BOARD OF PENSION TRUSTEES
FOR THE
CITY OF JACKSONVILLE RETIREMENT SYSTEM
Thursday, May 19, 2022
City Hall Conference Room 3C at 1:30PM

AGENDA

1. **CALL TO ORDER**

2. **PUBLIC COMMENT**

3. **INVESTMENT AND FINANCIAL MATTERS**

a. Securitized Fixed Income Finalist Presentations – (30 Minute Presentations + 15 minute Q&A)
   - RVK - Introduction & Process Review (1:30 PM – 1:45 PM)
   - The TCW Group (1:45 PM – 2:30 PM)
   - Columbia Threadneedle (2:35 PM – 3:20 PM)
   - Schroders Investment Management (3:25 PM – 4:10 PM)
   - Board Discussion

b. **INFORMATION**

a. The next regular BOT meeting will be Thursday, May 26, 2022, at 2:00 PM.

5. **PRIVILEGE OF THE FLOOR**

6. **ADJOURNMENT**

Memorandum

To	Board of Trustees of the City of Jacksonville ("COJ") Retirement System
From	RVK Inc. ("RVK")
Subject	Unconstrained Securitized Fixed Income Evaluation
Date	May 19, 2022

Background

The purpose of this memorandum is to provide the City of Jacksonville Employees' Retirement System ("City of Jacksonville ERS" or the "City") Board with an overview of the evaluation process of Securitized Fixed Income managers conducted by Staff and RVK. The purpose of the evaluation was to explore the potential for further enhancement of the fixed income composite through additional alpha generation and diversification.

Following a review of potential complimentary strategies for the City's fixed income composite, unconstrained securitized was identified as an attractive and additive asset class, providing valuable diversification and attractive risk adjusted returns. Staff and RVK conducted a review of the opportunity set, which included discussion of qualitative and quantitative factors such as absolute and risk-adjusted performance (over trailing and rolling time periods), firm structure, team experience, investment philosophy and process, among others. Ultimately, there were six candidates selected for further evaluation, including interviews with key members of each investment team. These candidates are listed below.

- Amundi Asset Management
- Columbia Threadneedle
- Fort Washington Investment Advisors
- Schroders Capital
- TCW Asset Management
- Voya Investment Management

Following the interview stage, there was collective agreement between Staff and RVK that three of the candidates separated themselves from the others with regards to offering differentiated approaches, which had achieved a high level of performance consistency. The three managers listed below were those determined to be brought forward to the Board for consideration.

- Columbia Threadneedle
- Schroders Capital
- TCW Asset Management

Detailed information on each of the three managers being brought forward can be found in the appendices of this memorandum. Appendix I includes summaries of the firm, investment team and strategies of each manager. Appendix II includes a comparison of performance and risk for each manager's strategy, the correlation of the three managers versus the current fixed income composite mandates, and fixed income characteristics and allocation data.

Search Background

When evaluating the City's overall fixed income composite, RVK and Staff discussed and considered a variety of potential asset classes including emerging market debt, global unconstrained credit, and securitized fixed income. Securitized notably offered little overlap with the City's current fixed income composite, and includes exposure primarily to securities backed by a diverse range of consumer loans, including agency and non-agency mortgage backed securities (MBS), asset backed securities (ABS), and commercial mortgage backed securities (CMBS). This exposure contrasts with the City's current fixed income composite, which includes primarily core fixed income, investment grade corporate credit, below investment grade corporate credit, and emerging market debt. While the City does hold some securitized exposure, it is largely agency-backed and more heavily influenced by interest rate fluctuations, as opposed to non-agency securitized, which is more heavily influenced by consumer credit. Non-agency securitized is more heavily represented in unconstrained securitized strategies specifically. As a result, unconstrained securitized was identified as an asset class that meets the objective of enhanced diversification.

Additionally, unconstrained securitized fixed income can benefit the City's fixed income composite in the current environment of low yields and rising interest rates, given the asset class's low interest rate sensitivity, enhanced yield, and attractive risk adjusted returns, particularly relative to core fixed income.

As such, managers selected by RVK and Staff are those who have demonstrated the capabilities to evaluate and invest in unconstrained securitized fixed income and which meaningfully diversify from core and corporate credit exposure.

Fee Comparison

The initial fee proposals submitted by the three managers are shown below along with their corresponding ranks relative to the eVestment US Fixed Income Securitized – Non-Traditional peer group. RVK and Staff determined a best and final fee would be solicited following presentations to the Board.

Manager	Separate Account Fee* ($)	Separate Account Fee (Bps)	
5th Percentile	$204,480	20	
25th Percentile	$325,000	32	
Median	$390,000	39	
75th Percentile	$550,000	55	
95th Percentile	$750,000	75	
			Rank
**Columbia Threadneedle	$240,000	0.24%	7
***Schroders	$820,000	0.82%	97
TCW	$750,000	0.75%	91

Fees shown assumes a $100 million mandate.
***The Columbia fee shown already incorporates a discount from the manager's standard fee schedule. A best and final fee will be solicited from all candidates following finalist interviews.*
****The Schroders product shown is a Limited Partnership. This fund comes with a management fee (65 bps) and operating costs of 17 bps, included in the total fee shown. As fund assets grow, operating costs are expected to decrease. RVK clients receive a manager fee break which would bring the all-in fee to 77 basis points should total RVK client asset within the Schroder LP reach $350 million.*

Next Steps

The next step in the process will include presentations to the Board by all three of the selected managers. These presentations have been scheduled for May 19, 2022. The goal of the presentations ultimately being to help inform a decision on whether any of the three managers should be awarded a mandate as either a replacement or addition to the current fixed income composite. Should the Board seek more information from RVK and/or Staff, please do not hesitate to let us know.

Appendix I: Manager Summary

Schroder Opportunistic Multi-Sector

Firm

Globally headquartered in London, England with domestic headquarters in New York, New York, Schroders was formed in 1804 and is a global firm consisting of over 200 legal entities operating in 37 countries. Today, Schroders is one of the largest asset managers listed on the London Stock Exchange with nearly $838 billion in AUM as of March 31, 2022. Of these assets, over $106 billion are based in the United States. The Schroder family today continues to hold 48% ownership in the equity of the firm. Schroders offers strategies across equities, fixed income, multi-asset, and alternatives.

Team

The Schroders Securitized Credit team has been managing securitized credit for nearly 27 years across a range of strategies, from investment grade to opportunistic securitized. Originally a part of Hyperion capital, founded by Lewis Ranieri, Schroders eventually purchased the then Hyperion-Brookfield team in 2016, bringing over all Hyperion-Brookfield client relationships. Today the Securitized Credit team of 15 is led by Michelle Russell-Dowe and follows a team-based and research-led approach. Teams are organized into a strategy execution framework, with a Low Duration team, a Benchmark Relative team, and an Opportunistic team. The Opportunistic team consists of six members with an average of 28 years relevant experience. All teams are headed by Michelle Russell-Dowe.

Team members are also organized into research teams with focuses across the securitized space including US CMBS, RMBS, Global ABS, and Global CLOs, among others. Schroders believes the team's research expertise and focus on relative value drives best idea selection within the space.

Michelle Russell-Dowe
Head of Securitized Credit, Lead PM

Team Based, Strategy Execution Framework

Low Duration	Benchmark Relative	Opportunistic
Anthony Breaks Chris Ames Robert Graham Adam Pinkerton Bridget Hu	Anthony Breaks Eric Richter Robert Graham Adam Pinkerton Bridget Hu	Chris Ames Anthony Breaks Jeff Williams Paul Bratten Alyse Kelly Bridget Hu
Strategy based teams lend to relative value approach and understanding of client objective		

Research Focus

US CRE/Global CMBS	RMBS	Global ABS/Asset-finance	Global CLO	Quantitative Research	Systems Development
Jeff Williams[1] Paul Bratten[2] Robert Graham[1]	Michelle Russell-Dowe[1] Anthony Breaks[1] Adam Pinkerton Bridget Hu[2] Eric Richter[1]	Michelle Russell-Dowe[1] Anthony Breaks[1] Chris Ames[1] Bridget Hu[2] Adam Pinkerton	Anthony Breaks[1] Alyse Kelly Bridget Hu[2]	Liyun Ma Yusi Xie[2]	Sagar Regmi

Source: Schroders

Investment Process

The Schroders Securitized Credit team focuses on areas where the team believes they hold a competitive advantage, and with over $18 billion in committed capital are a large manager in the securitized space. Where the incumbent Schroder mandate targets investment grade only, ABS, MBS, CMBS, CLO, US, and Non-US securitized, the Opportunistic Multi-Sector strategy targets unconstrained ABS, MBS, CMBS, CLO and secured financings (loans and/or leases) with the objectives of opportunistic income and positioning as a corporate credit or high yield alternative. The Opportunistic Multi-Sector strategy does not employ leverage and targets a return of cash+400-500 basis points over a market cycle, with exposure to less liquid portions of the asset backed market, in addition to lower quality and more opportunistic regions of the mortgage back and asset backed market. The team approach starts with a top-down examination of fundamental and technical factors. The team then performs bottom up analysis with detailed risk profiling; grouping securities by liquidity, volatility, and structural leverage profiles and incorporating in-depth quantitative assessment and modeling of each bond over various scenarios. The team also performs a qualitative assessment of counterparty, servicer capabilities, and risk, among other key factors.

At the start of the investment process Schroders identifies the fundamental and technical factors that drive performance for the overall securitized market as well as specific sectors by assessing regulation, access to credit, interest rates, prepayment trends, and delinquency rates. The Schroders fixed income and economic research teams can also be leveraged to provide additional insights. Once Schroders identifies their inputs for evaluating credit cycles, asset prices, and interest rates the team uses proprietary models for sensitivity analysis. This process seeks to identify risk profiles that represent areas of opportunity that are consistent with Schroders' view of the market.

The team will also monitor each securities cash flow and capital structure to identify areas of weakness. Schroders believes a thorough understanding of collateral cash flow and structure can drive returns over the long term. Additionally, they will compile information on loan originators and servicers believing that the specific tendencies of the originator and servicer can create differences in performance for bonds with otherwise similar collateral.

The teams research-led evaluation of the investment environment, as described above, is used to determine target levels of risk in the strategy. Portfolio construction then incorporates relative value decisions and looks at risk across liquidity, credit, volatility, and duration. Portfolios are then constructed based on asset valuation, client risk tolerance, and liquidity requirements. Using this framework, the team will select the preferred asset class and sector exposures as well as preferred collateral types and counterparty exposures. Purchases and sales are discussed among the team until a consensus is reached so that the team understands the reasoning behind each transaction and each team member can incorporate the reasoning into their decision making. Each portfolio manager on the investment team also conducts their own trading, which is in line with Schroders "team-based" approach.

The overall philosophy of the Schroders Securitized Credit team centers around operating in data rich sectors where they believe opportunity can be accurately assessed, deploying capital into inefficient markets, understanding credit cycles, and capitalizing on cyclical opportunities.

TCW Securitized Opportunities

Firm

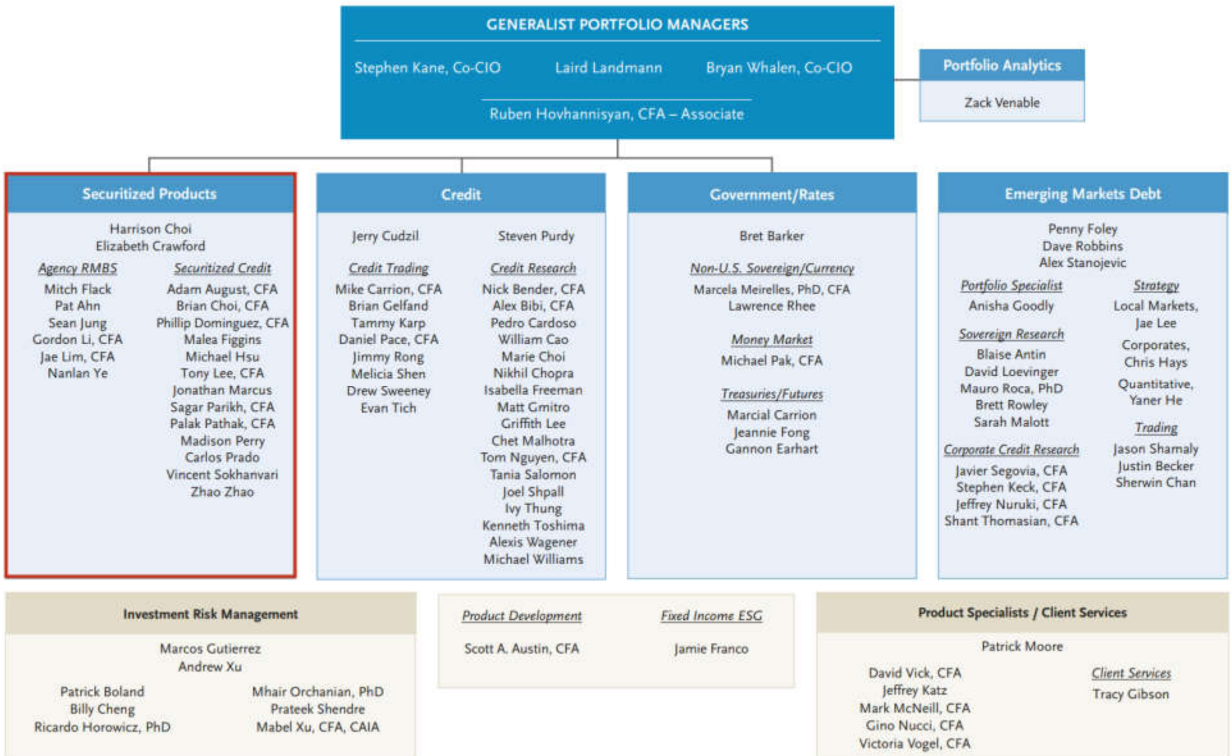
Originally founded in 1971 in Los Angeles, CA, TCW currently manages over $242 billion in assets under management. With over 600 employees, the vast majority of the firm's assets under management is dedicated to fixed income ($222 billion), of which core and core plus comprises the lion share. Currently, the firm is owned in part by the Carlyle Group following a management led buyout from the previous owner Société Générale in 2013. In addition, in 2017 Nippon Life acquired a minority stake in TCW of 24.75%. This acquisition had the effect of increasing employee ownership in TCW, resulting in an ownership structure today that is 31% Carlyle, 44% TCW management and employees (spread across 92 employee owners), and 24.8% Nippon Life.

Team

The TCW fixed income team is led by a group of four generalist portfolio managers, who set the top down firm strategy, particularly relevant to multi sector portfolios. For those products dedicated to a particular sector, such as the TCW Securitized Opportunities product, that is led by TCW securitized portfolio managers Harrison Choi and Elizabeth Crawford. This PM team is further supported by a heavily built out and resourced securitized team consisting of 6 Agency MBS specialists and 13 securitized credit specialists.

Dedicated Securitized Products accounts for $22 billion (as of December 31, 2021) of the firm's assets under management, however, when accounting for securitized allocations across multi sector portfolios such as core fixed income the firms securitized AUM grows to $99 billion (as of December 31, 2021) across agency Mortgage Backed Securities, Non-Agency Mortgage Backed Securities, Asset backed securities, and commercial mortgage backed securities.

The TCW Securitized Opportunities product currently holds $5.3 billion in AUM (as of December 31, 2021), $3.4 billion of which is in customized separate accounts.



Investment Process

TCW manages securitized product in a truly opportunistic approach, investing across ABS, RMBS, and CMBS across the quality spectrum, with a long-term return target of 500 bps over cash. The strategy does not employ leverage, and will engage in tactical sector rotation. The strategy is headed by structured product sector heads, and while informed by the firm's top down view provided by portfolio manager generalists, allocation decisions are primarily driven by bottom up selection led by sector specialists

While the strategy is unconstrained, the management team does not employ a constant “pedal to the medal” approach. Rather, the team will opportunistically rotate across the quality spectrum and across securitized sectors as they identify relative value per their long-term reversion to the mean philosophy.

Columbia Threadneedle

Firm

Columbia Threadneedle represents the global asset management group of Ameriprise Financial, a US based financial services firm with asset management, advisory, and insurance capabilities. The investment advisor representing the majority of funds in the Columbia family of funds was founded in 1985, which was combined with the Columbia Management Group when acquired by Ameriprise in 2010. Subsequently in 2015, Ameriprise launched the Columbia Threadneedle Investments global brand representing the firm's global asset management group.

Columbia Threadneedle manages $461.4 billion in total AUM, of which $160.3 billion (35%) is institutional and 36% is fixed income. The Columbia Threadneedle Structured Credit product's total AUM of $4.2B is entirely housed within a retail mutual fund, which may be subject to increased volatility as a pooled vehicle with multiple investors.

Team

The Structured Credit strategy is run by a team of three portfolio managers, Jason Callan, Tom Heuer, and Ryan Osborn averaging 22 years' experience. The team is based in Minneapolis, MN and sit on one combined trading floor to work closely with traders on their assigned sectors.

Investment Process

The Columbia Threadneedle process employs fundamental analysis paired with quantitative modeling to drive risk adjusted returns through yield and capital gains. The investment process begins with developing a macro top-down view based on housing and economic metrics to establish an investment thesis, which feeds into determining sector allocations, spread durations, and duration targets. Subsequently, the team develops targets within the investible universe based on the objectives of total return, available yield, and ability to mitigate downside risk. Lastly, security selection is performed by relying heavily on forward looking quantitative analysis driven by research analysts.

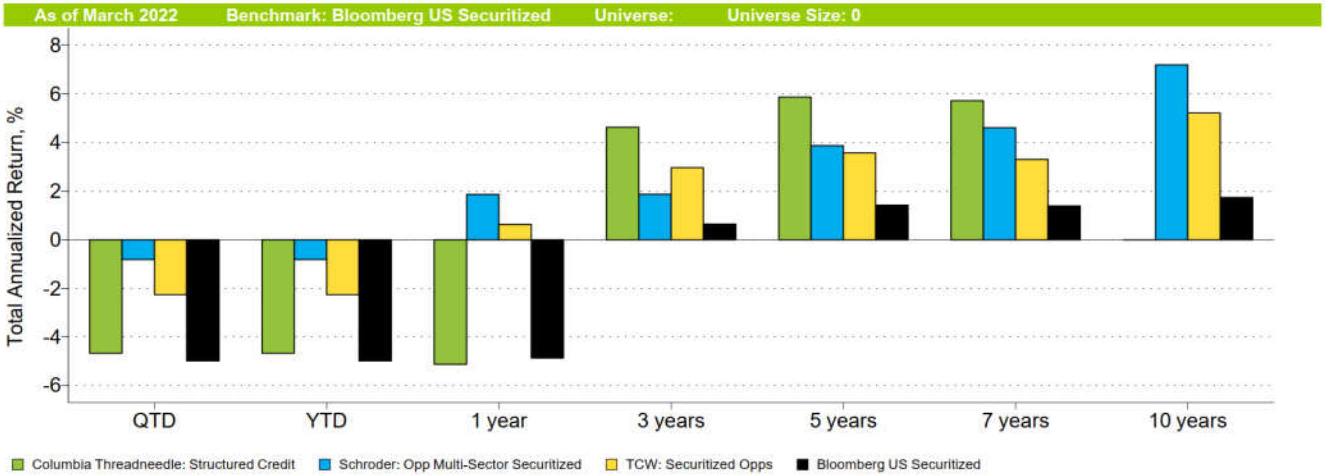
The portfolio management team seeks to optimize the portfolio by balancing the teams yield, duration, and convexity targets against the current market environment. The team will also apply macro hedges to hedge duration, convexity, credit risks, or to pursue risk adjusted returns.

The Columbia Threadneedle strategy has a heavy emphasis on mortgage backed securities (both Agency and non-Agency) with a historical 2/3 mortgage backed product tilt. The products guidelines allow -2 to 8 years duration, -20-100% Agency MBS, 0-90% non-agency MBS, 0-20% Interest Only CMO, 0-15% Inverse IO, -20-90% CMBS, and 0-20% ABS. The strategy allows corporate credit exposure, with an allowance of up to 20% corporate bonds. Corporate bonds are used as a non-cash hedge, as the team considers them a liquid option if they are unable to purchase within the securitized market. An increased allocation to corporate bonds may detract from diversifying benefits relative to other incumbent managers within the City’s fixed income composite, should that become a material component of the strategy. Within asset backed securities, the team favors esoteric securities which may offer enhanced yield and complexity premium with heightened liquidity and credit risk.

Appendix II: Comparative Performance and Characteristics

Trailing Period Returns

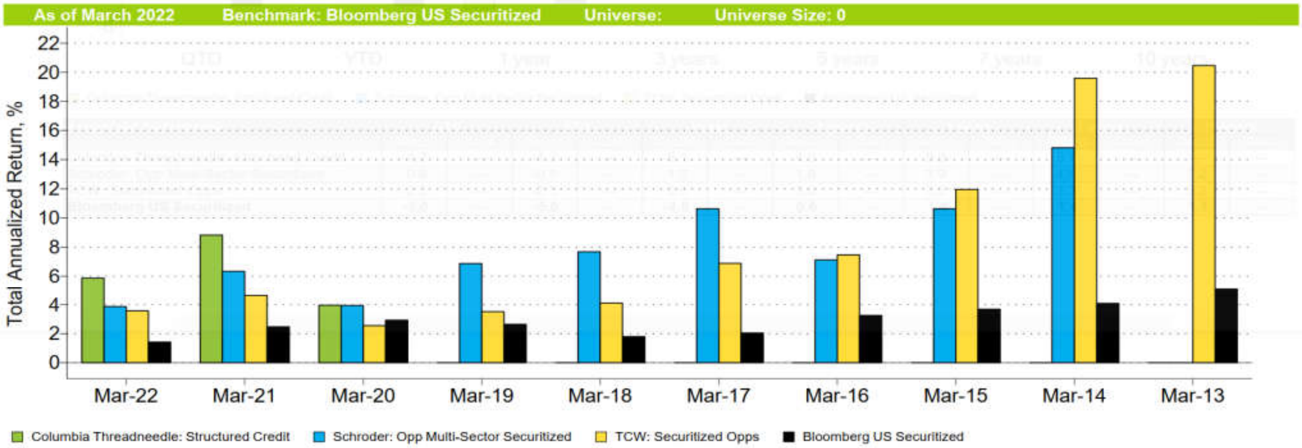
As of March 2022 Benchmark: Bloomberg US Securitized Universe: Universe Size: 0



Annualized Performance	QTD		YTD		1 year		3 years		5 years		7 years		10 years	
	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank
Columbia Threadneedle: Structured Credit	-4.7	---	-4.7	---	-5.1	---	4.6	---	5.9	---	5.7	---	---	---
Schroder: Opp Multi-Sector Securitized	-0.8	---	-0.8	---	1.9	---	1.9	---	3.9	---	4.6	---	7.2	---
TCW: Securitized Opps	-2.3	---	-2.3	---	0.6	---	3.0	---	3.6	---	3.3	---	5.2	---
Bloomberg US Securitized	**-5.0**	---	**-5.0**	---	**-4.9**	---	**0.6**	---	**1.4**	---	**1.4**	---	**1.7**	---

Manager Consistency – 5 Year Annualized Period Calculated Every 12 Months

As of March 2022 Benchmark: Bloomberg US Securitized Universe: Universe Size: 0

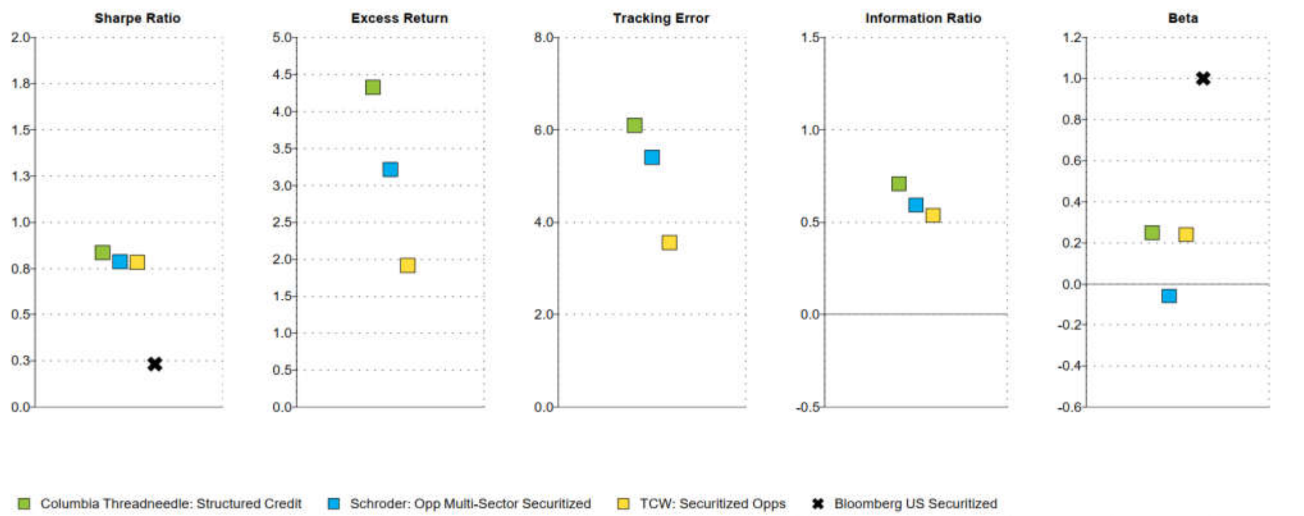


Annualized Performance	4/17 - 3/22		4/16 - 3/21		4/15 - 3/20		4/14 - 3/19		4/13 - 3/18		4/12 - 3/17		4/11 - 3/16		4/10 - 3/15		4/09 - 3/14		4/08 - 3/13	
	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank
Columbia Threadneedle: Structured Credit	5.9	---	8.8	---	4.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Schroder: Opp Multi-Sector Securitized	3.9	---	6.3	---	3.9	---	6.9	---	7.7	---	10.6	---	7.1	---	10.6	---	14.8	---	---	---
TCW: Securitized Opps	3.6	---	4.6	---	2.6	---	3.5	---	4.1	---	6.9	---	7.5	---	12.0	---	19.6	---	20.5	---
Bloomberg US Securitized	**1.4**	---	**2.5**	---	**2.9**	---	**2.6**	---	**1.8**	---	**2.1**	---	**3.3**	---	**3.7**	---	**4.1**	---	**5.1**	---

Performance and risk characteristics shown reference estimated net of fees returns using the stated manager fee schedules.

Modern Portfolio Theory Statistics – Seven Year

As of March 2022 Benchmark: Bloomberg US Securitized Universe: Universe Size: 0



Firm/Product	Sharpe Ratio	Rank	Excess Return %	Rank	Tracking Error	Rank	Information Ratio	Rank	Beta	Rank
Columbia Threadneedle: Structured Credit	0.84	---	4.32	---	6.10	---	0.71	---	0.25	---
Schroder: Opp Multi-Sector Securitized	0.79	---	3.21	---	5.41	---	0.59	---	-0.06	---
TCW: Securitized Opps	0.78	---	1.92	---	3.56	---	0.54	---	0.24	---
Bloomberg US Securitized	**0.23**	---	**0.00**	---	**0.00**	---	---	---	**1.00**	---

7 Year Return Correlations

Correlation: Apr 2015 - Mar 2022	Columbia Threadneedle: Structured Credit	Schroder: Opp Multi-Sector Securitized	TCW: Securitized Opps	Baird: Core Bond	Franklin Templeton: Global MS Plus	Loomis Sayles: Multisector FD
Columbia Threadneedle: Structured Credit	1.00	0.72	0.82	0.37	0.25	0.61
Schroder: Opp Multi-Sector Securitized	0.72	1.00	0.86	0.31	0.32	0.59
TCW: Securitized Opps	0.82	0.86	1.00	0.55	0.23	0.69
Baird: Core Bond	0.37	0.31	0.55	1.00	-0.09	0.67
Franklin Templeton: Global MS Plus	0.25	0.32	0.23	-0.09	1.00	0.38
Loomis Sayles: Multisector FD	0.61	0.59	0.69	0.67	0.38	1.00
Bloomberg US Securitized	0.08	-0.05	0.16	0.83	-0.24	0.30

Performance and risk characteristics shown reference estimated net of fees returns using the stated manager fee schedules.

Fixed Income Characteristics

	Average Quality Issue	Weighted Average Coupon	Yield to Maturity	Average Maturity (Years)	Effective Duration (Years)
Securitized					
Columbia Threadneedle: Structured Credit	A	3.4%	5.3%	3.9	-0.8
Schroder: Opportunistic Multi-Sector Securitized	BB	1.7%	5.8%	1.8	0.1
TCW: Securitized Opportunities	BBB	1.3%	4.4%	5.1	1.2
Incumbents					
Baird: Core Bond	AA-	2.8%	3.2%	8.4	6.6
Franklin Templeton: Global Multi-Sector Plus	BBB	3.8%	6.3%	2.8	1.7
Loomis Sayles: Multisector Full Discretion	BBB	3.4%	4.3%	6.6	4.5
Bloomberg US Securitized	**AAA**	**2.6%**	**3.0%**	**6.9**	**5.1**

Issue Allocation

	Gov't/ Gov't Related	Inv. Grade Credit	High Yield	Bank Loans	Agency RMBS	Non-Agency RMBS	CMBS	ABS (Non-Mtg.)	CMO	CLO	Non-US	EMD	Other
Securitized													
Columbia Threadneedle: Structured Credit	0%	0%	0%	0%	26%	42%	7%	15%	0%	0%	9%	0%	0%
Schroder: Opportunistic Multi-Sector Securitized	0%	0%	2%	0%	1%	28%	16%	15%	0%	12%	19%	0%	8%
TCW: Securitized Opportunities	0%	0%	0%	0%	6%	20%	23%	20%	30%	0%	0%	0%	0%
Incumbents													
Baird: Core Bond	27%	28%	0%	0%	18%	2%	6%	2%	0%	0%	14%	0%	2%
Franklin Templeton: Global Multi-Sector Plus	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	74%	26%
Loomis Sayles: Multisector Full Discretion	13%	29%	19%	0%	0%	0%	3%	17%	0%	0%	1%	6%	10%
Bloomberg US Securitized	**0%**	**0%**	**0%**	**0%**	**92%**	**0%**	**7%**	**1%**	**0%**	**0%**	**0%**	**0%**	**0%**

Allocation to "Other" consists of: Baird (cash and cash equivalents), Franklin Templeton (Cash and cash equivalents), Loomis Sayles (convertibles, cash and cash equivalents), Schroder (CRE Loans, Cash, derivatives).

Investment Manager Evaluation Guide
City of Jacksonville Employees' Retirement System
Unconstrained Securitized Fixed Income Interviews

	Manager Rank (1-3)	Notes
Organization and Background		
What is the ownership structure of the firm? Are investment team members eligible for ownership as a retention device?		
What are the key competitive advantages that your firm and team have versus peers?		
Can you provide a brief history of the team, including its size and structure, as its evolved over time?		
What resources, such as other investors at the firm, quantitative systems or risk management support, does the team have access to?		
Have there been recent, or will there be, any changes the investment team? Additions or reductions?		
Please briefly describe the compensation structure for members of the investment team.		
Investment Philosophy and Process		
Describe the opportunity set and how your strategy best capitalizes on the investable universe.		
What is the most unique aspect of your investment philosophy?		
How does your investment process set you apart from other investors and which elements allow you to either evaluate information more quickly or deeply than peers?		
What securitized sectors do you allocate to? How much of the strategy is agency backed (interest rate sensitive) compared to non-agency (credit sensitive)? Are any non-securitized sectors allowed in this strategy?		
Is there a back-up decision portfolio manager for this strategy?		
How is the strategy allocated among geographic regions?		
How are final decisions ultimately made for the portfolio? What rules, guidelines or risk management checks are in place for the portfolio?		

Investment Performance		
In what market environments does your portfolio perform well or poorly? Please provide specific years or periods for examples.		
When an individual security underperforms for an extended period of time or at a significant magnitude, what steps are taken to review that security?		
To what degree do security selection, sector rotation, or duration positioning drive excess return in the strategy? Is the strategy managed from the top down or the bottom up?		
How did your strategy perform during March 2020 at the onset of the pandemic? What changes to the portfolio did you make during that time? How was the strategy positioned leading up to and following Covid-19?		
What is a reasonable level of excess returns we can expect from this strategy over the long-term?		
Assets Under Management		
Please briefly discuss what asset flows have looked like over the past 5 years.		
What is the stated or proposed capacity limit on this strategy?		
Please describe the investment vehicles available, are they pooled products or separately managed accounts? What vehicle type holds the majority of assets for this strategy? What are the minimum investment amounts?		

TCW Securitized Opportunities Strategy

PRESENTATION TO:

City of Jacksonville

MAY 19, 2022

Presented by:

Harrison S. Choi | Managing Director | Head of Securitized Trading

Elizabeth (Liza) J. Crawford | Managing Director | Head of Securitized Research

Mark A. Romano, CFA, CAIA | Managing Director | Consultant Relations

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I. TCW Overview

TCW Overview

AS OF MARCH 31, 2022

Distinguishing Features:

- Among leading global asset management firms with more than five decades of investment experience
- Disciplined, team-managed investment processes that have been tested across market cycles
- Broad range of products and expertise across fixed income, equities, emerging markets, and alternative investments
- TCW is a signatory to the UN Principles for Responsible Investment
- High level of employee ownership of TCW
- For the eighth year in a row, TCW named "Best Places to Work in Money Management among firms with 500-999 employees" by *Pensions & Investments*, 2014 – 2021

Firm Facts:

- Established in 1971 in Los Angeles, California
- $243 billion under management
- Through our TCW and MetWest Fund Families, TCW manages one of the largest mutual fund complexes in the U.S. with over $100 billion in assets under management
- TCW staff of more than 650 individuals
- Offices in Los Angeles, New York, Boston, Chicago, London, Milan, Singapore, Hong Kong, Tokyo, and Sydney

Source: TCW
Comprises the assets under management, or committed to management, of The TCW Group, Inc. and its subsidiaries.

TCW Ownership

TCW MANAGEMENT/EMPLOYEES, CARLYLE GROUP, AND NIPPON LIFE

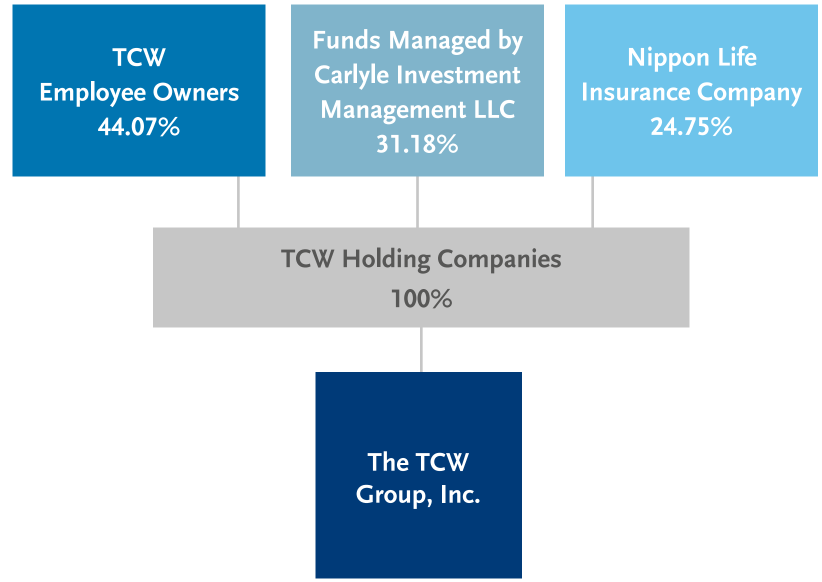
- As of December 27, 2017, Nippon Life Insurance Company, Japan's leading private life insurer, completed its acquisition of a 24.75% minority stake in TCW from The Carlyle Group. As a result of the transaction, ownership in TCW by TCW management and employees increased to 44.07%, and Carlyle maintains a 31.18% interest in the firm primarily through a purchase by its long duration private equity fund, Carlyle Global Partners

- The Carlyle Group is a global alternative asset manager with $301 billion of assets under management across 456 investment vehicles as of March 31, 2022

- Nippon Life is Japan's leading private life insurer, employing more than 70,000 people with operations in Japan, North America, Europe, and Asia

- Approximately 92 employees own equity in TCW. Equity ownership aligns key employee interests with those of our clients by creating a cohesive "ownership culture"

- The Board is comprised of nine members, reflecting proportionate economic ownership: four TCW members, three Carlyle members, and two Nippon Life members

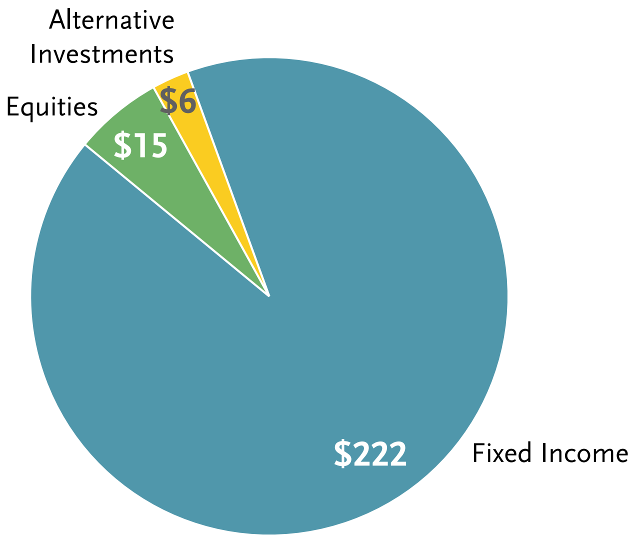


Percentage shareholdings are approximate, reflect fully diluted ownership as of December 27, 2017, and are subject to change.

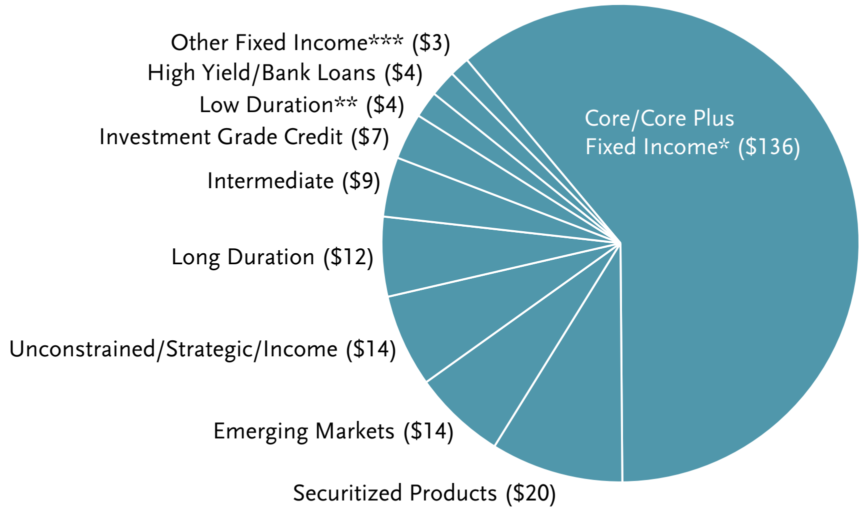
TCW Assets Under Management

AS OF MARCH 31, 2022

Firm AUM: $243 Billion[1]



Fixed Income Assets by Strategy: $224 Billion[2]



Source: TCW
Note: Totals may not reconcile due to rounding.
Comprises the assets under management, or committed to management, of The TCW Group, Inc. and its subsidiaries.
1 Includes respective allocations for multi-asset products.
2 Total invested assets by strategy includes cross-held positions and is not meant to reconcile to overall net firm AUM.
* Includes Core, Core Plus, and Opportunistic Core Plus Fixed Income.
** Includes Low Duration and Ultra Short/Cash Management.
*** Includes U.S. Government, Government/Credit, Global, and Other Fixed Income.

Fixed Income Products

Traditional

Ultra Short	Active liquidity management
Low Duration	Relative value 1-3 year duration
Intermediate	Relative value 2-4 year duration
Total Return	
Core	Investment grade; opportunistic, value driven
Core Plus	Value driven, up to 20% in high yield
Opportunistic Core Plus	Value driven, up to 50% in plus sectors

Securitized

Total Return MBS	Value-driven vs. MBS Index
Global MBS Plus	Value-driven vs. Global Securitized benchmark
Opportunistic MBS	Non-agency MBS focus
✔**Securitized Opportunities**	Full discretion, absolute return objective
Global Securitized	Investment grade focused, absolute return objective
ESG Securitized	Value-driven with positive ESG criteria

Corporate Credit

Investment Grade	Dedicated investment grade corporate bond portfolios
High Yield	Dedicated credit intensive process
Bank Loans/CLO	Secured, floating rate objective

Liability Driven Investments (LDI)

Long Duration	High quality vs. Long G/C or Long Credit
Overlay Strategies	Derivative-based asset/liability investing strategies

Global

Global	Invests in U.S., non-U.S. developed, and emerging market debt opportunities across sectors
Emerging Markets	Invests in sovereign, corporate and local currency emerging markets debt
Conservative Unconstrained	Invests in all sectors of the global market place, though investments with respect to high yield and emerging markets will be constrained
Unconstrained	Invests in all sectors of the global market place, untethered from a traditional fixed income benchmark

Other

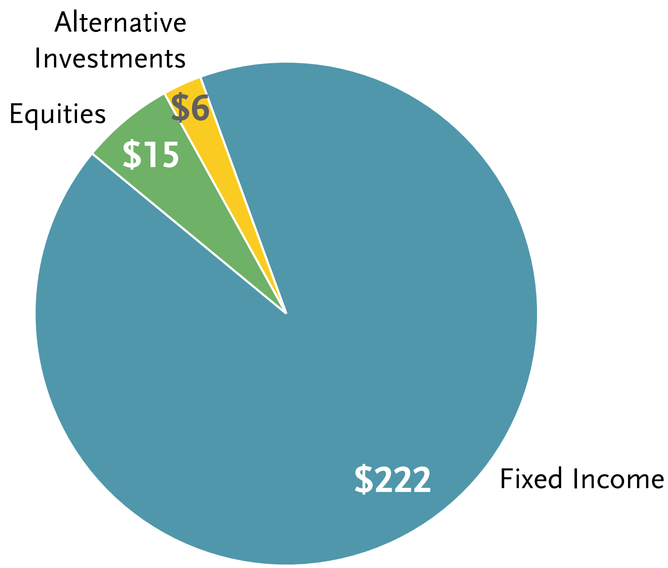
Absolute Return	Multi-sector, absolute return fixed income
Investment Grade Credit	Multi-sector intermediate strategy focusing on investment grade corporate and securitized credit sectors
Treasury-Only	U.S. Treasuries
TIPs	Treasury Inflation Protected Securities
Secured Fixed Income	Multiple-sector, bonds backed by pledged collateral
Portable Alpha	Futures/swaps to gain beta (e.g., S&P 500 or Bloomberg Commodity Index) + fixed income alpha engine

II. Securitized Product Management

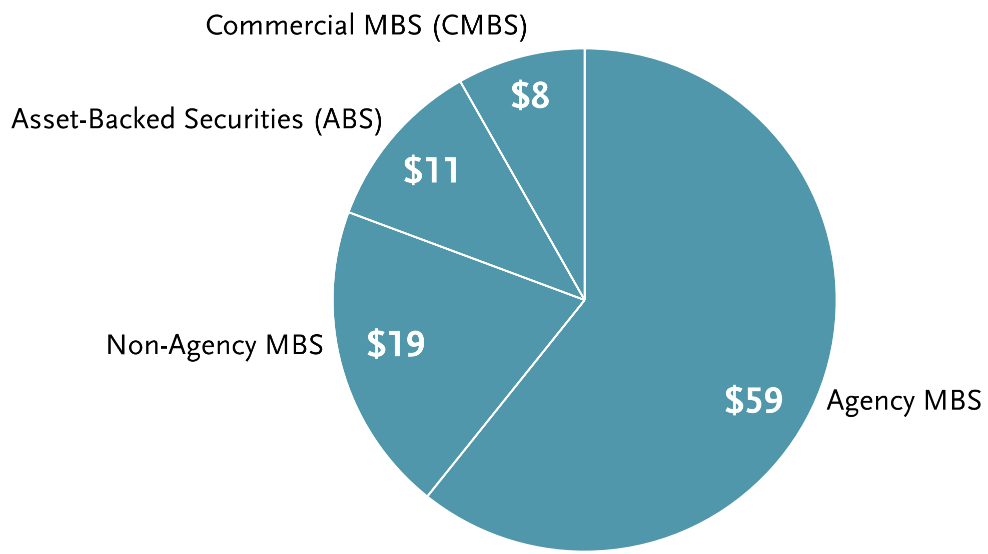
TCW Assets Under Management

AS OF MARCH 31, 2022

Firm AUM[1]: $243 Billion



Securitized Products Assets: $97 Billion by Security Type



Source: TCW
Note: Totals may not reconcile due to rounding.
Comprises the assets under management, or committed to management, of The TCW Group, Inc. and its subsidiaries.
1 Includes respective allocations for multi-asset products.

Fixed Income Team

MAY 2022

GENERALIST PORTFOLIO MANAGERS

Stephen Kane, Co-CIO
Laird Landmann
Bryan Whalen, Co-CIO

Ruben Hovhannisyan, CFA – Associate

Portfolio Analytics

Zack Venable

Securitized Products

Harrison Choi
Elizabeth Crawford

Agency RMBS
Mitch Flack
Pat Ahn
Gordon Li, CFA
Jae Lim, CFA
Nanlan Ye

Securitized Credit
Adam August, CFA
Brian Choi, CFA
Phillip Dominguez, CFA
Malea Figgins
Michael Hsu
Tony Lee, CFA
Jonathan Marcus
Sagar Parikh, CFA
Palak Pathak, CFA
Madison Perry
Carlos Prado
Vincent Sokhanvari
Zhao Zhao

Credit

Jerry Cudzil
Steven Purdy

Credit Trading
Alex Bibi, CFA
Mike Carrion, CFA
Brian Gelfand
Tammy Karp
Daniel Pace, CFA
Jimmy Rong
Melicia Shen
Drew Sweeney
Evan Tich

Credit Research
Nick Bender, CFA
Pedro Cardoso
William Cao
Marie Choi
Nikhil Chopra
Isabella Freeman
Matt Gmitro
Griffith Lee
Chet Malhotra
Tom Nguyen, CFA
Peter Johnson, CFA
Tania Salomon
Joel Shpall
Ivy Thung
Kenneth Toshima
Alexis Wagener
Michael Williams

Government/Rates

Bret Barker

Non-U.S. Sovereign/Currency
Marcela Meirelles, PhD, CFA
Lawrence Rhee
Jamie Patton

Money Market
Michael Pak, CFA

Treasuries/Futures
Marcial Carrion
Jeannie Fong
Gannon Earhart

Emerging Markets Debt

Penny Foley
Dave Robbins
Alex Stanojevic

Portfolio Specialist
Anisha Goodly

Sovereign Research
Blaise Antin
David Loevinger
Mauro Roca, PhD
Brett Rowley
Sarah Malott

Corporate Credit Research
Javier Segovia, CFA
Stephen Keck, CFA
Jeffrey Nuruki, CFA
Shant Thomasian, CFA

Strategy
Local Markets,
Jae Lee

External Debt,
Chris Hays

Quantitative,
Yaner He

Trading
Jason Shamaly
Justin Becker
Sherwin Chan

Investment Risk Management

Marcos Gutierrez
Andrew Xu

Patrick Boland
Billy Cheng
Ricardo Horowicz, PhD

Mhair Orchanian, PhD
Prateek Shendre
Mabel Xu, CFA, CAIA

Product Development
Scott A. Austin, CFA

Fixed Income ESG
Jamie Franco

Product Specialists / Client Services

Patrick Moore

David Vick, CFA
Jeffrey Katz
Mark McNeill, CFA
Gino Nucci, CFA
Victoria Vogel, CFA

Client Services
Tracy Gibson

Securitized Products – Team, Resources, Interactions

TCW manages $97 billion in Securitized assets*

Securitized Product Working Group

Generalist Portfolio Managers/Securitized Product Specialists

Reviews relative value, risk budgets, sets trading targets and approves new structures/trading programs

Proprietary Technology

- Securities Management System (SMS)
  - MBS Slicer
  - Trade Execution System (TES)
- Investment Reporting & Analytics System (IRA)
  - Security Analyzer
  - Security Allocation Tools
  - Coupon Stack Exposure Reports
  - Contribution to Duration Reports
  - Account Position vs Targets Reports
  - Security Surveillance Reports
  - Inventory and BWIC Browser
  - Fed MBS Portfolio Flow Analysis
- Loan Level Database
  - 30+ million Non-Agency Loans
  - 40+ million Loans in Agency MBS
- Non-Agency Default, Prepayment and Severity Models
- Servicer/Originator Reviews
- Agency MBS Basis Historical Factors Model
- Portfolio vs Benchmark Heat Map Analysis
- ESG Investments
  - ESG Dashboard: ESG considerations in bottom-up credit analysis
  - TCW Screen: Quantitative metrics used to determine positive and/or sustainable characteristics

Securitized Product Portfolio Managers

- Idea Generation
- Implementation
- Analysis Review
- Supervision

Securitized Products Analysts/Traders

- Idea Generation
- Price Discovery
- Relative Value Analysis
- Trends
- Originator Tracking
- Prepayment Analysis
- Servicer Reviews
- Risk Monitoring
- Stress Testing
- Reporting

Global Capital Market Resources

Other factors requiring cross-sector perspectives are quickly assessed through internal collaboration with TCW Specialists

Third Party Systems

- TradeWeb
- eMBS
- YieldBook
- Locus
- BAM (Bloomberg)
- Point (Barclays)
- Intex
- Loan Performance 1010Data (CoreLogic)
- Charles River (Compliance Engine)
- Equifax
- CBRE
- Level 11 Analytics (climate risk, socioeconomic and demographic data)
- Bloomberg Sustainable Bond File (social, green, sustainable bond flags)

*As of 3/31/2022

III. Securitized Opportunities Profile

Strategy Description

- An opportunistic, enhanced total return fixed income portfolio strategy
- Focuses on residential mortgage, commercial mortgage and asset-backed securities
- Seeks to add value through the application of experience and committed research to take advantage of market mispricing

Performance Objectives and Risk Expectations

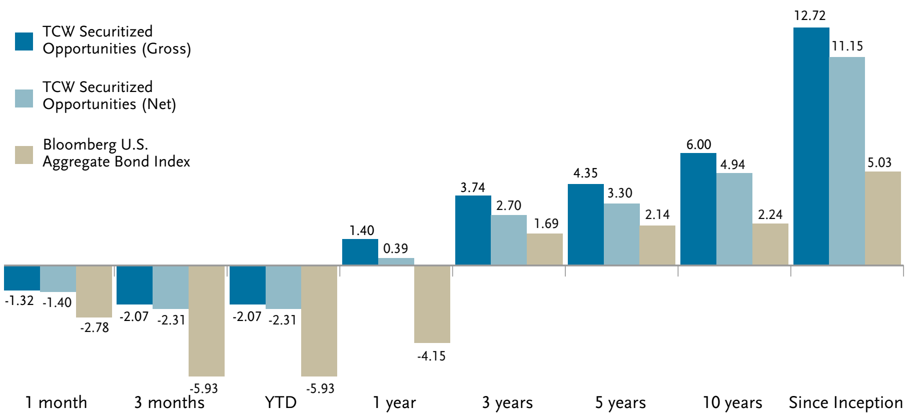
- Performance Objective: Seeks to achieve 500 basis points of annual outperformance, over a full market cycle, net of fees over the strategy's relevant benchmark
- Risk Expectations: Experience return variability (as measured by standard deviation) consistent with Long Duration (12-15 years) Fixed Income indexes*
- The strategy will not employ leverage

*There can be no assurance that the strategy's performance objectives will be achieved or that its risk expectations will prove to be correct, and actual results may vary significantly from such objectives and expectations. TCW has set such objectives and expectations based on a number of assumptions, including the strategy's anticipated investment approach, the anticipated risk/return profile of the types of assets targeted by the strategy relative to the fixed income market as a whole (and relative to the Bloomberg U.S. Aggregate Bond Index), and the current and historical state of the markets, and in consideration of prior performance of the strategy. See the Appendix for information about the performance and history of such strategy. TCW's assumptions may not prove to be valid and may be changed without notice. Moreover, prior strategy performance does not predict future performance of the strategy. Any change in assumptions or occurrence of unanticipated events may result in the strategy's returns falling short of its objectives, or return variability being higher than expected.

