Overview of Securitized Indices

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KEY TAKEAWAYS

- Allocators often struggle to select an appropriate securitized credit benchmark, and many are unclear on what can serve as an appropriate benchmark proxy when comparing securitized credit to other fixed income sectors.
- Securitized exposure within the Bloomberg US Aggregate Bond Index and Bloomberg Global Aggregate Index is primarily to GSE agency MBS; exposure to non-agency securitized credit is small and, in our view, not very representative of the entire securitized credit universe.
- Based on our assessment of a wide range of securitized indices, we believe the ICE BofA US ABS & CMBS (CABS) Index is appropriate as a benchmark for broad securitized credit strategies and the J.P. Morgan CLOIE Index for CLO-only mandates.

Summary

Investors and consultants often use fixed income indices to gain insights, benchmark performance, and inform their investment decisions. Two of the most prominent fixed income indices are the Bloomberg US Aggregate Bond Index and Bloomberg Global Aggregate Index, both of which are comprised of government-related, corporate and securitized bonds. Within the indices' securitized allocations, most of underlying exposure is to government-sponsored entity (GSE) agency guaranteed ("securitized agency") bonds and a much lower exposure is to non-agency ("securitized credit") bonds. However, the securitized credit holdings in these indices are not very representative of the entire securitized credit universe. As a result, we often observe allocators struggling to make recommendations on securitized credit benchmarks, and many are unclear on what can or should serve as an appropriate benchmark proxy when comparing securitized credit to other fixed income sectors.

In our view, investors seeking insights into specific segments of the securitized credit universe should not limit themselves to Bloomberg index offerings. In this paper, we explore a wide range of securitized indices and compare their historical sector compositions, ratings, and index construction methodologies. At the end of the paper, we provide our opinion on which indices we consider most helpful when analyzing the securitized credit sector.

Agency MBS

Bloomberg US Mortgage Backed Securities (MBS) Index: (LUMSTRUU Index, USD $7.1trn MARKET VALUE as of 31 December 2023)

The Bloomberg US Mortgage Backed Securities (MBS) Index is the most widely used benchmark for comparing agency MBS strategies because it effectively represents investment opportunities within government-guaranteed mortgages. The Bloomberg US MBS Index tracks fixed rate conventional and Ginnie Mae pass-through securities, and performance data is available as far back as January 1976. The index is constructed by grouping to-be-announced (TBA)-deliverable MBS pools into very detailed cohorts based on program (conventional vs. Ginnie Mae), term, coupon, vintage, and "story" (i.e., low loan balance, geography, low FICO, high loan-to-value ratio, occupancy). In fact, there are over 900 distinct cohorts within the Bloomberg US MBS Index. Historically, the cohort breakout in the index was not always so granular. Before 1 December 2022, there were only around 400 index cohorts given "story" was not an available category to group pools. Even with the reduced number of cohorts before December 2022, we believe the relative completeness, granularity, and long track record of the Bloomberg US MBS Index make it ideal for investors and consultants to use for benchmarking agency MBS returns and risk.

