring losses. Parametric does not provide legal, tax and/or accounting advice or services. Clients should consult with their own tax or legal advisor prior to entering into any transaction or strategy described herein.

Charts, graphs and other visual presentations and text information were derived from internal, proprietary, and/or service vendor technology sources and/or may have been extracted from other firm data bases. As a result, the tabulation of certain reports may not precisely match other published data. Data may have originated from various sources including, but not limited to, Bloomberg, MSCI/Barra, FactSet, and/or other systems and programs. Parametric makes no representation or endorsement concerning the accuracy or propriety of information received from any other third party.

Benchmark/index information provided is for illustrative purposes only. Investors cannot invest directly in an index. Returns for indexes are calculated gross of management fees. Deviations from the benchmarks provided herein may include but are not limited to factors such as: the purchase of higher risk securities, over/under weighting specific sectors and countries, limitations in market capitalization, company revenue sources, and/or client restrictions. Parametric's proprietary investment process considers factors such as additional guidelines, restrictions, weightings, allocations, market conditions and other investment characteristics. Thus returns may at times materially differ from the stated benchmark and/or other disciplines and funds provided for comparison.

Performance is presented gross of advisory fees. Advisory fees are deducted quarterly from an investor's portfolio and would impact performance adversely. As an example, assuming (a) \$1,000,000 investment, (b) portfolio return of 5% per year, and (c) 1.00% annual investment advisory fee, the cumulative fees paid would be \$10,209.57 in the first year, \$55,254.43 over five years, and \$122,351.51 over ten years. Actual fees charged vary by portfolio due to various conditions, including account size. Parametric's investment advisory fees are described further in Part 2A of Form ADV, which is available on request.

Derivatives such as futures, swaps, and other investment strategies have certain disadvantages and risks. Futures require the posting of initial and variation margin. Therefore, a portion of risk capital must be preserved for this purpose rather than being allocated to a manager. Liquid futures may not exist for published benchmarks which may result in tracking error. Also, some intra-period mispricing may occur. Swaps require periodic payments, may be less liquid than futures, and may have counterparty/credit risk. Some investment strategies require a cash investment equal to the desired amount of exposure.

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Parametric is headquartered at 800 5th Ave Suite 2800, Seattle, WA 98104. Parametric's Minneapolis office is located at 3600 Minnesota Drive, Suite 325, Minneapolis, MN 55435. For more information regarding Parametric and its investment strategies, or to request a copy of Parametric's Form ADV, please contact us at 206.694.5575 (Seattle) or 952.767.7700 (Minneapolis), or visit our website, [www.parametricportfolio.com](http://www.parametricportfolio.com).

**B.3**  
**PIOS Composite**  
**GIPS Composite Report**  
*Reported in: USD*

	Total Gross Return AWR	Total Net Return AWR	3Yr Ex Post Std Dev Composite Gross	Internal Equal Wtd. Dispersion	Number Of Portfolios	Year-End Composite Overlay Exposure (MM)*	Composite Assets (MM)*	Total Firm Assets (MM)*	Total Firm Overlay Exposure (MM)	Total Firm Economic Exposure (MM)**
2011	2.80%	2.65%	5.60%	6.76%	188		19,771			
2012	5.20%	5.04%	4.56%	5.72%	206		22,547	63,431		
2013	4.81%	4.65%	3.59%	9.38%	215		30,045	80,896		
2014	2.98%	2.83%	2.80%	4.74%	270		36,290	94,545		
2015	-0.86%	-1.01%	2.86%	5.57%	333		43,711	99,248		
2016	3.40%	3.24%	2.73%	8.03%	334		46,915	111,470		
2017	9.03%	8.87%	3.02%	9.08%	335		45,026	137,760		
2018	-2.86%	-3.01%	3.39%	3.43%	355		37,087	122,628		
2019	8.75%	8.59%	3.74%	9.71%	385		47,924	277,776		
2020	8.71%	8.55%	7.83%	26.05%	404	61,410		241,115	106,570	347,685

\* The composite was not included in Firm Assets prior to 2012 as it was being managed by a prior firm.

\*\* Total Firm Economic Exposure is the sum of the total firm assets and the overlay exposure.