TCW Securitized Opportunities Composite Portfolio Profile

AS OF MARCH 31, 2022 | SUPPLEMENTAL INFORMATION

Performance (%)



*Inception Date: 1/1/92

Portfolio Characteristics

AUM or committed to AUM (Billion)	$4.15
Yield to Maturity (%)	4.42
Effective Duration (Years)	1.23
Spread Duration (Years)	4.23

Source: TCW, Barclays

1 The ‘Cash & Other’ sector is excluded from the chart.

Portfolio characteristics and holdings are subject to change at any time. Please see additional disclosures in the appendix, which are an integral and important part of this presentation. Individual results may vary. Past performance is no guarantee of future results. Returns are annualized for periods greater than one year.

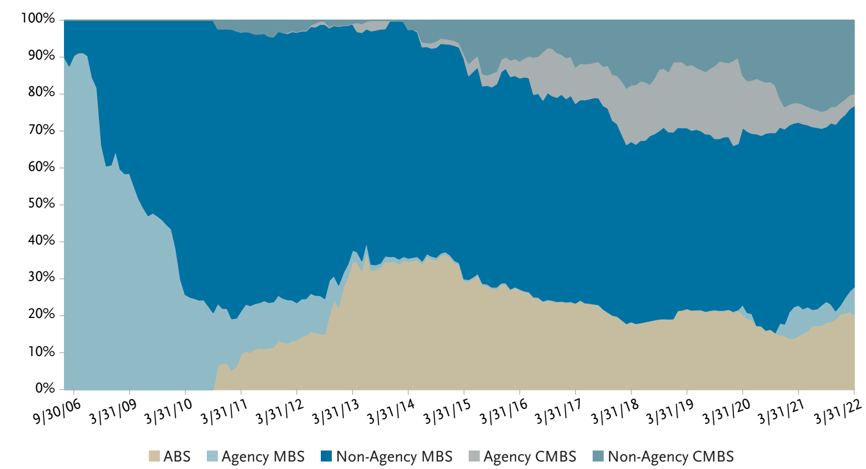
The return and other performance information presented are for the GIPS-compliant composite of accounts managed under the TCW Securitized Opportunities strategy, which was formerly known as the TCW “Strategic MBS” strategy and, until December 2009, was managed by a different team at TCW.

Sector Weights (%)

Non-Agency MBS				**45.14**
Prime 1.07	*Alt-A* 8.85	*Subprime* 18.37	*Other* 16.85	
CMBS				**21.33**
Agency 2.99	*Non-Agency* 18.34			
ABS				**18.80**
CLO 6.54	*Student Loan* 4.95	*Sm Bal Com* 0.09	*Other** 7.23	
Agency MBS				**6.82**
Cash & Other				**7.90**

*ABS Other includes CRE CLO as defined by Bloomberg

Historical Sector Weights[1]



TCW Securitized Opportunities Composite Annual Returns

AS OF DECEMBER 31, 2021 | SUPPLEMENTAL INFORMATION

	TCW Securitized Opportunities Composite		Bloomberg U.S. Corporate HY Index 2% Issuer Cap		ICE BofA U.S. Dollar 1-Month Deposit Offered Rate Constant Maturity Index
	Beginning of Year YTM	End of Year Total Return	Beginning of Year YTM	End of Year Total Return	End of Year Total Return
2010	10.58%	25.75%	9.23%	14.94%	0.28%
2011	8.40%	7.95%	7.91%	4.96%	0.23%
2012	8.79%	23.46%	8.69%	15.78%	0.25%
2013	5.80%	9.81%	6.79%	7.44%	0.19%
2014	4.71%	5.50%	6.36%	2.46%	0.16%
2015	3.77%	1.29%	6.90%	-4.43%	0.18%
2016	3.43%	4.36%	5.96%	17.13%	0.48%
2017	3.56%	6.88%	6.12%	7.50%	1.06%
2018	3.13%	3.61%	5.72%	-2.08%	1.99%
2019	3.90%	5.78%	7.96%	14.32%	2.34%
2020	3.19%	5.44%	5.19%	7.05%	0.66%
2021	2.95%	4.21%	4.20%	5.26%	0.10%

Source: Zephyr, TCW

All performance information is represented on a gross basis unless otherwise stated; Please see additional disclosures in the appendix, which are an integral and important part of this presentation. Individual results may vary. Past performance is no guarantee of future results.

TCW Securitized Opportunities Composite Statistics

AS OF MARCH 31, 2022 | SUPPLEMENTAL INFORMATION

Sharpe Ratio (annualized)

	TCW Securitized Opportunities Composite	Bloomberg U.S. Corporate HY Index 2% Issuer Cap
1 Year	0.65	-0.16
3 Years	0.64	0.42
5 Years	0.90	0.48
10 Years	1.64	0.79
15 Years	1.73	0.60

Correlations

	TCW Securitized Opportunities Composite	Bloomberg U.S. Corporate HY Index 2% Issuer Cap
1 Year	0.57	1.00
3 Years	0.83	1.00
5 Years	0.77	1.00
10 Years	0.64	1.00
15 Years	0.37	1.00

Source: Zephyr, TCW

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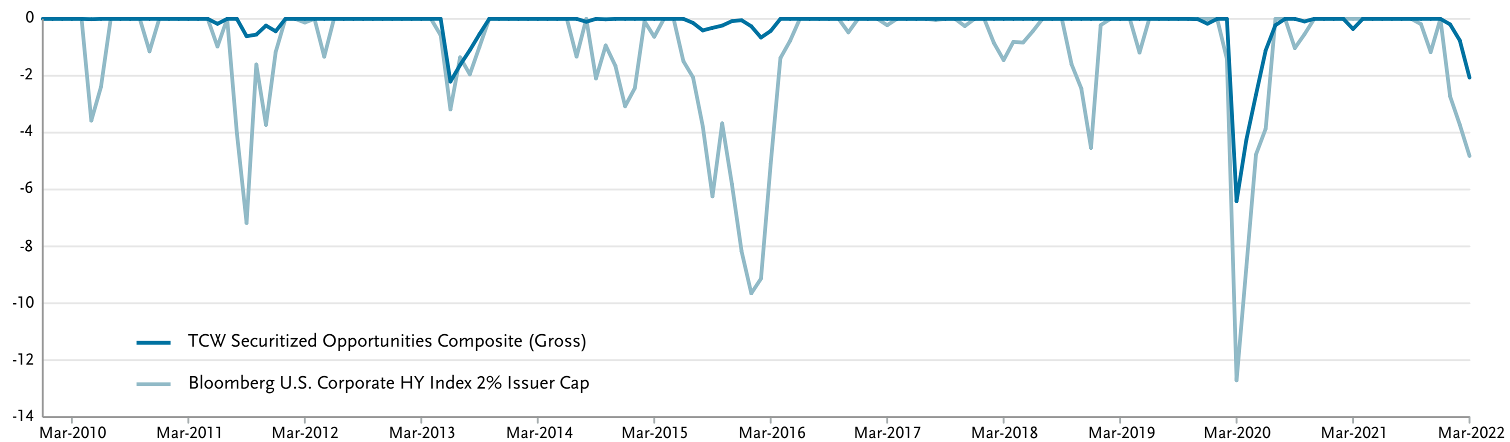
TCW Securitized Opportunities Composite Top Drawdowns (2010-present)

AS OF MARCH 31, 2022 | SUPPLEMENTAL INFORMATION

	Date	TCW Securitized Opportunities Composite Drawdowns
1	3/31/20	-6.41
2	3/31/22	-2.07
3	6/30/13	-2.21
4	2/29/16	-0.66
5	9/30/11	-0.61
6	3/31/21	-0.36
7	6/30/11	-0.18
8	12/31/19	-0.17
9	8/31/14	-0.10
10	10/31/20	-0.09
11	10/31/14	-0.02
12	5/31/10	-0.01

	Date	Bloomberg U.S. Corporate HY Index 2% Issuer Cap Drawdowns
1	3/31/20	-12.71
2	1/31/16	-9.65
3	9/30/11	-7.18
4	3/31/22	-4.82
5	12/31/18	-4.54
6	5/31/10	-3.58
7	6/30/13	-3.19
8	12/31/14	-3.07
9	3/31/18	-1.45
10	5/31/12	-1.33
11	7/31/14	-1.33
12	5/31/19	-1.19

Drawdowns (2010-Present)



Source: Zephyr, TCW Portfolio Analytics Group

Maximum Drawdown – This is the maximum loss (compounded, not annualized) that a strategy or index has incurred during any sub-period of the entire time period in review. The maximum drawdown shows the worst peak to trough performance.

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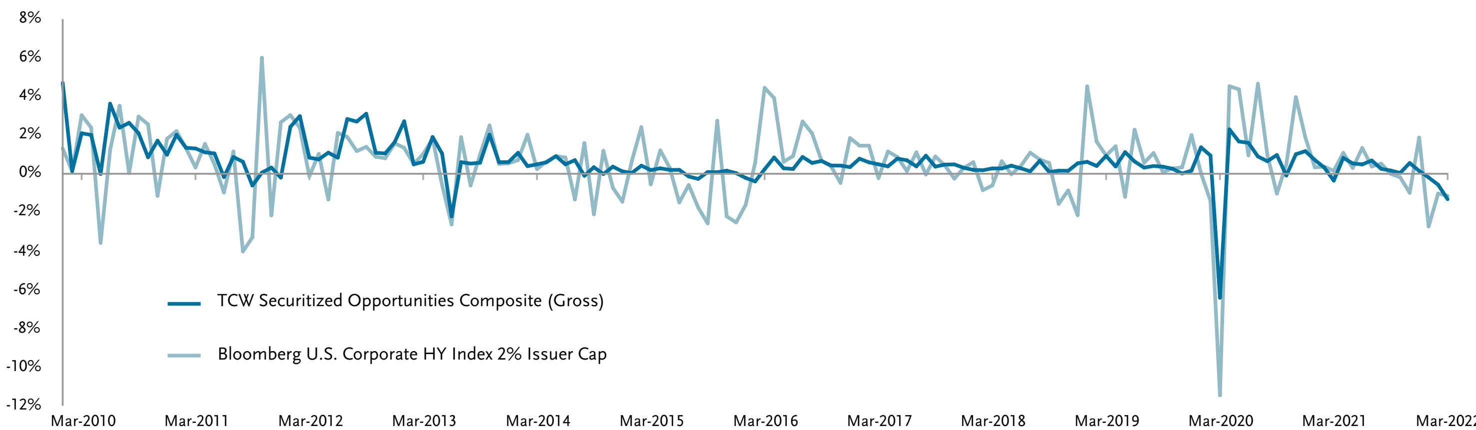
TCW Securitized Opportunities Composite Top Monthly Performances (2010-present)

AS OF MARCH 31, 2022 | SUPPLEMENTAL INFORMATION

	Date	TCW Securitized Opportunities Composite Performance
1	1/31/10	4.71%
2	6/30/10	3.62%
3	9/30/12	3.10%
4	2/28/12	2.98%
5	7/31/12	2.83%
6	1/31/13	2.71%
7	8/31/12	2.70%
8	8/31/10	2.63%
9	1/31/12	2.42%
10	7/31/10	2.39%
11	4/30/20	2.30%
12	9/30/10	2.10%

	Date	Bloomberg U.S. Corporate HY Index 2% Issuer Cap Performance
1	10/31/11	6.00%
2	7/31/20	4.66%
3	4/30/20	4.53%
4	1/31/19	4.52%
5	3/31/16	4.44%
6	5/31/20	4.37%
7	11/30/20	3.96%
8	4/30/16	3.92%
9	7/31/10	3.52%
10	1/31/12	3.04%
11	3/31/10	3.03%
12	9/30/10	2.96%

Monthly Returns (2010-Present)



Source: Zephyr, TCW

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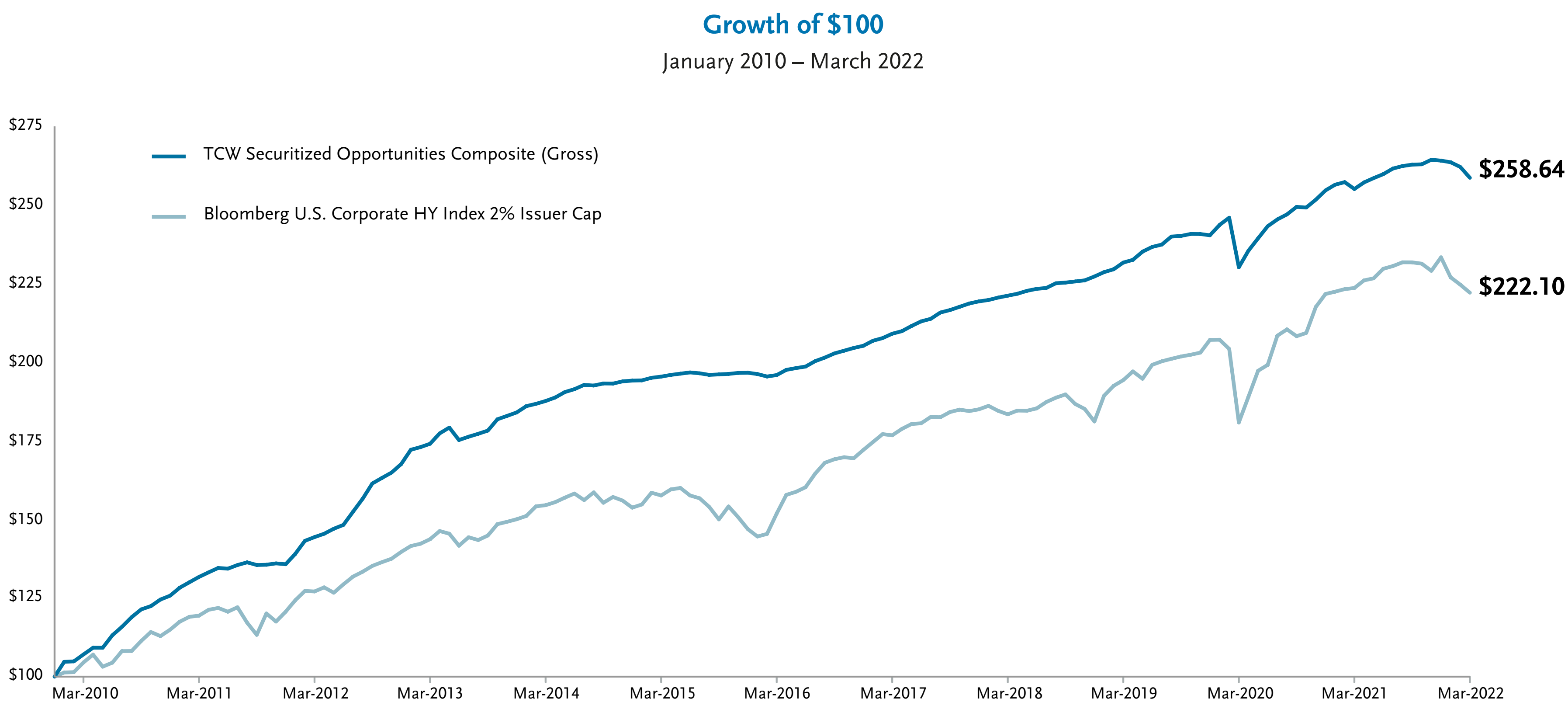
Dollars Today with $100 Invested in January 2010

SUPPLEMENTAL INFORMATION



Source: Zephyr, TCW Portfolio Analytics Group

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IV. Securitized Product Outlook

TCW Securitized Products Investment Philosophy

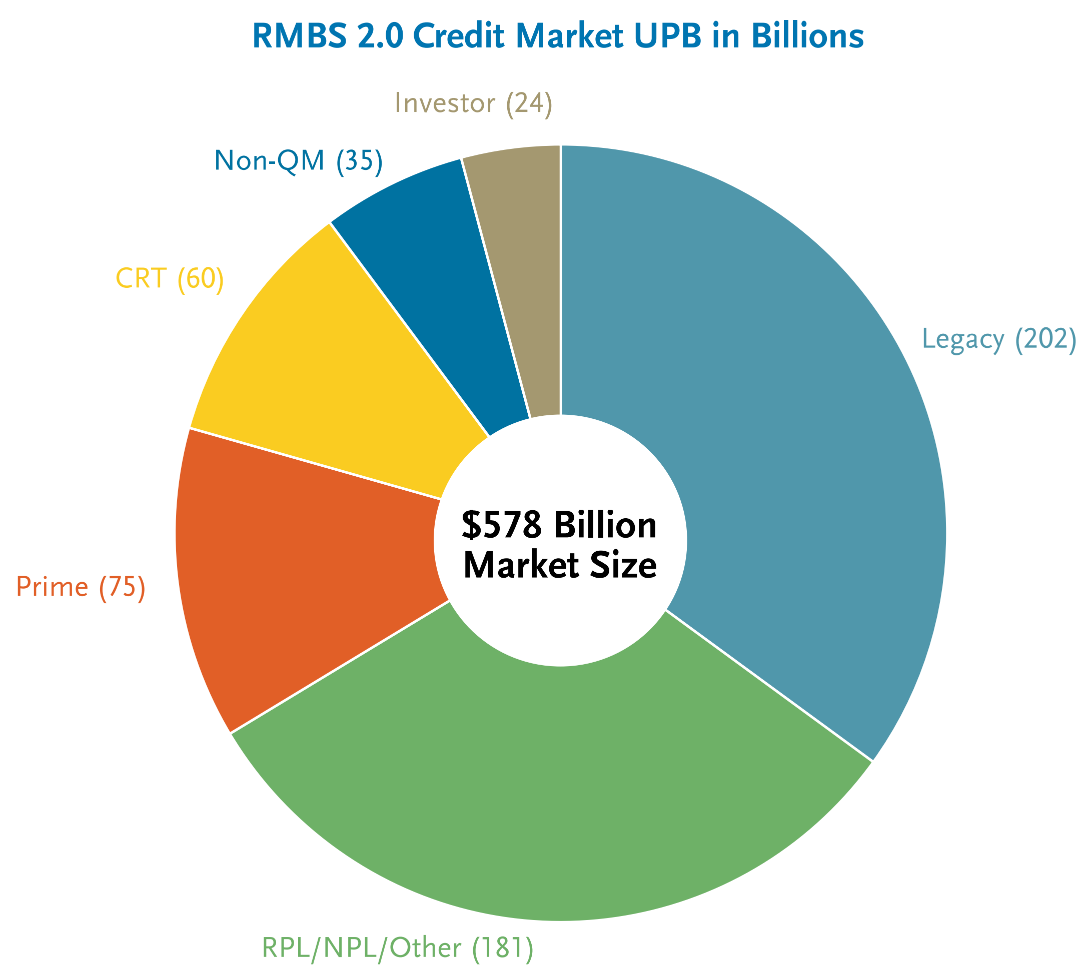
- **Volatility of price is typically greater than the volatility of value**
  - Appreciation for the mean reverting nature of fixed income securities, specifically well-collateralized securitized products

- **Alpha generation is more achievable in asset classes such as Securitized Products with the following characteristics:**
  - Cash flows among securities within the asset class have a wide range of alternative outcomes
  - Complexity in modeling cash flows and potential returns is significant, advantaging knowledgeable participants
  - Investor base has a diverse set of objectives, often non-economic, creating opportunities for flexible investors
  - Value added through insight into a complex asset class can be generated through capital investment in infrastructure and human resources

- **Persistent inefficiencies in the securitized markets can be exploited through disciplined research and bottom-up issue selection**
  - Loan level analysis within securitized structures often provides enhanced insight into cash flow potential
  - Utilize a disciplined process that includes dollar-cost averaging to help ensure alpha generation over full financial cycles which can vary in length

Non-Agency MBS

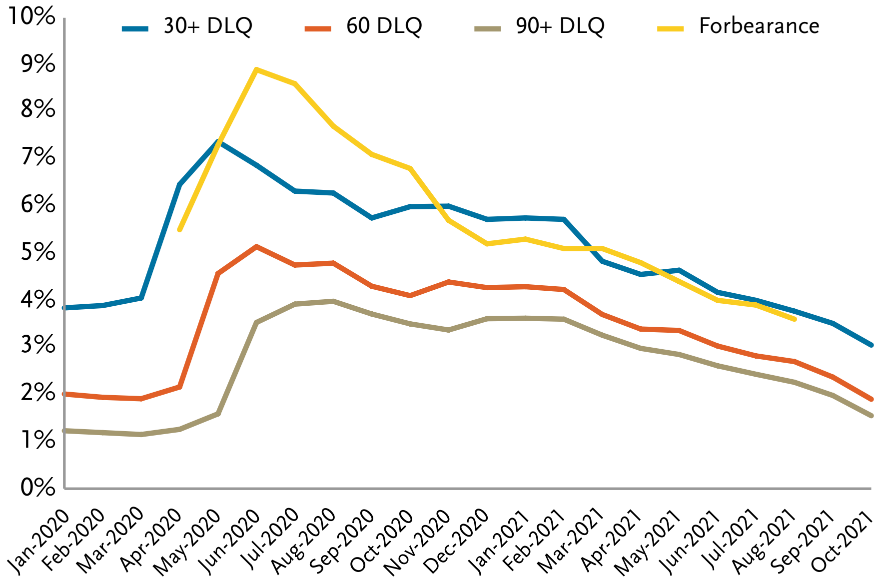
The Non Agency RMBS Market



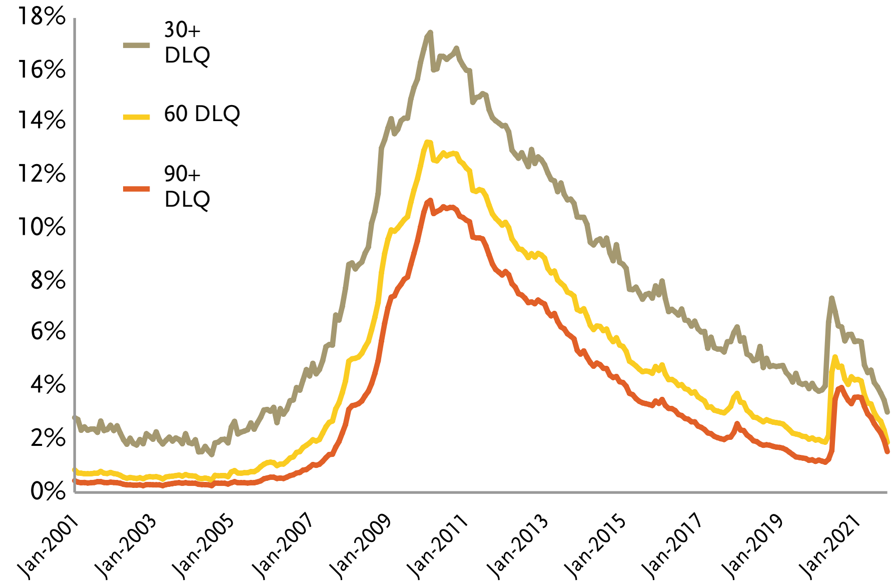
TCW, First American CoreLogic, Intex; Data as of May 2021

Mortgage Delinquencies

Mortgage Delinquencies and Forbearance Post COVID



Mortgage Delinquencies – All First Lien Mortgages

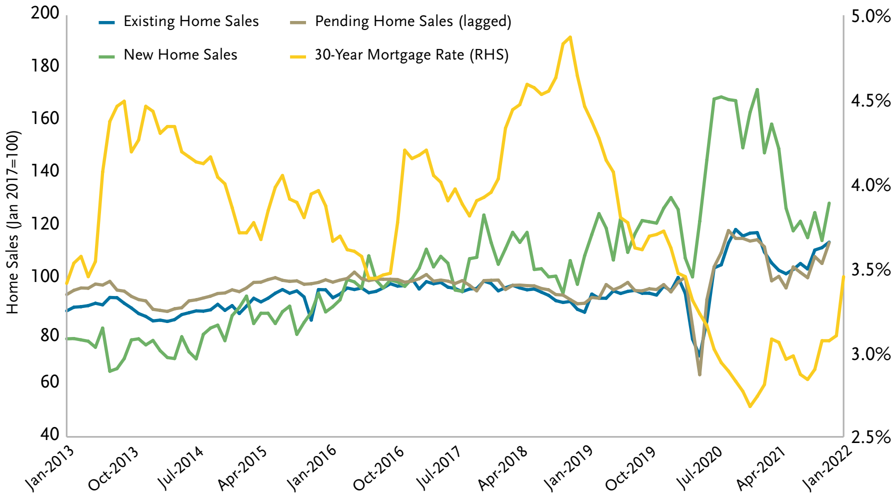


- COVID-19 led to a sharp rise in 30 day delinquencies
- Loss mitigation strategies such as forbearance were very effective in reducing the stress
- Performance continues to improve coming out of the pandemic

Source: JP Morgan, McDash

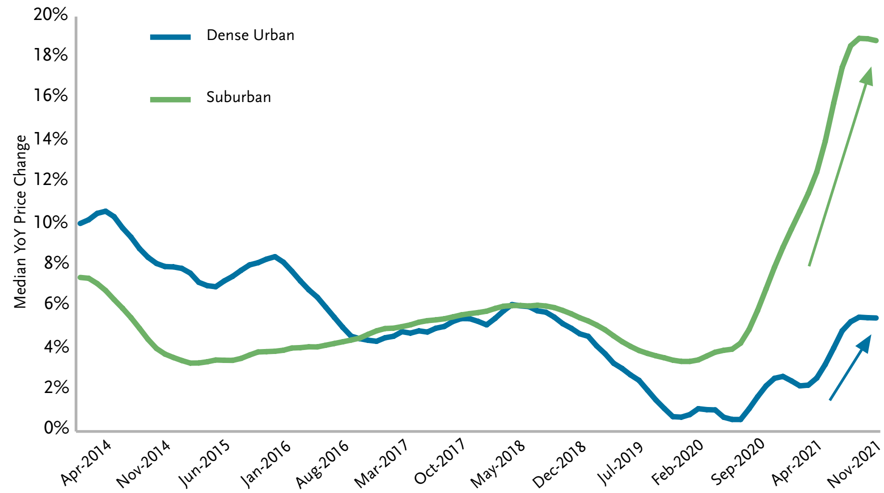
Strong Home Sales and Even Stronger Home Prices… But Rates Are Rising

Home Sales Have Seen Strong Increases Since May



Source: Nomura Securities International

Home Prices

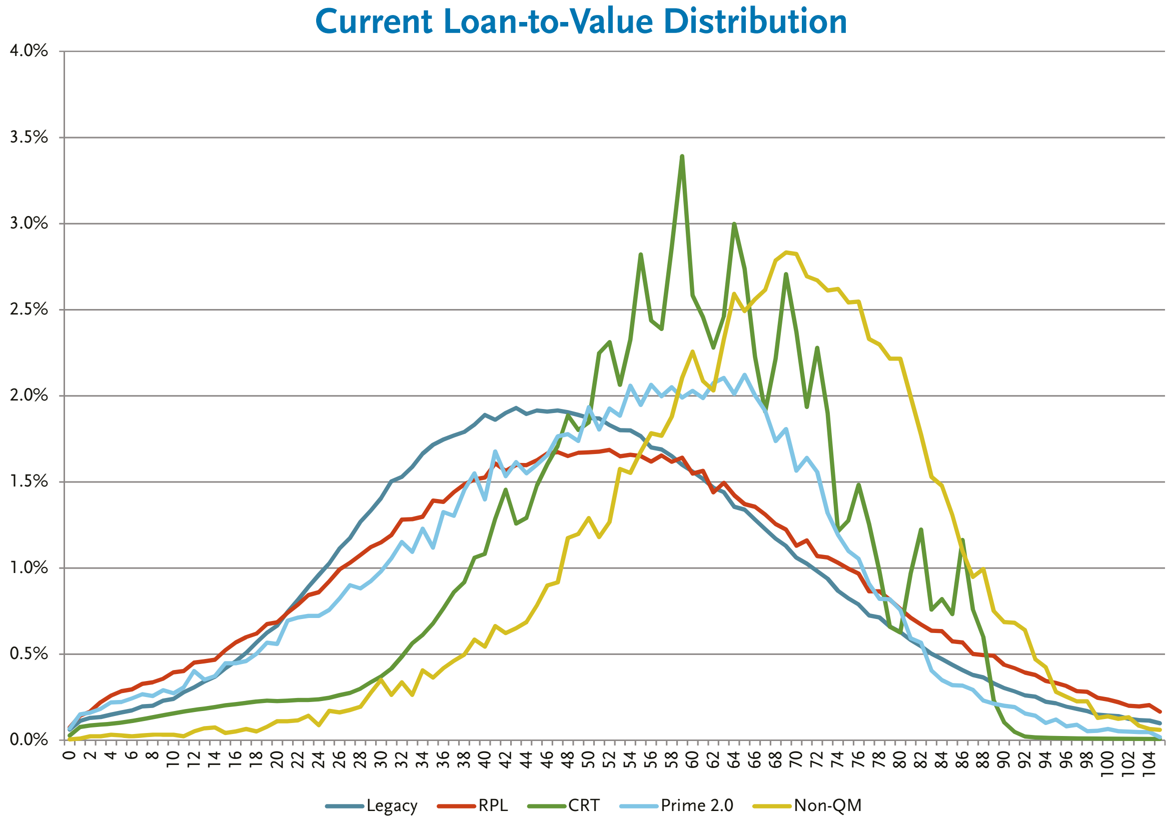


Source: Zillow, Dpt. of Defense, U.S. Census Bureau, Morgan Stanley

- Historically low mortgage rates – Federal Reserve MBS purchases drove mortgage rates down but now what?
- Historically low supply of homes/inventory – exacerbated by the implementation of eviction moratoriums
- Pandemic driven demand for single family shelter – migration away from dense urban to less dense suburban areas

Strong Home Prices Also Mean Lower Loan to Value Ratios… However

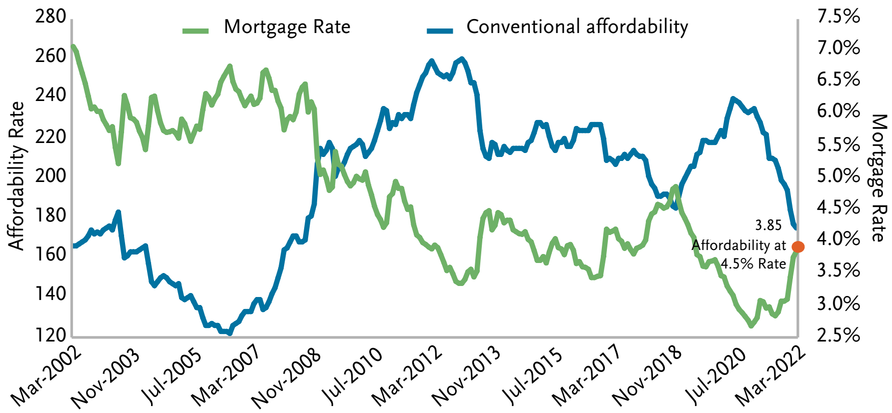
- Favor seasoned mortgages with embedded HPA
- Be cautious on recently originated mortgages



Source: TCW, Intex, Corelogic, Bloomberg, Case Shiller, FHFA, Equifax, FINRA.

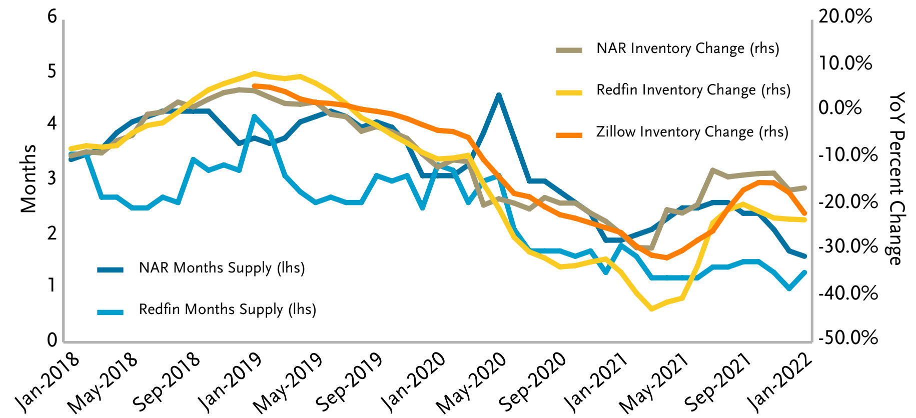
Expect Home Price Gains to Slow But Not Fall Off a Cliff...

Affordability Index



Source: CoreLogic, Freddie Mac, National Association of Realtors

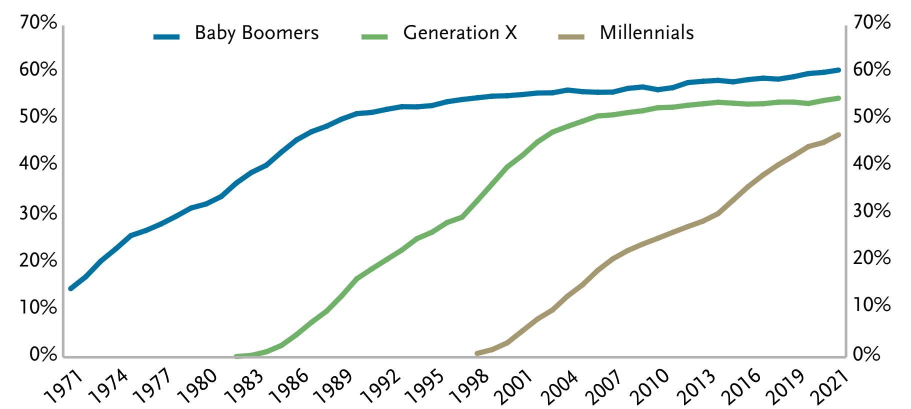
Monthly Supply



Source: CoreLogic, Freddie Mac, National Association of Realtors

- Rising interest rates will slow down home price gains as affordability gets reduced
- However, the supply vs demand dynamics are skewed toward more demand for housing especially as the millennials come of age

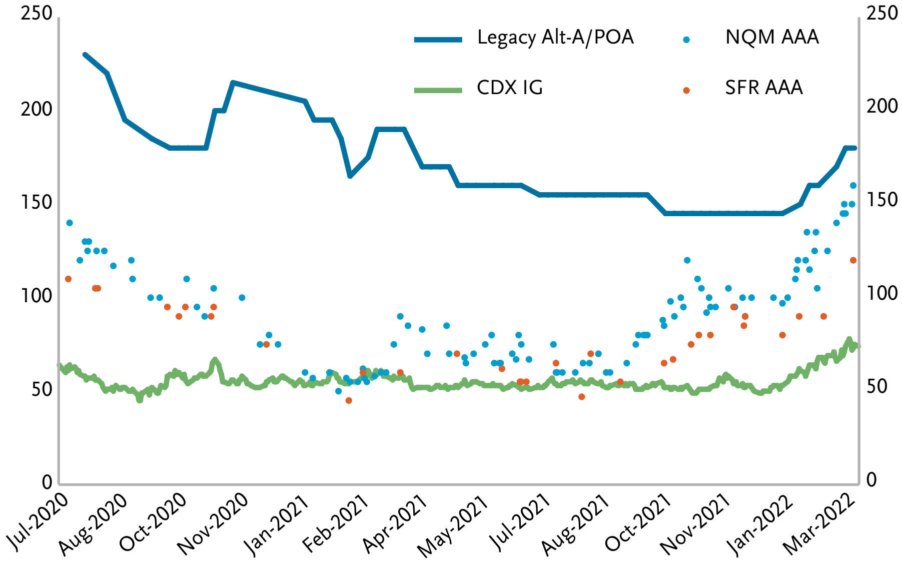
Headship Rate

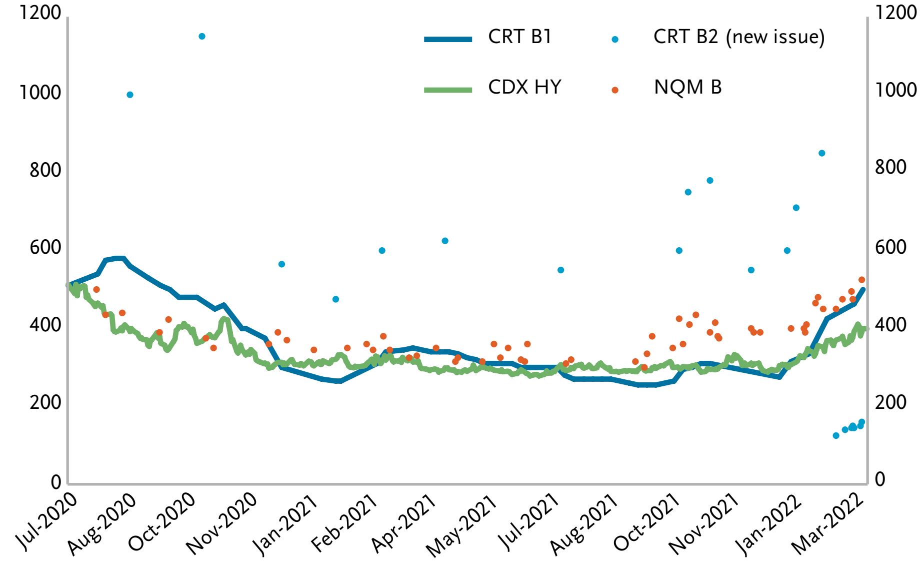


Source: Census Bureau HVS/CPS

TCW

Expect Ample Amounts of Opportunity within RMBS



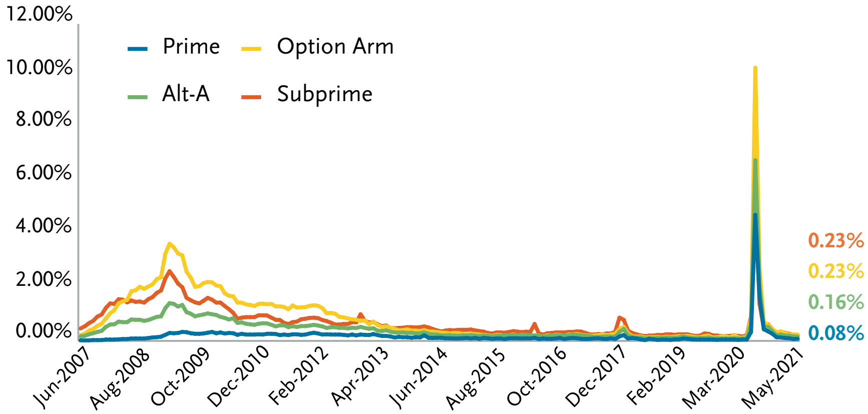


- As interest rates rise and volatility remains elevated, spreads will be pressured
- Expect an increase in opportunities and an increase in relative value trading

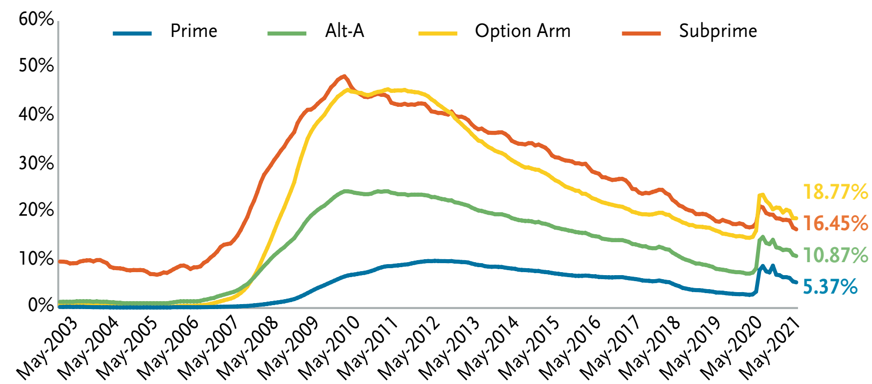
Source: TCW

Legacy Non-Agency Fundamentals are Strong

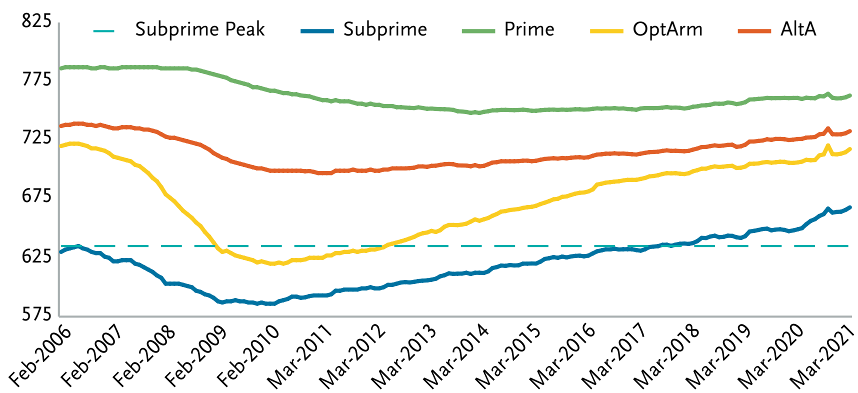
Percentage of 12 Month Clean DQ History Loans Rolling to 60 Days Delinquent Over Two Pay Periods as of May 2021



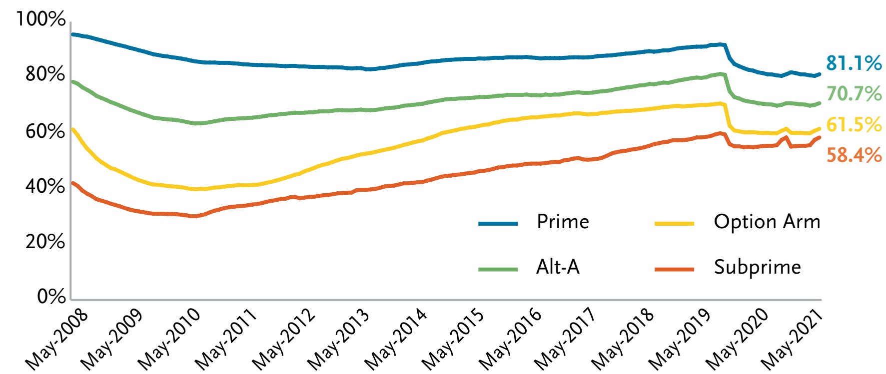
Securitized Mortgages: Serious Delinquencies as % of Unpaid Principal Balance as of May 2021



FICO Score Migration



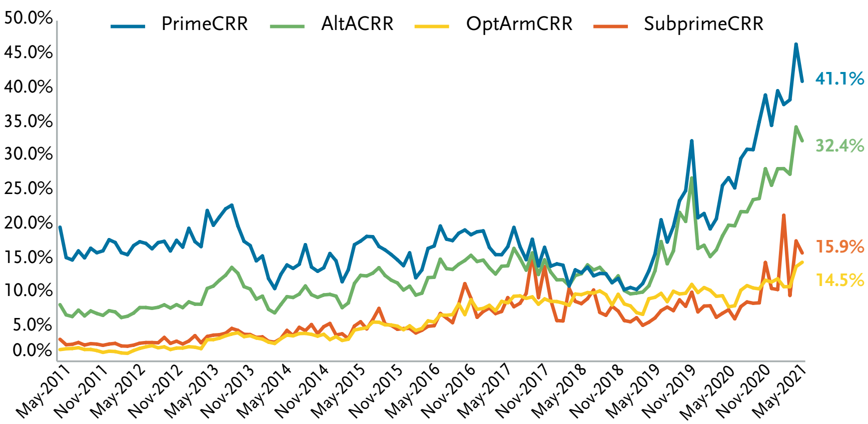
Percentage of Outstanding Loans With 12 Month Clean DQ History as of May 2021



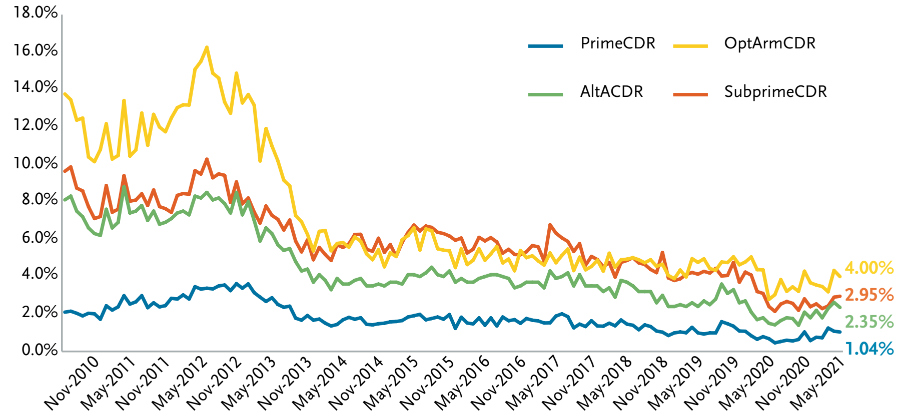
Source: First American CoreLogic Loan Performance, TCW

Legacy Non-Agency Fundamentals are Strong (cont'd)

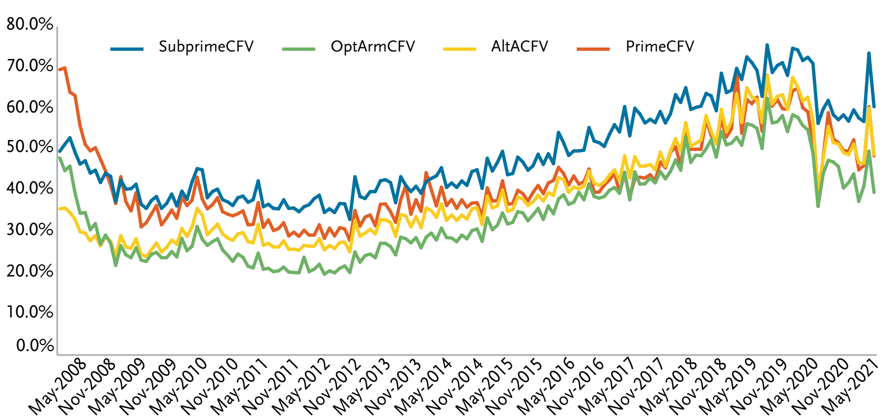
Securitized Mortgages:
Voluntary Prepayment Rates (CRR) as of May 2021



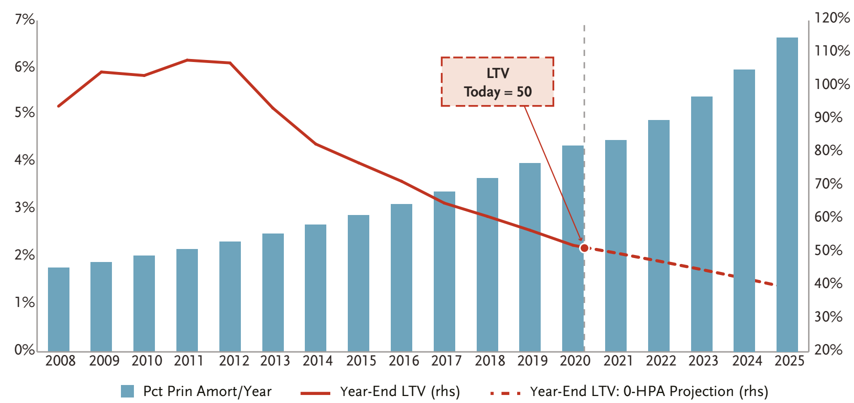
Securitized Mortgages:
Default Rates (CDR) as of May 2021



Securitized Mortgages:
Cashflow Velocity (P&I Paid / P&I Due) on Delinquent Loans as of May 2021



10-12 Years Seasoned, Borrowers are Paying a Growing Percentage of Principal,Greatly Reducing LTV's Over Time



Source: First American CoreLogic Loan Performance, TCW

Non-Agency MBS Conclusions

Remain Very Constructive on Mortgage Credit Risk Specifically in Legacy Non-Agency RMBS and Re-Performing Loans

- Limited supply will continue to be tailwinds for home prices
- LTV's will remain stable especially for seasoned collateral
- Lessons learned from the Great Financial crisis include the successful use of loan modifications and very high touch servicing

Favor Legacy Non-Agency RMBS

- Fully loss adjusted yields to conservative assumptions
- Super seasoned collateral with LTV's now at 54%
- High touch servicing

Favor Re-Performing Loans

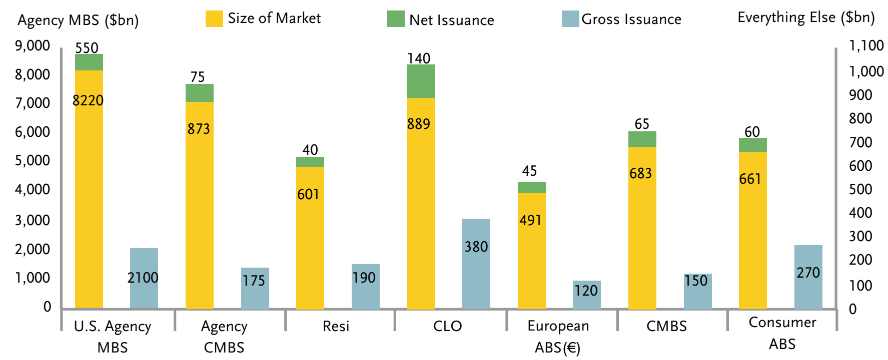
- Legacy/seasoned collateral
- New capital structures that are much more bond holder friendly
- Higher credit enhancement and attractive risk adjusted spreads

CMBS

Broader Securitized Overview

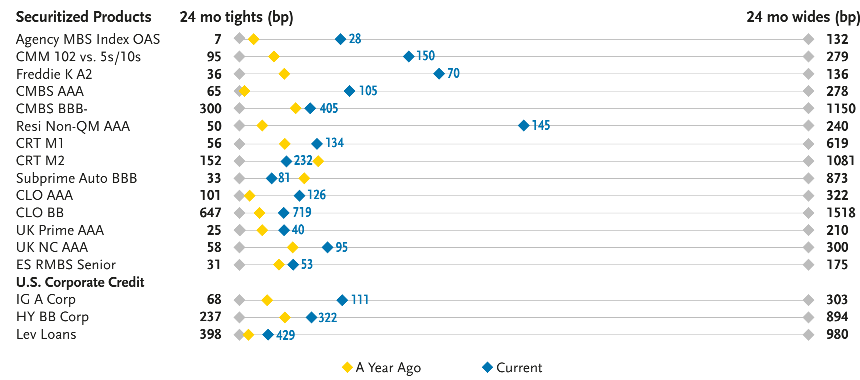
- **The Securitized Credit opportunity set includes** private label RMBS (~$535BN), private label CMBS (~$650BN), Consumer ABS (~$700BN), and CLOs (~$1T globally).
- **Securitized Credit Issuance broadly declined since the Global Financial Crisis (GFC)** due to increased regulations and cheaper funding alternatives, with the exception of Collateralized Loan Obligations (CLOs), growing at a rate of 12% per annum since 2012.