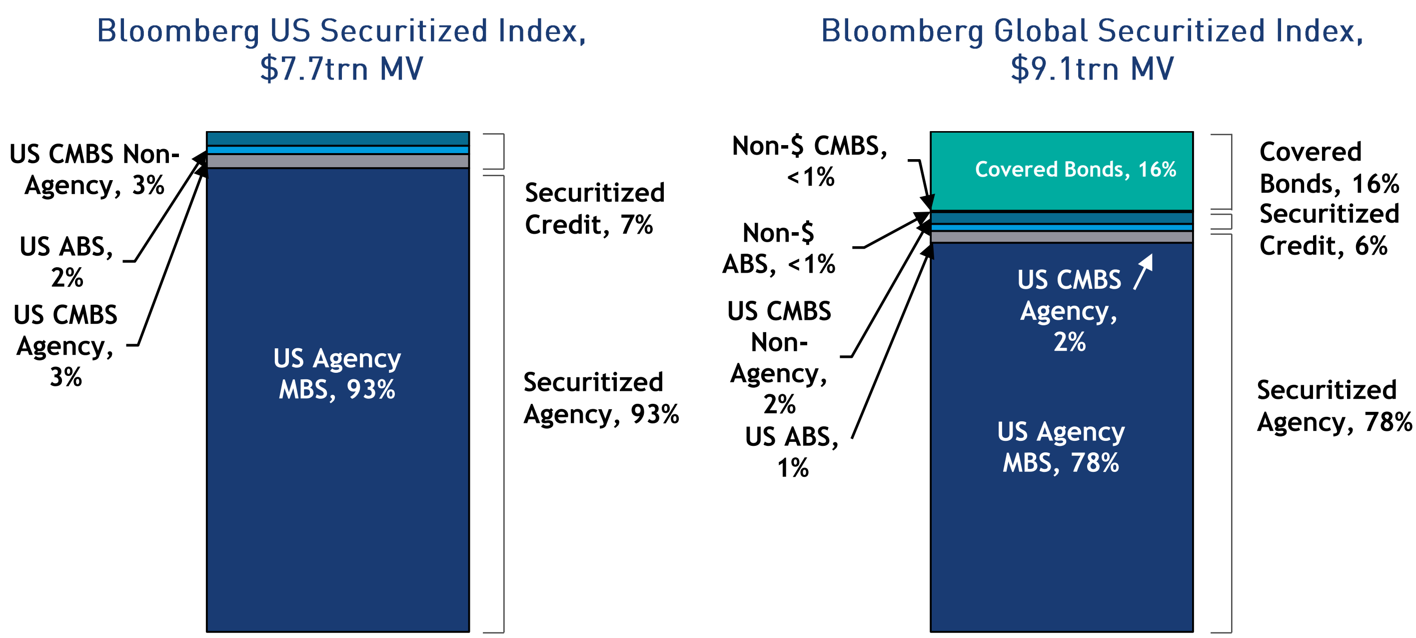
Securitized Credit

Bloomberg US Securitized Index (LD19TRUU Index, $7.7trn as of 31 December 2023)

Bloomberg Global Securitized Index (I03444US Index, $9.1trn MV as of of 31 December 2023)

In our view, available indices are not as representative of the securitized credit universe. Investors and consultants commonly use the Bloomberg US Securitized Index (part of the Bloomberg US Aggregate Bond Index) and the Bloomberg Global Securitized Index (part of Bloomberg Global Aggregate Index) for benchmarking securitized credit. However, as shown in Figure 1, only a small portion of these indices have exposure to securitized credit.

FIGURE 1



**Picture details index allocations as of 31 December 2023.*

Source: Bloomberg as of 31 December 2023.

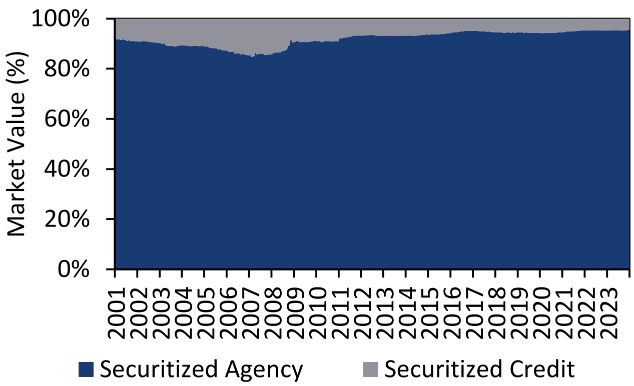
Indices are unmanaged and do not incur fees. It is not possible to invest directly in an index.

Past market experience is no guarantee of future results.