Composite Creation Date: December 1, 2013; Inception Date: July 1, 1986

1 Parametric Portfolio Associates® LLC claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Parametric Portfolio Associates® LLC has been independently verified for the periods January 1, 2000 to December 31, 2020. The verification report(s) is/are available upon request. 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. Verification does not provide assurance on the accuracy of any specific performance report.

2 Parametric Portfolio Associates® LLC is an independent investment advisor registered under the Investment Advisers Act of 1940. Parametric Portfolio Associates® LLC provides rules-based investment management services to institutional investors, individual clients and commingled investment vehicles, including Systematic Alpha and Income Strategies, Custom Core, Centralized Portfolio Management ("CPM"), Policy Implementation Overlay Service ("PIOS"), Customized Exposure Management ("CEM"), Volatility Risk Premium ("VRP"), Tax-Advantaged Bond Strategies (TABS), and Taxable Bond Strategies. The Firm has complied with the GIPS standards retroactive to January 1, 2000.

Prior to July 1, 2019, the firm included only the Parametric Investment & Overlay Strategies. On July 1, 2019, the firm was redefined to include the Parametric Custom Tax-Managed & Centralized Portfolio Management Strategies. On January 1, 2020, the firm was redefined to include the Tax-Advantaged Bond Strategies (TABS), and Taxable Bond Strategies previously managed by Eaton Vance Management, an investment affiliate of Parametric's parent company, Eaton Vance Corporation. For the purpose of complying with the GIPS standards, the Firm is defined and held out to the public as Parametric Portfolio Associates® LLC.

On March 1, 2021, Eaton Vance Management and its affiliates (which includes Parametric Portfolio Associates® LLC) became a wholly-owned, independently managed subsidiary of Morgan Stanley. The firm continues to operate as Parametric Portfolio Associates® LLC.

3 Effective January 1, 2020, portfolio returns are calculated based on the sum of the daily gain/loss in the client account divided by the account AUM value of the previous month end. The account AUM value is the notional value of the securities within the account. The client account AUM value at the prior month end is used for the composite asset weighted performance calculation. Collateral and collateral income are not reflected in the composite returns.

Prior to January 1, 2020 portfolio returns are calculated based on the sum of the daily gain/loss in the client account divided by the total portfolio value of the previous month end. The total portfolio value is the market value of the client's manager portfolios, as defined in the guidelines. The client account overlay target value at the prior month end is used for the composite asset weighted performance calculation. Collateral and collateral income are not reflected in the composite returns.

4 Internal dispersion is calculated retroactively based on the sample using the equal-weighted standard deviation of the annual gross returns of those portfolios that were included in the composite for the entire year. When the composite consists of five or fewer portfolios for the full year, no dispersion measure is presented. The three-year annualized standard deviation measures the variability of the composite gross returns and the benchmark returns over the preceding 36-month period.

5 Policies for valuing investments, calculating performance, and preparing GIPS Reports are available upon request.

6 A list including composite descriptions and pooled funds descriptions for limited distribution pooled funds is available upon request.

7 GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein.

- 8 The PIOS (Policy Implementation Overlay Service) Composite is comprised of all fully discretionary separate accounts that create custom overlay solutions designed to help investors achieve policy objectives. The PIOS strategy utilizes an array of investment instruments to achieve client objectives through adherence to detailed investment guidelines. Objectives can include interest rate management, currency management, rebalancing, transition management, cash securitization and neutralizing policy performance shortfalls. Key risks for strategies utilizing derivative securities have one or more combinations of the following risks that may be incurred: market risk, communication/information risk, leverage risk, trade restrictions risk, margin/liquidity risk, commodity risk, collateral risk and opportunity risk.
- 9 This composite is not compared against a benchmark. There is no observable benchmark or index that exists with an objective similar to that of the strategy. It is not possible to directly invest in an index.
- 10 Composite net returns are calculated by deducting the actual portfolio management fee charged when known and available, otherwise the maximum management fee charged for a segregated account of this style is deducted from the gross performance returns.
- 11 The separate account management fee schedule is as follows: First \$50M @ 0.15%; Thereafter @ 0.10%.
- 12 Derivative securities are used in the accounts which comprise this composite. The firm's strategies contain derivatives such as futures, options, swaps, and other investment strategies that may involve certain advantages and risks. Futures require the posting of initial and variation margin. Therefore, a portion of risk capital must be preserved for this purpose rather than being allocated to a manager. Swaps require periodic payments, which may be less liquid than futures, and certain swaps may have counterparty/credit risk. Some investment strategies may require a collateral investment equal to the desired amount of exposure.
- 13 Performance prior to January 2013 was achieved by the Clifton Group Investment Management prior to its merger with Parametric Portfolio Associates, LLC and has been linked to the performance history of Parametric Portfolio Associates, LLC. Performance results prior to January 2013 should not be interpreted as the actual historical performance of Parametric Portfolio Associates, LLC. Parametric Portfolio Associates, LLC has adhered to the performance record portability requirements of the GIPS standards in regard to the presentation and linking of this performance track record.