Market Size and 2021 Issuance Outlook



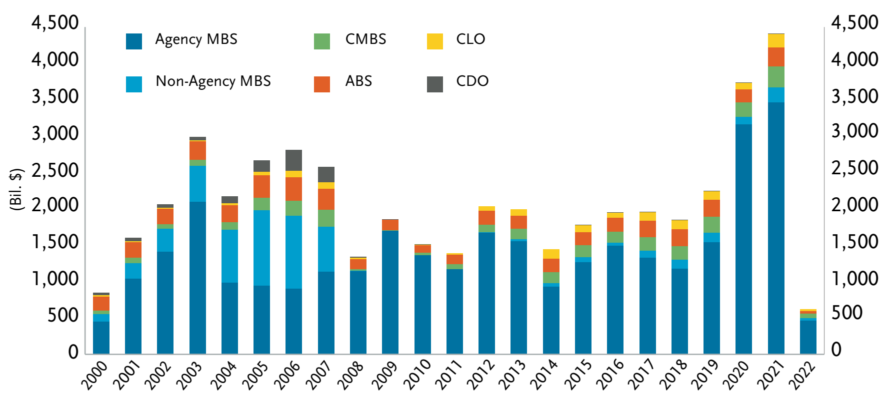
Source: eMBS, CMA, Intex, Trepp, Morgan Stanley Research forecasts

24mos Spread Ranges



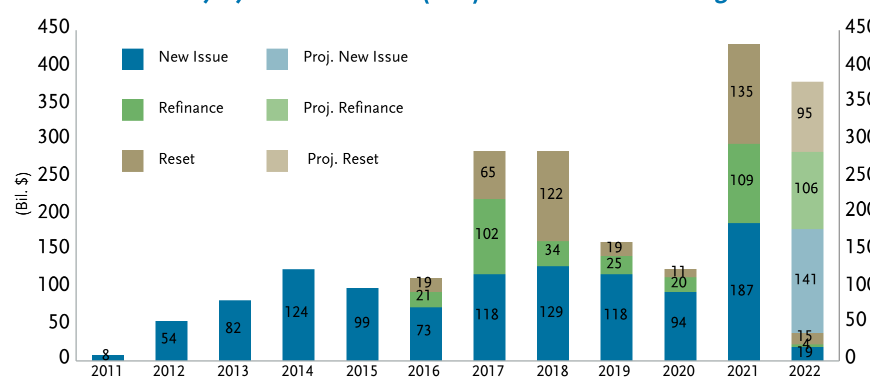
Source: Bloomberg, Yield Book, TRACE, Morgan Stanley Research

Historical Structured Finance Issuance



Sources: S&P Global Ratings, SIFMA, Bloomberg, Commercial Mortgage Alert, Asset Backed Alert, Wells Fargo, J.P. Morgan, The Urban Institute

2.0 Broadly Syndicated Loans (BSL) CLO Issuance Through Time



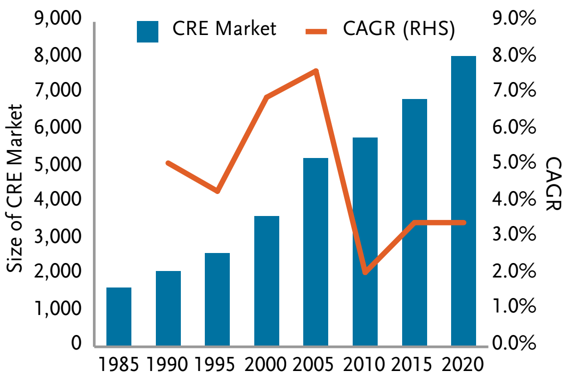
Sources: S&P LCD, Morgan Stanley Research. Note: 2021 volumes are through May 13, 2021

TCW

Overview of Commercial Real Estate (CRE) Market, Debt and Lenders

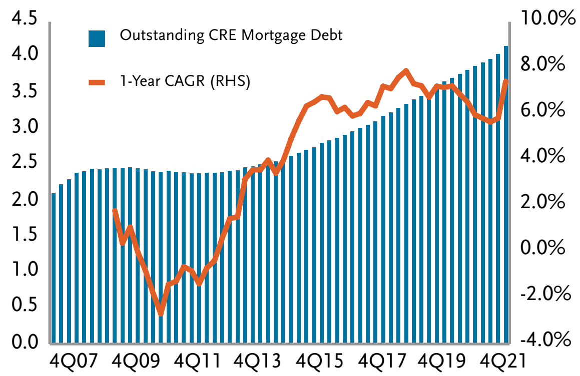
- **Commercial Real Estate (CRE) is a $8+ trillion asset class.** There is ~$3.8 trillion mortgage debt outstanding, which increases to ~$4.7 trillion if you include development and construction loans.
- **Multifamily, office, and retail account for ~80% of the CRE market,** at 30.4%, 27.3%, and 22.4% market share, respectively.

Size of the CRE Market



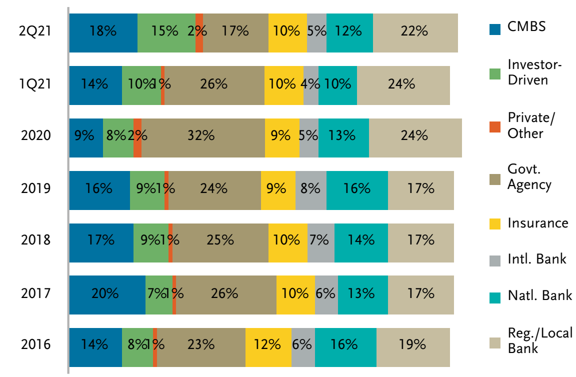
Source: Morgan Stanley Research

Total Outstanding CRE Debt



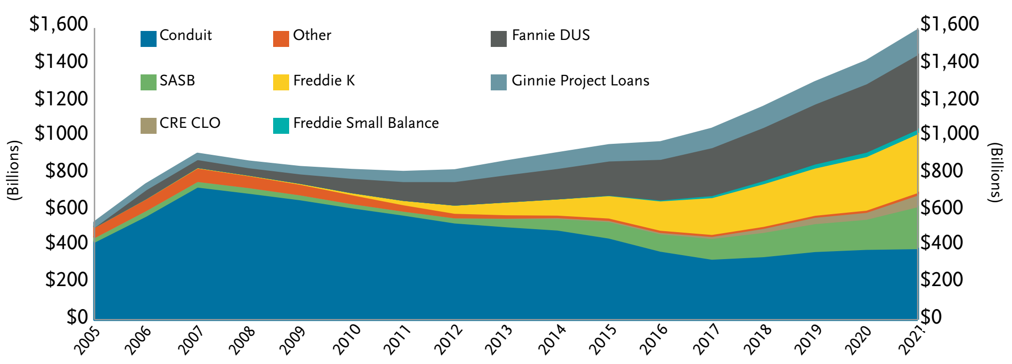
Source: Morgan Stanley Research, BEA, Haver Analytics, RCA

CRE Lender by Market Share



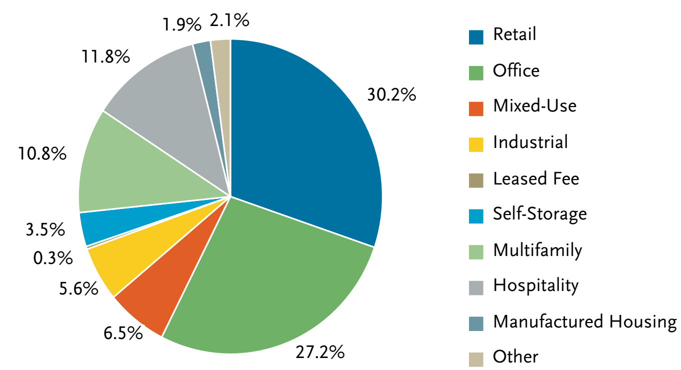
Source: Red Capital Analytics, Morgan Stanley Research

CMBS Outstanding



Source: Red Capital Analytics, Morgan Stanley Research

Average Property Type Exposure Across Conduit CMBS

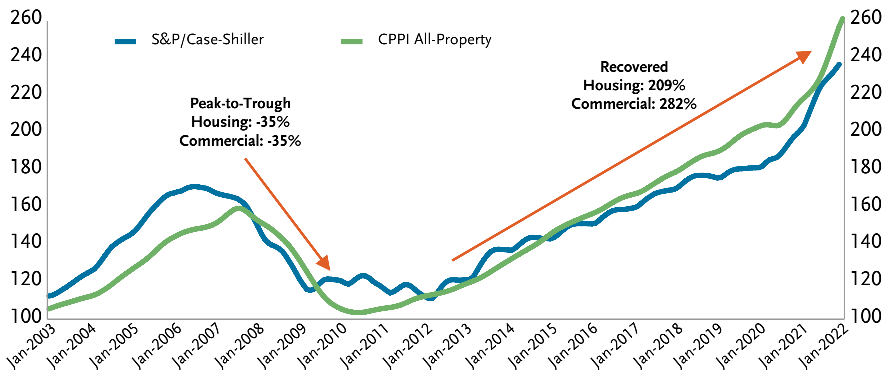


CRE Stock: The primary real estate assets include office, industrial, lodging, retail, multifamily, and healthcare properties.

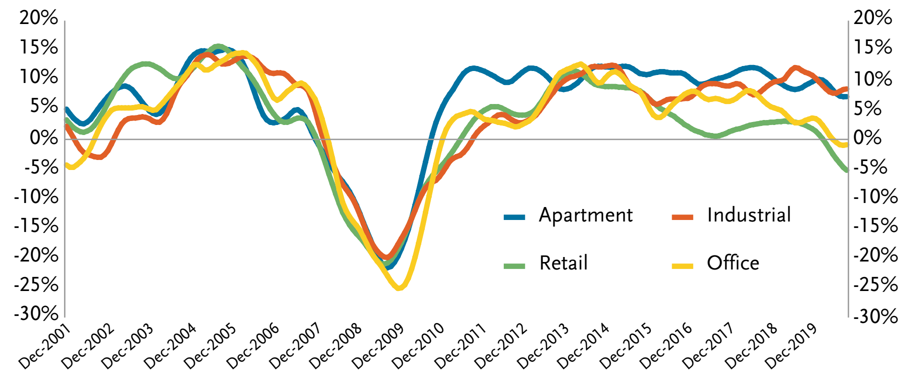
CRE Experienced Significant Valuation Gains Post-Global Financial Crisis (GFC)

- **Commercial Real Estate (CRE) prices have increased by 90+% in the last 10 years,** fueled by lower financing costs and capitalization rates resulting from Quantitative Easing (QE) policy.
- **Valuation gains were largely driven by Quantitative Easing** – low financing rates and capitalization rates (technicals). CMBS credit review focuses on underlying property cash flows."(fundamentals).

CRE Prices Outgain Housing Post-Global Financial Crisis



Extended Cycle – YoY Price Change by Property Type

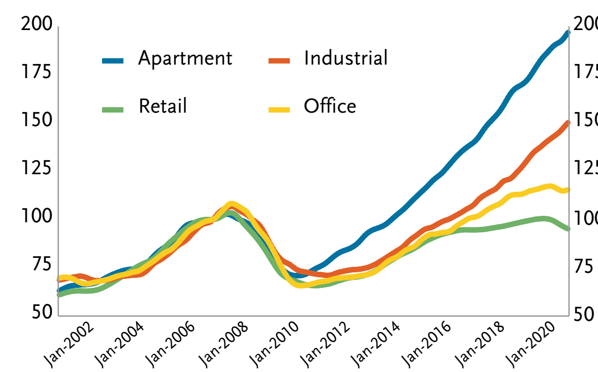


CRE Sector Price Changes

Index	Peak to Trough	Peak to Current	Percentage Peak-to-Trough Loss Recovered	2022 YTD	YoY	MoM
Apartment	-30.7%	135.5%	541.0%	1.9%	22.5%	1.9%
Industrial	-32.7%	79.9%	344.4%	2.4%	28.1%	2.4%
Major Markets (All-Property)	-29.6%	68.3%	330.7%	0.9%	14.6%	0.9%
National All-Property	-35.1%	63.8%	281.9%	1.6%	20.3%	1.6%
Non-Major Markets (All-Property)	-38.2%	59.1%	254.7%	1.9%	21.9%	1.9%
Office CBD	-34.4%	41.0%	219.2%	0.3%	5.0%	0.3%
Core Commercial	-36.1%	33.6%	193.1%	1.6%	18.3%	1.6%
Office	-39.3%	22.3%	156.6%	0.4%	11.8%	0.4%
Office Suburban	-40.9%	16.8%	141.2%	0.4%	11.5%	0.4%
Retail	-36.3%	12.3%	133.9%	1.9%	20.4%	1.9%

Note: Peaks are pre-crisis (2007 08), troughs are post crisis (2009 10).
Source: Real Capital Analytics, Morgan Stanley Research

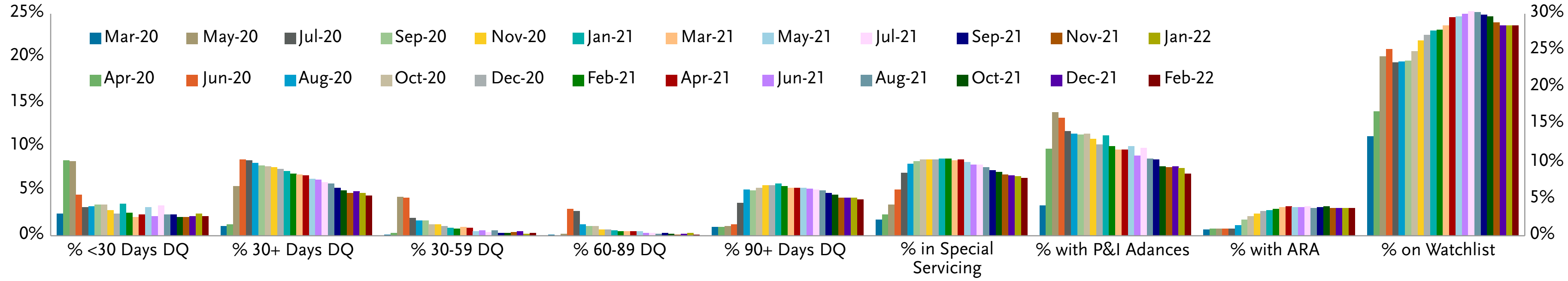
Apartment Prices 89% Higher than Prior Peaks, Retail Prices 7% Lower



COVID Caused an Acute Disruption – and Accelerated Underlying Trends

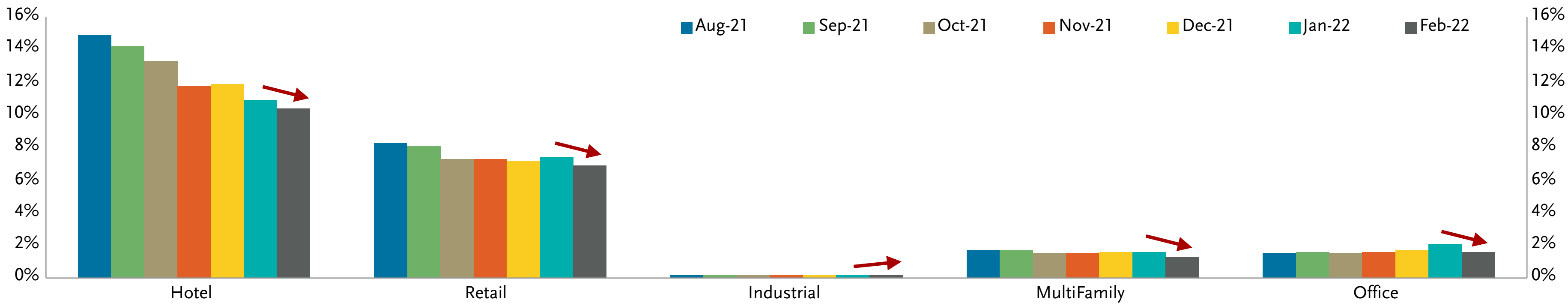
- **Conduit Delinquencies** continue to recover post-COVID, though Appraisal Reduction Amounts (ARAs) are climbing and Special Servicing rates and Principal and Interest (P&I) Advancing rates remain elevated.

State of the Conduit Market



- **The COVID pandemic** severely disrupted both Retail and Hotel operations, accelerating a prolonged correction in Retail, while segments of the Hotel market have already rebounded (especially drive-to leisure).

60+ Delinquency by Property Type



Source: BofA Global Research, Intex

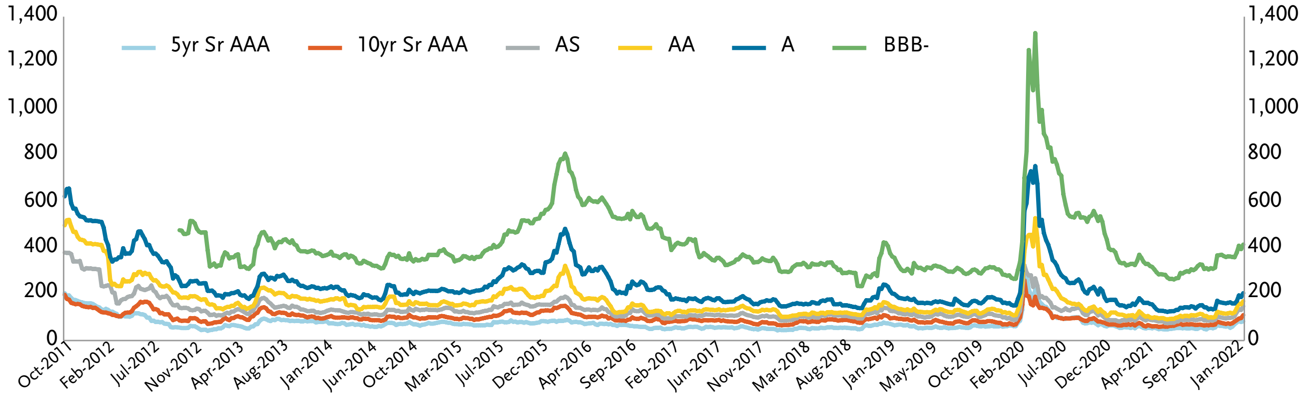
TCW

Expect Continued Bifurcation Trend ("K-shaped" Recovery)

- **Investment Grade CMBS spreads largely remediated** due to the significant fiscal and monetary stimulus injected into the broader market. Meanwhile, more vulnerable areas of the market, such as below-IG conduit CMBS and deals with higher exposure to weaker collateral, continue to trade wide to pre-COVID levels due to acute credit risk.

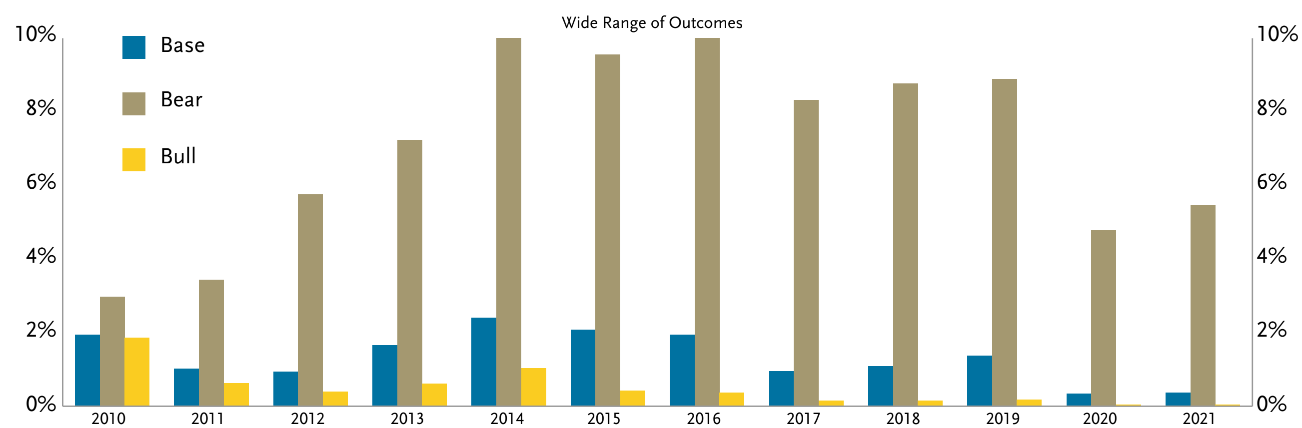
- **We expect modifications and appraisal reductions to increase in CMBS** as temporary forbearance periods expire. While most losses will be concentrated in weaker assets, identifiable pre-COVID, we recognize the pandemic introduced new secular tends, such as work-from-home (WFH) flexibility and reduced corporate travel.

Treasuries



Source: Intex, BofA Global Research

Projected CMBS Losses Vary Significantly Across Base/Bear/Bull Scenarios



Source: Intex, MS Research

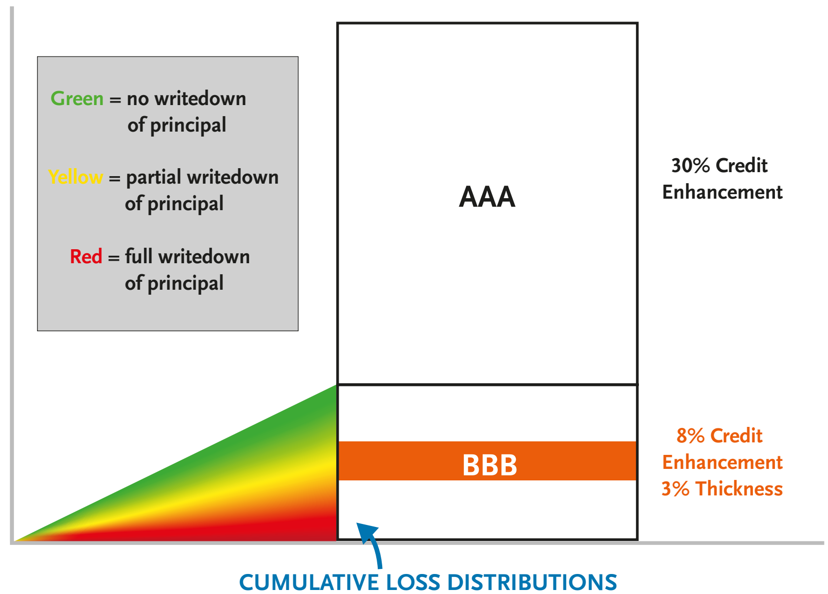
CMBS Investment Philosophy Remains Consistent – Take Advantage of Bottom-up Credit Analysis

- **CMBS credit review requires careful analysis of asset-specific factors,** including location, sponsor, tenants and loan structure. We combine manual underwriting with desk-designed proprietary analytics to scale review of the CMBS universe
- **Our bottom-up credit analysis philosophy recognizes that prices are more volatile than fundamental value.** With a common sense approach to fundamental value, we actively take advantage of price volatility and relative value to add alpha.
- **Private Label CMBS includes** Single Asset Single Borrower (~$220BN),conduit (~$390BN) and CRE CLO (~$65BN). There is significant crossover in SASB and conduit CMBS credits, as large loans are usually allocated across multiple deals.[1]
- **We're actively buying quality across the capital stack and remaining disciplined and opportunistic with weaker credits.**

Credit Quality Considerations

Better Credit:	Weaker Credit:
• Moderate valuation (limited pro-forma and higher cap rates)	• Frothy valuation (significant pro-forma and influenced cap rates)
• Low leverage (25-45% LTV)	• Higher leverage (60-85+% LTV)
• No mezz/limited mezz (maintain credit quality of senior)	• Significant mezz position beneath the senior
• High quality property (Manhattan trophy office)	• Low quality property (single-tenant suburban office)
• True sponsor equity	• Sponsor cash-out and/or high leverage
• Established sponsor in property type/ management	• Limited sponsor history/experience
• Recent capex to improve property	• Deferred maintenance
• Improving fundamentals (location, tenancy, etc.)	• Deteriorating fundamentals (subleasing, low-demand market)
• Limited term rollover	• Significant tenant rollover
• Strong submarket occupancy	• Weak submarket occupancy

Illustrative Conduit Structure

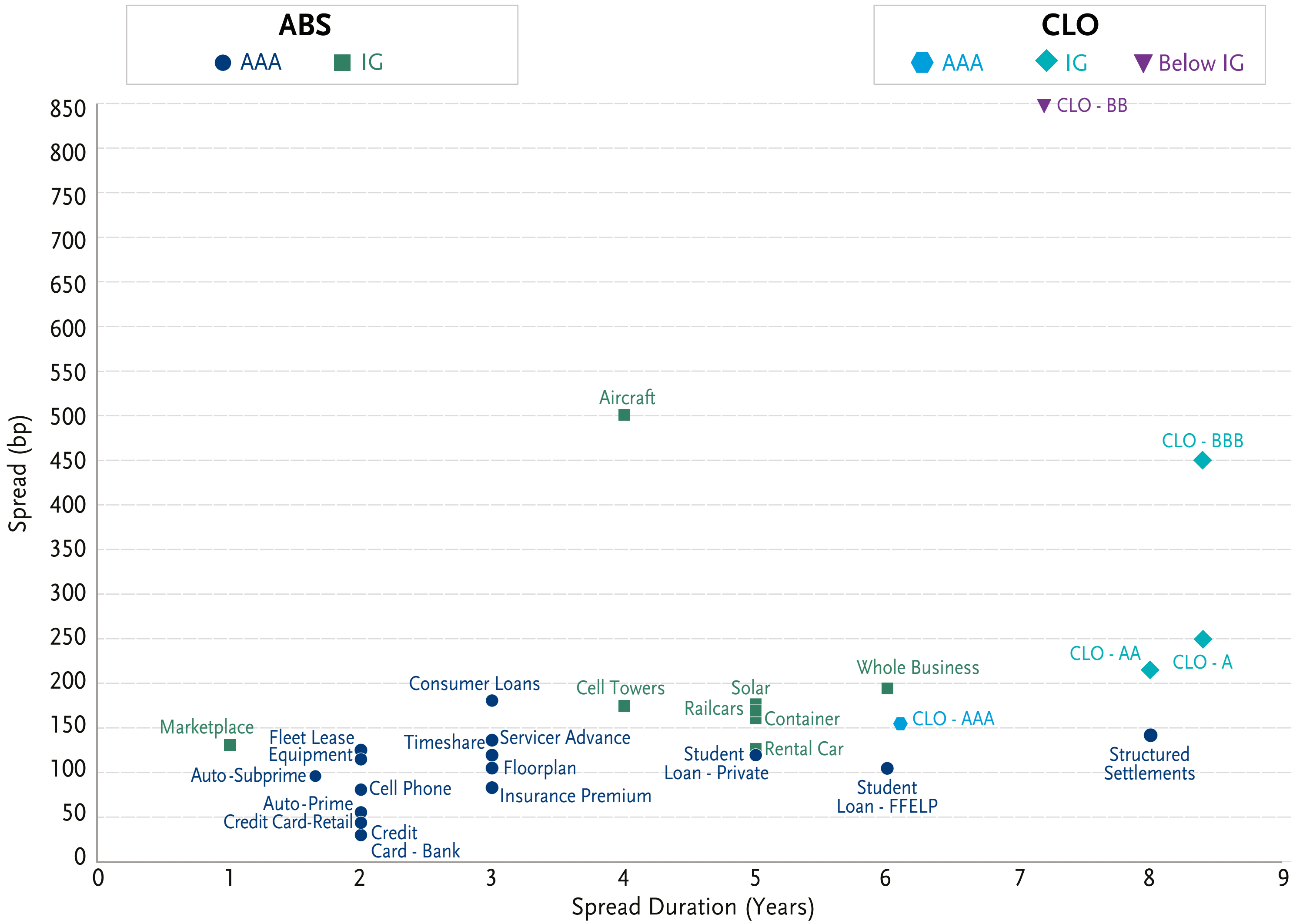


1 Conduit average pari passu exposure is over 50% YTD.2020, and has been over 40% since 2016.
Source: Deutsche Bank, MS Research, Trepp, Bloomberg, Offering Documents

ABS

ABS & CLO Opportunity Set

AS OF MAY 11, 2022



Source: TCW

ABS & CLO Opportunity Set Key

ABS	SIZE	NOTES
Consumer	**$450 Billion**	
Credit Card - Bank	$85B	Bank portfolio of credit card receivables
Credit Card - Retail	$24B	Credit card receivables partnered with retail brands
Auto - Prime	$121B	Auto loans/leases to prime borrowers
Auto - Subprime	$54B	Loans to subprime borrowers for mostly used cars
Student Loan - FFELP	$118B	97-98% gov't guarantee
Student Loan - Private	$38B	Education loans for in-school & refinancing
Cell Phone	$10B	Payment plan on mobile devices
Non-Traditional Consumer	**$39 Billion**	
Marketplace	$20B	Fintech origination of unsecured consumer loans
Consumer Loan	$8B	Subprime consumer loans originated in branches
Timeshare	$7B	Loans on vacation ownership interests
Structured Settlement	$4B	Stream of payments resulting from a settlements claim
Commercial	**$116 Billion**	
Rental Car	$11B	Backed by pool of vehicles leased to rental car company
Floorplan	$31B	Vehicle inventory financing at dealerships
Fleet Lease	$11B	Commerical vehicles used by small/med sized companies
Equipment	$29B	Pool of agriculture, construction, or office equipment
Whole Business	$27B	Franchisor royalty fees from franchisees
Insurance Premium	$5B	Financing of insurance premiums for businesses
Cell Tower	$3B	Metal structures used to mount wireless equipment
Transportation	**$43 Billion**	
Aircraft	$28B	Portfolio of aircraft leased to various airlines
Container	$9B	Container boxes leased to shipping lines for global trade
Railcar	$6B	Railcars leased to companies used to transport goods
Other	**$14 Billion**	
Servicer Advance	$7B	Payment advances related to mortgage servicing
Solar	$7B	Solar panel roof system used in residential homes

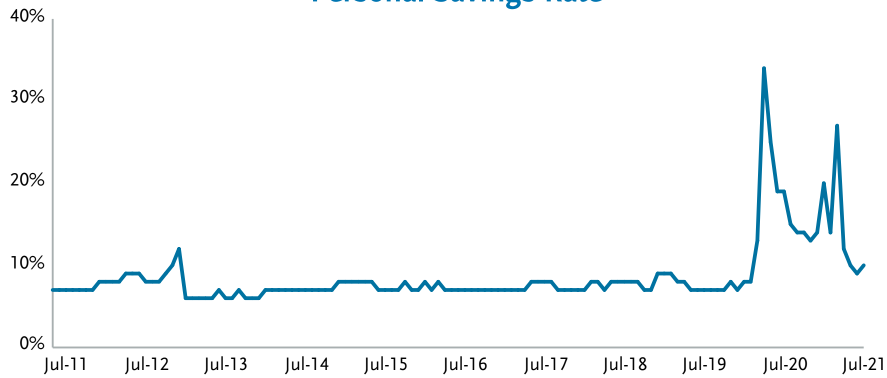
CLO	SIZE	NOTES
Structure	**$883 Billion**	
		Securitization backed by a pool of leveraged loans
AAA	$530B	1st pay, non pikable, 36% CE
AA	$124B	2nd pay, non pikable, 24% CE
A	$53B	3rd pay, pikable, 18% CE
BBB	$49B	4th pay, pikable, 12% CE
BB	$31B	5th pay, pikable, 8% CE

TOTAL SIZE OF THE ABS & CLO MARKET
$1.5 TRILLION

The Response to COVID-19 Has Strengthened Consumer Credit Profiles

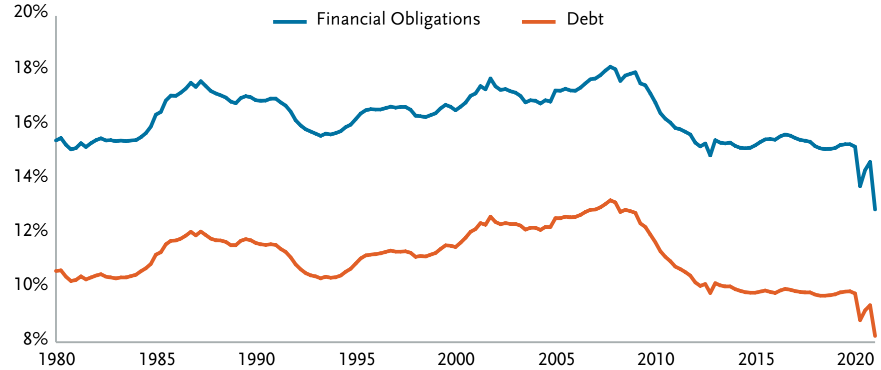
- Consumers are saving more than ever before: the personal savings rate has averaged 16.5% since March 2020, a significant increase from the prior 10yr average of 8.6%
- Lower debt loads and lower interest rates have led to significantly lower Debt-to-Income ratios for the average consumer
- Improved consumer credit can clearly be observed though ABS trust loss data

Personal Savings Rate



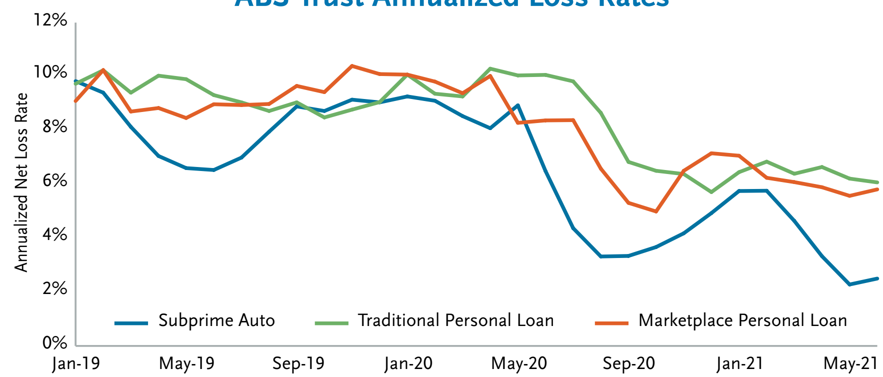
Source: U.S. Bureau of Economic Analysis, Federal Reserve Bank of St. Louis

Debt to Income



Source: The U.S. Federal Reserve

ABS Trust Annualized Loss Rates



Source: Barclays, INTEX

Capturing Improving Consumer Credit Through ABS Residuals

- ABS Residual tranches are the most subordinated part of a securitization structure. They have a claim on all cashflows once servicing (and other) fees and bond obligations have been satisfied

- **These residuals are the most exposed securities to credit losses, and stand to benefit the most when credit improves**

- Cashflows to an ABS residual tranche can be thought of as having 2 components, and interest only ("IO") and a principal only ("PO") component

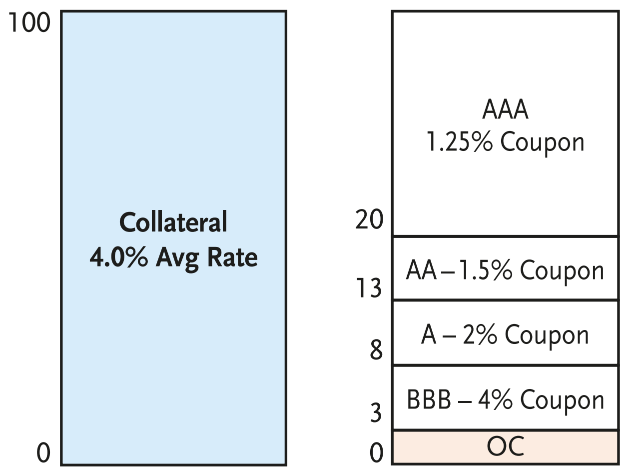
  - **IO:** The residual typically receives the difference in interest cashflow between the collateral and bond interest rates. This looks very much like a stream of interest payments and can be highly prepayment sensitive

  - **PO:** The residual is typically entitled to the overcollateralization ("OC") in a securitization. This is an asset which is long and locked out until all of the bonds in the securitization have been paid in full. This looks very much like a subordinated PO and can be highly sensitive to losses.

- **Sophisticated modeling of both the quantum AND timing of losses and payments allows us to capture significant upside returns in these securities**

Capturing Improving Consumer Credit Through ABS Residuals (cont'd)

Structural Illustration



This is the Residual PO

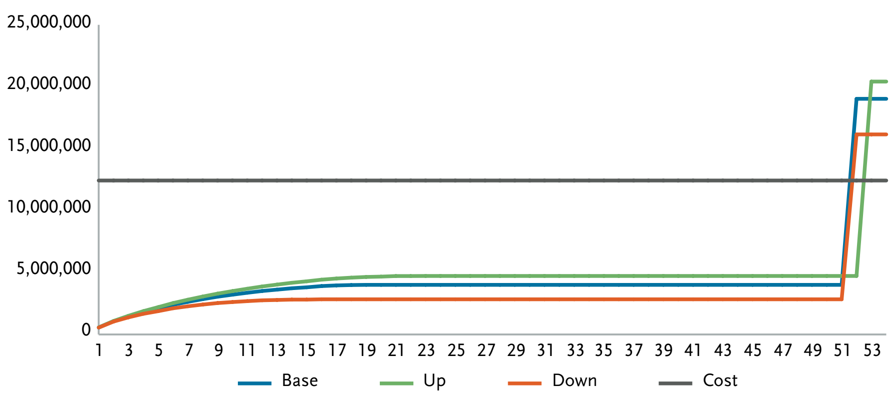
	Principal	Rate	Total
Collateral Interest	**100**	**4.00%**	**4.0**
Bond Interest	**97**	**1.43%**	**1.4**
AAA Class	*80*	*1.25%*	*1.0*
AA Class	*7*	*1.50%*	*0.1*
A Class	*5*	*2.00%*	*0.1*
BBB Class	*5*	*4.00%*	*0.2*
Servicing Fees	**100**	**1.00%**	**1.0**
Residual Class	*3*	*54%*	*1.6*

This is the residual IO component.
An astonishing 54% coupon (assuming no losses)

Cash Flow Illustration

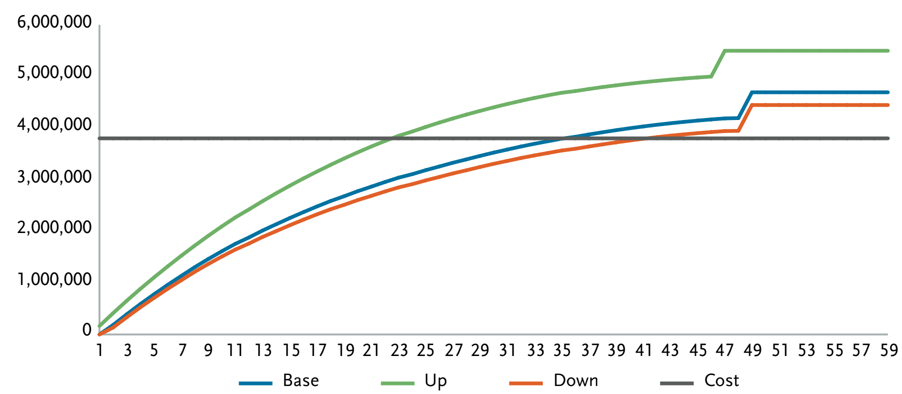
Highly PO-Like Residual

Cumulative Cashflows



Highly IO-Like Residual

Cumulative Cashflows



Source: TCW

TCW

International ABS

Global Securitized – Actively Traded Markets

United States

- **$10.7T** outstanding with active trading. Securities include longer fixed-rate (10+yr) as well as shorter (≤ 3-5yr) and floating-rate.
- **In residential,** the U.S. stands out with non-recourse mortgages and GSE wrapped lending (Agency MBS). The latter supports longer fixed-rate mortgages.
- **In commercial,** the U.S. has a well established conduit CMBS market that accommodates pooled commercial loans and single asset single borrower (SASB) market to finance large properties and/or portfolios
- **In consumer,** in addition to regular auto and credit card ABS, the U.S. market includes various asset classes less common in international markets such as most "esoterics," i.e. aircraft, container, solar, railcar, timeshare, etc.

Europe (Including UK)

- **$1.0T outstanding,** around 40% of which is placed. Most securities are shorter (≤ 3-5yr) and floating-rate
- **Bank-dominated lending and central bank funding** results in less need for securitization. Additionally, some European markets are largely domestic, ex. Switzerland, while other markets are more international, ex. Netherlands and UK.
- **Mortgages are recourse** and some countries have guarantee schemes, ex. Netherlands. The Buy-to-Let sector is mature in the UK and growing in the Netherlands and Ireland
- **Covered Bonds** are very popular in Europe and offer more efficient funding than RMBS; as a result, RMBS issuance has been largely net negative in recent years.

Australia (and New Zealand)

- **$70BN outstanding;** the majority is RMBS and floating-rate, though ABS issuance is growing
- **Mortgages are recourse** and prime loans over 80% LTV include Lenders Mortgage Insurance (LMI)
- **Banks dominate mortgage lending** with over 95% of market share (the Big Four banks have 80% market share)
- **In recent years,** global private equity firms have increased their investments in Australian non-bank lenders, with an aim to grow market share; this should support increased issuance
- **Most recently,** the pay-as-you-go (PAYG) and peer-to-peer lending sector have grown, aided by fin-tech, which may be a supply driver for new ABS issuance

Source: AFME 2Q.21 Securitisation Report
U.S. includes 866mm Agy CMBS added to the AFME numbers

Global Securitized – New Issue Gross Volume

- 2021 global securitized issuance totalled $1.53T, a 43% YoY increase vs 2020 issuance. S&P projects 2022 total issuance to remain flat relative to 2021 issuance, at $1.56T.
- Every major market experienced an increase in issuance. Most notably, issuance increased by 73% in the US, by 65% in Europe, and by 73% in Australia.
- By opportunity set, the most actively traded international markets are the U.S., Europe/UK, and Australia; others remain largely domestic.

Source: S&P Global Structured Finance 2022 Outlook

Global Securitized – Focus International Opportunities

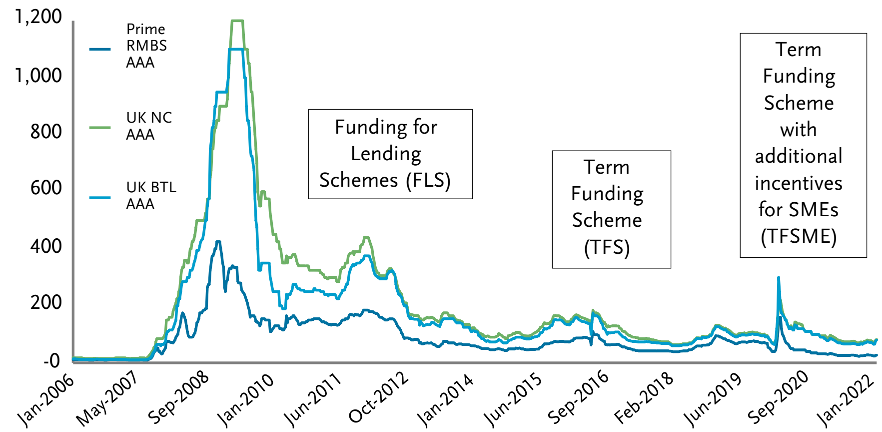
UK RMBS

- **Size:** $160bn UK RMBS across Prime, Non-Conforming and Buy-to-Let RMBS; one of the most actively traded sectors in international ABS
- **UK Mortgage Credit:** bank-dominated lending with strong historical performance due to recourse debt, regulatory oversight, and favorable supply < demand technicals
- **Generic Spreads:** UK Prime AAAs +30-35bps, Non-Conforming (NC) and Buy-to-Let (BTL) RMBS AAAs +80-85bps

Australian RMBS

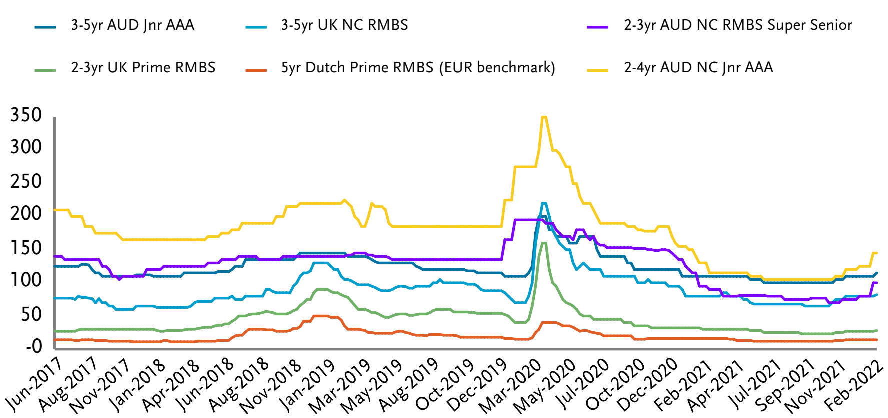
- **Size:** $70bn; limited secondary trading
- **Australian Mortgage Credit:** bank-dominated (>95%) with strong historical performance due to recourse debt, regulatory oversight and healthy economic growth (last recession was 1990-1991)
- **Generic Spreads:** Prime senior RMBS AAAs +80-85bps, junior AAAs +110-115bps; Non-Conforming (NC) RMBS senior AAAs +100-105bps and junior AAAs +145-150bps

Historical UK RMBS Spreads



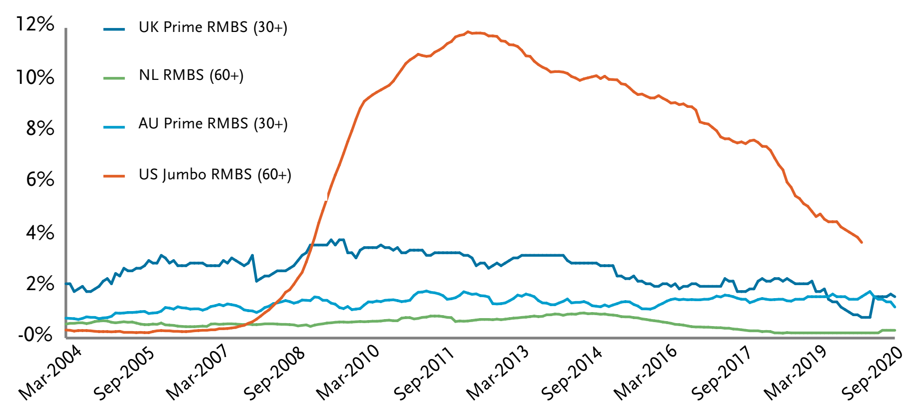
Source: J.P. Morgan

Recent International RMBS Spreads



Source: Citigroup Global Markets

Historical International RMBS Arrears



Source: Morgan Stanley, J.P. Morgan
Note: Spreads are floating rate and in respective currencies as of December 2020; benchmark to 3m LIBOR or SONIA for UK and 1m BBSW for AUD; Non-Conforming (NC) represent non-bank and typically non-prime collateral

Collateralized Loan Obligations (CLOs)

CLO Market Overview

Largest ABS Sector and Growing

- The U.S. CLO market is almost $900bn in size and growing at rate of 13% per annum since 2012

CLO Managers

- There are over 130 active CLO mangers, including TCW

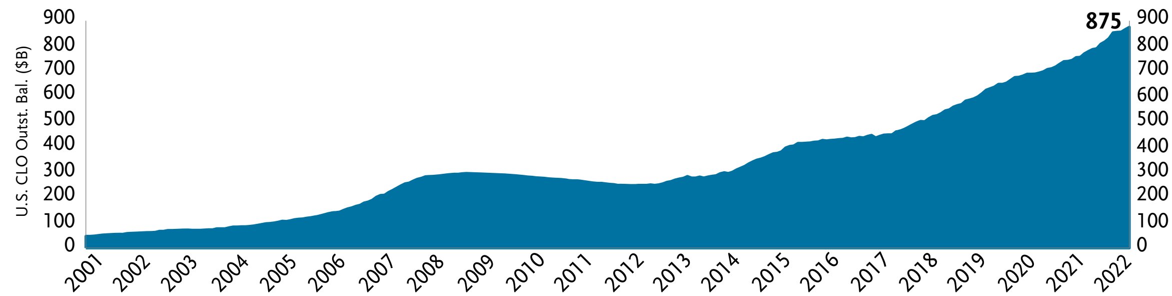
Active Primary Market

- Post global financial crisis, U.S. CLO issuance has averaged $108bn/year since 2012

Secondary Trading

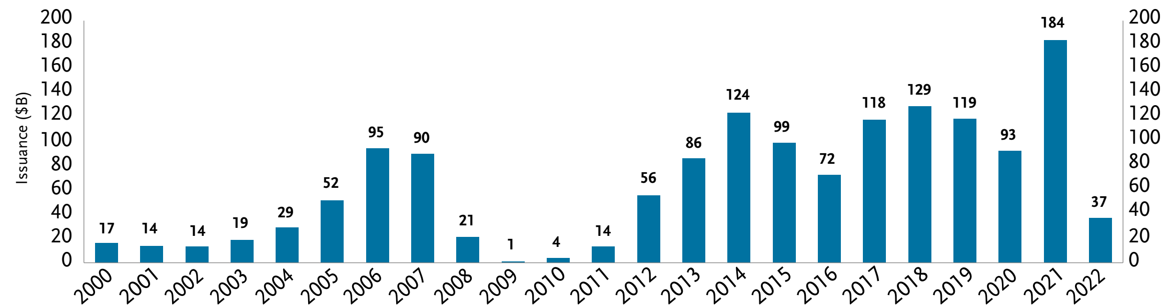
- U.S. CLO secondary BWIC volume averages $2-$4bn/month

U.S. CLO Market Size



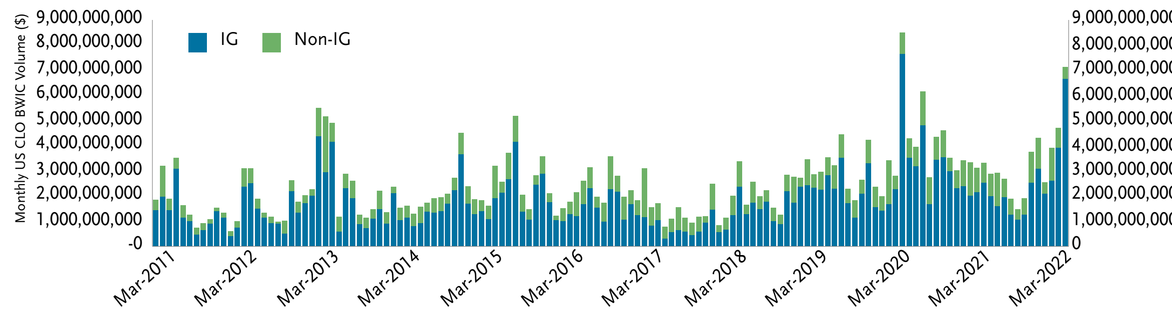
Source: BofA Global Research, Intex

U.S. CLO Issuance: Annual



Source: J.P. Morgan Securities LLC

U.S. CLO Secondary BWIC Volume

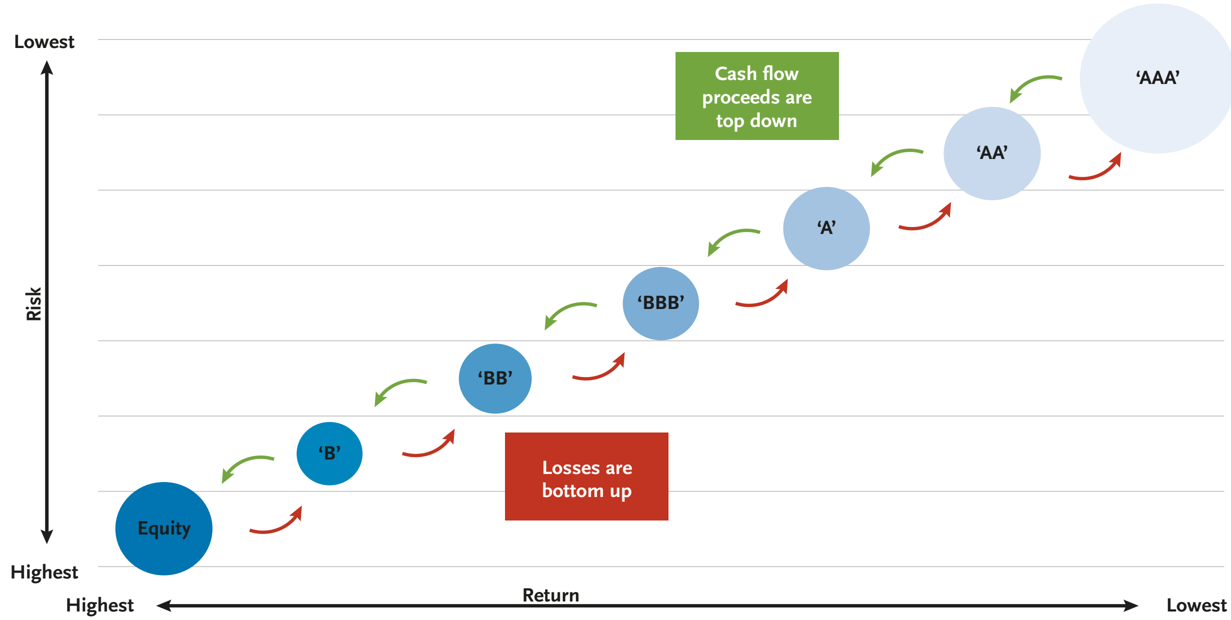


Source: Citi

CLO Structure

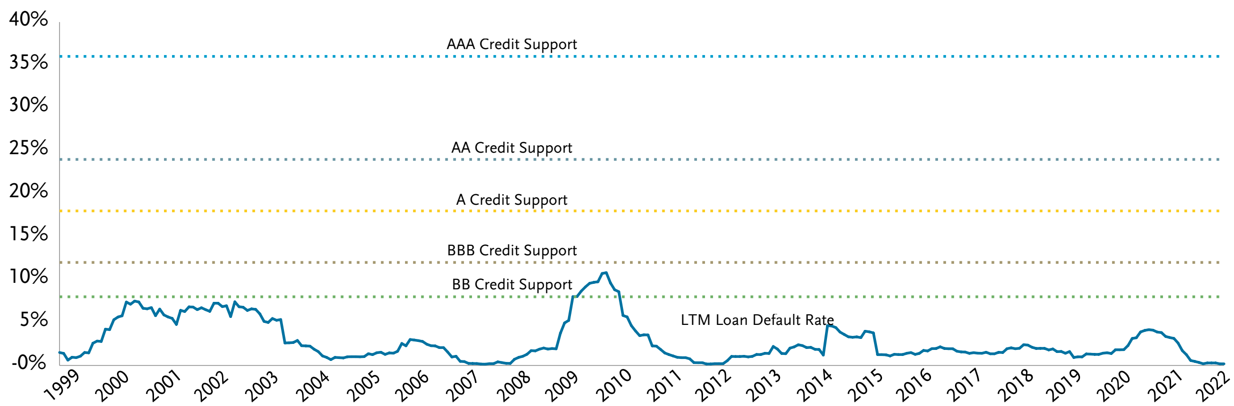
Active Management

- CLOs are actively managed securitizations that are tranched as sequential structures with losses applied in reverse sequential order
- Active Management can help CLOs build additional credit enhancement throughout the reinvestment period via trading gains and portfolio re-positioning
- CLOs are also unique in that they are one of the few assets classes that routinely sell the residual (equity) slice of the securitization.
- CLO equity is actively traded in the secondary market relative to other securitized residuals



Note: Size of bubble represent relative balance of tranches. Not to scale. ©2018 by Standard & Poor's Financial Services LLC. All rights reserved.