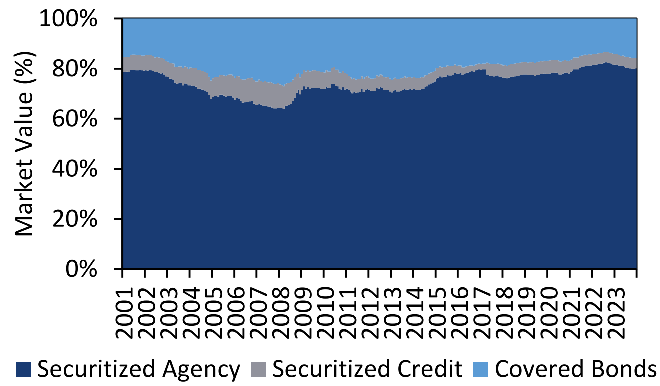
Even on a historical basis (Figure 2), the allocation to securitized credit in both of these indices has remained relatively small compared to its much larger securitized agency exposures. In the Bloomberg Global Securitized Index, there is also a sizable allocation to covered bonds, which we consider a hybrid of corporate and securitized sectors.

FIGURE 2

Historical Sector Allocation of Bloomberg US Securitized Index



Historical Sector Allocation of Bloomberg Global Securitized Index



Source: Bloomberg as of 31 December 2023.Indices are unmanaged and do not incur fees. It is not possible to invest directly in an index.
Past market experience is no guarantee of future results.

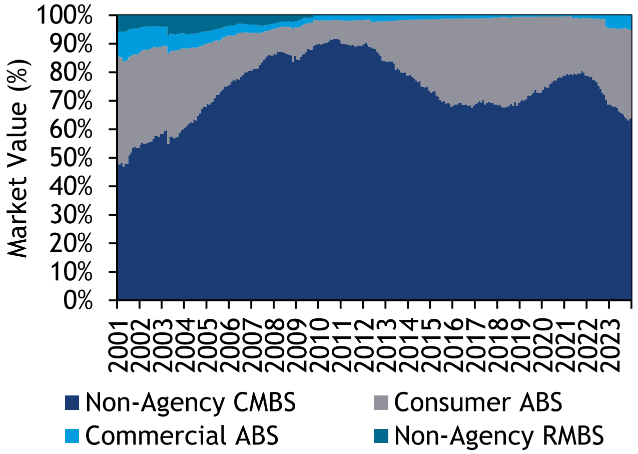
The securitized credit allocations of both the Bloomberg US and Global Securitized Indices contain large exposures to non-agency commercial mortgage-backed securities (CMBS) and small yet varying exposures to consumer asset-backed securities (ABS) (Figure 3). Historically, the allocations to non-agency RMBS have been miniscule. For the Bloomberg US Securitized Index specifically, the RMBS exposure was comprised of subprime legacy securities until 1 October 2009, when these bonds were excluded from the index. Neither the Bloomberg US nor the Global indices ever had exposure to CLOs.

It is also important for allocators to understand the two primary reasons why the historical securitized credit exposures between these two indices differ:

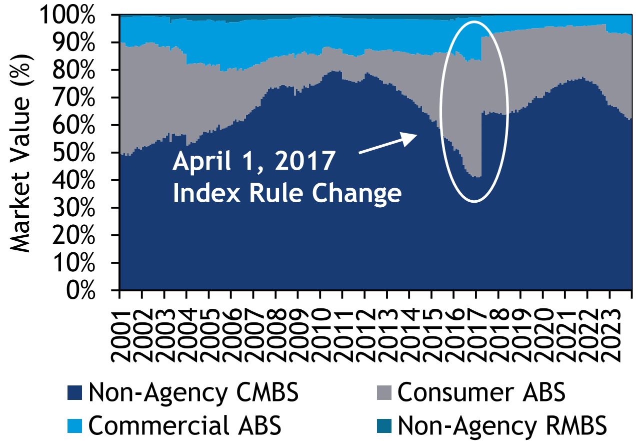
1. The difference is due in part to a change in the Bloomberg Global Securitized Index construction rules on 1 April 2017. Before 1 April 2017, the minimum outstanding tranche size of US ABS and CMBS tranches in the Bloomberg Global Securitized Index was $300 million, a very high and restrictive level. The Bloomberg US Securitized Index had a much lower, less restrictive minimum tranche size of $25 million. Before the rule change, the Bloomberg Global Securitized Index held only 40% of the securitized credit bonds in the Bloomberg US Securitized Index. This rule change decreased the minimum outstanding tranche size of US ABS and CMBS tranches in the Bloomberg Global Securitized Index from $300 million to $25 million, thereby making the minimum tranche size equal to the Bloomberg US Securitized Index. After 1 April 2017, Bloomberg Global Securitized Index held 100% of the securitized credit bonds in the Bloomberg US Securitized Index. Thus, this rule change resulted a significant increase in the securitized credit allocation of the Bloomberg Global Securitized Index. In fact, in April 2017, over 1,900 new securitized credit bonds ($192 billion) entered this index due to the rule change.