## C.1

### MCERA Investment Manager Reporting Schedule 2022 – 2023 - 2024 January 19, 2022

#### **2022**

January	Wellington, Parametric Futures Overlay
March	Morgan Stanley, State Street Global Advisors Securities Lending
June	Dimensional Fund Advisors, Fidelity
September	Abbott + Pathway (plus private equity pacing and ILPA fee review)
December	UBS

#### **2023**

January	CarVal, Fortress, Varde
March	Colchester, Artisan
June	Invesco
September	Abbott + Pathway (plus private equity pacing and ILPA fee review)
December	AEW

#### **2024**

January	Western
March	TimesSquare
June	KBI
September	Abbott + Pathway (plus private equity pacing and ILPA fee review)
December	UBS

## **C.2 Future Meetings**

This is a discussion with no backup.

**Marin County Employees' Retirement Association  
Defined Benefit Plan**

<b>Managers</b>	<b>December 2021 Market Value</b>	<b>Fiscal Year To Date 7/1/21 - 12/31/21</b>	<b>Calendar Year 2021</b>
<b>Domestic Equity</b>	<b>\$1,017,310,006</b>	<b>8.2%</b>	<b>27.6%</b>
<i>Russell 3000 Index</i>		9.5%	26.0%
<b>Large Cap Equity</b>	<b>\$790,384,927</b>	<b>10.4%</b>	<b>27.2%</b>
<b>SSGA S&amp;P 500/Russell 1000 Index</b>	<b>\$809,925,227</b>	<b>10.4%</b>	<b>27.2%</b>
<i>SSGA Blended Benchmark</i>		10.4%	27.2%
<b>Parametric Large Cap Futures</b>	<b>-\$19,540,300</b>		
<b>Small Cap Equity</b>	<b>\$226,925,079</b>	<b>3.6%</b>	<b>28.4%</b>
<b>Dimensional Fund Advisors</b>	<b>\$258,904,567</b>	<b>3.6%</b>	<b>28.4%</b>
<i>Russell 2000 Index</i>		-2.2%	15.0%
<b>Parametric Small Cap Futures</b>	<b>-\$31,979,488</b>		
<b>International Equity</b>	<b>\$698,467,613</b>	<b>-1.4%</b>	<b>5.4%</b>
<i>MSCI ACWI ex-US IMI Index</i>		-1.0%	8.5%
<b>Morgan Stanley</b>	<b>\$209,808,356</b>	<b>-2.7%</b>	<b>5.3%</b>
<b>Artisan Partners</b>	<b>\$219,516,684</b>	<b>2.5%</b>	<b>8.7%</b>
<i>MSCI EAFE Index</i>		2.2%	11.2%
<b>TimesSquare</b>	<b>\$131,502,625</b>	<b>-2.8%</b>	<b>2.2%</b>
<i>MSCI EAFE Small Cap Index</i>		1.0%	10.1%
<b>FIAM/Parametric Emerging Markets*</b>	<b>\$125,459,362</b>	<b>-4.5%</b>	<b>3.3%</b>
<i>MSCI Emerging Markets Index</i>		-10.0%	-3.3%
<b>Parametric International Futures</b>	<b>\$12,180,586</b>		
<b>Fixed Income</b>	<b>\$828,760,815</b>	<b>-0.9%</b>	<b>-2.6%</b>
<i>Blended Benchmark</i>		-0.7%	-2.8%
<b>Wellington</b>	<b>\$334,458,819</b>	<b>0.3%</b>	<b>-0.7%</b>
<i>Bloomberg US Aggregate Index</i>		0.1%	-1.5%
<b>Western Asset</b>	<b>\$176,500,901</b>	<b>-0.6%</b>	<b>-0.4%</b>
<i>Bloomberg US Intermediate Credit Index</i>		-0.5%	-1.0%
<b>Colchester</b>	<b>\$171,681,011</b>	<b>-3.2%</b>	<b>-8.0%</b>
<i>FTSE World Government Bond Index</i>		-2.3%	-7.0%
<b>Parametric Fixed Income Futures</b>	<b>\$146,120,084</b>		

\*FIAM was funded in multiple tranches beginning in mid-August and completed in mid-October.  
All market values and returns shown are preliminary and subject to revision.