U.S. Leveraged Loan Default Rate vs. CLO Tranche Credit Support



Source: S&P LCD, TCW

1 "Twenty Years Strong: A Look Back At U.S. CLO Ratings Performance From 1994 Through 2013" S&P Global (1/31/2014)

2 "1H 2021 CLO Performance Update: Stay Outperforming and Carry On", Citi Research (7/20/2021)

Performance

- During the Great Financial Crisis (GFC), AAA and AA tranches did not experience any losses. Single A, BBB and BB tranches incurred a 0.08%, 0.21% and 0.78% loss rate respectively from 1994-2013[1]
- CLOs issued post-2012 have been structured with higher credit enhancement than pre GFC deals
- Overall CLO equity performance has been positive with a 5-year annualized total return of 14.3%[2]

TCW CLO Investment Process

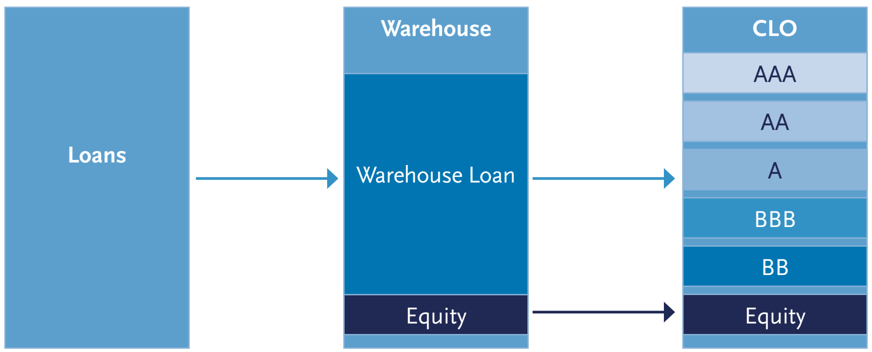
Manager Evaluation
- Credit Process
- Analyst Experience
- Historical Performance
- Transparency
- Market Perception
- Capitalization/Market Access
- Restructuring/Distressed Capabilities
- Compensation Structure

Collateral Evaluation
- Industry Concentrations
- Ratings Distribution
- Position Sizes
- Tail Risk
  - Obligor Sizes
  - Bid Depth
  - B-/B3 & CCC/Caa Exposure
- Market Value Metrics
- Trading Activity/Par Build (Loss)

Structure Evaluation
- Debt Vs Equity Friendly Language
- Coverage Tests/Haircuts
- Payment Waterfall
- Concentration Limitations
- Post Reinvestment Flex
- Libor Replacement Clause
- Workout/Restructuring Provisions

CLO Warehouse Investing Overview

- **CLO Warehouse:** Prior to issuing a CLO, a CLO manager typically opens a credit facility (warehouse), with the arranging bank to finance collateral loan acquisitions.
- **Third-Party Equity:** Arranging banks typically syndicate their warehouse first-loss risk (equity) to mitigate warehouse credit risk. Equity investors are usually the CLO manager and/or outside investors.
- **CLO Equity:** Some warehouse equity investors "roll" their investment into the equity of the issuing CLO.



- **Equity-Friendly Warehouse Structure:** Warehouse terms have become more equity-friendly, with longer terms, removal of mark-to-market triggers and lower interest rates:

Sample terms of a Warehouse Facility

Terms	Details
LTV	80% advance rate pre-CLO pricing, 90% post pricing
Term	12 - 24 months
Interest Rate	Benchmark + 125 bps[1]
Advance Rate Tests	Typically follows traditional CLO haircuts for defaulted assets, excess CCC/Caa assets, etc. Market value tests less common
Average Commitment[2]	\$20 - \$40mm
Structure	Sub Note or Preferred Share. No cusip/not tradable

Source: TCW
1 Steps up post ramp-up period if CLO is not issued
2 Can be smaller if split by various investors

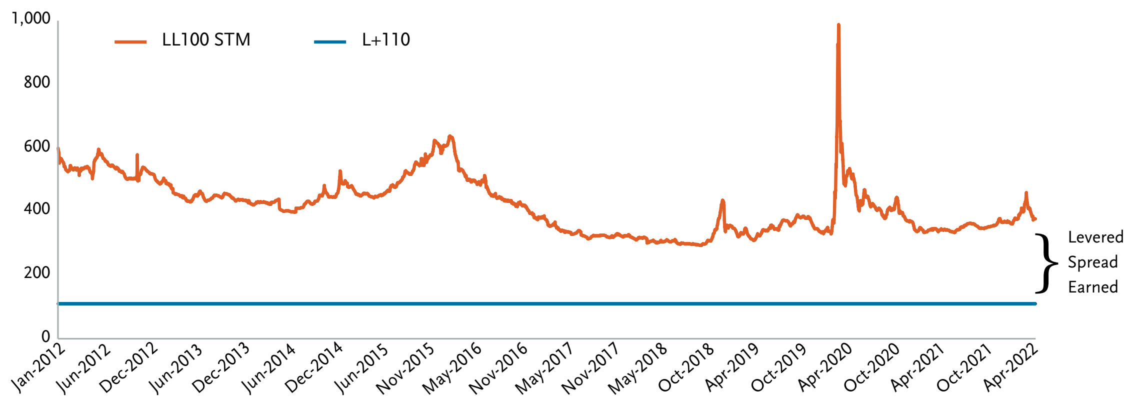
Investing in a CLO Warehouse

- **Investment Profile:** The first-loss (equity) investment earns a levered return on the spread (carry) between the assets in the warehouse (loans) and the financing cost (set by the bank). The warehouse term is typically < 12 months.

Pre-pricing example of Levered Carry	
Asset Spread[1]	L+370
Financing Cost	S+120
Advance Rate	80%
Spread Earned[2]	S+282
Levered Return	14.10%

1 Avg YTD spread to maturity of the LL100 index
2 Accouting for 10 bps 3m LIBOR/SOFR basis

Historical LL100 Loan STM vs L+100 Warehouse Financing



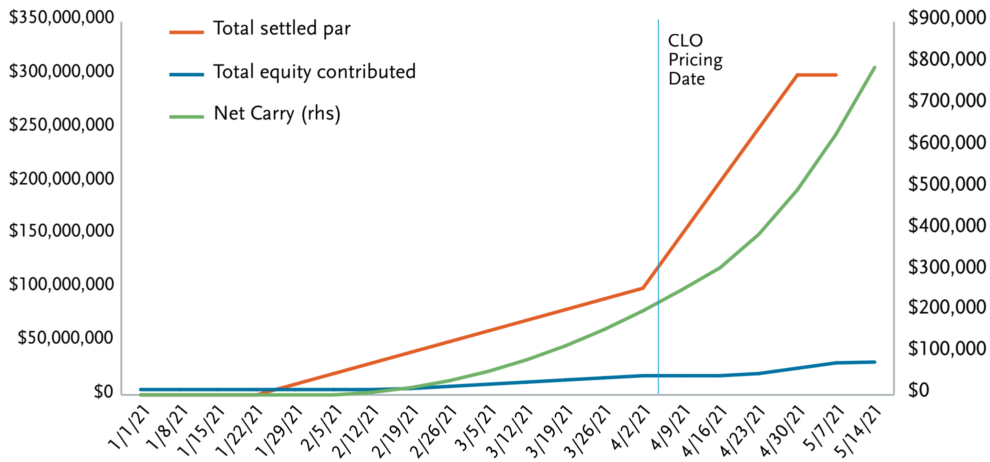
Source: S&P LCD, TCW

- **Risk Profile:** The main risks for investing in CLO warehouse equity are:
  - **Execution risk** - risk that the CLO does not get issued prior to the end of the warehouse term
  - **Ramp risk** - risk the manager ramps slowly, which can lower IRRs
  - **Collateral downgrades/defaults** - which can trigger asset liquidations and/or additional equity injections
  - **Illiquidity** - the investment typically does not have a CUSIP and cannot be traded
- **Investment Analysis:** TCW mitigates many of the above risks through careful manager selection – focusing on CLO managers with a time tested credit process, superior capital markets access and a dedicated CLO investor base. For more liquidity-constrained strategies, investments may be limited to post-pricing CLO equity, which is closer to a ~6 week term, rather than pre-pricing CLO equity (<12mos term).

Warehouse Investing Performance

- **Warehouse Returns:** Median warehouse IRRs range from 10% to 20%+ over an average of holding period of 6-8 months.

Warehouse Ramp Example



Source: BofA

- **Warehouse Resilience:** Forced liquidations are less common during periods of market stress – especially as more warehouses move to mark-to-credit vs. mark-to-market structures. Usually warehouse lenders work with equity investors to restructure terms, temporarily halt asset purchases, and/or increase equity commitments, etc. to navigate market volatility.
  - A June 2020 study by the Maples Group reported that of the 70+ open warehouses they administered, only 5% "succumbed to outright termination" during the COVID liquidity crisis.[1]

1 Maples Group Study: https://maples.com/en/knowledge-centre/2020/6/us-clo-warehouses-covid-19-health-check

Agency MBS

Agency MBS Themes for Q2 2022

Expected Fed timeline for rate hikes and balance sheet reduction has moved up as inflation persists

- Higher yields, a flatter curve, and tapered Fed MBS purchases have widened current coupon spreads by over 60 bps since the start of the year.
- Under current expectations of QT commencing in Q2 2022 and a more hawkish Fed, widening pressures for agency MBS spreads may persist for now.

Look this year for the Fed to complete the 4-Ps: Put ➡ Pivot ➡ Paydown ➡ Pause?

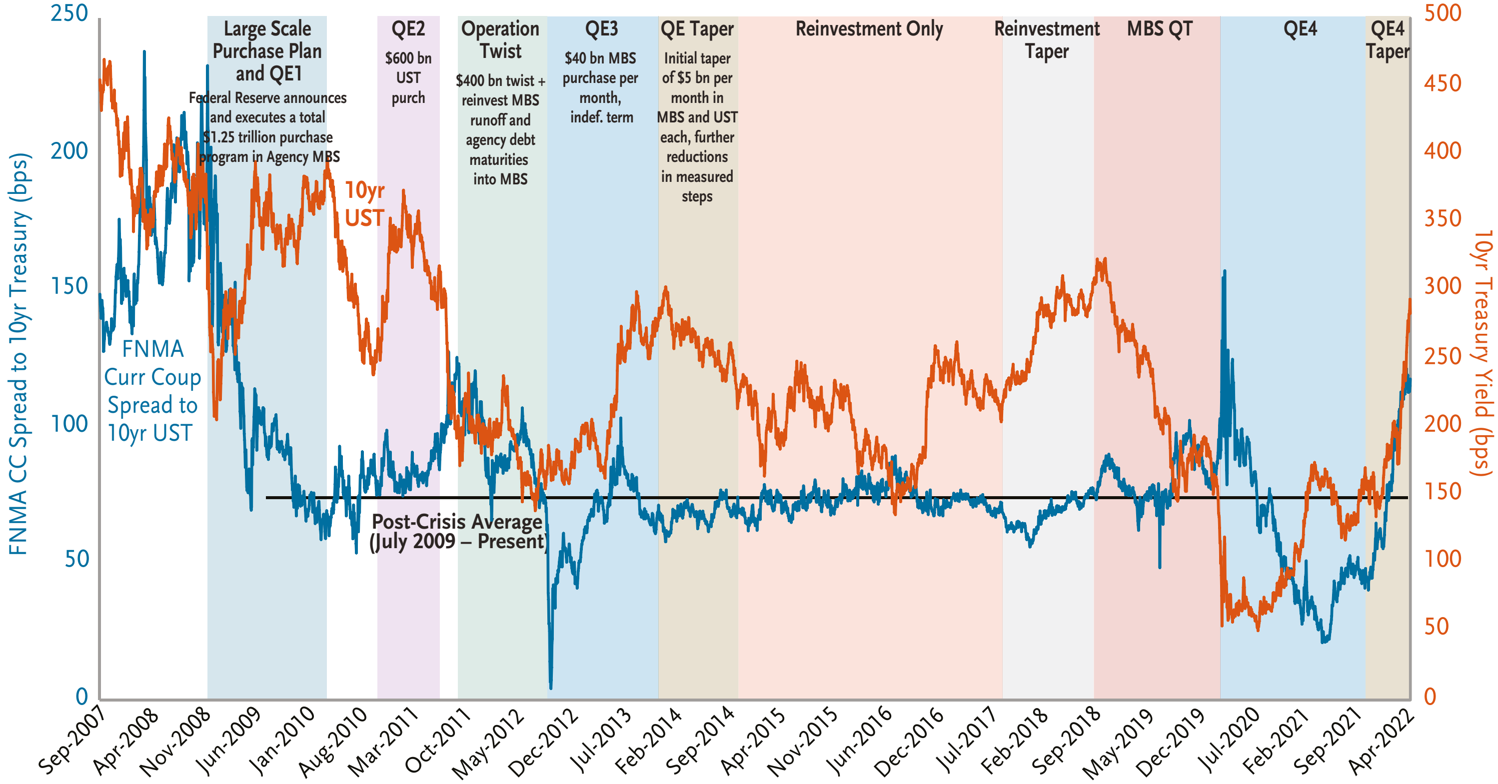
- Though market participants have determined that Q2 QT is the baseline today, previous "Taper-QT" experience suggest that a choppy normalization cycle is the norm.
- Heightened volatility for high-beta risk assets likely lies ahead, suggesting excess returns from agency MBS are positioned to outperform excess returns from corporate credit after several years of annualized underperformance.
- In the event of a "Powell Pause," Fed supported coupons will likely stem YTD negative excess returns through carry, roll specialness and potential for Fed reinvestment should the economy stall.

The sharp sell-off in rates has moved a substantial portion of the mortgage market out-of-the-money at record pace

- The average dollar price of the MBS Index has dropped to record low levels, fueling investor demand for extension protected stories as the mortgage market transitioned out-of-the-money.
- Uncertain trajectory of economic growth and Fed policy calls for prudent and opportunistic coupon and sector allocation.

Agency MBS Spread and Fed Policy

FNMA Current Coupon Nominal Spread to 10 Year UST
(in bps)

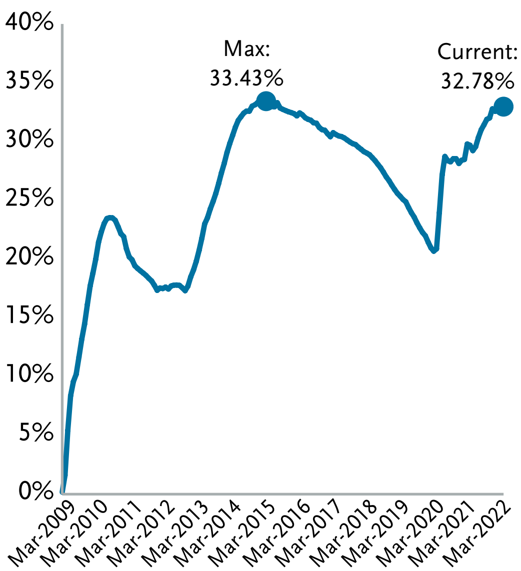


- Since 2H 2021, the agency MBS basis has widened at record speed as high rate volatility and hawkish Fed talk take center stage.
- It remains to be seen if the Fed can in-fact deliver a QT cycle that is akin to "watching paint dry."
- Rate hikes priced in by the market this year and the next would make the Fed's base case of a "soft landing" for the economy difficult to achieve.
- **Timing a pivot is ill-advised, dollar cost averaging is the best path forward.**

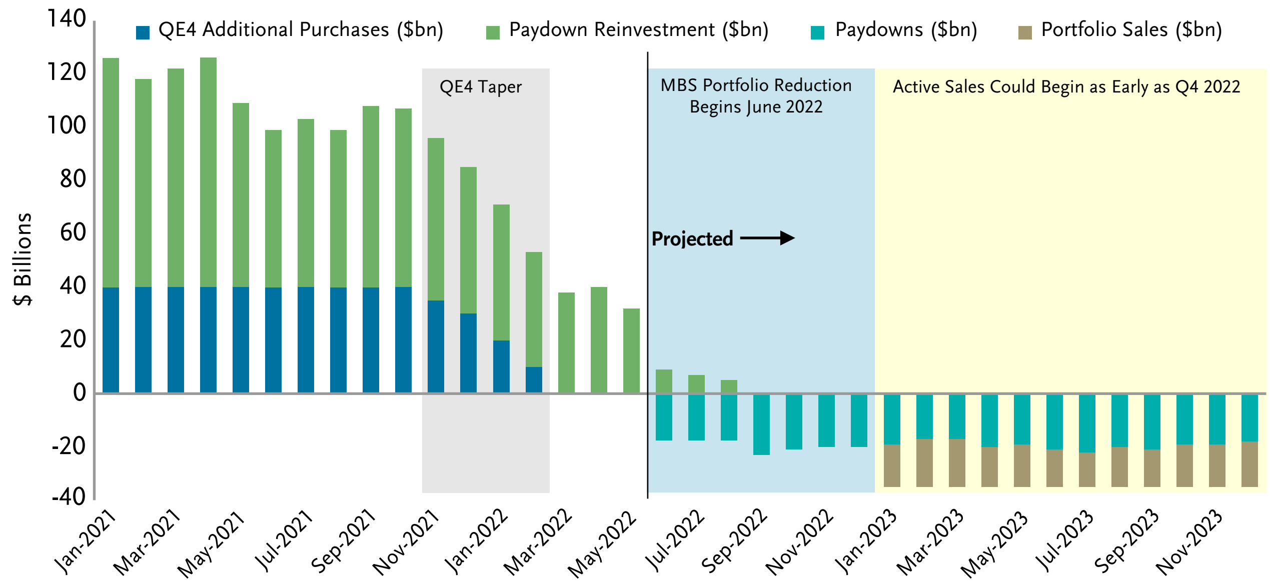
Source: TCW, Bloomberg

Fed Taper of MBS Purchases Has Completed, QT to Begin in June

Fed Holdings as a Percent of Fixed Agency MBS Outstanding is at Record Levels



Estimated Fed MBS QE Purchase Schedule

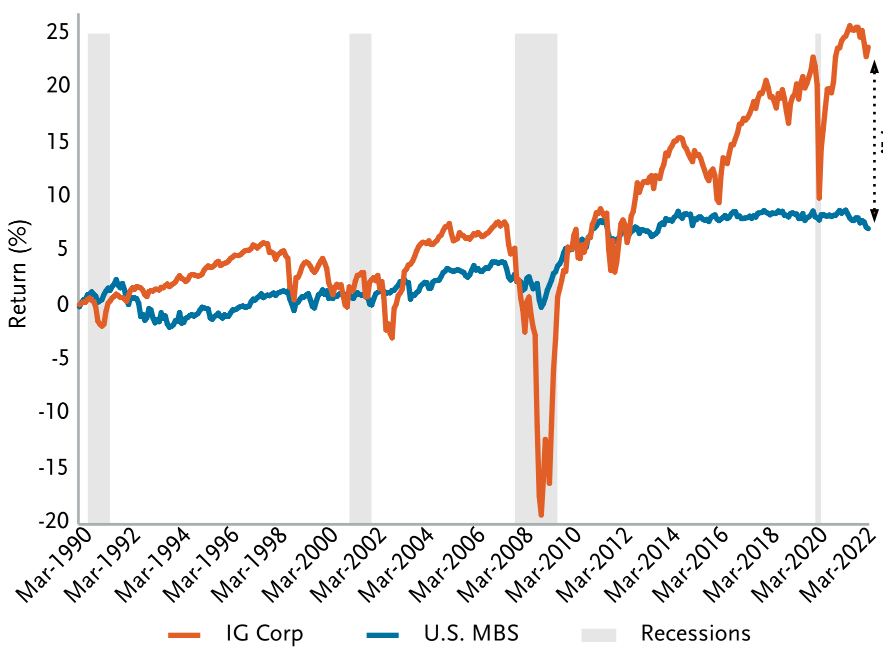


- The Fed has stated that active sales of the MBS portfolio would occur only after balance sheet runoff was "well under way." Depending on the trajectory of economic growth, the Fed may consider active sales in as early as Q4 2022.

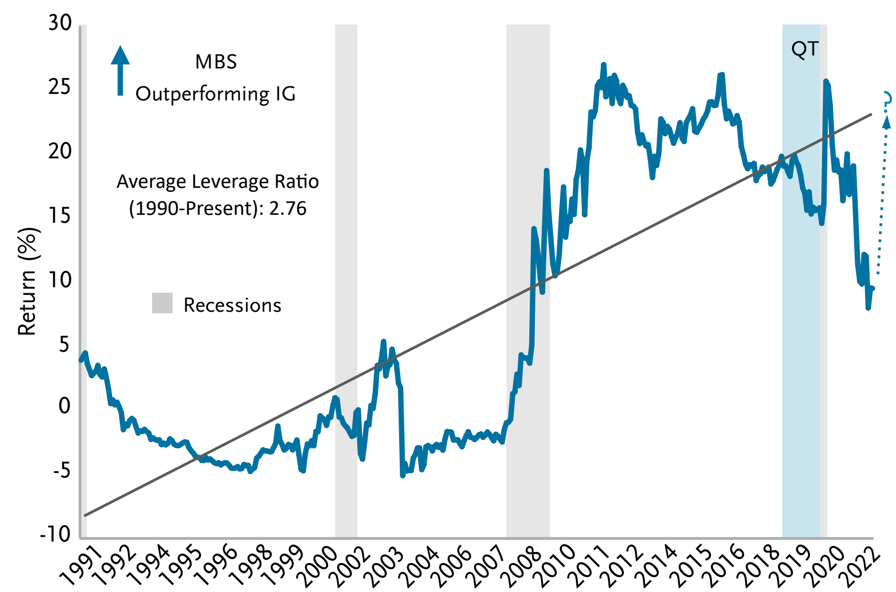
Source: TCW, Bloomberg, JP Morgan, Citi, FOMC

Agency MBS Returns Have Historically Been Less Volatile than IG Corporate Returns

Cumulative Excess Returns of MBS and IG Corporates, 1990-Present



Cumulative Excess Returns of Long Levered* MBS versus Short IG Corporates, 1991-Present



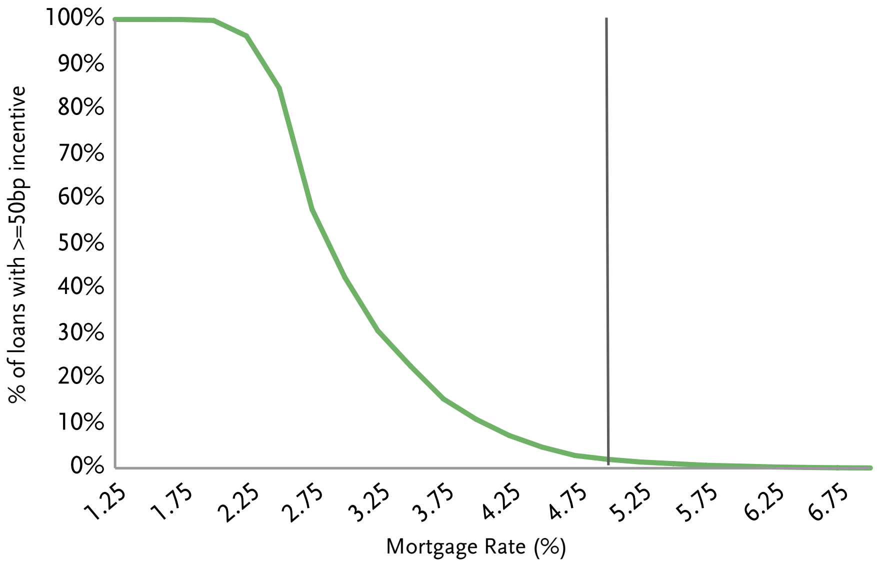
*Leverage for MBS is determined monthly using the ratio of the volatility of monthly excess returns of IG corporates versus the volatility of monthly excess returns of MBS over the trailing 24 months

- Agency MBS have historically offered more stable, but muted total and excess returns versus IG corporates.
- Agency MBS typically outperform corporates during and immediately following recessions as well as periods of heightened spread volatility.

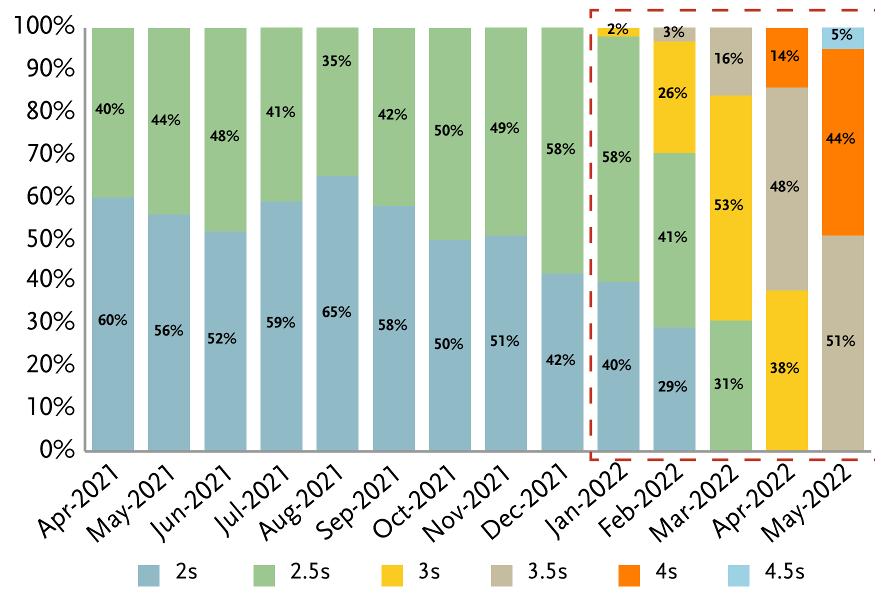
Source: TCW, Bloomberg, Goldman Sachs

The Surge in Rates Has Moved Most of the Mortgage Market Out-of-the-Money

The Mortgage Market Has Moved Out-of-the-Money
2% of Loans are Refinancable at a 5% Mortgage Rate



Fed Purchase Allocation in 30yr Conventional MBS
Has Moved Quickly Up-In-Coupon This Year

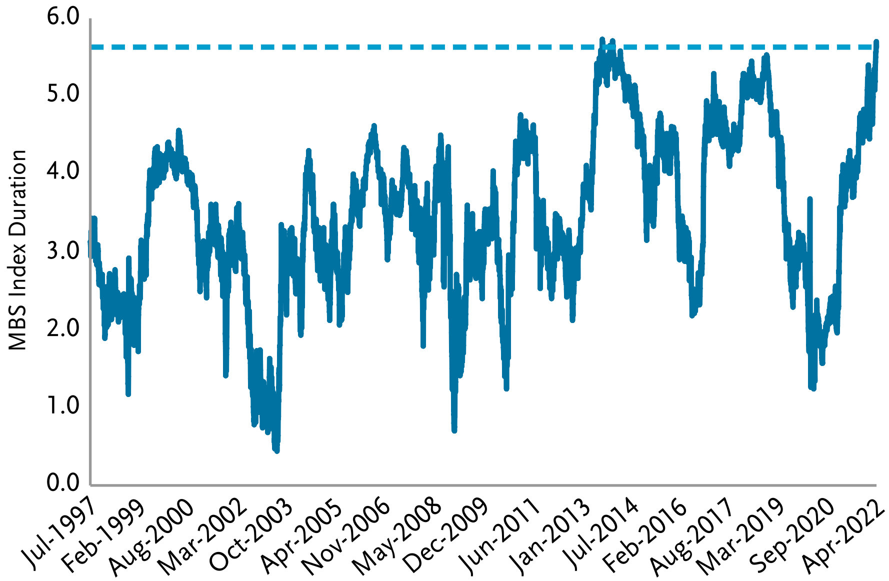


- The sharp sell-off in rates has shifted over 98% of the mortgage market out-of-the-money.
- Production coupons have moved higher, now dominated by 3.5s, 4.0s, and 4.5s, and the Fed has responded rapidly by shifting purchases to the higher coupons.

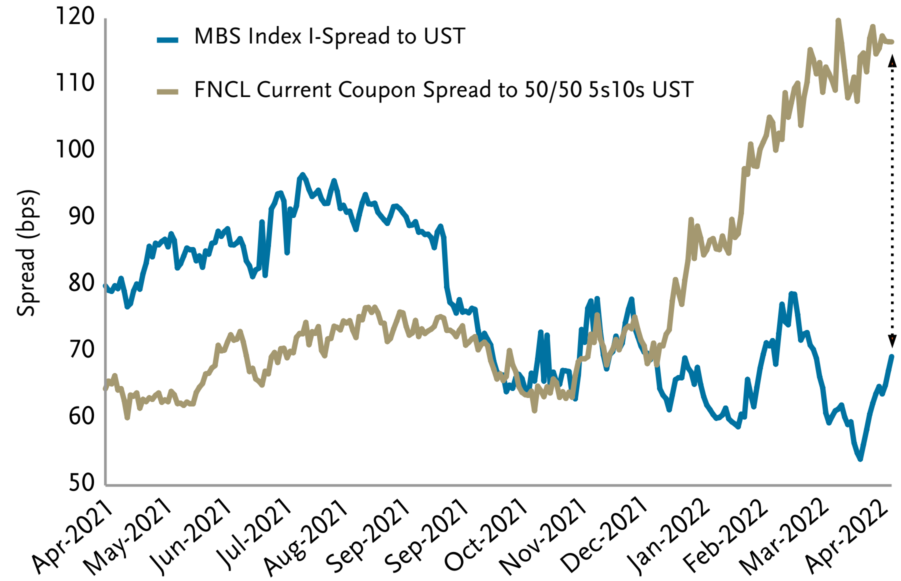
Source: TCW, Nomura, Baird

Agency MBS Valuations Have Bifurcated Between High and Low Coupons

MBS Index Duration Has Reached Historic Highs as Lower Coupon MBS Have Extended



MBS Index Spread Has Compressed in Contrast to Current Coupon MBS Spread

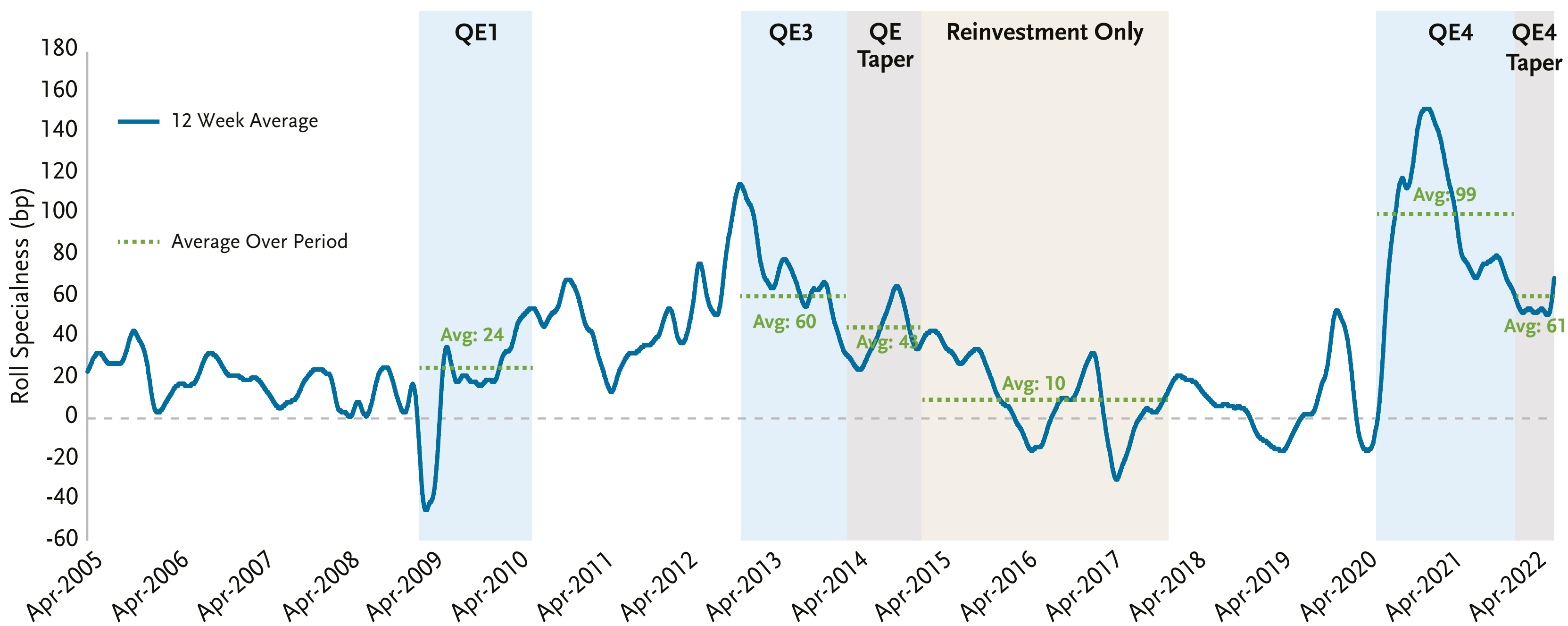


- Lower coupon MBS saw substantial extension this year, reducing negative convexity of the MBS index to record levels.
- Down-in-coupon MBS spread to Treasuries have remained compressed as the average life of bonds lengthened, limiting the attractiveness of the lower coupons relative to the wider valuations and higher carry in higher coupons.

Source: TCW, Bloomberg

TBA Roll Specialness Likely to Persist, But Lower

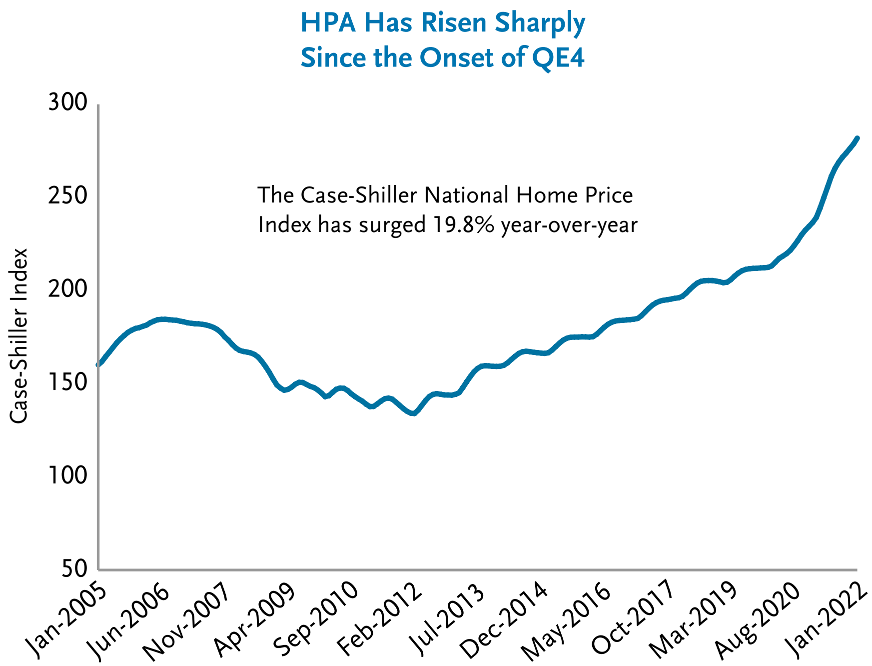
12 Week Average of Historical Production Coupon Roll Specialness

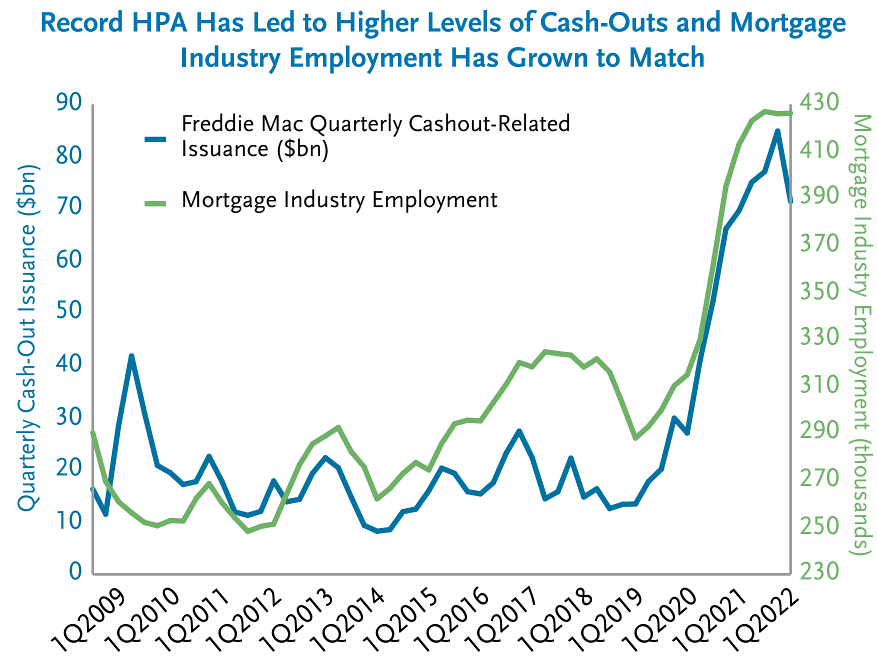


- Though Fed buying has moved up-in-coupon, available float remains limited as production ramps up, fueling uncertainty in worst-to-deliver assumptions along with supply stresses, contributing to a recent spike in levels of TBA roll specialness.
- While levels are unlikely to reach the highs observed during QE4, history suggests a reinvestment-QT range of 10-20 bps. Specialness may return to higher levels in the event of a "Powell Pause."

Source: TCW, Citi, Nomura

Cash-Outs Will Likely be a Driver of Refinance Demand This Year





- Record HPA has spurred a rise in cash-out refinances this year – a source of extension protection for discount dollar price lower coupon pools.
- The sharp increase conforming loan limits will likely to put downward pressure on the primary-secondary spread, while mortgage industry employment at historic highs suggests lenders have the capacity target more challenging borrowers.

Source: TCW, JP Morgan, Goldman Sachs, Bloomberg

Quantifying the Flow

Supply and Demand ($bn)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Estimate
Net Supply	**235**	**71**	**164**	**230**	**315**	**281**	**220**	**506**	**880**	**500**
Demand										
GSEs	-83	-46	-42	-43	-5	-15	-5	-61	-26	-15
Treasury	0	0	0	0	0	0	0	0	0	0
Overseas	-53	44	31	107	60	73	75	-41	125	40
Fed	570	240	11	-6	24	-147	-222	619	577	-120
Banks	-46	39	151	120	141	71	150	549	398	250
REITs	-88	9	-50	-18	43	17	60	-101	-46	10
Money Managers/ Others	-65	-215	63	70	52	282	162	-459	-128	335
Net Demand	**235**	**71**	**164**	**230**	**315**	**281**	**220**	**506**	**880**	**500**

Source: TCW, Nomura, BofA, Morgan Stanley, and Citi

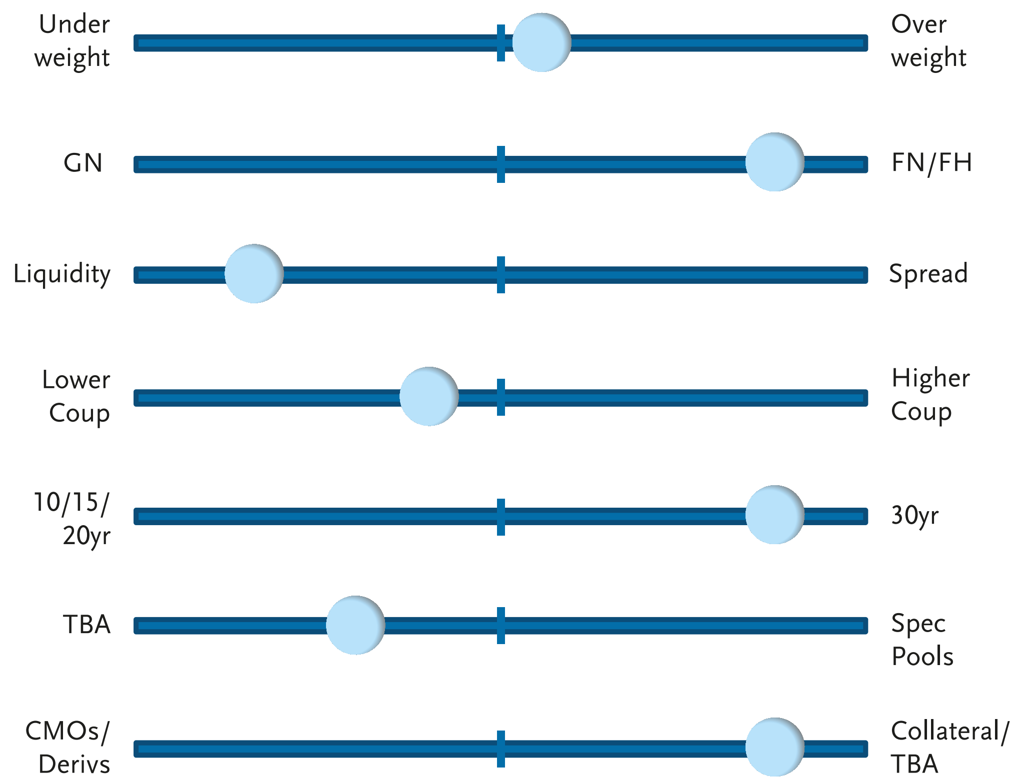
Agency MBS Full Cycle Alpha Generation

Top-down investment considerations

- MBS/UST Basis Exposure
- Issuer
- Liquidity vs. Spread
- Coupon Selection
- Maturity Selection
- TBA vs. Specified Pool
- CMOs/Derivs vs. Collateral

Bottom-up security selection

Current Positioning



Conclusions

Continued investment in agency MBS as higher-beta risk assets have not yet fully repriced for more restrictive Fed policy

- Previous “Taper-QT” experience suggests a choppy normalization cycle is the norm. Continued exposure in agency MBS remains the best option as other risk assets have not yet repriced for potential economic shocks from tighter Fed policy.

Opportunistic migration up-in-coupon to focus exposure in Fed-dominated coupons

- Lower coupons have fully extended and spreads to Treasuries remain compressed. Look to opportunistically increase exposure to higher coupons to capture more attractive valuations and higher carry.

Specified pool payups have dropped with improved convexity in lower coupons

- As a substantial portion of the MBS market moves out-of-the-money, payups for specified pools have dropped in lower coupons, opening the door for opportunistic swaps versus TBA to capture better convexity profiles.
- Record levels of HPA last year will likely induce higher levels of cashout refinances, a source of extension protection in out-of-the-money pools.
- Look for Low FICO, Low LTV, and Low Loan Balance stories to provide some extension protection.

V. Securitized ESG Integration and ESG Market Opportunities

ESG Integration Across Investment Teams

Established Process and Philosophy for Each Team	No One Size Fits-All Approach	Firm-Wide Governance and Coordination
ESG factors are explicitly considered as inputs in our investment process across investment teams at TCW. Firm-wide and group specific policy documents are publicly available on TCW.com. Detailed reporting and analysis is available on our respective approaches.	Investment teams covering different asset classes, including sovereigns, corporates, emerging markets, securitized, equities and private securities look at a variety of quantitative and qualitative information about material sustainability factors to inform our ESG views. Each team has designed frameworks to identify, monitor and track material sustainability risks in the issuers covered.	The Executive ESG Committee, which includes representation from management and investment teams supports cross-group collaboration and best-practices. In addition, asset class-specific working groups bring together representatives from each investment team. Together, these groups actively contribute to initiatives that further enhance transparency around ESG decision making and expand ESG integration.

Exclusionary Screening

Pre 2000s

Client mandates with constraints around business involvement categories

- For example, divest portfolios away from investments in companies tied to tobacco, alcohol, or gambling
- Scrutiny of governance issues

Inclusion of ESG Factors

2000-2010

Portfolio managers and research teams evaluate relevant material ESG factors into the research process

- Recognizing good governance (i.e., no corruption or unethical behavior)
- Consideration of issuer's sustainability values including carbon emissions, biodiversity, and energy efficiency
- Improved transparency of issuer's leverage and debt funding

ESG Integration and Enhancements

2010 to Present

Develop a formal and consistent approach to the incorporation of material ESG factors into the investment research process across teams

- Formally join the UN supported Principles of Responsible Investment, Taskforce for Climate Related Financial Disclosures, Climate Action 100+, Climate Bond Initiative, among others
- Hire a Global Head of ESG, establish an ESG Executive Committee
- Launch ESG-dedicated portfolios and fund solutions for global clients

Industry Engagement

Engage, collaborate and lead sustainable finance industry through partnerships with a broad team

Industry Collaboration

UN Global Compact,
UN PRI, US SIF, IIGCC,
Net Zero, ICGN,
Climate Action 100+

Research Accessibility

CBI, SASB, FAIRR,
University partnerships

Client Engagement

One Planet SWF, UN Global
Compact, IIGCC, UN PRI,
client events, industry events,
media opportunities

* Denotes current partnerships; other icons shown are partnerships in progress. As of December 2021.