FIGURE 3

Historical Sector Allocation of Securitized Credit in Bloomberg US Securitized Index



Historical Sector Allocation of Securitized Credit within Bloomberg Global Securitized Index



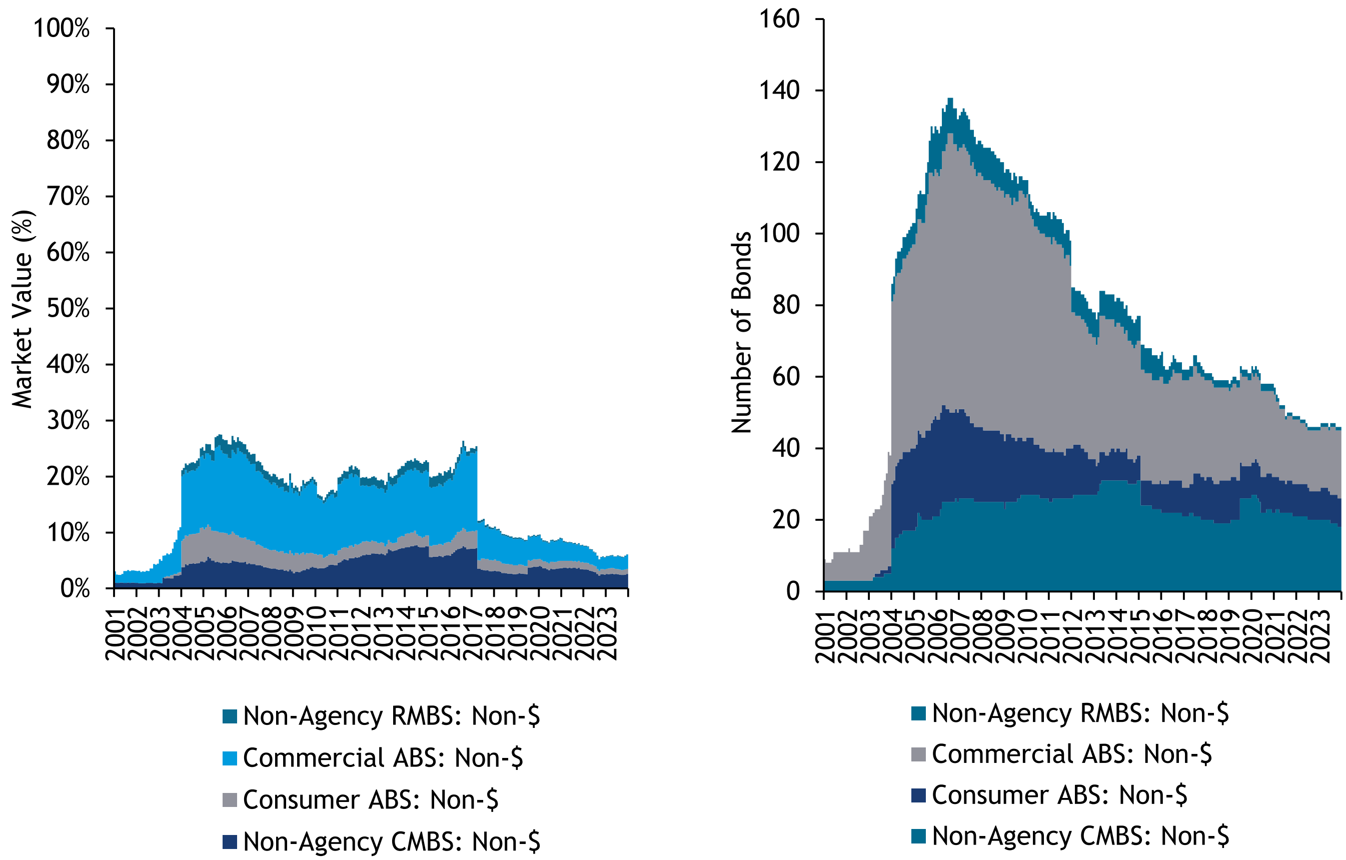
Source: Bloomberg as of 31 December 2023.
Indices are unmanaged and do not incur fees. It is not possible to invest directly in an index.
Past market experience is no guarantee of future results.