**Marin County Employees' Retirement Association  
Defined Benefit Plan**

<b>Managers</b>	<b>December 2021 Market Value</b>	<b>Fiscal Year To Date 7/1/21 - 12/31/21</b>	<b>Calendar Year 2021</b>
<b>Public Real Assets</b>	<b>\$240,552,843</b>	<b>8.6%</b>	<b>23.7%</b>
<i>Blended Benchmark</i>		<i>8.0%</i>	<i>25.8%</i>
<b>BlackRock TIPS Index Fund</b>	<b>\$56,785,325</b>	<b>4.1%</b>	<b>6.0%</b>
<i>Bloomberg US TIPS Index</i>		<i>4.1%</i>	<i>6.0%</i>
<b>BlackRock REIT Index Fund</b>	<b>\$64,204,909</b>	<b>18.7%</b>	<b>45.9%</b>
<i>DJ S&amp;P US Select REIT Index</i>		<i>18.7%</i>	<i>45.9%</i>
<b>Invesco Balanced Risk Commodities Fund</b>	<b>\$58,876,688</b>	<b>3.2%</b>	<b>19.7%</b>
<i>Bloomberg Commodities Index</i>		<i>4.9%</i>	<i>27.1%</i>
<b>KBI Global Resources Fund</b>	<b>\$60,685,920</b>	<b>7.0%</b>	<b>25.1%</b>
<i>S&amp;P Global Natural Resources Index</i>		<i>4.1%</i>	<i>24.4%</i>
<b>Real Estate(1)</b>	<b>\$243,226,251</b>	<b>10.2%</b>	<b>15.2%</b>
<i>NFI-ODCE Equal Weight Net(1)</i>		<i>14.0%</i>	<i>21.2%</i>
<b>Woodmont</b>	\$19,253,772	-	-
<b>UBS Trumbull Property Fund</b>	\$110,036,130	-	-
<b>AEW Core Property Trust</b>	\$113,936,349	-	-
<b>Private Equity(2)</b>	<b>\$418,083,054</b>	<b>0.0%</b>	<b>31.7%</b>
<b>Abbott ACE VI</b>	\$54,395,599	-	-
<b>Abbott ACE VII</b>	\$55,005,457	-	-
<b>Abbott AP 2016</b>	\$64,747,715	-	-
<b>Abbott AP 2017</b>	\$17,132,875	-	-
<b>Abbott AP 2021</b>	\$3,476,739	-	-
<b>Pathway PPEF 2008</b>	\$79,615,310	-	-
<b>Pathway PPEF I-7</b>	\$48,240,075	-	-
<b>Pathway PPEF I-8</b>	\$72,537,017	-	-
<b>Pathway PPEF I-9</b>	\$14,815,318	-	-
<b>Pathway PPEF I-10</b>	\$8,116,949	-	-
<b>Opportunistic(3)</b>	<b>\$32,260,409</b>	<b>2.2%</b>	<b>11.7%</b>
<b>CarVal Credit Value Fund V</b>	\$7,370,453	-	-
<b>Fortress Credit Opportunities Fund V Expansion</b>	\$5,601,505	-	-
<b>Varde Dislocation Fund</b>	\$19,288,451	-	-
<b>Total Fund</b>	<b>\$3,478,660,991</b>	<b>3.4%</b>	<b>15.6%</b>

(1)Market values as of September 30, 2021. FYTD and YTD returns use MCERA's and ODCE's pro-rata performance of prior quarter.

(2)Market values as of September 30, 2021. FYTD and YTD returns use MCERA's pro-rata performance of prior quarter.

(3)Market values as of September 30, 2021. FYTD and YTD returns use MCERA's pro-rata performance of prior quarter.

All market values and returns shown are preliminary and subject to revision.