TCW ESG Platform

MAY 2022

ESG Executive Committee

Olivia Albrecht, Chairwoman
Global Head of ESG

Penny Foley
EM Portfolio Manager

Liz Kraninger
Chief Operating Officer

Rick Miller
CIO, Private Credit

Bryan Whalen
Co-CIO, FI and Generalist PM

Joseph Carieri
Head of Marketing

Meredith Jackson
General Counsel

David Lippman
President & CEO

Michael Reilly
CIO, Equities; Dir. EQ Research

Gladys Xiques
Global Chief Compliance Officer

Global ESG Regulatory Taskforce

Jamie Franco, Chairwoman
Head of ESG Fixed Income

Olivia Albrecht
Global Head of ESG

Manu George
Head of Asia Pacific, Europe & Latin America Marketing

Meredith Jackson
General Counsel

Shamina Sneed
SVP, Legal

Gladys Xiques
Global Chief Compliance Officer

ESG-Related Exclusions Group

Sherveen Abdarbashi, Chairman
VP, ESG Strategist

Olivia Albrecht
Global Head of ESG

Jamie Franco
Head of ESG Fixed Income

Tracy Gibson
MD, Client Services - Fixed Income

Michael Reilly
CIO, Equities; Dir. EQ Research

Shamina Sneed
SVP, Legal

Gail Wilson
VP, Compliance

ESG Research & Engagement

Head of ESG Research & Engagement
Open Position*

ESG Research & Engagement Analysts
Nicholas Britz*
Andrea Fleming*
Rebecca Kurland*
Priyanka Shukla*
To Start Q2 2022*

ESG Strategist

Sherveen Abdarbashi*
Vice President

ESG Investment Leads

Head of Securitized Research
Elizabeth (Liza) Crawford

Head of ESG Fixed Income*
Jamie Franco

EM ESG Research Analyst
Sarah Malott

Securitized ESG Research Analyst
Malea Figgins

TCW ESG Investment Working Groups

Fixed Income

Emerging Markets

Equities

Private Credit

TCW's ESG Group

50+ Professionals Across:

Client Services

Corporate

Sales & Marketing

Inv. Operations

Compliance

Legal

Research

Technology

* Reports directly or indirectly to Global Head of ESG.

TCW

ESG Integration: Securitized Product Research

TCW's Securitized Credit Team considers ESG factors an important part of bottom-up credit analysis, especially when evaluating security cash flow stability and ultimate repayment of debt. Analysts focus on ESG risks through a review of the collateral, deal structure, and deal sponsor. These perspectives are centralized in the *ESG Dashboard*.

ESG Dashboard: Securitized analysts focus on ESG risks in their review of security collateral, deal structure, and sponsor quality.

Common Elements of Securitized Credit Review	ESG Considerations		
	E	S	G
Sponsor (and/or Issuer) Business and Background Reviews			
• Sponsor business model and operation	●		●
• Sponsor experience and/or background	●	●	●
• Sustainability of sponsor business model	●	●	●
• Sponsor capitalization review			●
• Specific deal purpose	●	●	●
Lender Origination Practices, Underwriting Criteria, and Secured Property (as applicable)			
• Appropriateness of debt product and/or lending criteria		●	●
• Origination approach	●	●	●
• Lender underwriting policy	●	●	●
• Broader lending consistency and/or underwriting exceptions		●	●
• Clear title/security interest		●	●
• Broader use of loan proceeds	●	●	●
• Secured property quality and sustainability	●	●	●
• Review debt repayment/refinancing ability		●	●
• Appropriate insurance	●	●	●
• Environmental reviews and/or inspections complete (as applicable)	●		
• Any respective mitigating factors for exceptions	●	●	●
• Prudent valuations (as applicable)		●	●
• Business practice related to positive/negative environmental screening	●		
Securitization Deal Structure and Transaction Parties			
• Special purpose vehicle			●
• Roles and responsibilities of transaction participants			●
• Risk retention requirements met			●
• Structural credit protections			●
• Unique structural features			●
• Appropriate environmental risk disclosures	●		
• Pool diversification and/or specific geographic risks	●		
• Financial reporting requirements			●
• Structure and cash flow waterfall			●
• Representations and warranties			●
• Servicer quality and background		●	●
• Servicing standards		●	●
• Servicer relationship to deal parties and/or any conflicts of interest		●	●
Additional Investor Action Reviews			
• Investor questions about originations	●	●	●
• Investor questions about servicing practices		●	●
• Review rating agency reports	●	●	●
Other			
• Considerations not listed above	●	●	●

Process (Transparent)

TCW's ESG Dashboard highlights ESG Factors commonly considered in securitized credit deal review.

Scope (Comprehensive)

The ESG Dashboard is intentionally broad in scope to accommodate the diverse securitized credit universe.

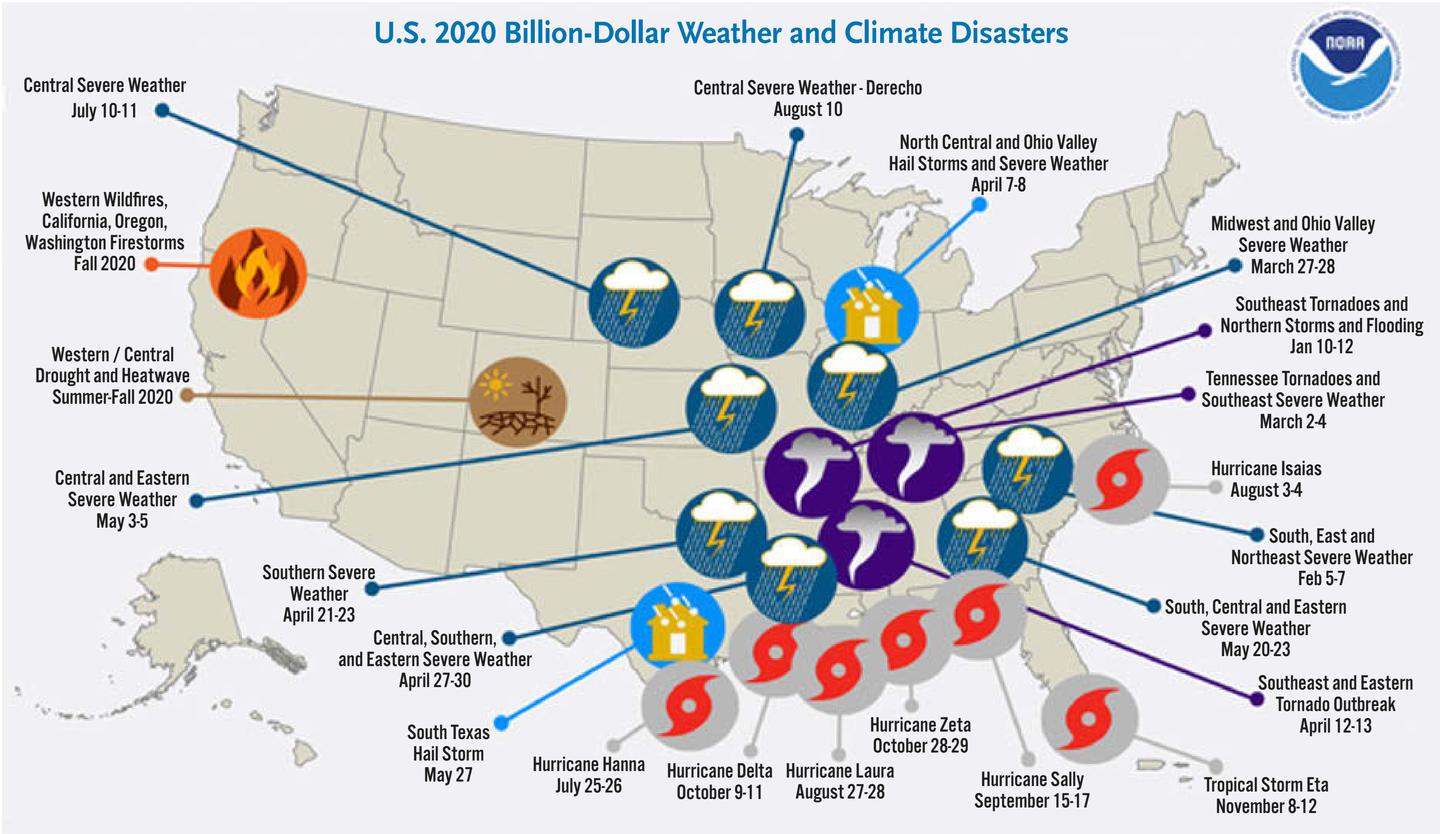
Materiality (Thoughtful)

Securitized credit analysts are responsible for considering ESG-factor materiality, as well as any relevant timing, probability, and severity of ESG-related risks.

Climate Risk in Securitized – ESG Integration *and* Investment

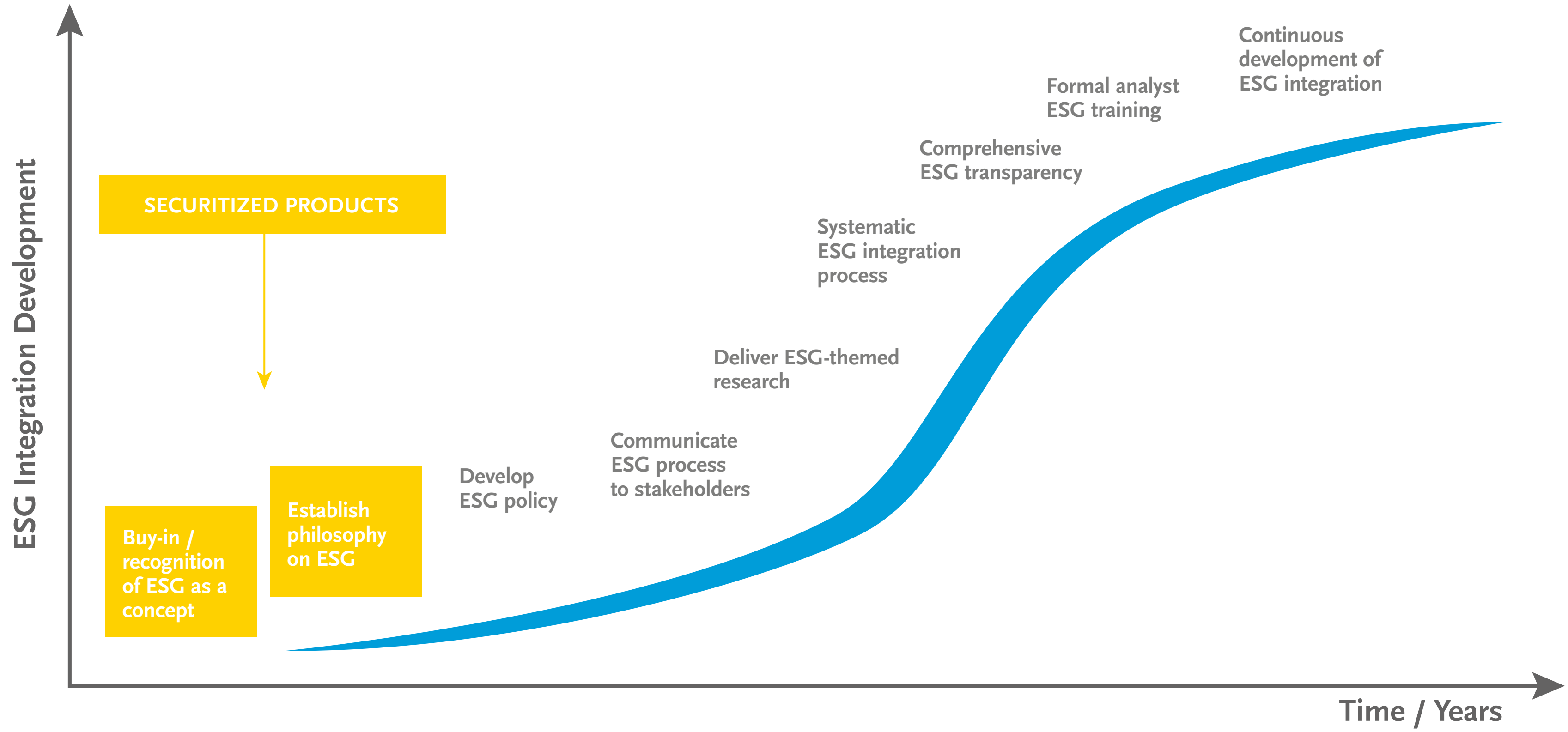
- **Loss related to climate-risk** is mitigated in certain securitized sectors by lower leverage debt, collateral diversification, subordination, insurance policies, overcollateralization and excess spread
- **Climate-risk mitigation efforts exist in securitized**, including electric vehicles (EVs) financing in auto ABS, solar panel installations in solar ABS, and various property-related energy-efficiency improvements and/or energy-efficiency achievements in residential and commercial MBS.
- **Over time, we expect climate-resilient infrastructure financing** will expand into our market, as many borrowers, investors, regulators, and local governments are incentivized to proactively protect themselves from climate-risk related losses.

In 2020, the United States experienced record smashing 22 weather or climate disasters that each resulted in at least $1 billion in damages, including a record 7 linked to landfalling hurricanes or tropical storms.



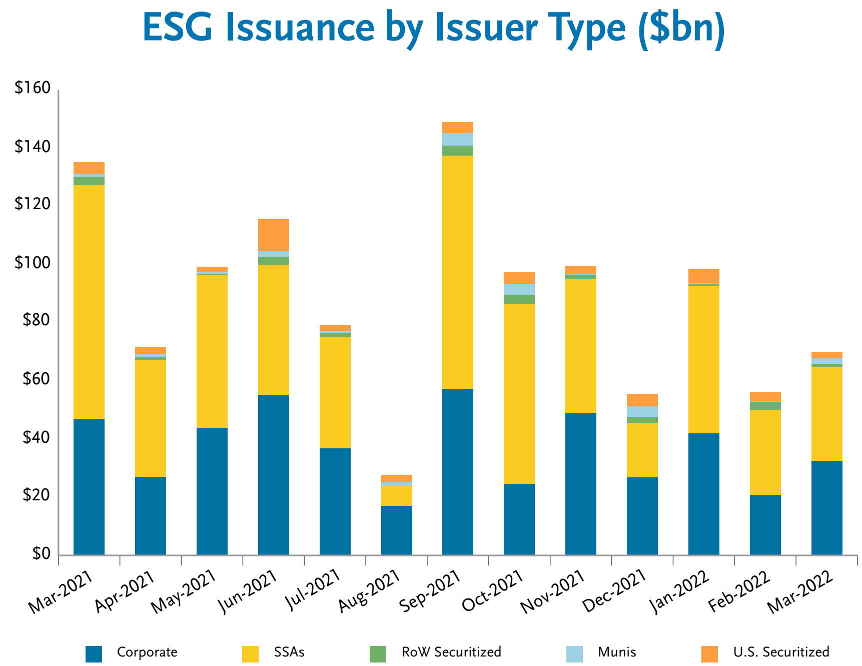
Source: NOAA map by NCEI, 2020 U.S. billion-dollar weather and climate disasters in historical context

Though Securitized Is Still Early Days (why there's so much engagement!)



Source: https://www.unpri.org/download?ac=13412

Global Labeled Bond Market – A Growing Opportunity Set



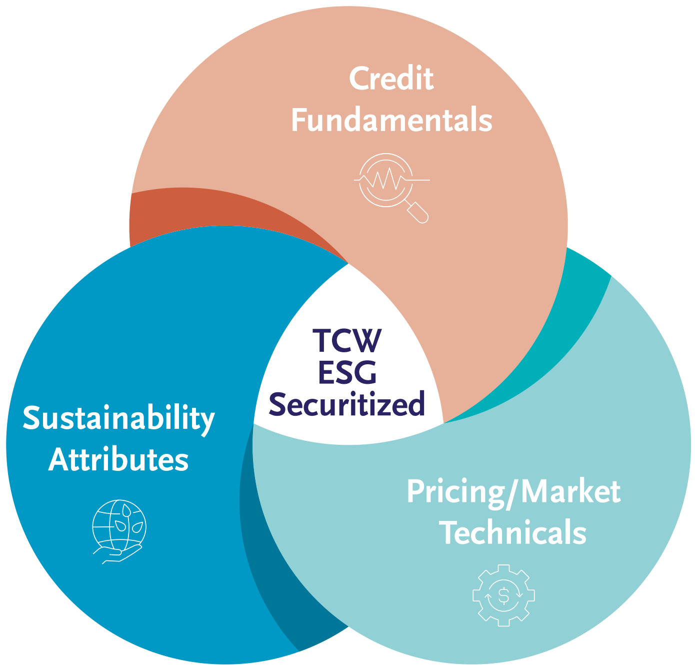
- ESG-labeled bonds earmark proceeds or link the structural characteristics of the bonds to predefined environmental, social, or sustainable objectives
- The ESG-labeled bond market has grown significantly with some predicting the market could reach $2 trillion of new issuance per year
- Securitized ESG-labeled bonds represent a small fraction of the marketplace, with the U.S. market dominating issuance

Source: Morningstar, Bloomberg, Morgan Stanley
As of March 31, 2022.

One Example of Sustainable Investing in Securitized

TCW utilizes bottom-up credit analysis and disciplined security selection to take advantage of the persistent pricing inefficiences in the securitized market.

TCW vets sustainability attributes beyond ESG-labeled and Green-unlabeled bonds through proprietary positive social and/or sustainable characteristics.



Securitized pricing inefficiencies arise from the fact that volatility of price is typically greater than the volatility of value.

Sustainable Security Selection – Opportunity Set

TCW Identified Bonds with Social & Sustainable Attributes

TCW's securitized team established metrics in order to identify traditional RMBS, CMBS, and ABS pools with strong social and sustainable characteristics. By utilizing metrics such as Loan-to-Value (LTV) ratios, FICO scores, and Debt-to-Income (DTI), TCW can identify bonds that extend lending to lower income borrowers, minority communities, and other underserved/underbanked populations.

While the GSEs' (Ginnie Mae, Fannie Mae, and Freddie Mac) mandate is to provide liquidity, stability, and affordability to the mortgage market, goals which are inherently aligned with sustainability considerations, utilizing this screen allows us to prioritize ESG characteristics of GSE issuance.

Unlabeled Green Bonds

Unlabeled green bonds are securities that are not formally labeled by the issuer or the market, but are debt instruments where the use of proceeds is financing environmentally friendly projects or where the underlying collateral has exclusively green characteristics.

Examples include Solar ABS or Single-Asset Single-Borrower CMBS deals backed by LEED (Leadership in Energy and Environmental Design) certified properties.

ESG Labeled Bonds

ESG-labeled bonds earmark proceeds or link the structural characteristics of the bonds to predefined environmental, social, or sustainable objectives.

Currently these labels are non-binding, but debt issued with these labels are generally aligned with the International Capital Markets Association's (ICMA) Principles, which are intended to bring standardization and enhanced disclosure. In addition, issuers typically will get a second party opinion (SPO) to validate that the bond goals conform to the ICMA Principles and then a third-party opinion to validate after a set time that bond's use of proceeds is meeting the stated objectives.

Source: TCW

TCW Securitized Engagement Priorities – Best Practices and Transparency

Identifying and Supporting Best Practices

- **Quality** of labeled ESG bonds varies significantly
- **Transparency and reporting** around sustainability varies at the bond and issuer levels
- **Clear best-practices** and clear worst-practices exist in the market

Helping Securitized Issuers Develop Sustainable Lending Capabilities

- **Offering ideas** for environmental and/or social-oriented lending programs
- **Helping issuers build intentionality** into their lending and reporting
- **Supporting best-practices** to follow ICMA bond principles and get a second-party opinion (SPO)

TCW Securitized Thought Leadership and Third-Party Engagement

- **Active participant** in the sustainable finance community, including UN PRI's Securitised Products Advisory Committee
- **Consistent dialogue** with investment banks, investor round tables, clients, and consultants
- **Evolving securitized solutions and expanding coverage with third-party data providers** – from climate-risk modeling to Bloomberg and Climate Bond Initiative (CBI) reporting

Securitized Green, Social & Sustainability Framework Highlights

TCW recognizes that not all Green, Social, Sustainable, and Sustainably-Linked bonds (GSSS) are created equal. To help evaluate these bonds, we developed a framework that can be flexibly adapted across securitized sectors and issuer types. This framework helps us quantitatively evaluate, track and compare ESG deals, focusing on the most relevant factors to asses the quality of the approach.

Green, Social & Sustainability Bond Details

- Security-level information (from Bloomberg) – includes collateral detail, issue date, maturity date, coupon, etc.

Collateral/Use of Proceeds

- External framework alignment and/or third party verification (Second Party Opinion)
- Description of underlying GSSS collateral and/or Use of Proceeds details
- Sustainability features and impact indicators and/or reporting

Red Flags

- Assessment of any material ESG risk factors – can be from any source, including offering document disclosures, news articles, second party opinion notes, etc.

Issuer

- Issuer broader sustainability commitment/goals – especially around owner properties and/or lending
- Issuer comparison to peers (leading, average, lagging?) – particularly helpful for engagement

Sustainable Examples in Private Label Commercial Mortgage Backed Securities (Private Label CMBS)

Example – Cold Storage Warehouse

Environmental-Oriented Collateral: 3 Class A newly constructed automated warehouses that use ~60% less energy than conventional storage warehouses (measured in kWh/m3/year).

Labeled/Unlabeled Green: CMBS issuance followed the related issuer Frost CMBS Bond Framework with a second party opinion (SPO) from Sustainalytics.

- **Energy Savings:** Energy efficient LED lighting (uses less energy and is less disruptive to the cooling process), optimized pallet movement (minimize door opening), Ammonia for cooling (Global Warming Potential (GWP) of 0 and 3-10% more refrigerant efficiency).
- **Expected Reporting:** Frost CMBS intends to report quarterly on relevant indicators such as status of EPC certification, energy savings (kWh/m2 per year), carbon and water footprints, and sustainability rating status.

Example – Office and Life Science Buildings

Environmental-Oriented Collateral: Commercial properties with Leadership in Energy and Environmental Design (LEED) certification represent an estimated 25% in energy savings compared to conventional properties (Sustainalytics). Impact reporting is limited, but some third-parties are focused on gathering ENERGY STAR data for actual energy and water usage, etc.

Labeled/Unlabeled Green: LEED Gold and Platinum represent the highest tiers of LEED-Certification, with CMBS exposure concentrated in urban trophy office and life science properties.
One Vanderbilt Avenue, a LEED-platinum NYC office, is one example.

Additional sustainability attributes include:
- Use of steel rebar made of 90% recycled content;
- Real-time air quality monitoring system and enhanced ventilation to better manage energy efficiency;
- 90,000-gallon rainwater collection system; and a
- WELL platinum-certified water system.


Source: Sustainalytics (FROST)


Source: Sustainalytics (OVA)

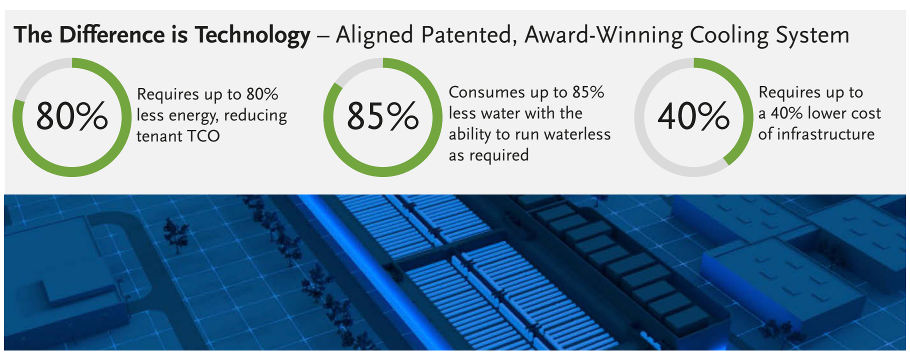
Sustainable Examples in Asset Backed Securities (ABS)

Example – Data Center ABS

Environmental-Oriented Collateral: Four state-of-the-art wholesale data center campuses (cash flow from technology customers). The sponsor, ADC has also committed to match 100% of their annual energy consumption to zero-carbon renewable energy by 2024

Labeled Green: Sample holding – Aligned Data Centers (ADC) ABS financing, which follows ADC's Aligned Green Finance Framework with a Second Party Opinion (SPO) from Sustainalytics. Eligible use of proceeds include:

- **Power Usage Effectiveness (PUE)** of 1.35 or below for data center infrastructure that uses water-based cooling technologies
- **Power Usage Effectiveness (PUE)** of 1.45 or below for those using water-free cooling technologies



Source: Aligned Data Centers Green Bond Framework

Example – Solar ABS

Environmental-Oriented Collateral: Solar loans used to finance the purchase and installation of solar systems and related items, including certain home efficiency items

Labeled/Unlabeled Green: Solar lender and ABS issuer Sunnova has a Green Financing Framework, with lending focuses on solar energy and solar storage

Reporting commitments include:

- Number of customers with installed systems, if applicable
- MW of solar capacity installed
- MW and MWh of energy storage capacity installed
- kWh generated by our systems and resulting metrics tons of CO2e avoided

Expected impact from Second Party Opinions (SPOs) on labeled bonds typically include:

- Total capacity of solar energy systems (Megawatts)
- Total estimated renewable energy produced by solar energy systems, during estimated 30 years of useful life (Megawatt hours)

Source: Sustainalytics (GS Solar) ; Sunnova Green Financing Framework

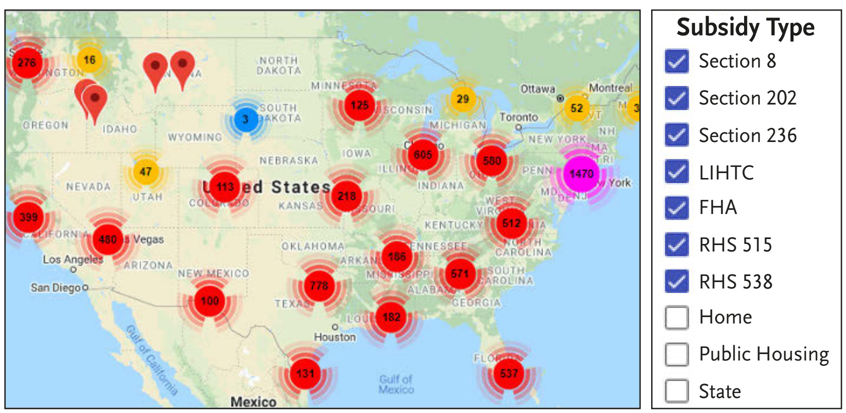
Case Study: Fannie/Freddie Single-Family and Multifamily

Agency MBS and CMBS (multifamily) offer opportunities in labeled ESG (green, social and sustainable) and criteria-based ESG investing. Relative Value is constrained in this space, with most opportunities in subordinate and interest-only investments.

- **Social-Oriented Collateral:** The Government Sponsored Enterprises (GSES) are chartered by the U.S. Congress to deliver liquidity, affordability, and stability to the U.S. residential mortgage market and promote fair access to mortgage credit.
- **Labeled Social Programs:**
  - **Fannie:** Multifamily lending focuses on higher affordability components, including rent restrictions and manufactured housing communities (MHC) in multifamily.
  - **Freddie:** Multifamily lending focuses on targeting additional social impact causes, beyond mission of supporting affordable housing – such as community development financial institutions (CDFI), housing finance agencies (HFA), and Small Financial Institutions (SFI).
- **Labeled Green Programs:**
  - **Fannie:** Lending focuses on financing energy improvements (multifamily) and/or properties with green building certification (multifamily and single family).
  - **Freddie:** Lending focuses on supporting water and/or energy efficiency improvements in workforce housing (i.e., multifamily Green Advantage) and single family (i.e., GreenCHOICE).

Freddie Mission Map

Freddie offers a public interactive tool to explore affordable housing preservation and development opportunities



Fannie Green Bond Timeline

Fannie's ESG efforts include "[improving] energy and water efficiency in housing" via their Green Bond program

2010	Launch green Multifamily (MF) Green initiative
2012	Launch first Green Financing product
2014	Develops standards and streamlined processes
2015	Launches Green Rewards Mortgage Loans
2016	Begins CUSIP-level MF energy- and water-related disclosure data
2017	Receives first recognition as the largest issuer of green bonds in the world by Climate Bonds Initiative
2019	Earns recognition by GlobalCapital as the Most Impressive Green/ SRI ABS Issuer
2020	Issues the first Agency Single-Family Green MBS in the U.S.

Source: Fannie Mae, Freddie Mac, and Ginnie Mae websites; deal documents.
These issuers are illustrative only and do not represent an actual portfolio.

VI. Appendix

Important Information: The return and other performance information presented in this Appendix are for the GIPS-compliant composite of accounts managed under the TCW Securitized Opportunities strategy, which was formerly known as the TCW "Strategic MBS" strategy.

Biographies

Harrison S. Choi
Managing Director
Head of Securitized Trading

Mr. Choi is a Specialist Portfolio Manager in the Fixed Income group and co-heads the Securitized Products Division as Head of Securitized Trading. Prior to joining TCW, Mr. Choi traded a variety of non-agency mortgage-backed securities for Metropolitan West Asset Management. He was previously a Director at Sparta Group LLC where he traded fixed income relative value and macro strategies within the interest rate derivatives market. Prior to that, he worked on alternative investment strategies at Western Asset Management Company (WAMCO). Mr. Choi holds a BS in Physiological Sciences from the University of California, Los Angeles (UCLA).

Elizabeth (Liza) J. Crawford
Managing Director
Head of Securitized Research

Ms. Crawford is a Specialist Portfolio Manager in the Fixed Income group and co-heads the Securitized Products Division as Head of Securitized Research. Prior to returning to TCW's Los Angeles headquarters in 2020, Ms. Crawford spent two years based in TCW's London office as a research analyst covering Global Securitized Products. Before joining TCW as a CMBS Trader in 2015, Ms. Crawford was a Portfolio Analyst covering securitized products and commercial and residential mortgage REIT equities at EJF Capital LLC ("EJF"), a $9.5bn multi-strategy alternative asset manager in Arlington, Virginia. Prior to joining EJF, Ms. Crawford was an Associate in the Securitized Products division at Credit Suisse. She started in Institutional Sales covering ABS, MBS, and CMBS investors before moving to Asset Finance, where she focused on residential mortgage banking and securitization. Ms. Crawford holds a BA in Political Science and International Studies from Yale University.

Mark A. Romano, CFA, CAIA
Managing Director
Consultant Relations

Mr. Romano joined TCW in 2021 as a Managing Director and Senior Consultant Relations executive. Prior to joining TCW, he was an executive vice president at PIMCO and member of the Consultant Relations team for 23 years. Prior to joining PIMCO in 1997, he was with Wells Fargo's institutional money management group. Before that, he was the Director of Fixed Income and portfolio manager for the Pacifica family of mutual funds for 12 years; there he also invested assets for pension plans, foundations, financial institutions, corporations, and trust accounts. In addition, Mr. Romano reported the daily business news for the San Diego ABC-TV affiliate. He holds an MBA from San Diego State University and earned an BSBA in accounting from Shippensburg University, Pennsylvania. Mr. Romano is a CFA charterholder, a Chartered Alternative Investment Analyst (CAIA), and is a member of the San Diego CFA Society. He holds Series 3, 7, and 63 FINRA licenses.

TCW Securitized Opportunities Composite Returns

AS OF MARCH 31, 2022 | SUPPLEMENTAL INFORMATION

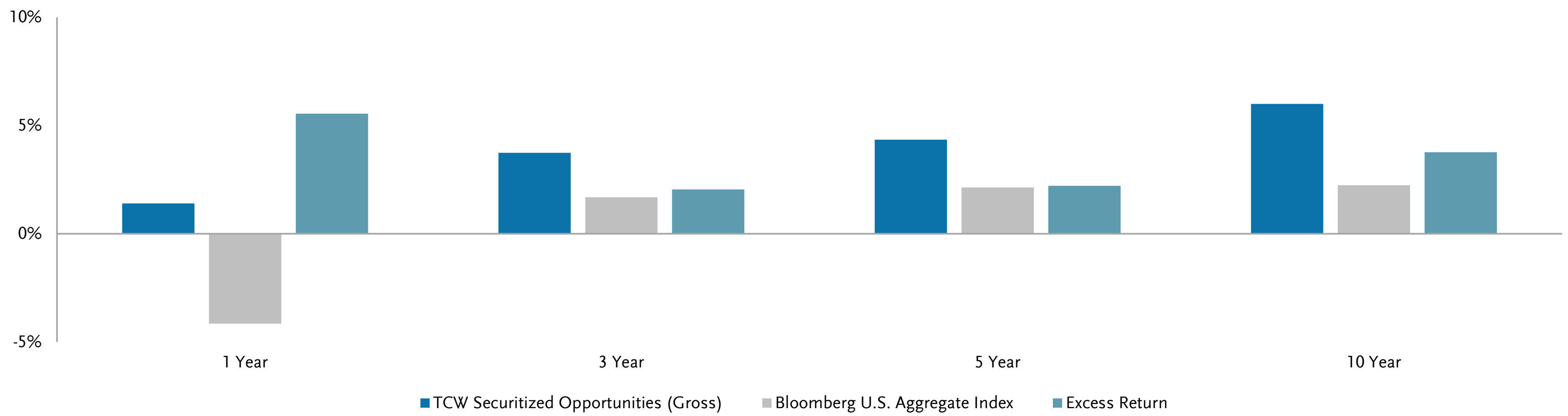
Calendar Returns

	2013	2014	2015	2016	2017	2018	2019	2020	2021
TCW Securitized Opportunities (Gross)	23.46%	9.81%	5.50%	1.29%	4.36%	6.88%	3.60%	5.78%	5.44%
Bloomberg U.S. Aggregate Index	4.21%	-2.02%	5.97%	0.55%	2.65%	3.54%	0.01%	8.72%	7.51%
Excess Return	19.25%	11.83%	-0.47%	0.74%	1.71%	3.34%	3.59%	-2.94%	-2.07%

Trailing Returns

		Annualized				
	3 month	1 Year	3 Year	5 Year	10 Year	ITD*
TCW Securitized Opportunities (Gross)	-2.07%	1.40%	3.74%	4.35%	6.00%	12.72%
Bloomberg U.S. Aggregate Index	-5.93%	-4.15%	1.69%	2.14%	2.24%	5.03%
Excess Return	3.86%	5.55%	2.05%	2.21%	3.76%	7.69%

*January 1992 - March 2022



Source: TCW, BARRA, Zephyr, FactSet

The return and other performance information presented in this Appendix are for the GIPS-compliant composite of accounts managed under the TCW Securitized Opportunities strategy, which was formerly known as the TCW "Strategic MBS" strategy and, until December 2009, was managed by a different team at TCW.

All performance information is represented on a gross basis unless otherwise stated; net performance is contained in the enclosed GIPS performance disclosures.

Past performance is no guarantee of future results. Footnotes regarding performance follow in this section and are an integral part of this chart.

TCW Securitized Opportunities Composite Volatility

AS OF MARCH 31, 2022 | SUPPLEMENTAL INFORMATION

Annualized Risk Adjusted Returns

Statistics vs Benchmark

	TCW			Index								
	Return	**Standard Deviation**	**Sharpe Ratio**	**Return**	**Standard Deviation**	**Sharpe Ratio**	**Tracking Error**	**Info Ratio**	**IR Beta Adjusted**	**Alpha**	**Beta**	**R-Squared**
1 Year	1.40%	2.06%	0.65	-4.15%	4.12%	-1.02	2.42%	2.29	3.73	3.31%	0.45	82.17%
3 Years	3.74%	4.63%	0.64	1.69%	4.03%	0.23	4.46%	0.46	0.60	2.49%	0.56	22.82%
5 Years	4.35%	3.61%	0.90	2.14%	3.57%	0.29	3.74%	0.59	0.85	2.77%	0.46	20.79%
10 Years	6.00%	3.29%	1.64	2.24%	3.23%	0.51	3.79%	0.99	1.55	4.84%	0.33	10.40%

Five-Year Statistics

	Average Return vs. Benchmark (%)		Benchmark Capture (%)			# of Months		Average Return (%)		Month (%)		1-Year (%)	
	Up Market	**Down Market**	**Up Capture**	**Down Capture**	**R-Squared**	**Up**	**Down**	**Up**	**Down**	**Best**	**Worst**	**Best**	**Worst**
TCW Securitized Opportunities	0.73	-0.09	81.30	15.10	82.25	52.00	8.00	0.59	-1.14	2.29	-6.41	10.81	-0.64
Bloomberg U.S. Aggregate Index	0.89	-0.69	100.00	100.00	100.00	33.00	27.00	0.89	-0.69	2.59	-2.78	11.68	-4.15

Ten-Year Statistics

	Average Return vs. Benchmark (%)		Benchmark Capture (%)			# of Months		Average Return (%)		Month (%)		1-Year (%)	
	Up Market	**Down Market**	**Up Capture**	**Down Capture**	**R-Squared**	**Up**	**Down**	**Up**	**Down**	**Best**	**Worst**	**Best**	**Worst**
TCW Securitized Opportunities	0.72	0.15	93.80	-23.50	82.25	105.00	15.00	0.68	-0.83	3.10	-6.41	21.94	-0.64
Bloomberg U.S. Aggregate Index	0.77	-0.65	100.00	100.00	100.00	71.00	49.00	0.77	-0.65	2.59	-2.78	11.68	-4.15

Source: TCW, BARRA, Zephyr, FactSet

The return and other performance information presented in this Appendix are for the GIPS-compliant composite of accounts managed under the TCW Securitized Opportunities strategy, which was formerly known as the TCW "Strategic MBS" strategy. All performance information is represented on a gross basis unless otherwise stated; net performance is contained in the attached GIPS performance disclosures. Past performance is no guarantee of future results. Footnotes regarding performance follow in this section and are an integral part of this chart.

TCW Securitized Opportunities GIPS® Composite Report

ASSET-WEIGHTED AND TIME-WEIGHTED RATES OF RETURN

	Annual Return		Bloomberg U.S. Aggregate Bond Index (%)	# of Portfolios	Total Composite Assets at End of Period (U.S.$ millions)	Composite Internal Dispersion	Composite 3-Year Standard Deviation Annualized	Benchmark 3-Year Standard Deviation Annualized	Total Firm Assets (MSD)* (U.S.$ millions)
	Gross (%)	Net (%)							
2011	7.95	6.87	7.84	2	215.01	—	6.06	2.82	81,764
2012	23.46	22.23	4.21	3	428.10	—	4.10	2.42	102,490
2013	9.81	8.71	-2.02	5	1,407.70	—	3.78	2.75	109,920
2014	5.50	4.44	5.97	7	2,833.44	—	3.64	2.67	144,768
2015	1.29	0.28	0.55	5	3,246.48	—	2.64	2.92	165,036
2016	4.36	3.32	2.65	5	3,003.03	—	1.18	3.02	177,187
2017	6.88	5.81	3.54	6	3,452.83	—	1.11	2.81	191,104
2018	3.60	2.56	0.01	5	3,502.02	—	0.98	2.88	179,091
2019	5.78	4.72	8.72	5	3,355.48	—	1.03	2.91	204,309
2020	5.44	4.38	7.51	5	3,251.51	—	4.46	3.40	233,633

The TCW Group, Inc. is divided into three divisions: the Marketable Securities Division; the Alternative Products Division; and the Managed Accounts Division. On February 23, 2010, The TCW Group, Inc. acquired Metropolitan West Asset Management. On January 1, 2011, the Marketable Securities Division and Metropolitan West Asset Management completed a merger. Accordingly, effective January 1, 2011, Metropolitan West Asset Management was included within the Firm definition.

1. Effective January 1, 2000, the Marketable Securities Division was established to provide investment advisory services in the marketable securities area. *The Marketable Securities Division is defined as the Firm for purposes of reporting performance in accordance with the Global Investment Performance Standards (GIPS®).
2. The Marketable Securities Division of The TCW Group, Inc. claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. The Marketable Securities Division of The TCW Group, Inc. has been independently verified for the periods January 2000 through December 2020. The verification reports 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.

   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.
3. The Composite includes all portfolios managed in the strategy, except for those subject to material client restrictions, which are, therefore, deemed non-discretionary. From January 2010 onward, portfolios included in the composite are present for an entire month. Prior to 2010, portfolios included in the composite are present for an entire quarter.
4. Results are time-weighted and geometrically linked to yield quarterly returns, and include all items of income, gain and loss.
5. Results are based on trade-date transactions.
6. A list of composite descriptions, a list of limited distribution pooled fund descriptions, and a list of broad distribution pooled funds are available upon request.
7. The internal dispersion of annual returns is measured by the standard deviation across asset-weighted portfolio gross returns represented within the composite for the full year. Periods with five or fewer portfolios are not statistically representative and are not presented.
8. Asset-weighted results use beginning of period market values. Unless stated otherwise, asset-weighted results are shown for the entire period. Equal-weighted results represent the simple average of all composite portfolios present for the entire period.
9. All numerical information is reported in U.S. dollars.
10. Gross results do not reflect the deduction of management fees and other custodial fees. Including these costs would reduce the shown returns. Net results reflect the deduction of the maximum standard fee charged for separate accounts without taking into account breakpoints. Net-of-fees returns are calculated by reducing monthly composite returns using a factor of 0.999163. This equates to a model annual fee of 1.00%, which is the highest tier of the separate account fee schedule. Certain clients could pay a significantly higher or lower fee which would result in different net returns. A fee which is 0.50% higher than the separate account fee will result in the total return being reduced, over five years, by 2.53% on a compound basis. Net results do not include the deduction of custodial fees or other administrative expenses, which will also reduce the returns shown. Prior to August 2010 net returns were calculated arithmetically, afterwards net returns were calculated geometrically.
11. TCW makes no representation that future investment performance will conform to past performance and it should never be assumed that past performance foretells future performance.

Source: TCW

12. TCW's policies for valuing investments, calculating performance, and preparing GIPS Reports are available upon request.
13. There is a $20 million minimum asset level for portfolios included in the Composite at the beginning and end of the month from October 2012 to present.
14. The Securitized Opportunities Composite has an inception date of January 1, 1992 and was created in 2Q 2000. Returns for periods prior to the 10-year track record presented in this report are available upon request.
15. The Securitized Opportunities Composite is composed of portfolios whose objective is to outperform the benchmark over the long term by investing in securitized assets including, but not limited to agency and non-agency mortgage-backed securities, collateralized mortgage obligations, commercial mortgage-backed securities, and asset backed securities, and other asset types, either for the short or long term, whose duration will likely vary significantly over time. While TCW's objective is to outperform the stated benchmark it does not imply that this strategy shall share, or attempt to share, the same or similar characteristics of the benchmark or attempt to track the benchmark. Effective September 25, 2015, the Composite definition changed to better clarify the security types of portfolios included within the Composite. There were no composite membership changes as a result of this clarification.
16. The benchmark is the Bloomberg U.S. Aggregate Bond Index. The Bloomberg U.S. Aggregate Bond Index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. The index is not available for direct investment; therefore its performance does not reflect a reduction for fees or expenses incurred in managing a portfolio. The securities in the index may be substantially different from those in the Composite.
17. The Composite's separate account fee schedule is as follows:

The Composite's separate account fee schedule is as follows:	1.00% on first $50 million	The TCW Securitized Opportunities, L.P. fee schedule is as follows:	1.00% on first $50 million
	0.50% on the next $450 million		0.50% on the next $450 million
	0.32% on the next $500 million		0.32% on the next $500 million
	0.15% on the next $500 million		0.15% on the next $500 million
	0.10% on the remaining balance		0.10% on the remaining balance

    The total expense ratio as of December 31, 2020 for the TCW Securitized Opportunities, L.P. was 0.51%. Additional information regarding fund expenses is contained in the fund's offering and other documents.
18. Derivatives are not a driving factor in the Composite's strategy, but may be used in certain portfolios where such use is consistent with client investment guidelines. Certain derivative instruments such as credit default swaps, treasury futures, and option contracts may be utilized to add incremental value, to hedge credit risk exposure, and/or to tactically adjust the duration and/or yield curve exposure.
19. Withholding tax is not deducted from the portfolios contained in the composite.
20. Gross-of-fees returns were used to calculate the three-year annualized ex post standard deviation and the internal dispersion of the composite.
21. In 4Q 2009, former Portfolio Manager Jeffrey Gundlach was relieved of his duties. In his place, a team of portfolio managers now oversees the strategy. A full list of portfolio managers is available upon request.
22. A Significant Cash Flow Policy has been applied to the Composite beginning June 2020. When a portfolio's net amount of contributions or net amount of withdrawals over a ten day period during a month equals or exceeds 15% of the portfolio's beginning monthly market value, the portfolio is deemed to be temporarily non-discretionary and is removed from the Composite for the month. Upon the first month that this portfolio's total net amount of contributions or net amount of withdrawals over a ten day period during the month are less than 15%, the portfolio is reassigned to the Composite. From April 2020 through May 2020 this policy applied to a portfolio's total amount of inflows or outflows of capital in a month that equaled or exceeded 8%. From January 2020 through March 2020 this policy applied to a portfolio's total amount of inflows or outflows of capital in a month that equaled or exceeded 15%. From July 2019 through December 2019 this policy applied to a portfolio's total amount of inflows or outflows of capital in a month that equaled or exceeded 25%. From October 2012 through June 2019 this policy applied only to net withdrawals of capital that equaled or exceeded 15% of the portfolio's beginning monthly market value. Additional information regarding the treatment of Significant Cash Flows is available upon request.

INDEX DISCLOSURE

Secondary indice definitions, (primary index definition is found on the GIPS® disclosure page in the Appendix.)

ICE BofA U.S. Dollar 1-Month Deposit Offered Rate Constant Maturity – The Index tracks the performance of a synthetic asset paying Libor to a stated maturity. The index is based on the assumed purchase at par of a synthetic instrument having exactly its stated maturity and with a coupon equal to that day's fixing rate. That issue is assumed to be sold the following business day (priced at a yield equal to the current day fixing rate) and rolled into a new instrument.

Bloomberg U.S. Corporate High Yield Index 2% Issuer Cap – An unmanaged index that covers the USD-denominated, non-investment grade, fixed-rate, taxable corporate bond market. The index limits exposures to a specific issuer to a maximum 2% by market value.

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GENERAL DISCLOSURE

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An investment in the strategy described herein has risks, including the risk of losing some or all of the invested capital. An investor should carefully consider the risks and suitability of an investment strategy based on their own investment objectives and financial position. There is no assurance that the investment objectives and/or trends will come to pass or be maintained. The information contained herein may include preliminary information and/or "forward-looking statements." Due to numerous factors, actual events may differ substantially from those presented herein. TCW assumes no duty to update any forward-looking statements or opinions in this document. This material comprises the assets under management of The TCW Group, Inc. and its subsidiaries, including TCW Investment Management Company LLC, TCW Asset Management Company LLC, and Metropolitan West Asset Management, LLC. Any opinions expressed herein are current only as of the time made and are subject to change without notice. The investment processes described herein are illustrative only and are subject to change. Past performance is no guarantee of future results.

BIOGRAPHIES

Harrison S. Choi

Managing Director
Head of Securitized Trading

20 Years
Industry Experience

2007
Started with the Firm

Mr. Choi is a Specialist Portfolio Manager in the Fixed Income group and co-heads the Securitized Products Division as Head of Securitized Trading. Prior to joining TCW, he traded a variety of non-agency mortgage-backed securities for Metropolitan West Asset Management. He was previously a Director at Sparta Group LLC where he traded fixed income relative value and macro strategies within the interest rate derivatives market. Prior to that, he worked on alternative investment strategies at Western Asset Management Company (WAMCO). Mr. Choi holds a BS in Physiological Sciences from the University of California, Los Angeles (UCLA).

Elizabeth (Liza) J. Crawford

Managing Director
Head of Securitized Research

13 Years
Industry Experience

2015
Started with the Firm

Ms. Crawford is a Specialist Portfolio Manager in the Fixed Income group and co-heads the Securitized Products Division as Head of Securitized Research. Prior to returning to TCW's Los Angeles headquarters in 2020, Ms. Crawford spent two years based in TCW's London office as a research analyst covering Global Securitized Products. Before joining TCW as a CMBS Trader in 2015, Ms. Crawford was a Portfolio Analyst covering securitized products and commercial and residential mortgage REIT equities at EJF Capital LLC ("EJF"), a $9.5bn multi-strategy alternative asset manager in Arlington, Virginia. Prior to joining EJF, Ms. Crawford was an Associate in the Securitized Products division at Credit Suisse. She started in Institutional Sales covering ABS, MBS, and CMBS investors before moving to Asset Finance, where she focused on residential mortgage banking and securitization. Ms. Crawford holds a BA in Political Science and International Studies from Yale University.

Mark A. Romano, CFA, CAIA

Consultant Relations
Managing Director
TERRITORY COVERED: United States - West
mark.romano@tcw.com
(213) 244-0996

38 Years
Industry Experience

2021
Started with the Firm

Mr. Romano joined TCW in 2021 as a Managing Director and Senior Consultant Relations executive. Prior to joining TCW, he was an executive vice president at PIMCO and member of the Consultant Relations team for 23 years. Prior to joining PIMCO in 1997, he was with Wells Fargo's institutional money management group. Before that, he was the Director of Fixed Income and portfolio manager for the Pacifica family of mutual funds for 12 years; there he also invested assets for pension plans, foundations, financial institutions, corporations, and trust accounts. In addition, Mr. Romano reported the daily business news for the San Diego ABC-TV affiliate. He holds an MBA from San Diego State University and earned an BSBA in accounting from Shippensburg University, Pennsylvania. Mr. Romano is a CFA charterholder, a Chartered Alternative Investment Analyst (CAIA), and is a member of the San Diego CFA Society. He holds Series 3, 7, and 63 FINRA licenses.

Columbia Structured Credit

City of Jacksonville Employees Retirement System

First Quarter 2022

Columbia Structured Credit

City of Jacksonville Employees Retirement System

Search Objective

To select a new manager in the Opportunistic Structured Credit category in an effort to complement the City of Jacksonville's current Core Fixed Income Manager

Presentation Objective

To review the Columbia Structured Credit team's unique approach that aims to deliver strong uncorrelated returns and help provide a demonstrable ability to meet the Board's goal as a complementary manager for the City of Jacksonville

Source: Columbia Threadneedle Investments North America.

Columbia Threadneedle

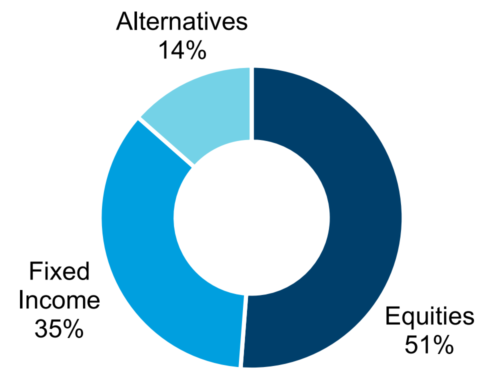
Breadth and depth of global resources

- Over **650** investment professionals[1] based in North America, Europe and Asia, managing **US$699.8 billion**[2] of assets across developed and emerging market equities, fixed income, asset allocation solutions and alternatives.
- Managing the assets of the world's institutional clients, including sovereigns, public plans, corporations, Taft-Hartley, endowments and foundations.
- Broad mix of capabilities and a willingness to work in strategic partnership with clients on customized investment solutions.