2. The second reason for the historical sector differences between both indices is the exposure to non-dollar securitized credit bonds. These bonds are only held in the Bloomberg Global Securitized Index, not the Bloomberg US Securitized Index. Within the securitized credit portion of the Bloomberg Global Securitized Index, non-dollar bonds represented over 25% market value exposure before the 1 April 2017 index rule change. Because the rule change drove an influx of new securitized credit bonds into this index, the non-dollar bond market value exposure dropped significantly. As of 31 December 2023, non-dollar bonds represented just 6% market value (46 bonds) within the securitized credit portion of the Bloomberg Global Securitized Index (Figure 4). The remaining 94% market value (4,079 bonds) is exposed to US securitized credit. In essence, the securitized credit bonds held in the Bloomberg Global Securitized Index are now largely US dollar denominated. Excluding covered bonds, we believe it is reasonable to conclude that the Bloomberg Global Securitized Index is hardly “global” at all.

FIGURE 4

Historical Allocation of Non-$ Bonds within Securitized Credit portion of Bloomberg Global Securitized Index (MV%)

Historical Allocation of Non-$ Bonds within Securitized Credit portion of Bloomberg Global Securitized Index (# Bonds)



Source: Bloomberg as of 31 December 2023. Indices are unmanaged and do not incur fees. It is not possible to invest directly in an index.
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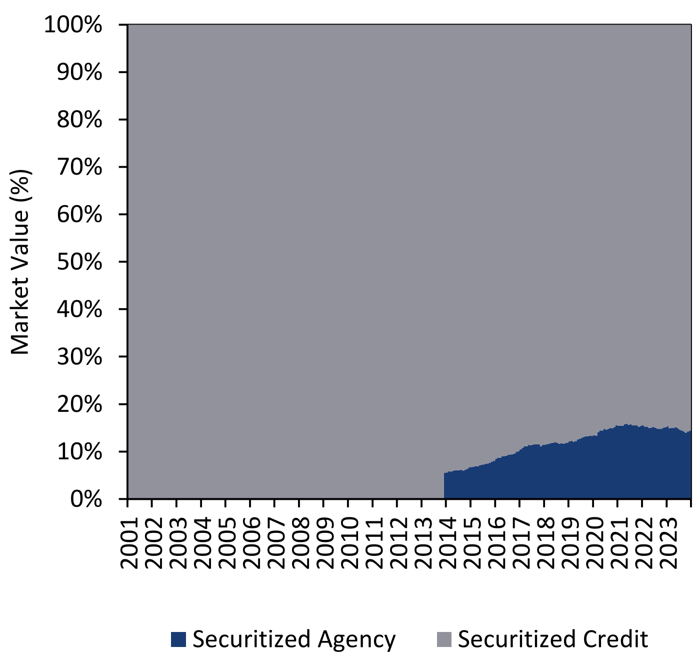
Overall, we don't think either the Bloomberg US Securitized Index or the Bloomberg Global Securitized Index is an accurate representation of the entire securitized credit universe. We believe the overrepresentation of agency MBS, covered bonds, and non-agency CMBS make them less than ideal benchmarks for the sector.