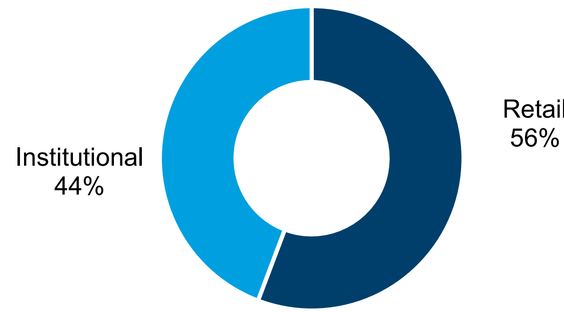
Equity Investment Professionals	**229**
Portfolio managers	118
Analysts	82
Traders	29
Fixed Income Investment Professionals	**199**
Portfolio managers	81
Analysts	92
Traders	26
Multi-Asset Alternatives & Solutions[3]	**188**
Portfolio managers	109
Analysts	89
Other Investment Professionals[4]	**85**
Total Investment Professionals	**701**
Portfolio managers	308
Analysts	253
Traders	55
Other Investment Professionals[4]	85

GIPS Firm Assets under Management	US$bn
Columbia Threadneedle Investments North America (GIPS Firm)	432.8
Columbia Threadneedle Investments EMEA APAC (GIPS Firm)	143.7

AUM by asset class (%)



AUM by product type (%)



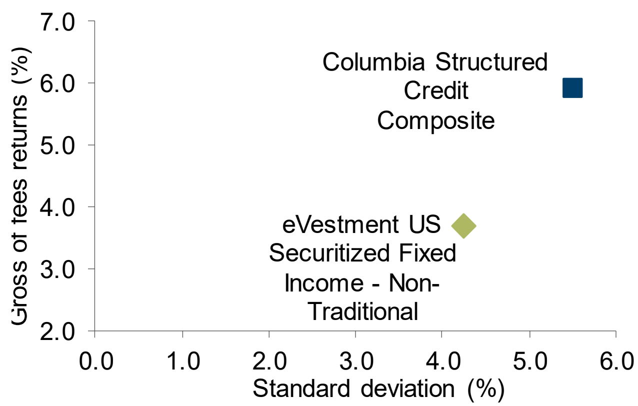
[1] Information is for all entities in the Columbia and Threadneedle group of companies. Total investment professionals includes additional professionals integral to the investment process including multi asset/alternatives, economists, client portfolio managers, and investment risk professionals. [2] AUM includes externally managed funds under administration as well as all assets managed on a discretionary or non-discretionary basis by the entities in the Columbia and Threadneedle group of companies, as of 31 March 2022. [3] Multi-asset, alternatives and solutions investment professionals include those professionals dedicated to the firm's property, real estate and other alternative strategies managed by the firm which do not fit into the traditional definition of equity or fixed income. [4] Other investment professionals includes executive level personnel, business analysts and other job responsibilities who do not fit into the market definition of PM, trader or analyst, but still contribute to the management of an investment strategy offered.

Why Columbia Structured Credit?

A deep and stable team of experienced structured-assets specialists with a track record of delivering strong risk adjusted returns.

- A seasoned portfolio-management team with 16 years average investing experience across the credit spectrum executing a disciplined and repeatable approach
- Backed by a team of sector specific analysts with deep investment experience
- Investment process combines top-down, market thesis with rigorous, independent, bottom-up research
- Security selection process utilizing proprietary analytic tools that are more forward looking than street based models
- Delivered strong risk-adjusted returns over extended time periods

Annualized risk/return relationship
Since Inception through March 31, 2022*



Source: Columbia Threadneedle Investments North America eVestment Alliance.

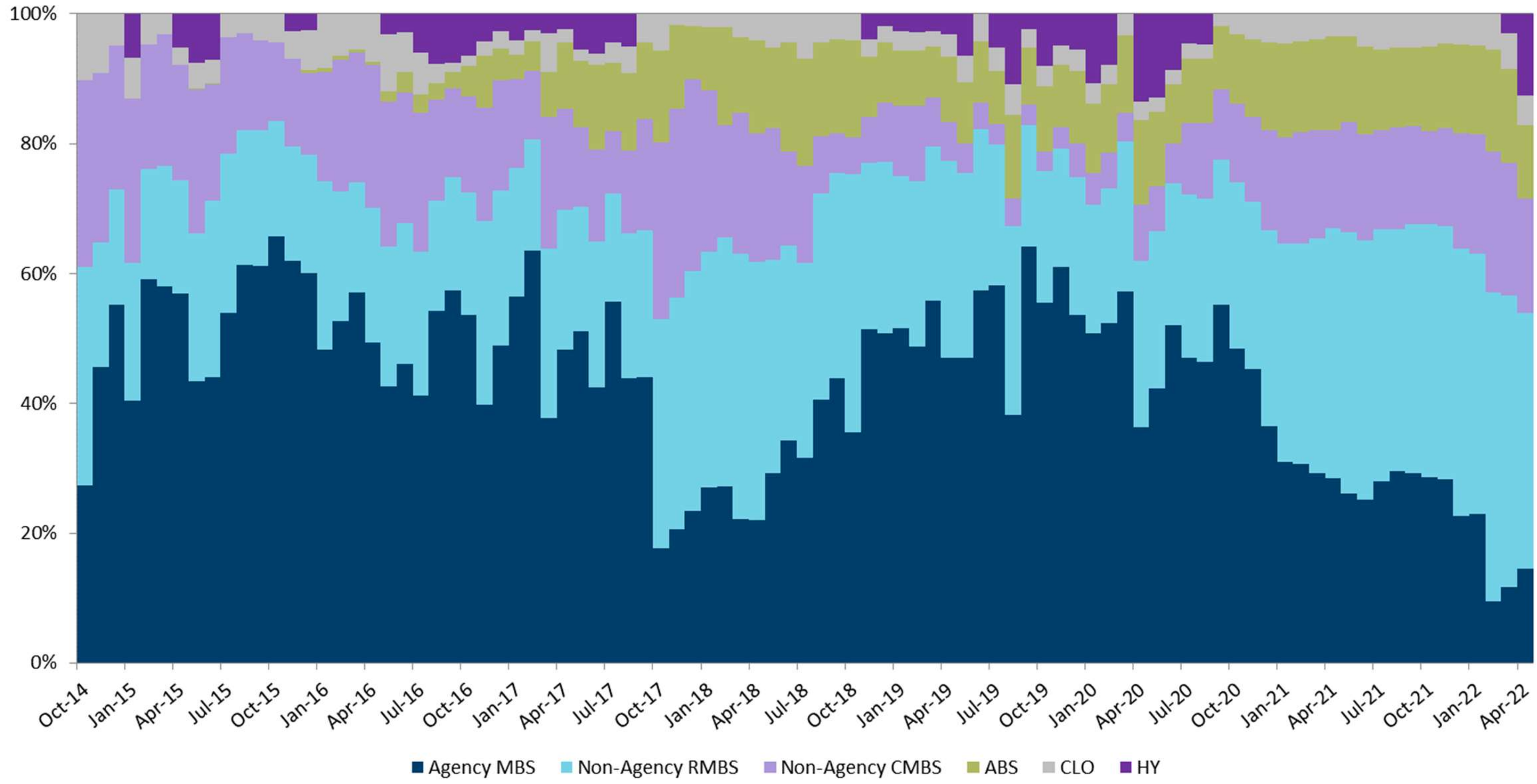
Past performance does not guarantee future results.

*Inception: May 31, 2014.

Returns over one year are annualized. Gross returns do not include the impact of management fees and other expenses that will reduce individual returns on a compound basis. **Please see the GIPS Report provided for additional performance information, including the impact of fees**.

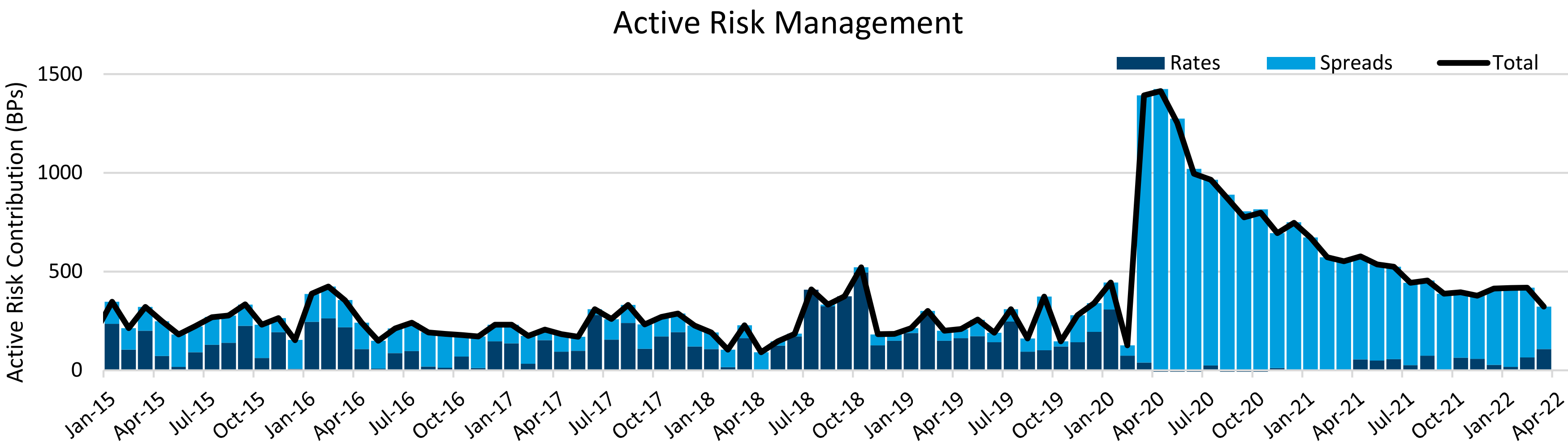
Use of flexibility through asset allocation
Driven by market opportunities

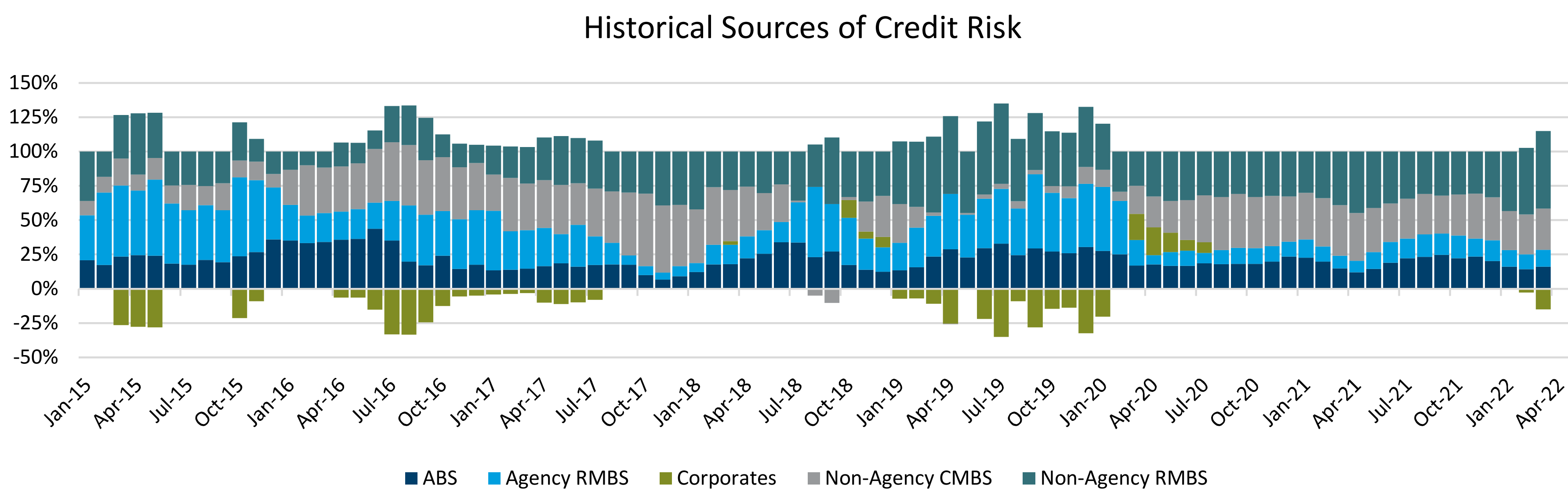
Structured Credit – Asset Allocation (%)



Source: Columbia Threadneedle Investments North America as of March 31, 2022. Based on a representative account in the Columbia Structured Credit composite.

Use of flexibility through risk allocation

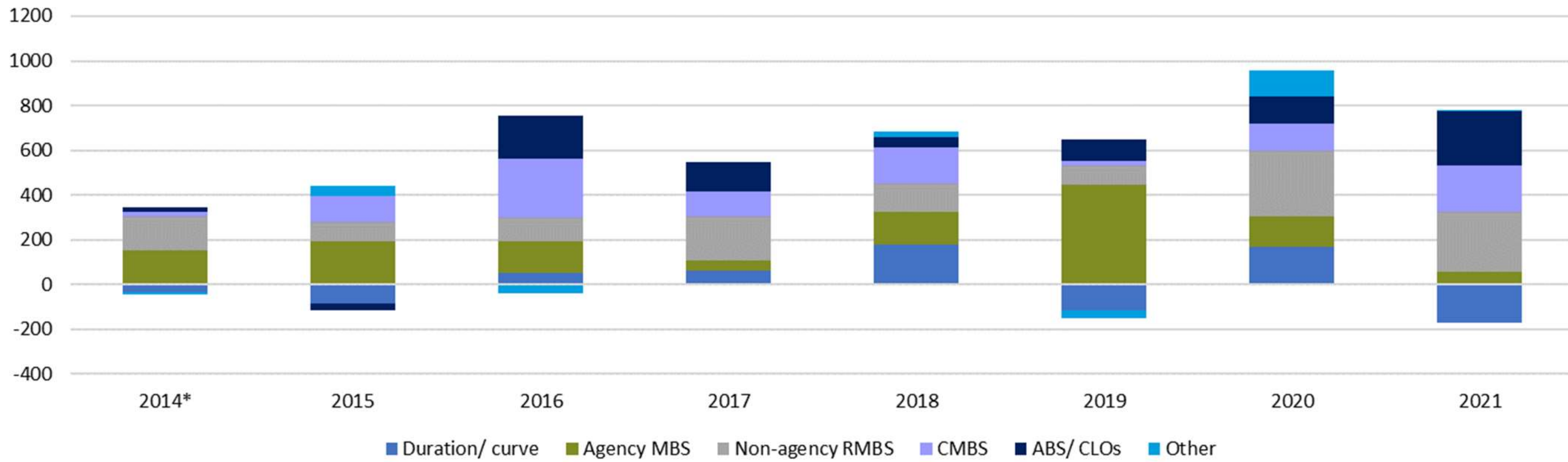




Source: Columbia Threadneedle Investments North America based on a representative strategy account. 6/1/14- 3/31/2022. The Active Risk Contribution chart is a visual representation of the VaR contribution. VaR stands for Value at Risk and it is an expression of the level of risk exposure and whether it's coming from credit or duration positioning.

Results of flexibility
Evolving with market opportunities

Historical sources of attribution (basis points)



Sector risk/return

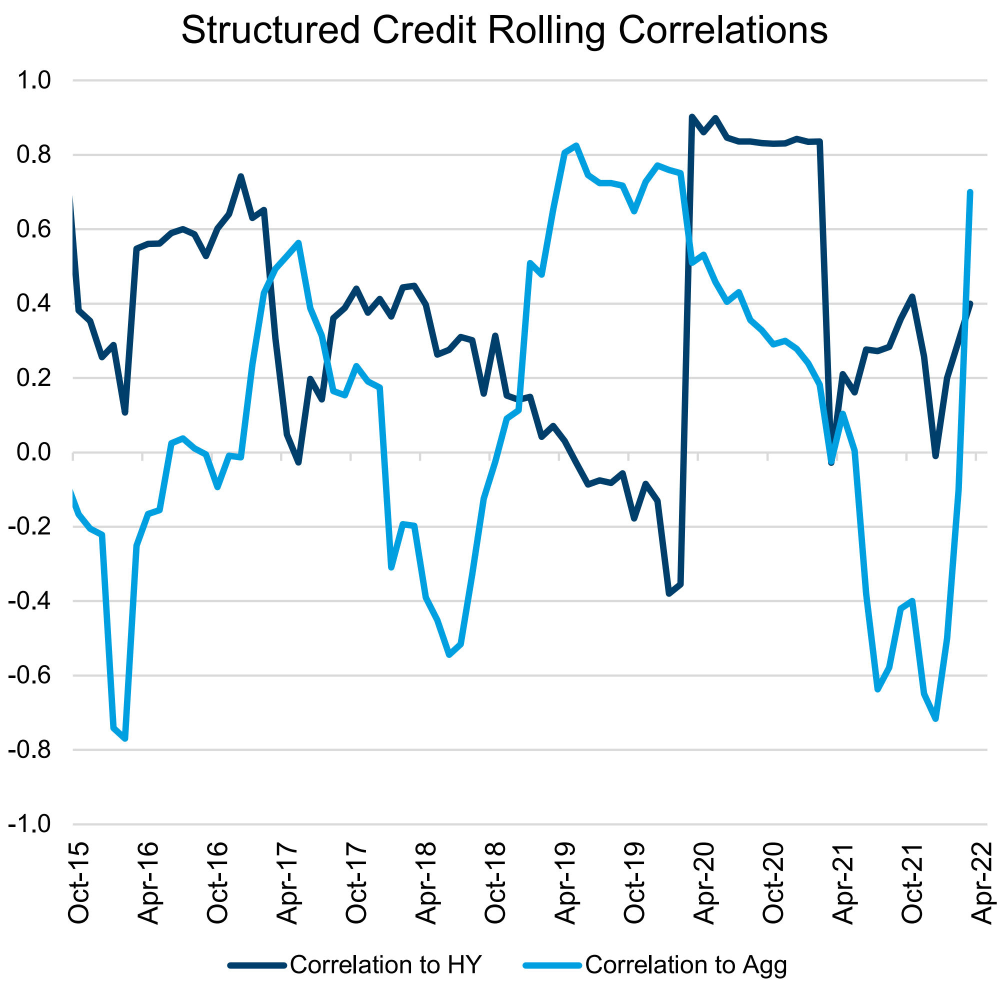
From June 1, 2014 – March 31, 2022	Annualized Return	Volatility	Sharpe Ratio
Columbia Structured Credit (Gross)	**5.9**	**5.5**	**0.9**
U.S. MBS Index Total Return	1.6	2.3	0.4
Bloomberg US Agg Total Return	2.1	3.3	0.4
Bloomberg U.S. Corporate High Yield Total Return	4.5	7.1	0.6
Bloomberg U.S. Corporate Total Return	3.2	5.5	0.5
S&P/LSTA Leveraged Loan Total Return	3.8	5.7	0.6
FTSE 1-mo T-bill	0.7	0.3	-0.3
S&P 500 Total Return Index	13.7	14.1	0.9

*From Inception 6/1/14 – 3/31/2022

Sources: Columbia Threadneedle Investments North America, Bloomberg, S&P, FTSE. Based on a representative account in the Columbia Structured Credit composite. Past performance does not guarantee future results. Gross composite returns do not include the impact of management fees and other expenses that will reduce individual returns on a compound basis. Please see the GIPS Report provided for additional performance information, including the impact of fees. Indices in the bottom chart illustrate the historical performance of various asset classes for the period since strategy inception and do not represent the performance of strategy holdings. Results for other historical periods will differ. Top chart is based on a representative account and the bottom chart is composite returns.

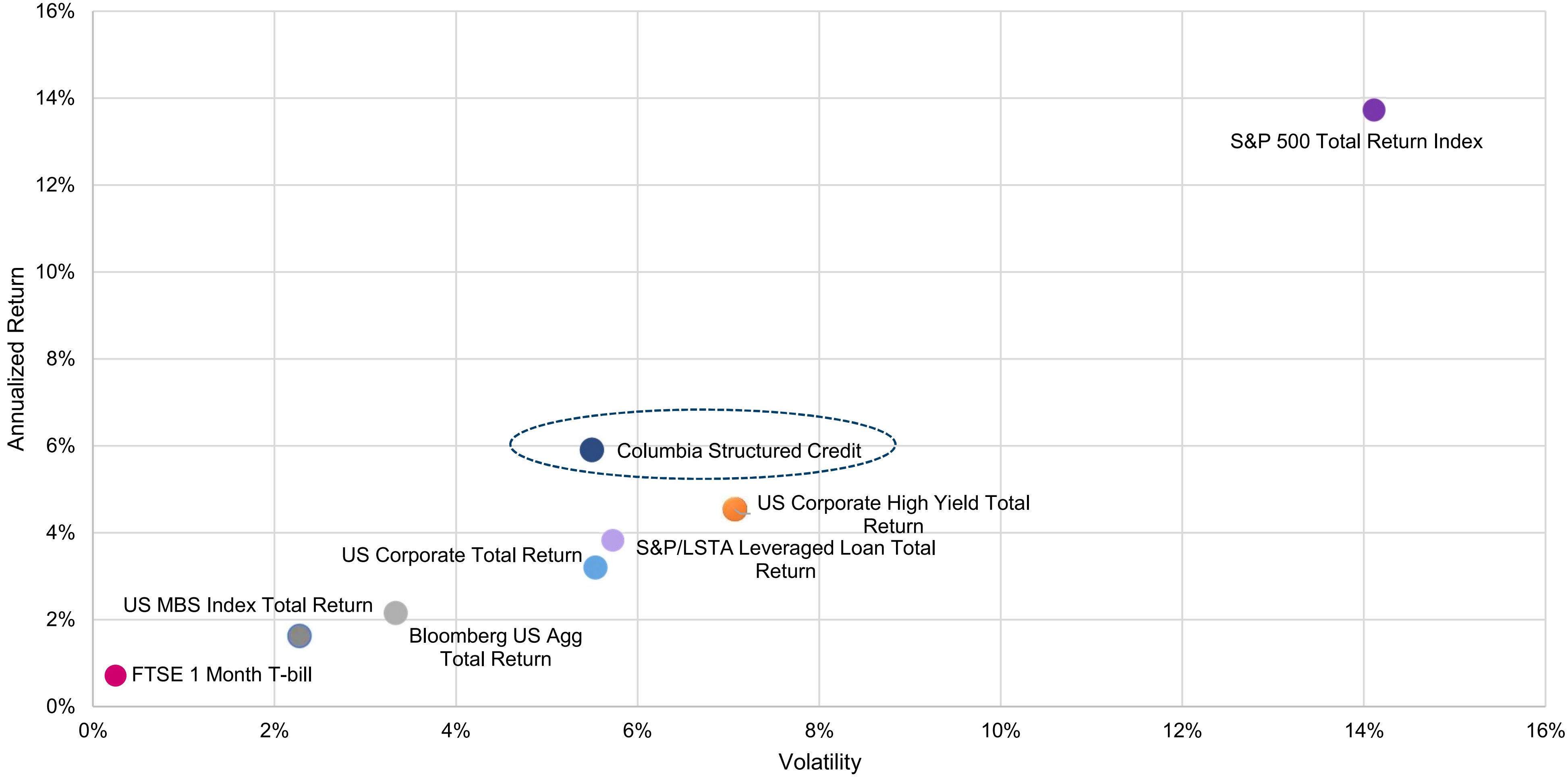
Diversification From Flexibility

Correlations of monthly returns (since inception - June 1, 2014)	Structured Credit *	US IG Corporates	S&P 500	Agg	US High Yield Corporates	Agency MBS
Agency MBS	0.03	0.54	-0.12	0.87	0.03	1
U.S. High Yield	0.64	0.68	0.68	0.26	1	
U.S Agg	0.20	0.83	0.04	1		
S&P 500	0.37	0.42	1			
U.S. IG Corporates	0.51	1				
Structured Credit	1					



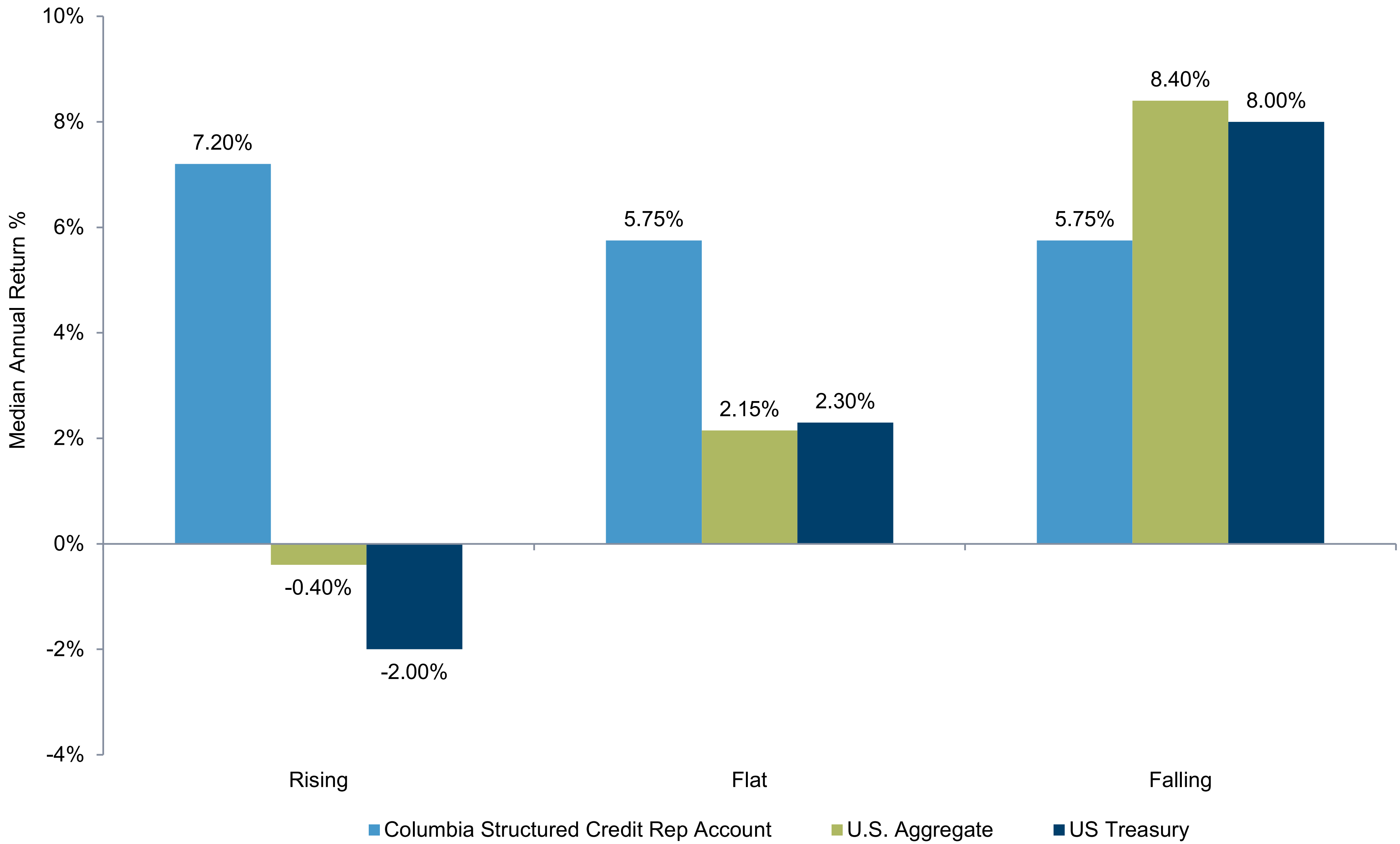
Source: Columbia Threadneedle Investments North America, Bloomberg US MBS, Bloomberg US Corp HY, Bloomberg US Agg, S&P 500, Bloomberg US Corporate Bond. Calculation period: 6/1/14-3/31/2022. See important information slide for more on correlation. *Based on composite returns.

Historical risk/return vs. other asset classes



Sources: Columbia Threadneedle Investments North America, Bloomberg US MBS, Bloomberg US Corp HY, Bloomberg US Agg, S&P 500, Bloomberg US Corporate Bond, S&P/ LSTA Leveraged Loan. Calculation period: 6/1/14-3/31/2022. **Past performance does not guarantee future results.** Performance is gross of fees for the Columbia Structured Credit composite. The strategy benchmark is the FTSE 1-month Treasury Bill Index. Other indices illustrate the historical performance of various asset classes for the period since strategy inception. Results for other historical periods will differ. Gross composite returns do not include the impact of management fees and other expenses that will reduce individual returns on a compound basis. Please see the GIPS Report provided for additional performance information, including the impact of fees.

Performance in different interest rate environments



Source: Columbia Management Investment Advisers, LLC and Bloomberg Indices. "Rising" indicated by an increase of more than 50 bps in the 10-year Treasury yield. "Falling" indicated by a decrease of more than 50 bps 10-year Treasury yield. Data reflects rolling 12-month periods from 05/01/2014 through 3/31/2022. Reflects net of fees performance for a representative strategy account. **Past performance does not guarantee future results. Please see the GIPS report for additional performance information.**

Structured Assets Team

Columbia Structured Assets
Assets Under Management

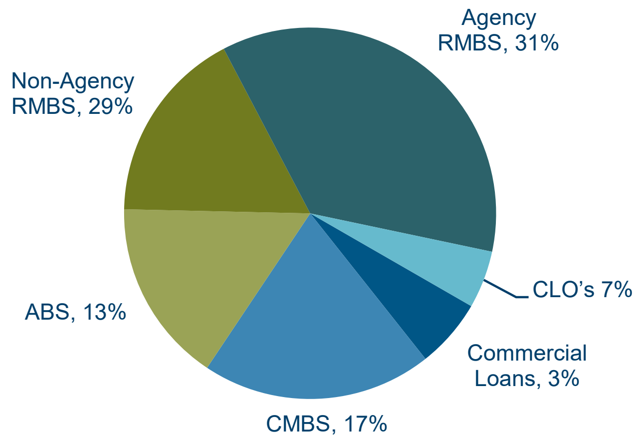
Together, the Structured Assets team manages a broad array of strategies, which helps them better identify the market and credit trends important for tactical portfolio execution.

Insurance	Traditional MBS Portfolios	Multi Sector Portfolios	Unconstrained MBS
Buy and hold	Income and total return	Total return	Total return
IG assets	Mostly IG assets	Full spectrum	Full spectrum

Columbia Threadneedle Investments North America
Structured Assets Under Management

$62.9 billion in structured assets under management as of March 31, 2022

Strategy	Total assets ($B)	% of total
Agency RMBS	19.4	31%
Non-agency RMBS	18.0	29%
ABS	8.4	13%
CMBS	10.5	17%
Commercial loans	1.9	3%
CLO's	4.7	7%
Total	62.9B	100%



Source: Columbia Management Threadneedle Investments North America.

Columbia Structured Assets resources

The Structured Assets team consists of 18 investment professionals with full coverage across the structured product asset class.

William Davies, Global Chief Investment Officer

Gene R. Tannuzzo, CFA, Global Head of Fixed-Income

Kirk Moore, CFA, Global Head of Research

Stephen Harasimowicz, Global Head of Trading

STRUCTURED ASSETS PORTFOLIO MANAGEMENT	STRUCTURED ASSETS RESEARCH	COMMERCIAL REAL ESTATE LOAN MANAGEMENT	STRUCTURED ASSETS TRADING
Jason Callan Head of Structured Assets Senior Portfolio Manager	**Shawn Pierce, CFA** Head of Structured Assets Research ABS, CLOs	**John Dittrich** Senior Portfolio Manager	**Brian Dirgins** Trader
Tom Heuer, CFA Senior Portfolio Manager	**Mike Milosch, CFA** Senior Analyst CMBS	**Chris Cervenka** Senior Mortgage Underwriter	**Clinton Vilks** Trader
Ryan Osborn, CFA Senior Portfolio Manager	**Mitch Helle-Morrissey, CFA** Senior Analyst ABS, RMBS	**John McCarthy** RELI, Portfolio Manager	**Kurt Meyer** Trader
Jacob Gotto Senior Portfolio Analyst	**Scott Kenney** Analyst RMBS	**Dominic Berntson** RELI, Senior Mortgage Underwriter	
	Siao Lu Associate Analyst		
	Philip Coonley, CFA Associate Analyst ABS		
	Aaron Weinrib Associate Analyst		

For staff that joined the firm as part of an acquisition, tenure includes time at legacy firms. As of March 31, 2022.

Global fixed-income resources

William Davies
Global Chief Investment Officer

Research

Kirk Moore, CFA
Global Head of Research

Investment Grade
- **Todd Czachor, CFA**
- **Jonathan Pitkanen**
- Dori Aleksandrowicz, CFA
- Arabella Duckworth
- Travis Flint, CFA
- Guillaume Langellier, CFA
- Michael Laskin
- Nathaniel Liddle
- David Morgan, CFA
- Ben Myrtle, CFA
- Tony Pederson
- Rosalie Pinkney, CFA
- Paul Smillie
- Gregory Turnbull Schwartz, CFA
- Mary Titler, CFA
- Sharon Vieten

U.S. Structured Credit
- **Shawn Pierce, CFA**
- Philip Coonley, CFA
- Mitch Helle-Morrissey, CFA
- Scott Kenney
- Siao Lu
- Michael Mlosch, CFA
- Aaron Weinrib

Responsible Investment
- **Iain Richards**
- *Mac Ryerse*
- Tyler Blenkush
- Bina Desai
- Freddie Rowan-Hamilton
- David Honick
- Geetika Jobanputra
- Ben Kelly
- Stacia Lagges
- Natalia Luna
- Andrew Mckee
- Troy Sawyer
- Olivia Watson
- Roger Wilkinson
- Jess Williams

U.S. High Yield
- **Kris Keller, CFA**
- Matthew Corbett, CFA
- Rich Gross, CFA
- Brandon Jankowski, CFA
- Drew Kettwick, CFA
- Brian Newman, CFA
- Ted Nerison, CFA
- Spencer Sutcliffe
- Peyton Tich
- Jason Weinberg, CFA

U.S. Bank Loan
- **Ashraf Jilani, CFA**
- Felix Munther-Anderson
- Suyog Dahal
- Oscar Garcia
- Carlos Gonzalez
- Angela Jarasunas
- Mary Shaifer
- Bo Tang

European High Yield
- **Tom Southon**
- Loic Cathenod
- Harry Lister, CFA
- Kara Paslawska
- Hayley Tipping

Municipal Bonds
- **Matthew Stephan**
- Dan Belcher
- Henry Henderson
- Jeff Kovala
- *Anders Myhran, CFA*
- Ty Schoback
- Elizabeth Ware
- Ben Woo
- Michael Zonghetti, CFA

Rates, Currency & Sovereigns
- **Ed Al-Hussainy, CFA**
- Gordon Bowers, CFA
- Sarah Glendon
- *Adrian Hilton*
- Lin Jing Leong
- Eng Tat Low

Emerging Markets Corporates
- Patti McConachie
- Justin Ong
- Rosalie Pinkney, CFA
- Paul Smillie
- Catherine Stronach
- Chuanyi Zhou

Real Estate Loans
- **John Dittrich**
- Dominic Berntson
- Chris Cervenka
- John McCarthy

Portfolio Management

Gene Tannuzzo, CFA - Global Head of Fixed Income
Roman Gaiser - Head of Fixed Income - EMEA

Multi-Sector Fixed Income

Core/Core Plus
- **Jason Callan**
- Gene Tannuzzo, CFA
- Alan Erickson, CFA
- Mary Werler, CFA
- Alexandre Christensen, CFA
- Samantha Dearey
- Elena Rozina, CFA

Multisector Fixed Income
- Gene Tannuzzo, CFA
- Jason Callan
- Alexandre Christensen, CFA
- David Janssen, CFA
- Samantha Dearey

Short Duration & Stable Value
- **Ron Stahl, CFA**
- Greg Liechty
- Jim McKay, CFA
- John Dempsey, CFA
- Ryan Krieg
- Linda Solarek
- Erik Tamiyasu

Cash and Money Market
- **John McColley**
- Julie Oman
- Mandy Coatsworth

Responsible Investment
- Simon Bond
- *Mac Ryerse*

Investment Grade
- **Tom Murphy, CFA**
- **Alasdair Ross, CFA**
- Royce Wilson, CFA
- John Dawson, CFA
- John Hampton
- Christopher Hult, CFA
- Ryan Staszewski, CFA
- Tammie Tang
- Simon Bond
- Shannon Rinehart, CFA
- James Phillips
- Shaun Levine, CFA
- Kaeli Stayer

LDI
- **David Kennedy**
- **Tom Murphy, CFA**
- Tom Egan, FSA, EA, CFP
- Timothy Brannon
- Kathleen P. Brolly, FSA
- Adam Shakoor, CFA
- Elena Rozina, CFA
- Diane Bordulis

U.S. Structured Credit
- **Jason Callan**
- Jacob Gotto
- Tom Heuer, CFA
- Ryan Osborn, CFA

U.S. High Yield
- **Brian Lavin, CFA**
- Mark Van Holland, CFA
- Brett Kaufman, CFA
- *Daniel DeYoung*
- Nicholas Beck
- Jonathan Tripp, CIPM

European High Yield
- **Roman Gaiser**
- David Backhouse
- Gareth Simmons
- John Moogan

U.S. Bank Loan
- **Jerry Howard, CFA**
- *Daniel DeYoung*
- *Eric Johnson*
- *Vesa Tontti, CFA*

Municipal Bonds
- **Catherine Stienstra**
- Bill Callagy
- Kimberly Campbell
- Carri Dolin
- Paul Fuchs, CFA
- *Anders Myhran, CFA*
- *Malcolm Ryerse*
- Deb Vargo
- Douglas White, CFA

Rates & Currency
- ***Adrian Hilton***
- Alex Batten, CFA
- Dave Chappell
- Alex Edelsten

Emerging Markets
- ***Adrian Hilton***
- Chris Cooke
- Fred Priggs

Client Portfolio Management
- **David Oliphant**
- Angelina Chueh
- Charlotte Edwards, CPA
- Jake Lunness, CPA
- Chris Jorel, CFA
- Kris Moreton, CFA
- Douglas Rangel, CFA
- Katy Nuss, CFA

Trading

Steve Harasimowicz
Global Head of Trading

U.S. - Taxable
- Tyler Landvik-Geyen, (IG)
- Andrew Quinet, CFA (IG)
- Nathan Raduns (IG)
- Travis Hulstein, CFA (HY)
- Michael Roberts, CFA (HY)
- Andrea First (HY)
- Brian Dirgins, CFA (Structured)
- Kurt Meyer (Structured)
- Clinton Vilks (Structured)
- Braj Agrawal (Derivatives)
- Philip McKernan (Derivatives)
- Bryson Burlong (FX/Rates/EMD)
- Keven Ofstehage (FX/Rates/EMD)

U.S. - Municipal
- **Anthony Purcell**
- Travis Bates
- Philip Carty
- Normand Desrosiers
- Kelsey McSweeney, CFA

EMEA / APAC
- **Emma Photis**
- Marc Harrington (HY)
- Sarah Kendrick (IG)
- James Lake (IG)
- James Lavey (FX/Rates/EMD)
- Marcus Goh (Asia)
- Michael Namba (Asia)
- Mandy Coatsworth (MM)
- Danny Ramos (MM)

Information as of April 4, 2022. The above information is not representative of a formal organization chart. Leaders indicated in bold. Certain team members may be employees of affiliates. Investment professionals that are italicized have dual investment capacities.

Philosophy and process

Investment philosophy

We believe that the structured product securities market is inherently inefficient and that the degree of inefficiency changes with broader market conditions. We focus on a value-driven investment process to exploit market inefficiencies in a consistent and repeatable manner.

Key tenets	
Proprietary research	■ Utilize forward-looking, proprietary risk and relative value metrics that allow for consistency across our global fixed-income platform ■ Through forward looking, proprietary analytics, we seek attractive investment opportunities with strong and consistent risk-adjusted returns
Flexible mandate	■ A bond strategy with ample latitude to evolve and redistribute risk exposure through all phases of the market cycle, with the ability to tap into multiple sources of alpha ■ Ability and willingness to invest in out-of-index sectors, spanning the entire Structured Assets opportunity set
Risk management	■ A framework of quantitative risk controls and qualitative risk assessments seeks to minimize portfolio relative volatility ■ We focus on alpha generation while actively managing downside risk

There is no guarantee that an investment objective will be achieved or that return expectations will be met.

Resource utilization

Idea generation in Structured Assets

The portfolio management team collaborates with investment professionals across the organization to identify the most compelling opportunities across the Structured Assets landscape.

Top down analysis | **Sector allocation** | **Security selection** | **Portfolio construction and risk management**

Portfolio management team
- Portfolio construction
- Risk management
- Performance accountability

Trading
- Market intelligence and execution
- Assessment of liquidity dynamics

Global fixed-income Asset Allocation Team
- Macro research and relative value assessment across opportunity set

Portfolio benefits:
- Synthesis of broad perspective
- Unbiased starting point
- Emphasis on expertise

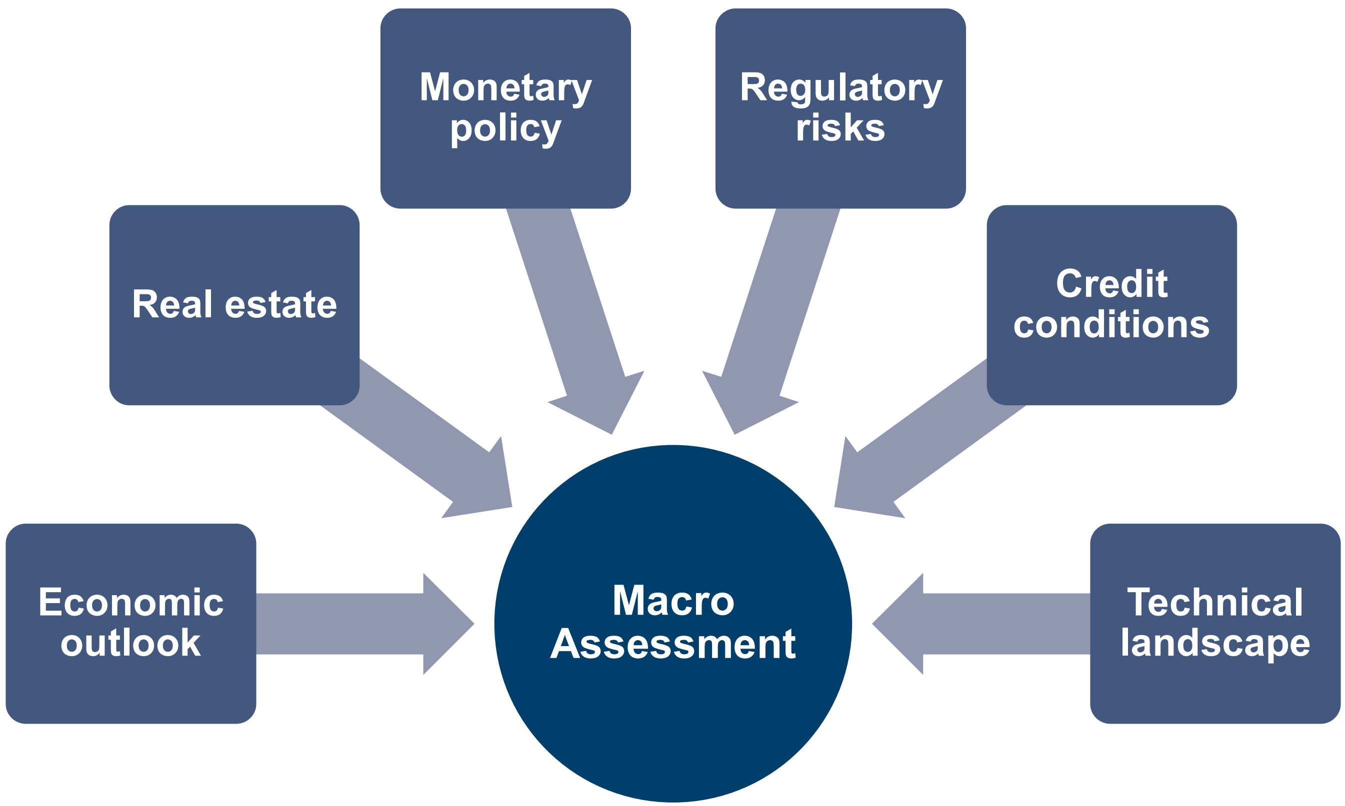
Sector specialists
- Sector outlook
- Proprietary fundamental research process
- Bottom-up security selection

Global Rates and Currency Team
- Analysis and relative value assessment of global interest rates and currencies

Investment process
Top-down analysis

Top down analysis | Sector allocation | Security selection | Portfolio construction and risk management

- Development of a top-down macro thesis is a key starting point for evaluating investment opportunities
- Our macro thesis helps frame sector allocation and security selection biases



Investment process

Top-down indicators of relative value

Top down analysis	**Sector allocation**	Security selection	Portfolio construction and risk management

Our Structured Assets investment process evaluates fundamentals, technicals, and valuations assessing relative value to better identify the sectors that offer attractive risk-adjusted return potential.

Fundamentals

Goal
- Aim to understand key drivers of intrinsic value

Focus
- The industry environment
- Prepayment Risk
- Political Risk
- Management and strategy
- Loan-level analysis
- Ability and willingness to pay
- Housing fundamentals

Outcome
- Avoid deteriorating fundamental situations

Technicals

Goal
- Aim to understand supply and demand within Structured Assets sectors
- Structure and liquidity

Focus
- Size and liquidity
- Impact of non-economic buyers
- Sources of supply and demand
- Housing inventory

Outcome
- Understand price drivers over short-, intermediate-, and long-term

Valuations

Goal
- Aim to understand relative and absolute valuation

Focus
- Interest rate and credit spread volatility
- Subjective assessment of risk in each sector
- Quantitative risk factors based on actual market history

Outcome
- Ensure that the portfolio is positioned to benefit from attractively priced sectors

There is no guarantee that these outcomes will be achieved.

Investment process

Inputs to sector allocation

Top down analysis	Sector allocation	Security selection	Portfolio construction and risk management

The structured product market is inherently inefficient. We aim to consistently exploit these inefficiencies through our robust security selection process.

Independent
- Generate independent cash flow assumption and scenarios
- Assign proprietary risk ratings to all credit exposures
- Re-underwrite commercial properties leveraging in-house loan team with local market knowledge
- Customized regression tools and empirical analysis

Forward looking
- Street models often are backward looking and mean reverting
- Establish a forward looking view on sector and credit fundamentals
- Identify and capitalize on structural changes within the mortgage landscape

Opportunistic
- Actively assess risk versus return
- Exploit inefficient market pricing
- First-mover advantage – Willing to explore unique opportunities

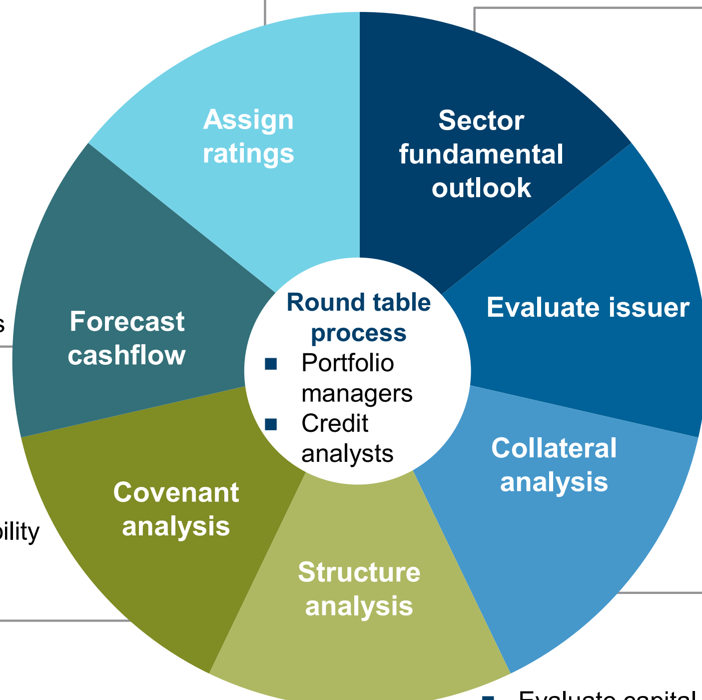
Research process –
Rigorous fundamental due diligence

Top down analysis | **Sector allocation** | **Security selection** | **Portfolio construction and risk management**

- Determine catalysts for out and under performance
- Assign risk ratings

- Track and evaluate sector and economic data
- Evaluate impact on structured assets sectors
- Consider exogenous risks

- Create independent, forward looking cashflow projections
- Project losses based fundamental outlook, collateral and structure analysis
- Scenario analysis used to understand performance under a variety of economic conditions



- Experience and strategy
- Issuance history
- Leverage corporate analyst team

- Evaluate issue/manager flexibility
- Servicing guidelines
- Evaluate strengths and risks

- Characteristics (LTV, geos, fico, etc.)
- Risk layering
- Historical comparisons
- Collateral strats/distributions

- Evaluate capital structure and incremental risk
- Credit enhancement analysis
- Payment/loss waterfall

Proprietary risk rating system

Top down analysis	Sector allocation	Security selection	Portfolio construction and risk management

- **Proprietary internal risk rating system allows analysts to efficiently communicate an issuer's risk profile**
- **Ratings facilitate relative value discussions and help determine portfolio position sizes**

Risk	High level interpretation	Possible credit characteristics
Risk 1	■ Very solid credit quality ■ Minimal risk of credit deterioration	■ High level of structural protection versus collateral risk ■ Significant collateral seasoning ■ Bond structure provides very significant loss coverage ■ Remote risk of credit loss based on current or distressed conditions ■ Low structural leverage
Risk 2	■ Strong credit quality ■ Low risk of credit deterioration	■ Ample structural protection versus collateral risk ■ Bond structure provides significant cushion over expected losses ■ Low or Modest structural leverage ■ Remote risk of credit loss based on current conditions, credit may deteriorate under very stressful conditions
Risk 3	■ Good credit quality ■ Modest risk of credit deterioration, but vulnerable to more vulnerable to stress scenarios	■ Adequate structural protection versus collateral risk under base case conditions ■ Changes in conditions can change credit outlook - vulnerable to stressful scenarios ■ Greater idiosyncratic risk ■ Increased sponsor risk ■ Increased structural leverage
Risk 4	■ Credit quality could deteriorate or be volatile ■ Quite vulnerable to stressful scenarios	■ Material principal loss unlikely under current conditions ■ Small changes in conditions can significantly change credit outlook - very vulnerable to stressful scenarios ■ Significant idiosyncratic risk ■ Significant sponsor risk ■ Significant structural leverage
Risk 5	■ Low or very volatile credit quality ■ Principal loss likely	■ Risk of credit loss highly probable under current conditions ■ Insufficient structural protections ■ Significant idiosyncratic risk ■ Significant sponsor risk ■ Significant structural leverage

Security selection process

Top down analysis	Sector allocation	Security selection	Portfolio construction and risk management

Idea sources

Credit analyst

- New issue
- New information
- Trading levels
- Relative value
- Catalysts/milestones
- Change in fundamentals
- Opportunity/opinion change

Daily discussions

Portfolio managers/traders

- Review credit fundamentals
- Update model
- Assign internal ratings
- Update recommendation

- Assess:
- Trading level
- Relative value
- Liquidity
- Technicals
- Impact on portfolio risk profile

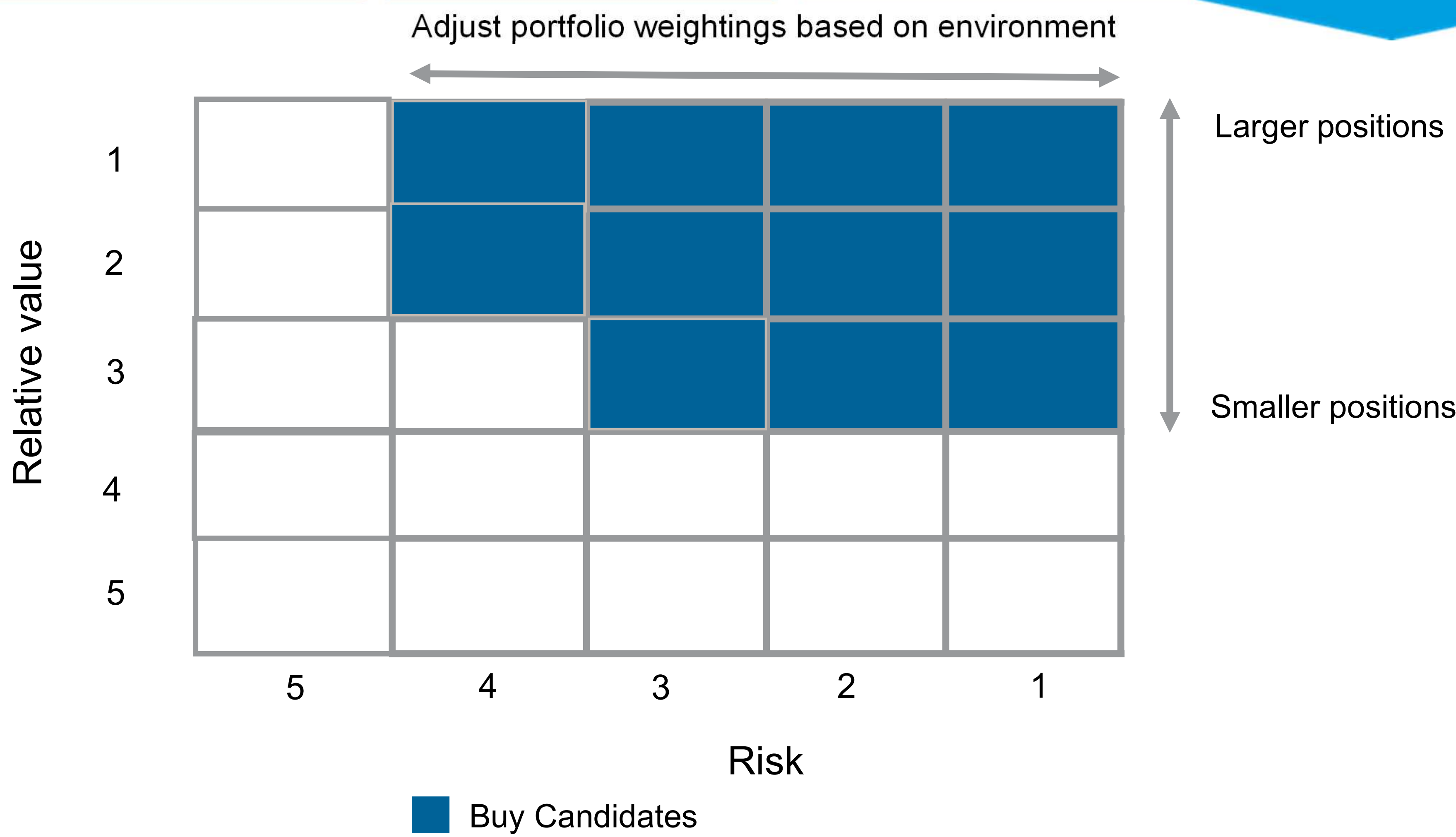
Roundtable Process

Execution

Independent proprietary credit research

Combining ranking for risk-adjusted performance

Top down analysis | Sector allocation | Security selection | **Portfolio construction and risk management**



Monitor portfolio and manage risk

Top down analysis	Sector allocation	Security selection	Portfolio construction and risk management

Continually monitor portfolio positioning, sector emphasis and risk exposures with a disciplined, risk-aware framework.

Result = confirmation the portfolio is performing in line with expectations

Portfolio monitoring and risk management

- Track absolute and relative exposures (sector and security weights) on real-time basis
- Assess holdings on nominal and contribution-to-duration basis
- Monitor yield-curve and duration positioning
- Conduct formal monthly attribution analysis
- Participate in annual investment review (5P)

Real-time compliance

- Segregated portfolio management and trading supervision
- Segregated risk management and compliance functions
- Investment guidelines coded into trade order management system (Aladdin)
- Pre-trade compliance protocol compares trade data to guidelines; alerts portfolio managers to potential violations
- Post-trade compliance confirms trades
- Real-time alerts issued to portfolio managers and compliance if portfolio holdings move out of compliance

Systematic investment process

Top down analysis	Sector allocation	Security selection	Portfolio construction and risk management

The portfolio is actively reviewed as valuations and economic inputs change to consider possible purchase or sales candidate

Firm-wide oversight

- Independent compliance and risk management functions
- Reporting lines to senior leaders of parent company, Ameriprise Financial Inc.

Oversight across investment division

- Firm wide chief investment officer
- Independent investment oversight committee
- Comprehensive 5P strategy reviews

Team-specific oversight

- Straightforward, transparent investment processes
- Uniform Analytic and Risk Management Systems
- Risk monitoring at strategy level

Fixed Income Investment team

Performance and characteristics

Columbia Structured Credit Portfolio characteristics

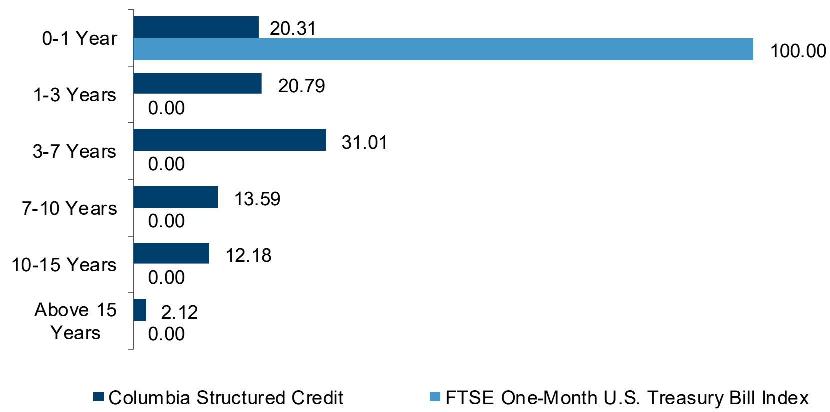
As of March 31, 2022

Characteristics	Columbia Structured Credit	FTSE One-Month U.S. Treasury Bill Index
Number of Issuers	105	1
Number of Issues	443	1
Yield to Maturity	5.15%	0.12%
Average Effective Duration (yrs)	2.48	0.07
Option Adjusted Spread (OAS) (bps)	370	-3
Average Credit Quality	A2	Aaa
Average Coupon	3.70%	0.00%

Credit Quality	Columbia Structured Credit	FTSE One-Month U.S. Treasury Bill Index
Agency	18.5	--
AAA	0.1	--
AA	0.5	--
A	1.8	--
BBB	6.1	--
BB	22.5	--
B	12.8	--
CCC	0.4	--
Not Rated	31.2	--
Cash and Equiv.	7.2	100
Other	-1.2	--

Top 10 Holdings	% of Portfolio
UMBS 30yr Tba(Reg A) 4.000 04/13/2052	6.1
UMBS 30yr Tba(Reg A) 3.500 04/13/2052	5.8
FNMA 30yr UMBS Super 2.500 01/01/2052	2.8
FHLMC 30yr UMBS 2.500 03/01/2052	2.6
PNMAC GMSR Issuer Trust_18-GT2 3.107 08/25/2025	1.1
Cas_22-R01 6.099 12/25/2041	1.0
Stacr_21-Dna5 5.599 01/25/2034	1.0
Stacr_22-Hqa1 11.050 03/25/2042	0.9
Bvrt_21-3f 2.950 07/12/2033	0.9
LRAIT_21-2 2.840 06/30/2023	0.9

Weighted Average Life



Sources: BlackRock and Columbia Threadneedle Investments North America
This information is based on a representative account in the composite. The portfolio characteristics of your account may differ from those shown. Bond ratings apply to the underlying holdings of the portfolio. Third-party rating agencies provide bond ratings ranging from AAA (highest) to D (lowest). When three ratings are available from Moody's, S&P and Fitch, the middle rating is used. When two are available, the lower rating is used. If only one is available, that rating is used. If a security is Not Rated but has a rating by Kroll and/or DBRS, the same methodology is applied to those bonds that would otherwise be Not Rated. Bonds with no third-party rating are designated as Not Rated. Investments are primarily based on internal proprietary research and ratings assigned by our fixed income investment analysts. Therefore, securities designated as Not Rated do not necessarily indicate low credit quality, and for such securities the investment adviser evaluates the credit quality. Holdings of the portfolio other than bonds are categorized under Other. Credit ratings are subjective opinions of the credit rating agency and not statements of fact and may become stale or subject to change.

Columbia Structured Credit

Risk/return characteristics
As of March 31, 2022

Risk/Return Characteristics *Three Year*	Columbia Structured Credit	FTSE One-Month U.S. Treasury Bill Index
Relative Return	4.29%	--
Tracking Error	8.19%	--
Information Ratio	0.52	--
Alpha	12.16%	--
Beta	64.54	1.00
R-squared	0.59	1.00
Standard Deviation	8.14	0.26
Sharpe Ratio	0.51	-0.42

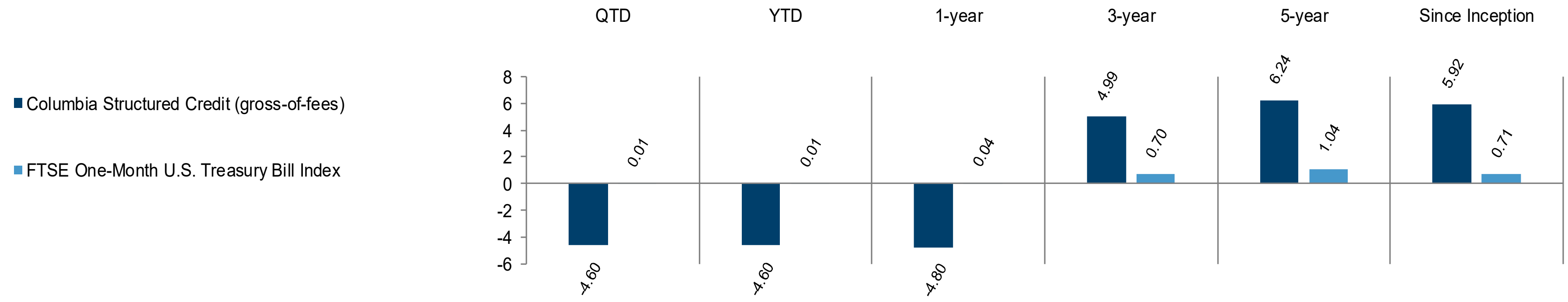
Source: Columbia Threadneedle Investments North America.

Past performance is not a guarantee of future results.

The information shown is based on the gross performance of the Columbia Structured Credit Composite. Returns over one year are annualized. Gross returns do not include the impact of management fees and other expenses that will reduce individual returns on a compound basis. **Please see the GIPS Report provided for additional performance information, including the impact of fees**.

Columbia Structured Credit Institutional Composite Performance

Average annual total returns (%) as of March 31, 2022 (USD)
Inception date: May 31, 2014



eVestment US Securitized Fixed Income - Non-Traditional percentile rank	YTD	1-year	3-year	5-year	Since Inception
Columbia Structured Credit	81	98	4	2	5
No. of observations in eVestment US Securitized Fixed Income – Non-Traditional peer group	53	53	50	43	38

Gross calendar year returns (%)	2021	2020	2019	2018	2017
Columbia Structured Credit	6.14	10.02	7.19	8.69	6.26
FTSE One-Month U.S. Treasury Bill Index	0.04	0.45	2.20	1.82	0.80
eVestment US Securitized Fixed Income - Non-Traditional percentile rank					
Columbia Structured Credit	25	5	49	2	50
No. of observations in eVestment US Securitized Fixed Income – Non-Traditional peer group	57	59	58	58	55

Source: Columbia Threadneedle Investments North America.

Past performance is not a guarantee of future results.

Returns over one year are annualized. Gross returns do not include the impact of management fees and other expenses that will reduce individual returns on a compound basis. **Please see the GIPS Report provided for additional performance information, including the impact of fees.**

Appendix

Custom Separate Account Fee for City of Jacksonville Employees Retirement System

Columbia Structured Credit

Proposed management fee
0.24% flat

5P process overview

We employ a formalized process called "5P" to determine that an investment team is adhering to their stated investment philosophy and process.

- Formally determine that the investment team is adhering to their philosophy and process.
- We do not tell portfolio managers what to do, we seek to ensure they do what they say.
- Results are reviewed to assess adherence to strategy, product viability and performance.

Biographies

Jason Callan
Senior Portfolio Manager, Head of Structured Assets, Head of Core and Core Plus
Jason Callan is head of Structured Assets, head of Core and Core Plus and a senior portfolio manager for Multi-Sector Fixed Income at Columbia Threadneedle Investments. He joined Columbia Threadneedle Investments in 2007 as a senior quantitative analyst covering Non-Agency RMBS, was promoted to portfolio manager in 2008, and head of Structured Assets in 2009. Mr. Callan assumed Multi-Sector portfolio management responsibilities in 2016 and became lead portfolio manager on Core and Core Plus strategies in 2017. Mr. Callan is also a co-portfolio manager on the Strategic Income portfolio and a member of the Global Fixed Income Asset Allocation Committee. Previously, Mr. Callan worked at GMAC in their Principal Investments unit as a portfolio manager and an analyst. He has been a member of the investment community, specializing in structured assets, since 2003. Mr. Callan received a B.S. in Economics from the University of Minnesota and an MBA from University of Minnesota's Carlson School of Management.

Thomas Heuer, CFA
Senior Portfolio Manager
Tom Heuer is a senior portfolio manager for the Structured Assets Team at Columbia Threadneedle Investments. He began his career at one of the Columbia Threadneedle Investments legacy firms in 1993 and held a variety of finance positions prior to joining the investment department in 2000. As a member of the Fixed-Income Group, he provided portfolio modeling and analytical support for a hedge fund before moving into his current capacity in October 2002. Mr. Heuer received a B.A. in accounting from the University of Wisconsin and an MBA with a concentration in finance from the University of Minnesota. He holds the Chartered Financial Analyst® designations.

Ryan Osborn, CFA
Senior Portfolio Manager
Ryan Osborn is a senior portfolio manager for the Structured Assets team at Columbia Threadneedle Investments. He began his career at Columbia Threadneedle Investments in 2004 on the Commercial Real Estate Lending team. In 2008, he was promoted to research analyst covering non-agency MBS. In 2012, he was promoted to Head of Structured Assets Research, overseeing all RMBS, CMBS and ABS research. In 2019, he became a senior portfolio manager focusing on structured assets credit. Mr. Osborn received a B.B.A. with a double major in Finance and Real Estate from the University of Wisconsin –Madison. In addition, he holds the Chartered Financial Analyst® designation.

Jacob Gotto
Senior Portfolio Analyst
Jacob Gotto is a senior portfolio analyst for the Structured Assets Team at Columbia Threadneedle Investments. Prior to joining the organization in October 2021, he was a data analyst at Carlson Capital Management. He has been a member of the investment community since 2019. After completing his B.S. in Mathematics from South Dakota State University, Jacob received his M.S. in Financial Mathematics from the University of Minnesota.

Biographies

Shawn M. Pierce, CFA
Head of Structured Assets Research
Shawn Pierce is head of research for the Structured Assets Team at Columbia Threadneedle Investments, responsible for credit research of non-residential ABS. Mr. Pierce joined one of the Columbia Threadneedle Investments firms in 2012. Previously, he worked for UniCredit as first the vice president of asset-backed finance and then transitioned to the director/restructuring officer on distressed credits. Prior to that, Mr. Pierce was a senior securitization analyst for Capital One Financial and Cendant Timeshare Resort Group. He has been a member of the investment community since 2003. Mr. Pierce received a B.A. from the University of Minnesota and an MBA with a concentration in finance from Florida International University. In addition, he holds the Chartered Financial Analyst® designation.

Michael J. Milosch, CFA
Senior Analyst
Michael Milosch is a senior analyst for the Structured Assets Team at Columbia Threadneedle Investments, responsible for providing research coverage on real estate investment trusts and commercial mortgage-backed securities. He joined one of the Columbia Threadneedle Investments legacy firms in 1997. Previously, he was an analyst at Washington National Insurance Company in Illinois. He has been a member of the investment community since 1986. Mr. Milosch received a B.A. from the University of Wisconsin and an MBA with a concentration in finance from DePaul University. He received the Chartered Financial Analyst® designation.

Mitch Helle-Morrissey, CFA
Senior Analyst
Mitch Helle-Morrissey is a senior analyst for the Structured Assets Team at Columbia Threadneedle Investments. Mr. Helle-Morrissey joined one of the Columbia Threadneedle Investments legacy firms in 2010 and has been a member of the investment community since 2001. Previously, he was the director of data architecture and data integration for Ameriprise Financial. Previous to that, Mr. Helle-Morrissey worked for Thomson Reuters as first the director of structured finance, MBS and ratings development and then transitioned to the head of data development, sales and trading content technologies. He received a B.S. in mathematics from the University of Minnesota and an MBA with a concentration in finance and international business from the University of Minnesota Carlson School of Management. In addition, he holds the Chartered Financial Analyst® designation.

Scott D. Kenney
Analyst
Scott Kenney is an analyst for the Structured Assets Team at Columbia Threadneedle Investments, responsible for providing credit research on non-agency residential mortgage-backed securities. Mr. Kenney joined Columbia Threadneedle Investments in 2018 and has been a member of the investment community since 2015. Previously, he was a securitized credit analyst at Amundi Smith Breeden. Mr. Kenney received a B.S. in Business Administration and a B.A. in Mathematics from the University of North Carolina at Chapel Hill, where he graduated with highest distinction.

Siao Lu
Associate Analyst
Siao Lu is an associate analyst on the Structured Assets Fixed Income Research team for Columbia Threadneedle Investments. Mr. Lu joined the firm in 2019 and has been a member of the investment community since 2017. Previously, he was a pricing strategy analyst with PennyMac Financial Services. Siao earned a B.S. in Statistics from the University of California, Los Angeles. In addition, he is a CFA Level II candidate.

Philip Coonley, CFA
Associate Analyst
Philip Coonley is an associate analyst for the Structured Assets Team at Columbia Threadneedle Investments. Prior to joining Columbia Threadneedle Investments in October 2017, he was a research analyst at Pavilion Advisory Group and financial analyst at Wilary Winn LLC. He has been a member of the investment community since 2015. Mr. Coonley received a B.S. in business from Miami University. He is a member of the CFA Society of Minnesota and holds the Chartered Financial Analyst® designation.

Biographies

Aaron Weinrib
Associate Analyst
Aaron Weinrib is an associate analyst for the Structured Assets Team at Columbia Threadneedle Investments. Prior to joining the firm, Aaron was a senior analyst at The Number. He has been a member of the investment community since 2016. He received a B.S. in Engineering and a Masters of Science in Engineering from the University of Pennsylvania.

Clinton J. Vilks
Trader
Clinton Vilks is a trader for the Structured Assets Team at Columbia Threadneedle Investments. He joined one of the Columbia Threadneedle Investments firms in June 2015 after receiving a B.B.A. in finance from the Tippie College of Business at The University of Iowa. He is currently working towards the Chartered Financial Analyst designation.

Brian Dirgins, CFA
Trader
Brian Dirgins joined Columbia Threadneedle in 2018 and is responsible for the trading of structured products. Previously, Mr. Dirgins spent 17 years at Hartford Investment Management Company where he traded structured products, managed a short duration mutual fund and traded municipal bonds. Prior to his tenure at Hartford, he spent four years at Conning Asset Management where his responsibilities included fixed income trading and portfolio analysis. He has spent 21 years in the investment community focusing on structured assets and 11 years prior to that in finance roles in banking, with his last role as Treasurer of a community financial institution. He holds a B.A from Bryant University and an MBA from the University of Hartford. In addition, he holds the Chartered Financial Analyst designation.

Kurt Meyer
Trader
Kurt Meyer is a trader for the Structured Assets team at Columbia Threadneedle Investments. He joined the firm in 2020. Mr. Meyer is a graduate of Illinois Wesleyan University where he studied Economics and Finance. In addition, Kurt is currently working towards the Chartered Financial Analyst® designation.

Biographies

John T. Dittrich
Senior Portfolio Manager
John Dittrich is the senior portfolio manager for the Real Estate Loan Investment Team at Columbia Threadneedle Investments. He joined one of the Columbia Threadneedle Investments firms in 1989. Prior to being promoted to his current position in 2013, he worked as an asset manager, senior mortgage underwriter and associate portfolio manager within the commercial real estate group. Mr. Dittrich received a B.S. in economics from The Wharton Business School of the University of Pennsylvania with a double major in finance and accounting. He also received an MBA degree from the University of St. Thomas.

Chris Cervenka
Senior Commercial Loan Underwriter
Mr. Cervenka is responsible for investing in whole loan mortgages on behalf of Ameriprise affiliates. Mr. Cervenka joined the firm in 2016 and has been active in commercial real estate since 2002. Prior to joining the firm, he was a Research Analyst at Nuveen Asset Management where he was part of the Open End REIT fund team.

John McCarthy
Senior Commercial Loan Underwriter
John McCarthy is a senior mortgage underwriter on the Real Estate Loan Management Team for Columbia Threadneedle Investments. In this role he is responsible for the origination and management of commercial real estate investments on behalf of RiverSource Life Insurance Company. John joined one of the Columbia Threadneedle Investments firms in 2013. Previously, he worked at North Marq Capital and was responsible for the underwriting and valuation of commercial real estate investments in Minneapolis and St. Paul, Minnesota. He has been a member of the investment community since 2003. John received a B.A. in Economics from St. John's University and an MBA in Finance from the University of Minnesota Carlson School of Management.

Dominic Berntson
Senior Mortgage Underwriter
Dominic Berntson is a senior mortgage underwriter for Ameriprise Financial. His responsibilities include sourcing new loans for RiverSource and managing the existing portfolio. He joined the firm in 2018. Previously, he was a vice president and senior investment analyst in loan underwriting for NorthMarq Capital. Mr. Berntson received his Bachelor of Arts in Psychology and Speech Communications from the University of St. Thomas. He received a Masters of Business Administration and a Masters of Real Estate and Construction Management from University of Denver. In addition, he holds the CCIM (Certified Commercial Investment Member) designation.

Columbia Structured Credit Composite

GIPS Report

Columbia Threadneedle Investments North America

Reporting Currency: USD

Statement of Performance Results

Calendar Year	Gross-of-fees Return (%)	Net-of-fees Return (%)	Index Return (%)	Composite 3-Yr St Dev (%)	Index 3-Yr St Dev (%)	Internal Dispersion (%)	Number of Portfolios	Total Composite Assets ($ mil.)	Total Firm Assets ($ bil.)
2021	6.14	5.47	0.04	7.81	0.29	N.A.	≤ 5	4,219	461
2020	10.02	9.32	0.45	7.68	0.25	N.A.	≤ 5	2,131	396
2019	7.19	6.50	2.20	2.38	0.19	N.A.	≤ 5	1,846	353
2018	8.69	7.99	1.82	3.05	0.20	N.A.	≤ 5	1,000	320
2017	6.26	5.57	0.80	2.99	0.10	N.A.	≤ 5	228	364
2016	7.39	6.70	0.21	N.A.	N.A.	N.A.	≤ 5	268	333
2015	3.27	2.60	0.02	N.A.	N.A.	N.A.	≤ 5	222	328
2014 (IP)	2.61	2.25	0.01	N.A.	N.A.	N.A.	≤ 5	165	333

Inception Date 05/31/2014

1. Columbia Threadneedle Investments North America claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Columbia Threadneedle Investments North America has been independently verified for the periods of January 1, 1993 to December 31, 2020. The verification report is 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. 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.

2. Columbia Management Investment Advisers, LLC, is an SEC-registered investment adviser (formerly known as RiverSource Investments, LLC prior to May 1, 2010). For purposes of compliance with the GIPS standards, Columbia Management Investment Advisers, LLC has defined the Firm as Columbia Threadneedle Investments North America (prior to January 1, 2021, the Firm was known as Columbia Management Investments), an operating division of Columbia Management Investment Advisers, LLC that offers investment management and related services to institutional clients. As of May 1, 2010, certain long-term assets of Columbia Management Advisors, LLC (“CMA”) were merged into Columbia Threadneedle Investments North America and included in firm assets as of that date. The Firm was redefined in January 2011 to include stable value assets that were previously excluded from the firm. Beginning March 30, 2015, the Columbia and Threadneedle group of companies, which includes multiple separate and distinct GIPS-compliant firms, began using the global offering brand Columbia Threadneedle Investments. As of January 1, 2017, the Firm was redefined to include Columbia Wanger Asset Management, LLC, a wholly-owned subsidiary of Columbia Management Investment Advisers, LLC. As of November 1, 2020, the Firm was redefined to include Columbia Cent CLO Advisers, LLC.

Columbia Structured Credit Composite

GIPS Report

Columbia Threadneedle Investments North America

Reporting Currency: USD

3. The strategy consists of a discretionary portfolio whose assets primarily are invested in the full spectrum of mortgage-related assets. Under normal circumstances, the strategy will invest at least 80% of its net assets in mortgage-related assets, including, but not limited to, mortgage-related securities that are either issued or guaranteed as to principal and interest by the U.S. Government, its agencies, authorities or instrumentalities, mortgage-related securities issued by non-U.S. governments, and residential and commercial mortgage-backed securities issued by non-governmental entities, all of which may be represented by derivatives such as forwards, options, futures, or swap agreements. The benchmark is the FTSE 1-Month U.S. Treasury Bill Index. The composite was created June 1, 2014.

4. The gross-of-fees returns are time-weighted rates of return net of commissions and other transaction costs. Net-of-fees returns are calculated by deducting from the monthly gross-of-fees composite return one-twelfth of the highest client fee (model fee) in effect for the respective period. Composite returns reflect the reinvestment of dividends and other earnings.

5. Internal dispersion is calculated using the equal-weighted standard deviation of the annual gross returns of those portfolios that were included in the Composite for the entire year. If the composite contains five or fewer accounts for the full year, a measure of dispersion is not statistically representative and is therefore not shown.

6. The three-year annualized standard deviation measures the variability of the gross-of-fees composite and benchmark returns over the preceding 36-month period. It is not required to be presented when a full three years of performance is not yet available.

7. Portfolios are valued and composite returns are calculated and stated in U.S. dollars. Returns are calculated net of non-reclaimable withholding taxes on dividends, interest, and capital gains. Policies for valuing investments, calculating performance, and preparing GIPS Reports, as well as the list of composite descriptions, list of pooled fund descriptions for limited distribution pooled funds, and the list of broad distribution pooled funds are available upon request.

8. The following fee schedule represents the current representative fee schedule used as the starting point for fee negotiations for institutional clients seeking investment management services in the designated strategy: 0.40% on the first $25 million; 0.35% on the next $50 million; 0.30% on the next $75 million; negotiable on all assets over $150 million. Gross of fee performance information does not reflect the deduction of management fees. The following statement demonstrates, with a hypothetical example, the compound effect fees have on investment return: If a portfolio's annual rate of return is 5% for 5 years and the annual management fee is 64 basis points, the gross total 5-year return would be 27.6% and the 5-year return net of fees would be 23.6%.

9. The benchmark is the FTSE 1-Month Treasury Bill Index that is a market-value-weighted index of public obligations of the U.S. Treasury with maturities of one month. Index returns reflect the reinvestment of dividends and other earnings and are not covered by the report of the independent verifiers.

10. Past performance is no guarantee of future results and there is the possibility of loss of value. There can be no assurance that an investment objective will be met or that return expectations will be achieved. Care should be used when comparing these results to those published by other investment advisers, other investment vehicles and unmanaged indices due to possible differences in calculation methods. Registration with the SEC as an investment advisor does not imply a certain level of skill or training.

11. Prior to 2/24/2020, the composite was referred to as the Columbia Mortgage Opportunities Composite.

Important information

Information as of March 31, 2022 unless otherwise noted. This information does not constitute investment advice and is issued without regard to specific investment objectives or the financial situation of any particular recipient. Individual performance returns may differ from those of the composite due to the size and timing of cash flows as well as your individual investment objectives.

Any portfolio holdings information provided by Columbia Management Investment Advisers, LLC and/or its agents or affiliates is proprietary and confidential. References to specific securities are included as an illustration of the investment management strategy and are not a recommendation to buy or sell. Holdings may represent only a small percentage of the portfolio and are subject to change based on market and other conditions. It should not be assumed that any particular security was or will prove to be profitable or that decisions in the future will be profitable or provide similar results to the securities discussed.

The statistical data and related information presented in this material is designed to assist the reader in making an informed investment decision. Use of different statistical data and related information might portray different historical results. The information presented does not portray a comprehensive picture of the investment objectives, strategies and methodologies employed by the products or managers identified, and the reader is encouraged to conduct its own due diligence regarding any differences between the products and managers identified.

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Correlation ranges from+1 to -1. Positive correlation indicates returns moving in the same direction, negative correlation indicates returns moving in opposite directions, and a correlation of 0 would indicate no relationship between the movement of the two returns.

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Schroders capital

Securitized Product & Asset-Based Finance, Flexible Secured Income

Presentation to the board of The City of Jacksonville Retirement Systems

19 May 2022

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Michelle Russell-Dowe,
Nick Pont
Walter Lindsey

Global Head of Securitized Products & Asset-Based Finance, Head of Product Strategy & Senior Institutional Director

Schroders Overview

A worldwide team dedicated to asset management

Focus

- Asset management is our main business

Experience and independence

- Over 200 years of financial services experience
- Founding Schroder family controls 47% of voting equity

Resources

- Well established teams in all key investment regions
- Over 900 investment professionals worldwide
- Over 5,600 employees in 37 locations

Financial strength

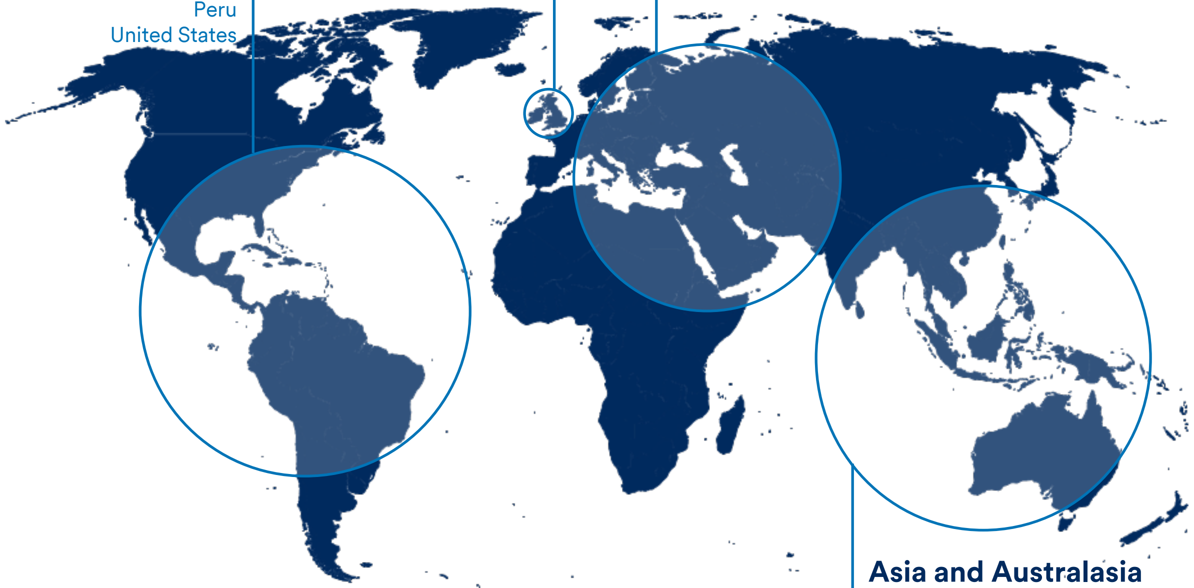
- $967.5* billion in assets under management (AUM)

Schroders offices

The Americas
Argentina
Bermuda
Brazil
Canada
Chile
Mexico
Peru
United States

UK and Channel Island
Guernsey[1]
Jersey[1]
United Kingdom[1]

Europe and Middle East and Africa
Austria
Belgium
Denmark
Finland
France
Georgia
Germany[1]
Gibraltar[1]
Ireland
Israel
Italy
Kenya
Luxembourg
Netherlands
South Africa
Spain[1]
Sweden
Switzerland[1]
United Arab Emirates



Asia and Australasia
Australia
China
Hong Kong1
Indonesia
Japan
Republic of Korea
Singapore[1]
Taiwan

Source: Schroders, as of June 30, 2021. *Assets under management include Joint Ventures and Associates.
Investment offices in blue.
[1]Wealth Management.

Schroder Capital Securitized Products Team

Uniquely positioned to deliver through dynamic market change

Experienced Team

1

- Longest tenure in the industry
- Experience together through cycles
- Lessons learned create process
- Diverse backgrounds
- Client focused institutional background
- Lasting client partnerships

Consistent Process

2

- Public/private process allows a comprehensive survey & benefits all levels of risk
- Process is consistent across the platform
- Process developed by the same team over cycles
- Flexible best ideas process grounded in risk management
- Long track record, globally

Flexibility-Diverse Tools

3

- A global platform, with a diverse tool kit, allows management through a cycle
- Experienced leaders with a multi-regional platform and core partners/resources
- Experienced at the asset level/ lending, financing
- Focus on regions, on assets, on structures that are strong

Sustainability-Innovation

4

- We have a track record of being able to use data and address market shifts
- We have a quantifiable process
- We have incorporated social pillars for decades
- We will create/structure when we need control/quality

Source: Schroders Capital. The views and forecasts shared are those of the Schroders Capital Securitized Products & Asset-Based Finance Team and are subject to change.

Platform continuum from alternative fixed income to private credit

	Liquid credit alternatives				Alternative credit (private/ hybrid)		
Strategy name	High Quality Securitized Income	Securitized Index Investment Grade (IG)	Securitized Credit Investment Grade (IG)	Securitized Credit Unconstrained	Opportunistic Securitized	Opportunistic Credit Funds	Real estate loans
Objective	Liquid, low duration high grade alternative, AAA/AA quality with low duration	Alternative to Aggregate Index, Agency MBS Index ABS Index	Investment grade credit alternative, income with low duration	Credit alternative, high income with daily trading and low duration	Credit alternative/ direct lending alternative	Flexible opportunistic return focused on asset-secured lending and securities	Secured income
AUM	$1bn AUM	$5.5bn AUM	$3.5bn AUM	$2bn AUM	$2bn AUM	$1.5bn	$1.0bn
Target (over a market cycle)	Cash+ 100 bps per annum	Index[1] +50-100	Cash + 200 bps per annum	Cash + 350 bps per annum	Varies: Cash + 400 bps per annum to 10%	12%-15%	Varies (4%-10%)
Main Investments	Global Securitized – AAA/AA	Global Securitized – IG only	Global Securitized – IG, <30% Below IG	Global Securitized	Global Securitized + Secured Asset-Based Finance	Global Securitized + Secured Asset-Based Finance	Senior stabilized Senior transitional Senior mezzanine (US CRE loans)
Liquidity	Daily (T+3)	Mandates only, strategic, not tactical. Liquid securities	Daily (T+3), notice on flows >$100mm	Daily (T+4) 5 BD Notice on flows >$50mm	18-month lock-up/quarterly	None	None
Leverage-Financial	No	No	No	No	Varies	Yes	Varies
Vehicles	SUTL: Schroder AAA Flexible ABS Fund (SAAAF)	SHIFTR*- ERISA (Launching July 2022)	UCITS – Schroder ISF Securitised Credit Fund (SISZL) '40 ACT- HF/ Schroder Securitized Income Fund	UCITS – Schroder ISF Alternative Securitised Income Fund (SASZI)	Evergreen: FLEXSI* (USD) – GP/LP, SOSI (GBP) – UK pension PILLARS* – ERISA EFLEX* - ERISA (Launching May 2022)	FOCUS II* – Closed October 30th, 2020 FOCUS III, first close September 2022	Loan Opportunities* – Closed October 31, 2018 Taft Hartley Income* – Final Close 2022 Evergreen: Permanent RE loans (PERLS* - 2022)

Source: Schroders as of March 2022. There can be no guarantee that any investor objective or outcome will be achieved. UCITS funds are Schroder International Selection Funds which is referred to as Schroder ISF. SUTL and Schroder ISF are not available to US investors. For illustrative purposes, intended only to demonstrate the depth and breadth of the Team's investment capabilities. Capital preservation and protection references do not reflect an absolute guarantee against capital loss. 1. Indexes include Agency MBS, Intermediate Aggregate & ABS indices. *Limited to those US investors who are qualified purchasers.

Schroders Securitized Products & Asset-Based Finance

All-weather secured finance, from liquid securitized to alternative credit

Objectives

- Attractive risk adjusted income/return
- Low sensitivity to interest rates/ low volatility
- Aligned with strong fundamentals & optimization thru structure

Benefits

- Diversification from traditional asset classes
- Flexible range of solutions to adapt to a market/cycle
- Tool-kit allowing flexible access to attractive opportunity across consumer, housing, real-estate, equipment finance and business lending

Credit cycle intelligence

- Wide range of underlying assets creates opportunity to emphasize specific sectors as **fundamentals** support developing opportunity
- Flexibility to own securitized debt or loans allows use of **structure** to enhance return potential or create a level of downside protection. Moving between loans and securities enables us to ensure access to the best fundamentals with the control over quality we demand
- Earn alpha through inefficiencies such as market size or complexity and take advantage of **valuations** where they are most attractive

Source: Schroders. The opinions stated in this document are those of the Schroders Securitized Credit team and are subject to change. There can be no guarantee that any investment objectives or outcomes will be achieved. Diversification cannot ensure profits or protect against loss of principal.

Schroders Securitized Products Platform

Experienced, proven team with a long history together through cycles

A pioneer in investing in and structuring asset-based debt

1988 – Hyperion Capital, formed by **Lewis Ranieri**, father of the securitized credit market. Buyers of the first non-agency MBS b-piece and one of the first b-piece buyers in the CMBS market.

2005 – Business bought by **Brookfield Asset Management** forming Hyperion-Brookfield.

2016 – Business acquired by Schroders, retaining all client relationships including Brookfield sub-advisory.

2018 – Sourcing agreement with **A10 Capital**, a US commercial real estate (CRE) loan originator and servicer.

2020 – Loan acquisition agreement with Lionheart, an affiliate of **Fisher Brothers**, a 100+ year old owner/operator of US real estate.

2021 – Loan acquisition agreement with **Grant Street**, a US CRE loan originator .

Evolving products as market conditions change

- **1993** – Securitized Index
- **2007** – Securitized Credit
- **2008** – Opportunistic Securitized Public/Private
- **2018** – Loan Opportunity Fund & CML flow
- **2020** – FOCUS II & Taft Hartley Income
- **2021** – FLEXSI, PILLARS
- **2022** – E-FLEX FOCUS III SAAAF

Experienced team with decades together through cycles

Managing securitized strategies since the inception of the non-agency market.

Team of 18 led by Michelle Russell-Dowe:

Michelle Russell-Dowe

Anthony Breaks

Jeffrey Williams

Christopher Ames

Nicholas Pont

Over $18 billion in AUM

Across a range of strategies: bespoke solutions provides through fund structures and segregated mandates.

Consistent process across a continuum of investment products

Securitization is term financing of debt contracts. We have a broad investment tool kit, allowing incorporation of the full range of senior and subordinate securities, short-term and longer-term financing, risk transfer and direct lending on assets.

Flexible best ideas within a proprietary framework

Proven process incorporating proprietary models, data and analytics built to address the opportunities and mitigate risks of higher income securities in an ESG framework.

Source: Schroders, as at May 2022. Past performance is no guarantee of future results.

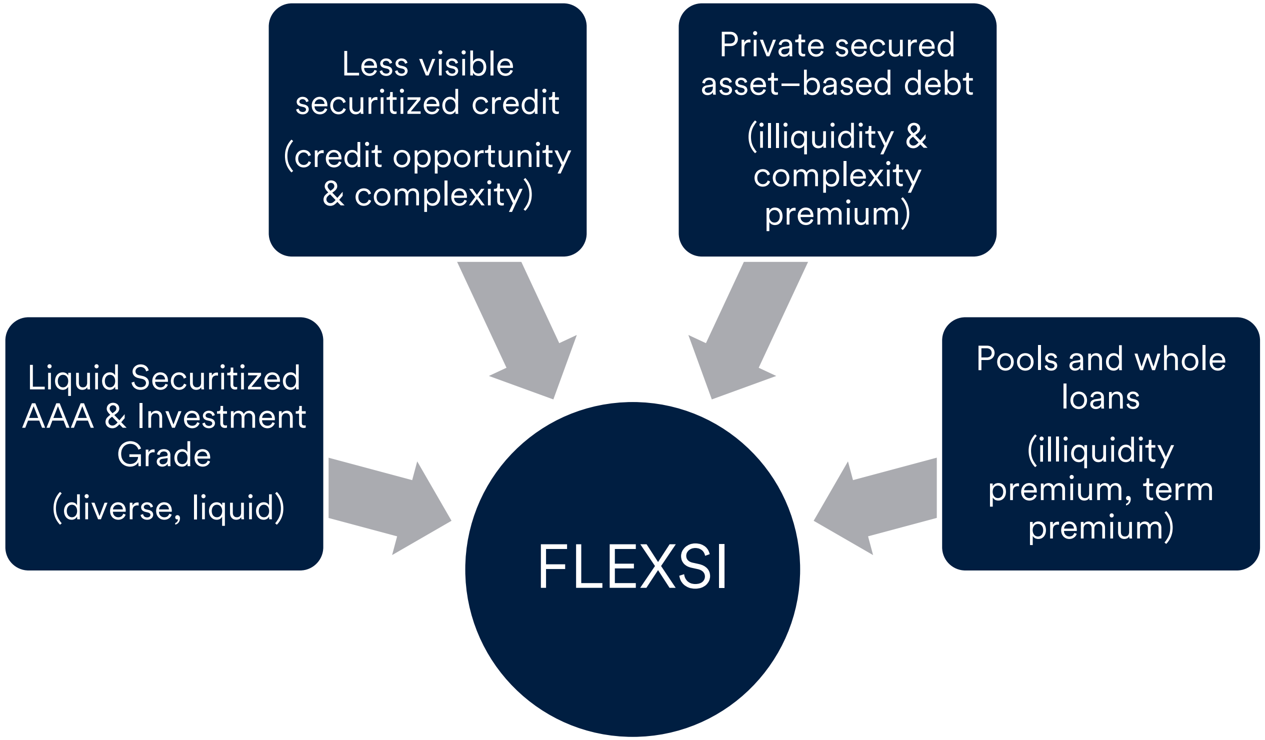
Flexible Secured Income (FLEXSI)

Let’s talk about Flex: flexible, global, best ideas approach

Robust, predictable cashflows offer quality income and diversification of risk premia

We use a diverse set of investments through which we seek to add predictable income and diversification to a portfolio

- **We use diversified risk premia to ensure a more predictable return.** We can use both public or private market to earn liquidity or complexity premium, in addition to the traditional credit, prepayment or term premiums
- **We access a diverse range of sectors to navigate through cycles.** The breadth of the exposures allows us to emphasize sectors with fundamentals we like, with the protection and control we require
- **A diverse tool kit offers a range of tools to mitigate risk**: credit support, lower LTV, better loan structure, shorter tenor. This allows us to mitigate risk/volatility, important when volatility is high
- **We can capitalize on opportunity where it exists.** Inefficiency and opportunity may occur in lending, or in securities, given regulation and the involvement of the Central Banks
- We have the ability to access large, liquid, primary and secondary markets, as well as more unique public or private markets, to create an **evergreen opportunity**



We have a long history of successfully identifying opportunity and developing a variety of return profiles that access it

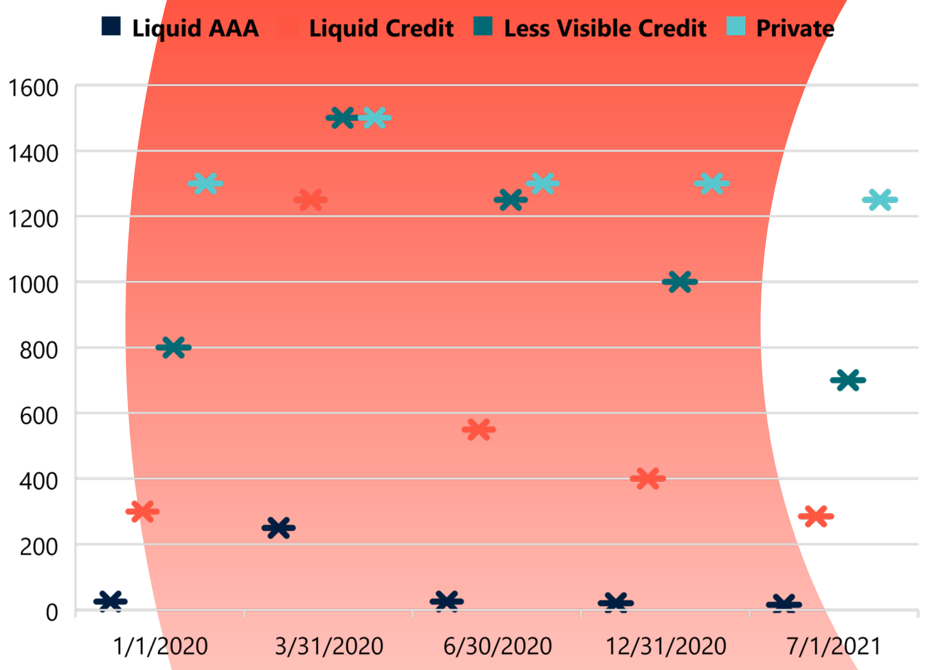
Source: Schroders Capital. The opinions stated in this document are those of the Schroders Capital Securitized Products & Asset-Based Finance Team and are subject to change. There can be no guarantee that any investment objectives or outcomes will be achieved. Diversification cannot ensure a profit or protect against the loss of principal.

Flexibility is a benefit in a market that is dynamic

Moving across opportunities as markets develop is key

Using public and private markets – go where opportunity presents

- Liquid markets (securitized AAA) experience dislocation in a liquidity crisis first. They also recover quickly when policy support is applied. **These markets are the first to evidence dislocation and can be used for liquidity and relative value opportunity**
- Visible/ traditional credit markets recover once policy support establishes a floor and credit is understood. Recovery happens first in investment grade securities and then progresses to HY. Securitized credit typically lags recovery. **When valuations are deeply discounted, these markets can be an attractive, recovery play**
- Less visible markets represent a clear opportunity where capital flows are less efficient. **Complexity premium and liquidity premium can be captured here when credit fundamentals are strong.** Smaller markets can be an opportunity for experienced players
- Private markets for loans and asset-financing are much less crowded and can be a consistent source of income, and less influenced by Central Bank liquidity. Quality can be controlled here, and there is more flexibility to work-out and manage assets. When securities trade at par, this is a much safer source of income. **We believe here you earn returns from liquidity premium and take less risk**
- The ability to allocate across opportunities allows more efficient capture of excess return, especially where decisions take time. We create lower volatility returns than our peers that focus on securitized only



Risk premium across liquid, less visible and less liquid markets has not been synchronized

Source: Schroders Capital. The opinions stated in this document are those of the Schroders Capital Securitized Products & Asset-Based Finance Team and are subject to change. There can be no guarantee that any investment objectives or outcomes will be achieved.

What does a private investment look like: Jax 3 safer return

LOCATION: Jacksonville, FL metro area, portfolio of Three Walmart Neighborhood Market grocery anchored properties
Jacksonville is ranked #12 out of 390 in our market rankings, with very low vacancy 3.8% and strong rent growth 9.1%.

LOAN TYPE/ COLLATERAL: Senior mezzanine loan secured by three stabilized (fully occupied) Walmart Neighborhood Market grocery anchored properties. The sponsor is a Jacksonville based real estate investment corporation, specializing in retail shopping center development, management and renovation. They acquired the properties in 2013 and converted from the then existing Food Lion grocery anchors.

ORIGINATION DATE: May 2017

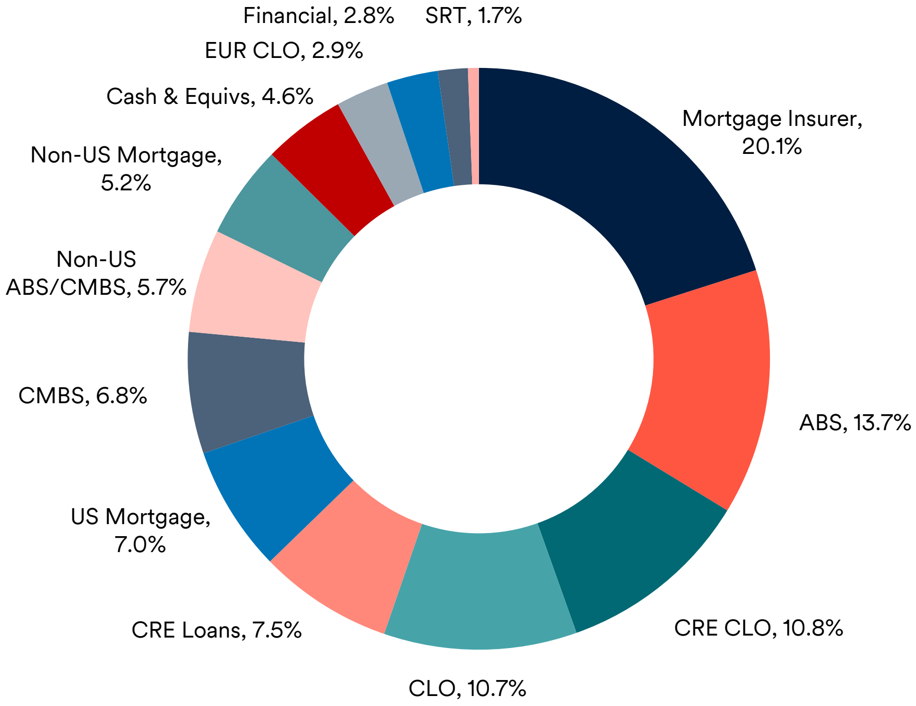
LOAN STATUS: Repaid in full February 2022; during the term the property was never less than 95% occupied, even through COVID
9.98% Gross IRR / 1.27x Multiple

Loan Overview			
Borrower	Gatlin Development Company, Inc.	Loan to Value	**67%**
Mezzanine Lender	Schroder opportunistic composite portfolio	Loan Term	72 Months
Total Square Feet	204,973	Extension Options	None
Loan Amount	**$3,520,000**	Fixed Coupon	**9.75%**

The opinions stated in this document are those of the Schroders Securitized Credit team and are subject to change. Not a recommendation to buy or sell any security. Source: Schroders Capital. Past performance provides no guarantee of future results and may not be repeated.