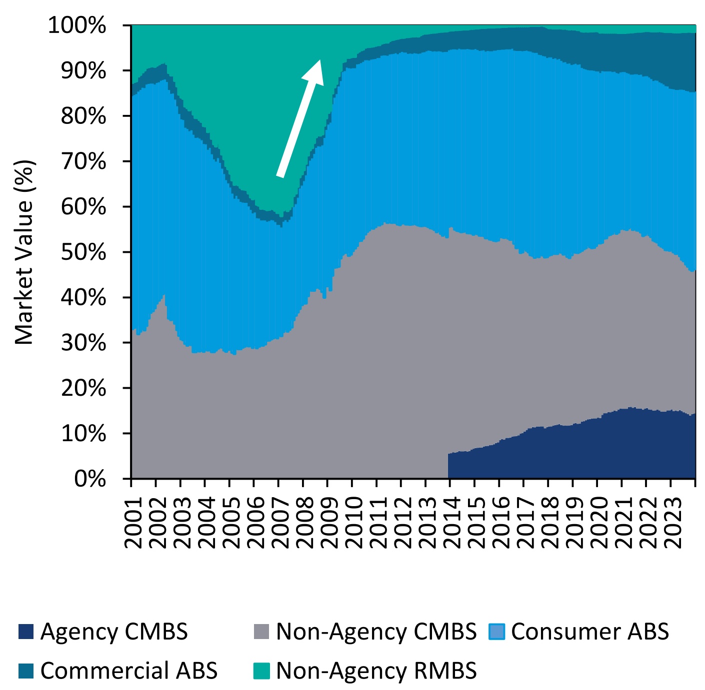
ICE BofA US ABS & CMBS (CABS) Index (CABS Index, USD $949bn market value as of 31 December 2023)

Our team considers the ICE BofA US ABS & CMBS (CABS) Index the most representative benchmark for the securitized credit sector because it consists mostly of credit sectors such as consumer ABS, commercial ABS, and non-agency CMBS (Figure 5) and it has the broadest inclusion methodology. The securitized agency allocation in the index is fairly small (15-20% market value), and is comprised of senior, guaranteed agency CMBS securities. While the CABS Index historically had a material (42%) exposure to non-agency RMBS, specifically subprime legacy RMBS, today it carries 2-3% market value exposure to RMBS 2.0 sectors like single family rental (SFRs) and re-performing loans (RPLs). The drop in subprime legacy RMBS exposure from 2007 to 2011 is largely due to a combination of price declines during the global financial crisis (GFC) and downgrades that resulted in the bonds being removed from the index. The CABS Index's limited weighting to RMBS today is not ideal, but no other securitized credit index offers higher exposure to that sector. Similar to the Bloomberg US Securitized Index and Bloomberg Global Securitized Index, the CABS Index does not hold any CLOs. There are also several differences between these indices to consider. The CABS Index has a much lower minimum original deal size ($250 million) than the Bloomberg indices ($500 million), which allows a greater number of small off-the-run deals to be included. Another difference is the CABS Index holds both fixed and floating rate ABS while the Bloomberg indices allow only fixed rate ABS bonds. Lastly, the CABS Index allows securitized credit bonds subject to Rule 144A that have no registration rights, while the Bloomberg indices do not. The minimum deal size, coupon type, and Rule 144A eligibility differences expand the number of bonds eligible for index inclusion and help make the CABS Index more representative of the Securitized Credit universe. For more information on the compositional differences between the indices, please reference Figure 12 at the end of this document.