FLEXSI allocation as of March 31, 2022

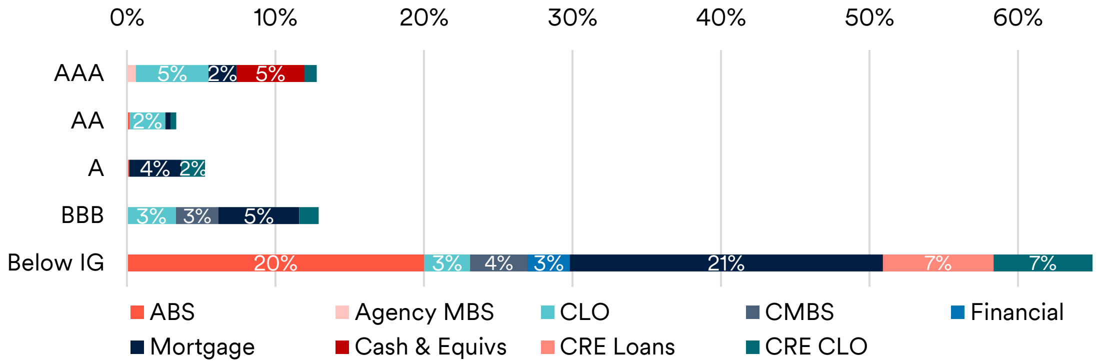
Sector allocation



Portfolio Characteristics

	Portfolio
Yield	6.2%
Spread	468 bps
Weighted Average Life	2.8 yrs
Modified Duration	2.2 yrs
Duration	0.0 yrs

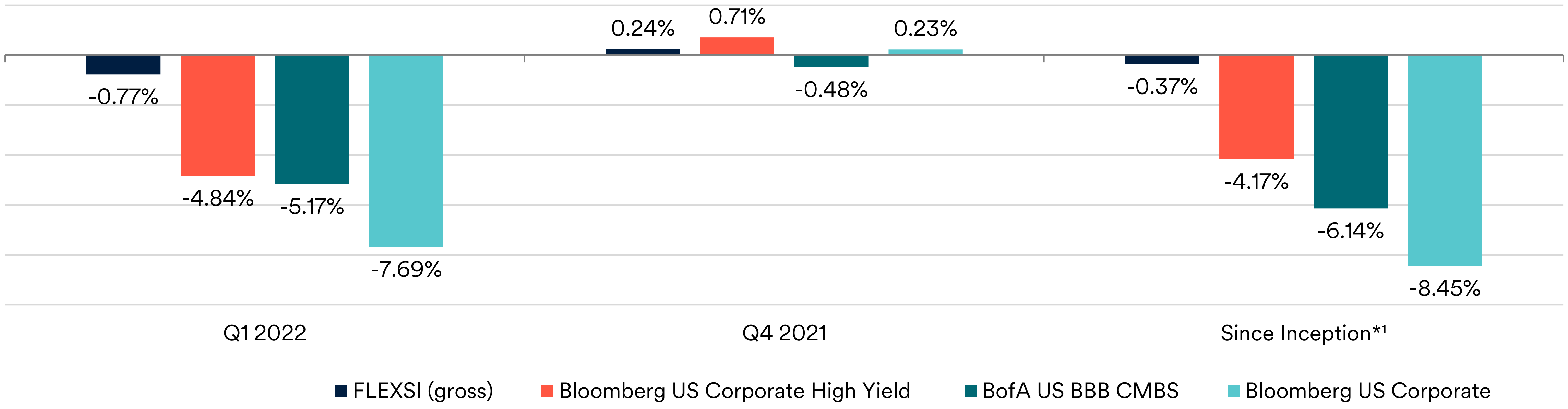
Credit allocation by sector



Source: Schroders Capital. Composition is subject to change over time. The sectors mentioned are for illustrative purposes only and not a recommendation to buy/sell. Any references to securities, sectors, regions and/or countries are for illustrative purposes only. Credit allocation and average credit quality reflect the higher of S&P, Moody's, Fitch, DBRS, KBRA, MSTA. Past performance provides no guarantee of future results.
ABS is 11.1% Auto, 1.3% Single-Family Rental, 1% Student ABS, 0.3% ABS Other.

Portfolio performance

Q1 2022

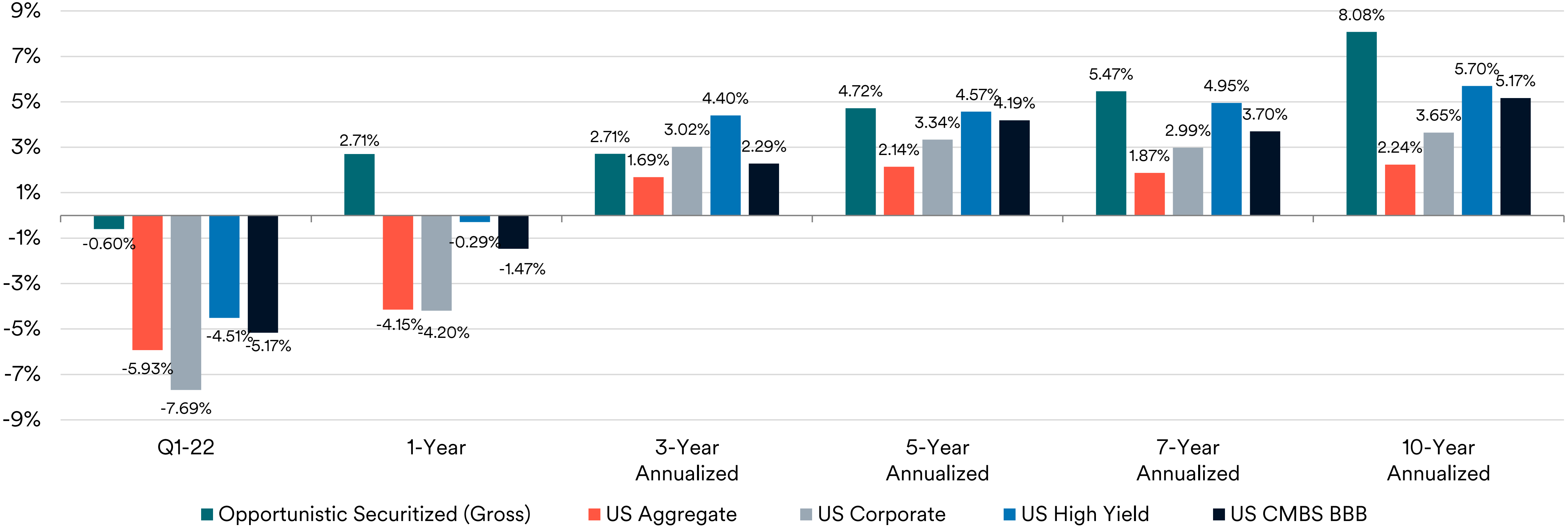


- Versus other credit indices and peer funds, the fund's YTD performance and since inception performance has been strong
- The fund has material income, and is backed by strong credit and remains well positioned given its 6.2% yield
- We expect the funds current income to increase as the forward curve is realized and we have no credit concerns today

Source: Schroders. [1]Official performance inception date is August 31, 2021. Past performance provides no guarantee of future results and may not be repeated. The value of investments can go up or down and may not return to the original amount invested. Indexes are unmanaged. Investors cannot invest directly in any index. Actual results would vary due to, among other things, fees and expenses. Returns would have been lower had fees been deducted.

Schroder Opportunistic Securitized

March 2022



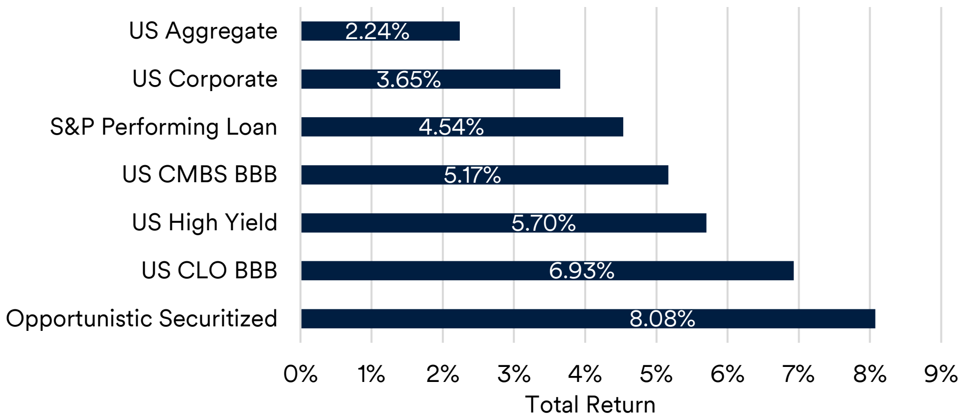
Source: Schroders. Refers to Opportunistic Securitized composite. Returns are annualized. Strategy inception date is July 1, 2008. Gross performance results for the account do not reflect the deduction of advisory fees, brokerage or other commissions and other expenses a client would have paid and returns will be reduced accordingly. Actual fees will vary depending on, among other things, the applicable fee schedule and account size. Performance data quoted represents past performance, which does not guarantee future results. See Appendix for additional disclosures.

Indices: Bloomberg US Aggregate Index; Bloomberg US Corporate Index; ICE BofA US High Yield Index; ICE BofA BBB US Fixed Rate CMBS. Investors cannot invest directly in any index. Actual results would vary due to, among other things, fees and expenses.

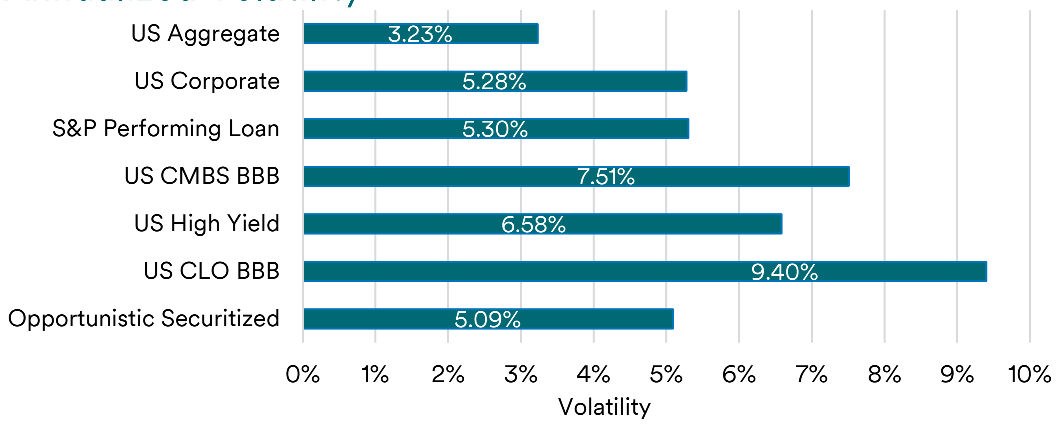
10-year returns and return correlation matrix

As of March 2022

Returns



Annualized Volatility



Correlation matrix

Correlation Matrix	Opportunistic Securitized (Gross)	J.P. Morgan CLO BBB	S&P/LSTA Leveraged Performing Loan	ICE BofA BBB US Fixed Rate CMBS	ICE BofA US High Yield	Bloomberg Barclays US Corporate	Bloomberg Barclays US Aggregate
Opportunistic Securitized (Gross)	1.00	0.79	0.72	0.69	0.65	0.50	0.18
J.P. Morgan CLO BBB	0.79	1.00	0.90	0.71	0.76	0.47	0.07
S&P/LSTA Leveraged Performing Loan	0.72	0.90	1.00	0.70	0.86	0.54	0.08
ICE BofA BBB US Fixed Rate CMBS	0.69	0.71	0.70	1.00	0.64	0.60	0.34
ICE BofA US High Yield	0.65	0.76	0.86	0.64	1.00	0.66	0.28
Bloomberg Barclays US Corporate	0.50	0.47	0.54	0.60	0.66	1.00	0.84
Bloomberg Barclays US Aggregate	0.18	0.07	0.08	0.34	0.28	0.84	1.00

Source: Bloomberg, BAML, Schroders Capital. Past performance is no guarantee of future results. Returns would have been lower had fees been deducted.

FLEXSI: summary of offering terms for the fund

Fund Name	Schroder Flexible Secured Income (FLEXSI)
Investment Objective	The primary investment objective: The Fund seeks to generate income and capital appreciation, with low exposure to interest rates, through investment in public and private market debt & securities, generally related to securitized sectors and secured finance Return target: Cash +5% p.a.
Potential Investments	– ABS, MBS, CMBS, CLO: senior, junior and residual interests – Risk transfer or capital relief transactions – Debt secured by assets/receivables – Other: REIT debt or equity, loans, warehouse financing, closed-end fund invested in structured credit/structured products
Management, perf fees	65bps / none
Minimum Investment	$10 million
Fund Term / Liquidity	18-month soft lock[1], quarterly subscriptions and redemptions, redemptions 90-days notice, subscriptions 10 BDs before next subscription date
Use of Leverage	No leverage
Timing	Fund launched 9/30/2021
Structure	Master/Feeder, Delaware/Cayman LP. ERISA limited to 25%

Source: Schroders Capital. Guidelines are subject to change. Not intended as an offer or solicitation for the purchase or sale of any financial instrument. There can be no guarantee that any investment objectives will be achieved. The investment terms and service providers noted herein are superseded by the terms and service providers noted in the Schroder FLEXSI Offering Documents. Offering Documents contain material information about the investment objective and the terms and conditions of an investment in the Schroder FLEXSI Fund as well as other relevant information, including important investment risk factors. Offering Documents should be reviewed prior to investing in the Fund. All expressions of opinion are subject to change without notice and are not intended to be a forecast of future events or results. Please refer to the appendix for definitions of terms used in the presentation. 1. The fund has an early redemption fee of 5% which is paid if money is redeemed prior to the 18-month holding requirement.

Our process and philosophy

A sustainable cash flow profile is the cornerstone of our risk managed framework

Process and philosophy begins with being engaged

Seek to generate attractive & sustainable return through understanding collateral and structure

Our philosophy

- We believe an in-depth understanding of collateral cash flow and the impact of structure is the foundation of generating returns in a market where size and complexity leads to exploitable inefficiency.
- The consideration of ESG factors complements the assessment of the quality of the collateral and the sustainability of the cash flows.

Consistent, proven investment process that seeks to capitalize on differentiated sources of risk adjusted return

Proprietary analytics that can be used to generate alpha and mitigate risk in some higher income securities

Portfolio construction that benefits from combinations which optimize return and minimize downside

We believe that clients do not have to choose between sustainability and alpha

Source: Schroders Capital. There is no guarantee the Environmental, Social and Governance (ESG) approach to investment analysis will enhance a portfolio's performance or protect against a loss of principal.

Flexible best ideas execution requires several pillars

Pillars to support the process

1

Team structure

- No silos
- Strategy teams
- Diversity of perspective
- 19 people with over two decades of experience

2

Tool kit

- Scalable markets
- Idiosyncratic opportunity
- Ability to self-generate the right point of asset exposure

3

Systems

- Consistent approach
- Common ground (risk profiles)
- Analytics that work across sectors, investment and risk
- Assessment across risks, including sustainability

4

Risk Management

- Understand factors & sensitivity
- Monitor and implement the desired risks
- Consistently deploy across similar strategies
- Efficiency to benefit from scale
- Prepare, perform, reflect
- Feedback through attribution analysis

Source: Schroders Capital. The views and forecasts shared are those of the Schroders Capital Securitized Products & Asset-Based Finance Team and are subject to change.

Our tool kit is broad, covering liquid to private

Right tool, right time

	Housing	Commercial RE	Asset based	Inefficiency
Public securitized	RMBS/ Agency & Non-Agency	Multi-borrower (conduit) CMBS	Credit card/unsecured loan ABS	Liquidity, complexity, credit, term
	Credit risk transfer (GSE/ MI)	Single-asset/single borrower CMBS	Auto ABS	
	Mortgage derivatives	CRE CLO	Student loan ABS	
	Non-US MBS	Non US CMBS	Equipment ABS (solar, shipping)	
	Single family rental ABS	Derivative index	Esoteric ABS (receivables finance)	
	Multi-family CMBS/agency DUS pools		CLO / SME	
Public securities	Mortgage REIT	Commercial REIT/ Operators	EETC	Liquidity, credit, term
	Mortgage insurers, originators, servicers, builders	ETF	Consumer finance	
	Secured term loans	Secured term loans	ETFs	
	ETF	BDC		
Private market	Mortgage loans- performing / re-performing/ non-performing	Investment grade (stabilized) loans	Leases/loans/ receivables	Liquidity, credit, term
	Single-family rental, income property	Bridge (transitional) loans	Residual interests	
	Warehouse/acquisition finance	Senior mezzanine loans	Warehouse/acquisition finance	
	Significant risk transfer (SRT)/ bank capital relief	Social (multi-family) finance	Significant risk transfer (SRT)/ bank capital relief	

Source: Schroders Capital. Shown for illustrative purposes and should not be viewed as investment guidance.

Understanding risk profile is key

Differentiated approach managed through cycles

Philosophy: An in-depth understanding of collateral cash flow and the impact of structure is the foundation of generating returns in a market where size and complexity leads to exploitable inefficiency. Portfolio construction benefits from combinations which optimize return and minimize downside

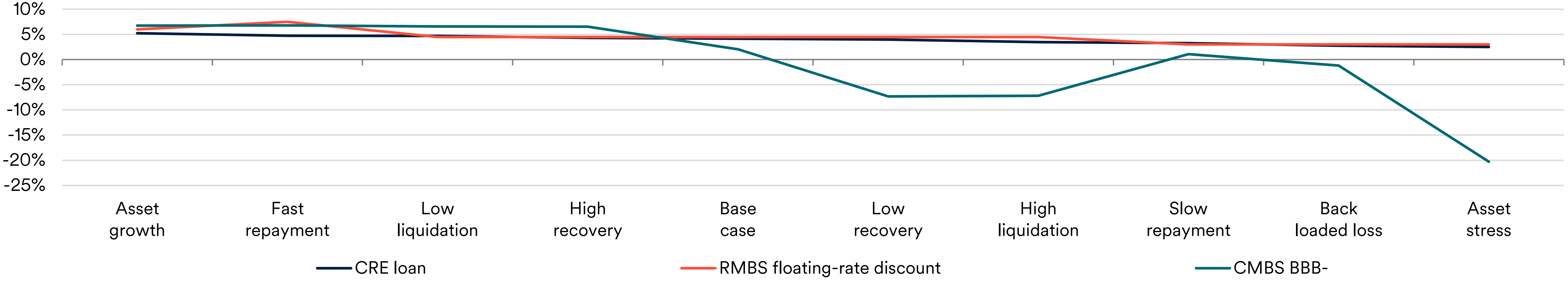
Collateral cash flow

- Establishing 'shoulds' and 'coulds'
- Yield profiles can vary significantly
- Quality and amount of data impacts the degree of accuracy
- Historical understanding of markets including depth and liquidity

Structure

- The right packaging can add protection or enhance sensitivity to a risk factor
- Relative value can be identified by comparing risk profiles and examining relative compensation
- Isolates the critical sources of performance and variation

Scenario Yield



Source: Schroders. The opinions stated in this document are those of the Schroders Securitized Credit team and are subject to change. Sectors are mentioned for illustrative purposes only and should not be viewed as a recommendation to buy/sell. For illustrative purposes only, actual results may vary.

Portfolio construction applied across all strategies

Determining risk appetite and investment themes

1 Determine our risk appetite

- Evaluate macro environment and general level of spreads/ compensation for risk
- Fundamental and technical factors, valuations

2 Rank importance of major factors

- Liquidity
- Credit Risk
- Volatility
- Duration
- Spread duration
- Complexity

3 Determine investment themes and credit cycle

- Evaluate and rank sectors based on relative attractiveness and stage in underlying credit cycle
- Investment theme exposure
- Opportunity or risk mitigation

4 Enhance returns through security specific value

- Unique asset specific proprietary analysis
- Forward returns/scenario based assessments
- Idiosyncratic option value driven by collateral/structure

5 Allocate across 9 risk groupings

- Weights to risk groupings are determined in (1) and (2), weightings within risk groupings are a function of (3) and (4)

Source: Schroders. The opinions stated in this document are those of the Schroders Securitized Credit team and are subject to change.

Our outlook

Our strategies & tools work well in today's market

Thoughts on inflation and interest rates

1 Rising rates

- Higher income on floating-rate debt
- Lower interest rate exposure
- Lower rate sensitivity (lower interest rate volatility)

2 Wage inflation

- Wages paid by corporations to consumers
- Consumers benefit from wage inflation
- Affordability improves with higher wages

3 Increasing asset prices

- Values of assets rise and loan to value ratios improve, creating potential for credit promotion (upgrades)
- Consumer wealth and equity improves
- Housing and RE assets /real assets with fixed rate debt become a more desirable investment

4 Time to taper

- Alternative risk premium dampens volatility, diversifies return
- Higher quality mortgage cash-flows become more attractive as relative compensation for risk increases and selling volatility is more attractive

Schroders. The views and forecasts shared are those of Schroders Securitized Credit team and are subject to change.

Building for change: perspective is everything

All-weather investments must manage through volatility and change

Our outlook

- We expect a Fed Funds well over 3% in 2023. Very likely that the next 3 hikes will be 50bps each. We view 3%-4% as a neutral Fed Funds Rate, a rate of over 4.25% will be necessary if current conditions persist or if the Fed is too far behind
- When we examine the key pillars (consumers, corporations, and banks), we see an economy on solid footing
- We have expected higher, AND more persistent inflation, as well as a healthier and more resilient US economy. A 4%-5% level was and remains our forecast for this year end
- Earlier this year we called for a steeper curve and higher 10-yr (2.5%-3.0%). The 10-year is already above this range. Absent material war escalation, we believe the 10-yr rate will trade in a range of 3%-5%. If the Fed is perceived to be too slow to act, the 10-year should be at the higher end, if the Fed is perceived to be aggressive, the 10-yr will remain at the low end of the range
- QE is an important tool in the monetary policy toolkit, and we expect the Fed to trade off more rate hikes versus more QT. We believe the now current (and higher) mortgage rates will slow the runoff well below the Fed's cap, and the Fed will sell Agency MBS, after a few months of observation. The market does not expect sales until 2023
- The impact of the Russia-Ukraine Crisis is larger the closer you get to the war from a geographical sense. China, as well, is another large question market for global growth
- Volatility will increase, liquidity will fall, and we are in an out of sample period that needs a new playbook, not a mere reversal of an old one. Lookbacks only over the post covid or post GFC period are likely too short to provide perspective

Source: The views and opinions shared are those of the Schroders Capital Securitized Products & Asset-Based Finance Team and are subject to change.
There is no guarantee that any forecasts or opinions will be realized. The forecasts included should not be relied upon, are not guaranteed and are provided only as at the date of issue. Our forecasts are based on our own assumptions which may change.

Building for change: perspective is everything

Perspective is everything – “Bear” necessities

Our Outlook

- Idiosyncratic risk is higher, volatility is higher, diversifying risk and diversifying risks is more critical today, than ever before
- Think about a longer history, in terms of what works in an inflationary environment
  - Beneficiaries will be “things”
  - Own the outputs, or the inputs, not the producer
  - Move from unsecured to secured
- Go back to the basics; “bear” necessities, now is the time to own things…
  - Homes/ shelter substitutes (for rent)
  - Equipment (to build)
- Inequality will create fiscal subsidy in favor of these areas

Source: The views and opinions shared are those of the Schroders Capital Securitized Products & Asset-Based Finance Team and are subject to change.

APPENDIX

BIOGRAPHIES OF KEY INVESTMENT PROFESSIONALS

Michelle Russell-Dowe

Global Head of Securitized Products & Asset-Based Finance

2016	Schroders
1999	Brookfield Investment Management, Head of Securitized Products Team
1994	Duff & Phelps

MBA, Graduate School of Business at Columbia University BA, Princeton University

27 years of investment experience

Nicholas Pont

Head of Product Strategy, Global and US Securitized

2018	Schroders
2016	Alcentra, Managing Director
2007	PIMCO, Senior Vice President
2002	Western Asset Management Company

BA, University of Exeter
Former Professional Cricketer

19 years of investment experience

Source: Schroders.

BIOGRAPHIES OF YOUR RELATIONSHIP TEAM

Walter Lindsay

Director – Institutional Sales

Walter is a Director on the Institutional Sales team, responsible for institutional clients and prospects in the Southeast. He recently joined Schroders in December 2020, and is based in Atlanta. Walter has 25+ years experience in the institutional investment space. Previously, he spent 5 years with Eaton Vance as an Investment Director. Prior to this, Walter was Senior Vice President at Herndon Capital Management for 6 years. He also spent 16 years with Fidelity Investments as a Senior Vice President of Institutional Sales.

Karen Kwon

Director – Relationship Management

Karen is a Director on the Relationship Management team, responsible for developing relationships with institutional investors in the Southeast. She has been with Schroders for 10 years and is based in New York, NY. Prior to Schroders, Karen was an Analyst at JP Morgan Alternative Asset Management covering hedge fund strategies. She has also worked with private clients at Morgan Stanley.

Source: Schroders.

Securitized Products & Asset-Based Finance – our story

Our team has extensive experience across residential mortgage, commercial mortgage, unsecured consumer lending, secured consumer lending, equipment lending and business lending
Out team has been together longer than any other team
Our backgrounds span acquisition, structuring, trading, originating, servicing and risk management

Storied history has allowed flexibility and access to opportunity – the best marginal use of capital

- Evolving from the first subordinated securitized credit investor, navigating multiple cycles over nearly three decades, incorporating tools to manage through dynamic market
- Invested in excess of $100bn in ABS, CMBS, CLO and MBS credit across a flexible best ideas platform

Flexibility is key

- Tool kit spans a wide range of liquid and less visible securities and culminates with our ability to lend and structure custom investments
- As specialists, we can identify critical partners to flex into opportunity as it changes throughout a cycle
- We are open minded and attuned to what the market offers, this allows us to take advantage of mis-pricings, opportunities and inefficiency

Opportunity at many points in the return spectrum, we are an opportunistic investor and will focus investments where opportunity is best

- We have partnered with some of the largest and most sophisticated investors for three decades, consistently expanding our strategy continuum with the changing investment landscape and the changes in the needs of our partners
- We have aligned funds to our strategies to maximize our ability to provide the best combination of liquidity and opportunity across our strategic continuum
- We focus on matching the right product to the right structure to best serve our client's needs and objectives, without being tied to a particular sector

Conviction: we are a research and credit-oriented culture

- We are passionate credit investors
- We seek to maximize the best ideas by which we can successfully deploy capital, generate income and mitigate risk through rigorous comparison of investments
- We offer unique perspective, with the breadth of our network and given our involvement in many stages of financing

Securitized Product & Asset-Based Finance

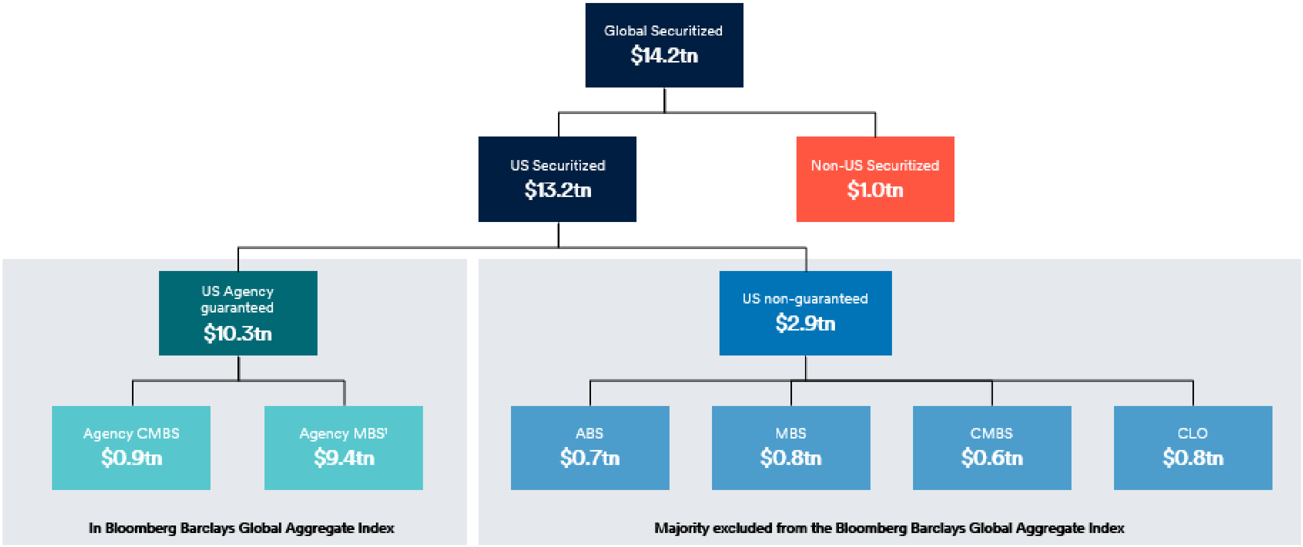
- $5 bn in RMBS Credit
- $3 bn in US and EU CLO
- $2 bn in CMBS/ $1bn in CRE loans
- $2 bn in Non-US MBS
- $0.7 bn in SRT
- $0.7 bn in Private Asset-Based Finance

Source: Schroders Capital. The views and opinions shared are those of the Schroders Capital Securitized Products & Asset-Based Finance Team and are subject to change. Objectives may not be achieved.

Secured income: start from the diverse securitized sector exposure

Outcomes benefit from the flexibility of a broad universe

- Securitisation takes a group of assets (a loan, a lease or a debt contract) and uses term financing to create several securities of different risk and return profiles
- Securitisation offers flexibility across many sectors with different fundamental factors structuring both senior and junior exposures
- The flexibility of the sector / structure combination creates a wide range of solutions across geography, assets, credit quality, maturity and risk premiums
- Our strategy is a diversified across sectors and across geographies, across structure and quality creating opportunity for
  - Return
  - Risk mitigation (rates and credit)
  - Diversification
- Securitized is an alternative to traditional ‘core’ allocations like intermediate corporate credit, or to ‘plus’ allocations like high yield, leveraged loans or emerging markets
- The natural barriers to entry and more limited government support make this an asset class that still offers additional return and income while avoiding the crowds



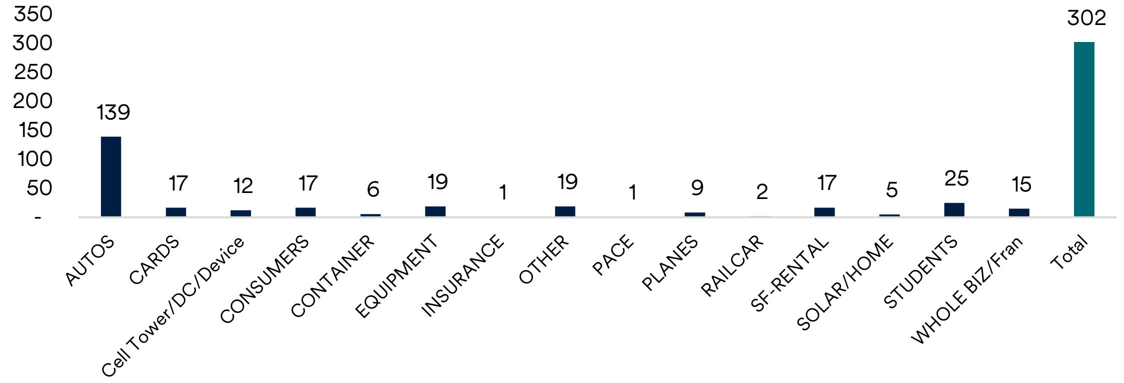
Source: Schroders, SIFMA, JPM, ECB as of October 2021. SIFMA data as of Q2 2021. The views and opinions are those of Schroders Securitized Credit team and are subject to change. Diversification cannot ensure profits or protect against loss principal.
[1]Agency MBS outstanding includes Agency CMO.

Source: Schroders. The views and opinions are those of the Schroders Securitized Credit Team and are subject to change. There can be no guarantee that any investment objectives or outcomes will be achieved. Diversification cannot ensure a profit or protect against loss of principal.

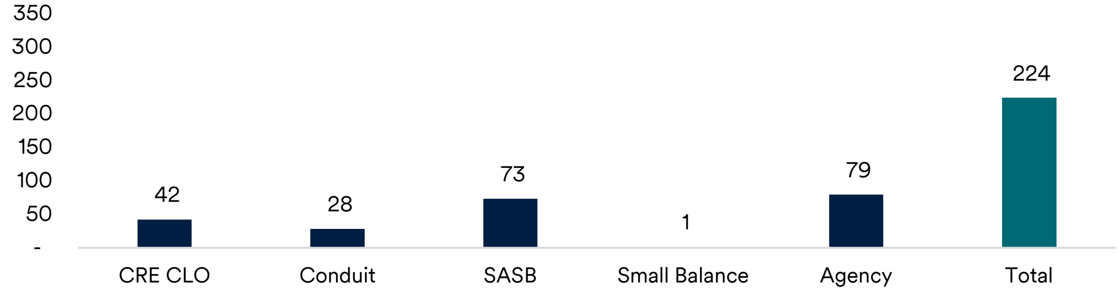
New issue summary

US 2021 full year (USD, in billions)

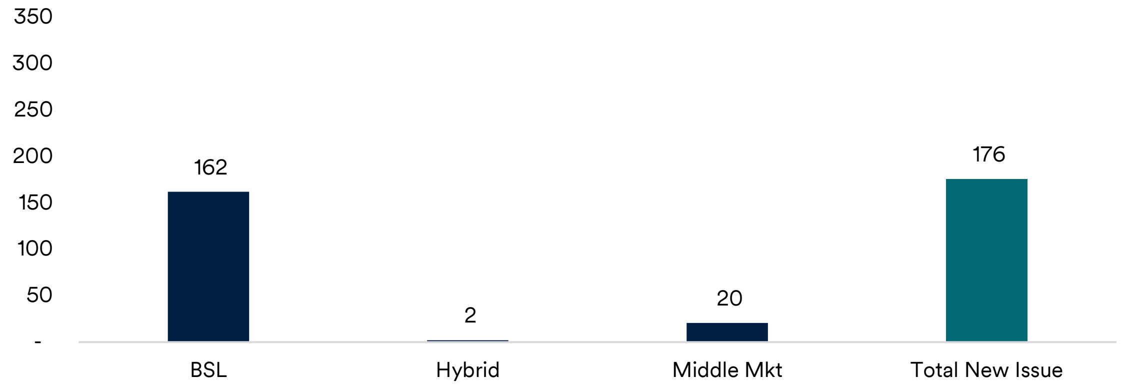
ABS



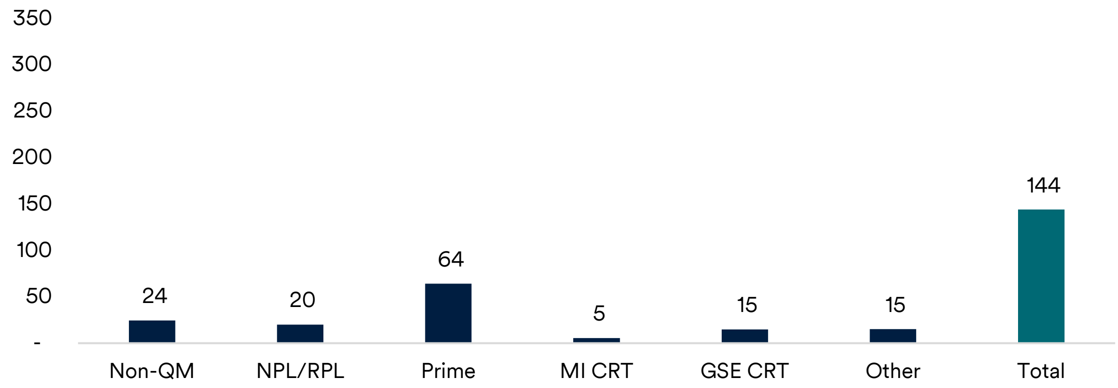
CMBS



CLOs (new issue, excludes refi/resets)



Non-Agency RMBS

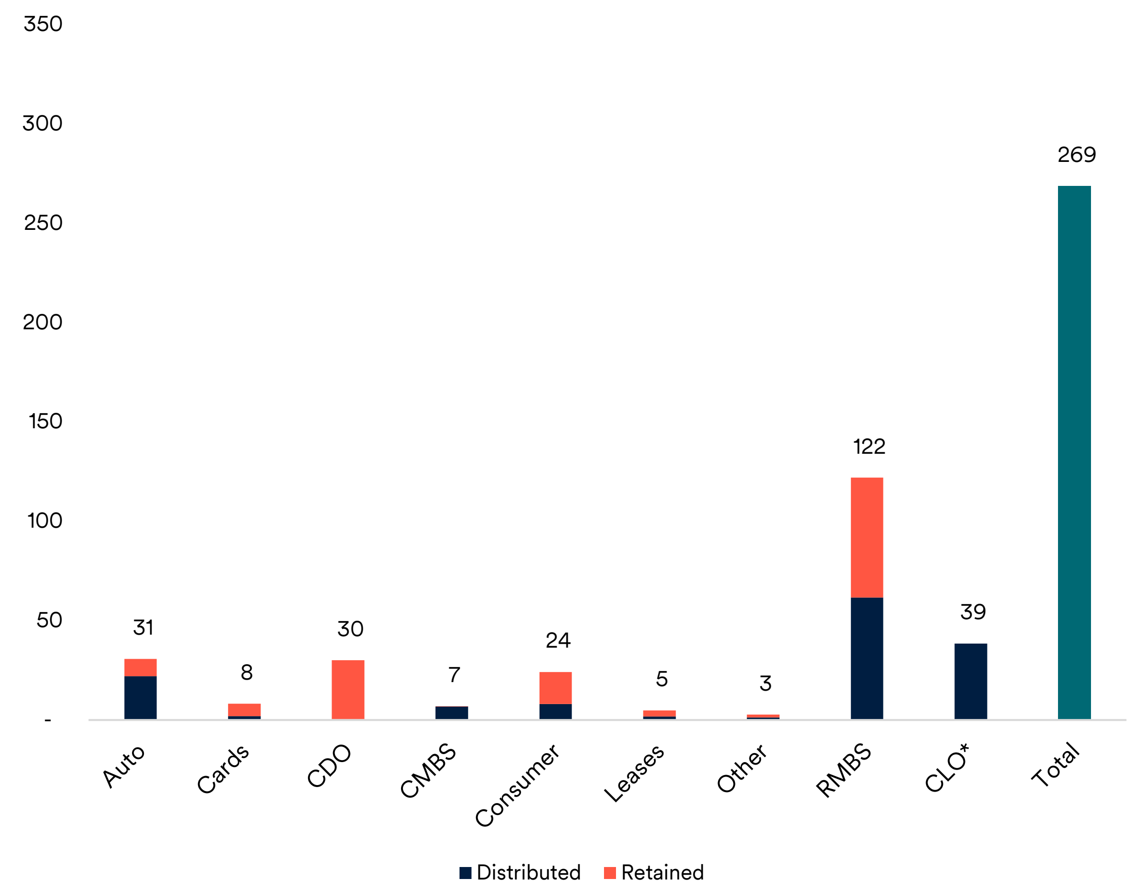


Source: Bloomberg as of 12/31/2021. Shown for illustrative purposes only and should not be viewed as a recommendation to buy or sell.

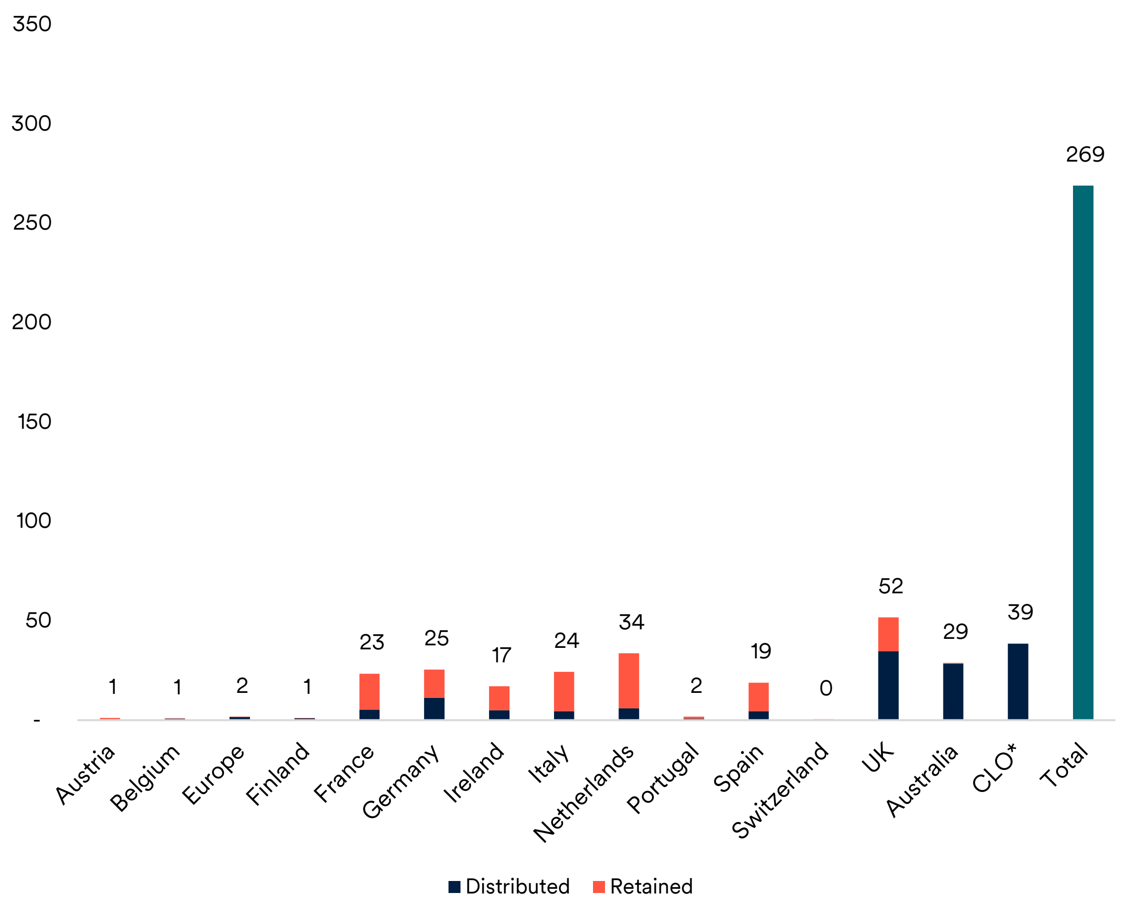
New issue summary

Non-US 2021 full year (€, in billions)

By sector



By country



Source: Bloomberg, JP Morgan as of 12/31/2021.
*CLO reflects new issue, excludes refi/reset. Shown for illustrative purposes only and should not be viewed as a recommendation to buy or sell.

Schroder Opportunistic Securitized

Composite disclosures as of: December 31, 2020

Definition of the Firm

The Schroders GIPS Firm is defined as accounts managed by investment management entities that are wholly owned subsidiaries of Schroders plc and located in the US, UK, Switzerland, Singapore, Hong Kong, Japan, Germany and Australia. The following types of accounts are excluded: (i) accounts managed by [Schroder Adveq Management AG and its subsidiaries], which claim GIPS compliance separately; (ii) accounts managed by [BlueOrchard Finance Ltd. and its subsidiaries]; (iii) accounts managed by Wealth Management entities of the Schroders Group, including Cazenove Capital; (iv) accounts managed by our UK-based Solutions business pursuant to a liability driven mandate; (v) accounts that are directly invested in or directly manage real estate assets; (vi) advisory only and execution only accounts; and (vii) sub-funds of the Schroder GAIA fund range for which assets are managed by a third party selected by the Schroders Group. On January 1, 2017, the Schroders GIPS Firm was formed following the merger of independent regional GIPS Firms, defined based predominantly on the location of the investment desk, and held out to clients or prospective clients as the following distinct firms: combined London/New York/Zurich (SIMUK/US & SIMSAG respectively), Singapore (SIMSL), Hong Kong (SIMHK), Australia (SIMAL) and Japan (SIMJP). These firms were merged as a result of the increasingly global nature of the business. Details of previous firm mergers are available upon request.

Composite Definition

The Schroder Opportunistic Securitized Composite (the "Composite") seeks to achieve returns above USD LIBOR or an equivalent benchmark by providing capital growth and income primarily through investment in securitized assets such as asset-backed securities, mortgage-backed securities, commercial mortgage-backed securities, collateralized loan obligations and related loans.

Benchmark Description

The composite benchmark is 1-Month US LIBOR.

Minimum Account Size

In accordance with the Firm's account inclusion/exclusion procedures, to be included in the Opportunistic Securitized a portfolio must be fully invested, deemed discretionary and have a minimum beginning market value of $350 million from June 30, 2021 onwards.

Composite Details

The composite base currency is US Dollar. Composite Inception Date: June 30, 2008. Composite Creation Date: July 2, 2021.

Withholding Tax

Income and dividends on investments are recognized net of irrecoverable withholding tax. Withholding tax rates may differ between portfolios within the composite.

Fee Schedule

Net returns have been calculated based upon the highest fee rate charged to each account in the composite using a model fee which has been applied geometrically on a monthly basis. The fee scale applied to the composite is: 65bps on the first $350 million, 60bps on the next $250 million, 55bps on the next $200 million, 50bps on the balance.

Dispersion

Internal dispersion is calculated using asset weighted standard deviation of all portfolios included within the composite for the entire year. In cases where 5 or less portfolios are included in the composite for the entire year, the number of portfolios and a measure of dispersion will not be not shown.

GIPS Compliance and Verification

The Schroders GIPS Firm (“the Firm”) claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. The Firm has been independently verified for the periods January 1, 1996 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. 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. A list of descriptions for composites and limited distribution pooled funds is available upon request. A list of broad distribution pooled funds is also available.

Additional Information

Additional information regarding policies for valuing investments, calculating performance, and preparing GIPS reports are available upon request.

Risk Statistics Unavailability

A measure of standard deviation will only be provided where the composite or benchmark has been in existence and active for at least 36 consecutive months.

Schroder Opportunistic Securitized

Composite disclosures as of: December 31, 2020

Benchmark:	1-Month US LIBOR
Currency:	USD
Returns as of:	Dec-31-2020
Inception Date:	June 30, 2008

Year	Gross Composite Return (%)	Net Composite Return (%)	Primary Benchmark Return (%)	3 Year Composite Risk (%)[1]	3 Year Primary Benchmark Risk (%)[1]	Number of Portfolios (throughout period)[2]	Account Dispersion (%)[3]	Market Value at End of Period	Average Account Value at End of Period	Percentage of Firm Assets (%)	Total Firm Assets[4]
2020	-0.48	-1.11	0.53	7	0.25	< 5	N/A	558,845,733	558,845,733	0.09	613,960,455,990
2019	6.09	5.42	2.28	1	0.16	< 5	N/A	563,716,317	563,716,317	0.12	487,332,595,542
2018	4.42	3.75	2.07	3	0.20	< 5	N/A	453,242,945	453,242,945	0.12	384,803,377,261
2017	13.00	12.27	1.13	3	0.12	< 5	N/A	382,196,506	382,196,506	0.08	455,112,000,742
2016	9.96	9.25	0.49	3	0.05	< 5	N/A	339,556,245	339,556,245	0.11	302,127,480,639
2015	3.00	2.33	0.20	4	0.01	< 5	N/A	309,776,683	309,776,683	0.11	293,397,986,258
2014	9.94	9.26	0.16	6	0.01	< 5	N/A	924,656,269	462,328,134	0.33	282,697,291,678
2013	10.61	9.91	0.19	6	0.01	< 5	N/A	784,384,074	392,192,037	0.31	255,707,099,715
2012	29.14	28.32	0.24	6	0.01	< 5	N/A	690,721,459	345,360,730	0.31	223,940,416,622
2011	-6.29	-6.89	0.24	8	0.02	< 5	N/A	427,550,349	427,550,349	0.22	194,958,113,724
2010	21.27	20.48	0.28	N/A	N/A	< 5	N/A	373,990,355	373,990,355	0.18	202,946,283,267
2009	18.95	18.18	0.34	N/A	N/A	< 5	N/A	236,658,635	236,658,635	0.15	161,183,088,770
H2 08	-24.48	-24.72	1.24	N/A	N/A	< 5	N/A	98,405,248	98,405,248		

As at Dec-2020	Gross Composite Return (%)	Net Composite Return (%)	Primary Benchmark Return (%)	Composite Risk (%)[1]	Primary Benchmark Risk (%)[1]
Annualized 3 Year	3.31	2.65	1.63	6.54	0.25
Annualized 5 Year	6.50	5.81	1.30	5.59	0.24
Annualized 7 Year	6.47	5.79	0.98	4.87	0.25
Annualized 10 Year	7.58	6.89	0.75	5.39	0.23
Annualized S.I.5	6.75	6.07	0.75	7.95	0.24

Past performance is not indicative of future results

[1] Annualized standard deviation of gross monthly returns for the composite and monthly returns for the benchmark. N/A for periods with less than 36 months of available returns.

[2] Not available for periods where the composite contains fewer than 5 portfolios.

[3] Asset weighted standard deviation of annual gross returns of accounts that have been in the composite for the entire year. Part periods are not annualized. Not available for periods where the composite contains fewer than 5 portfolios.

[4] Total Firm Assets incorporate firm mergers as detailed in the Definition of the Firm.
Manager accounts are included in the Total Firm Assets

[5] Since Inception June 30, 2008.

N/A – Information is not statistically meaningful due to an insufficient number of portfolios for the entire year. *Returns are for a part period year.

Important information

All investments involve risks including the risk of possible loss of principal. Illiquid investments such as private debt and loans carry special market, operational, and illiquidity risks and should only be considered by sophisticated investors who understand the nature of these, and other, principal risks. The market value of a bond portfolio may decline as a result of a number of factors, including interest rate risk, credit risk, inflation/deflation risk, mortgage and asset-backed securities risk, U.S. Government securities risk, foreign investment risk, high yield securities risk and derivatives risk. Asset-backed, mortgage-backed or mortgage-related securities are subject to prepayment and extension risks, delinquency and foreclosure. The use of derivatives involves risks different from, or possibly greater than, the risks associated with investing directly in the underlying assets. The use of leverage may magnify gains or loses. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment. Bonds rated BBB/Baa or higher are considered investment grade, while bonds rated BB/Ba or lower are considered speculative as to the timely payment of principal and interest.

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Not all strategies are available to US Investors.

Asset allocation and diversification cannot ensure a profit or protect against loss of principal. Duration is a measure of volatility expressed in years. The higher the number, the greater potential for volatility as interest rates change.

Performance shown is past performance and is no guarantee of future results. The value of an investment can go down as well as up and is not guaranteed. The opinions stated in this presentation include some forward-looking statements. We believe that we are basing our expectations and beliefs on reasonable assumptions within the bounds of what we currently know. There can be no assurance, however, that events will occur as we expect or believe.

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