FIGURE 5

Historical Sector Allocation of ICE BofA US ABS & CMBS Index





Source: Bloomberg as of 31 December 2023. Indices are unmanaged and do not incur fees. It is not possible to invest directly in an index.
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J.P. Morgan Collateralized Loan Obligation Index (CLOIE) (JCLOAGTR Index, USD $795bn market value as of 31 December 2023)

Given the Bloomberg US Securitized Index, Bloomberg Global Securitized Index, and ICE BofA US ABS & CMBS (CABS) Index all do not contain CLOs (see Figure 6), we believe investors/consultants should rely on another index to track performance and risk in that asset class - the J.P. Morgan Collateralized Loan Obligation Index (CLOIE). This index tracks US dollar-denominated, broadly-syndicated, arbitrage CLO debt. Its coverage of the CLO universe is very comprehensive, covering approximately 94% of the total US CLO debt stock (according to its Product Guide, as of 9/30/2021). The CLOIE Index references bonds across the CLO capital stack, from Single Bs to AAAs, and includes over 1,300 deals with 7,000 tranches managed by over 130 CLO managers. Similar to all of the other indices discussed in this paper, the CLOIE Index is market value weighted, so the largest part of the CLO capital stack (AAAs) is most predominant.

In March 2024, the J.P. Morgan European Collateralized Loan Obligation Index (€-CLOIE) was launched. This index tracks Euro-denominated CLO debt, and covers 84% of the total European CLO debt stock (according to its Product Guide, as of 8 March2024). Given its wide coverage, this index is helpful in tracking analytics and performance of the European CLO market.

FIGURE 6

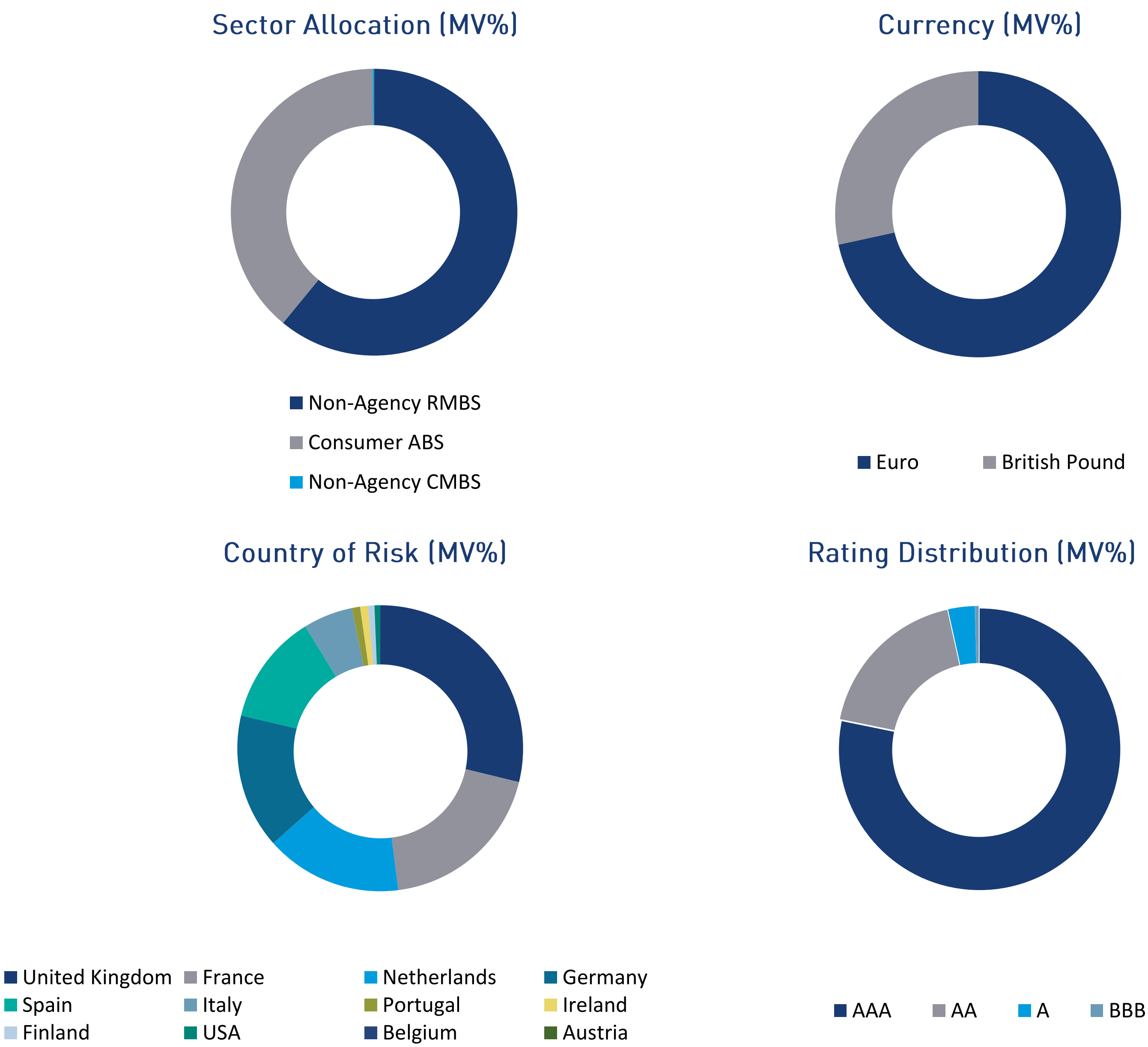
Sector Exposure, as of 31 December 2023	ICE BofA US ABS & CMBS (CABS) Index	Bloomberg US Securitized Index	Bloomberg Global Secuitized Index
Agency MBS		93%	78%
Agency CMBS*	14%	3%	2%
Consumer ABS	39%	1%	1%
Commercial ABS	13%	0%	0%
Non-Agency CMBS**	32%	3%	3%
Non-Agency RMBS	2%		0%
Covered Bonds			16%
CLOs			

** Senior, Guaranteed Agency CMBS*
***Includes Mezzanine, Non-Guaranteed Agency CMBS*

Bloomberg Pan European Floating Rate ABS Index, Hedged to Euro (H21892EU Index, €55bn market value as of 31 December 2023)

For investors and consultants looking for an index that is representative of the European Securitized Credit universe, we believe the Bloomberg Pan European Floating Rate ABS Index, Hedged to Euro is appropriate. This index is largely composed of Consumer ABS and Non-Agency RMBS bonds, either Euro or British Pound denominated. It consists of mainly AAA-rated bonds, though AAs comprise a sizable 18% portion as of 31 December 2023 (Figure 7).

FIGURE 7



Source: Bloomberg as of 31 December 2023. Indices are unmanaged and do not incur fees. It is not possible to invest directly in an index. ***Past market experience is no guarantee of future results.***

Comparing Characteristics across US Securitized Indices

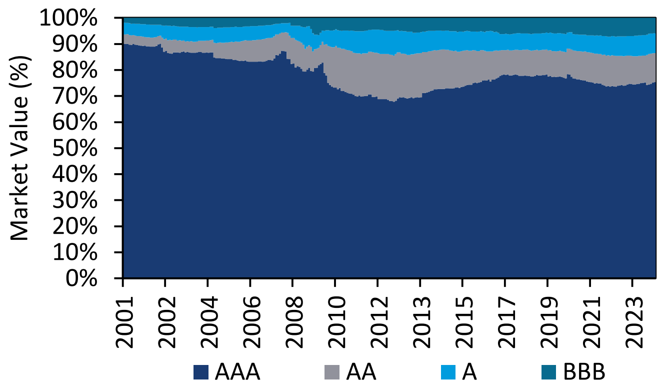
The following section examines characteristics of the four US securitized indices discussed previously. Specifically, we focus on comparing the index credit ratings, weighted average lives (WAL), option-adjusted spreads (OAS), and sector exposures relative to the securitized credit universe. Given that securitized agency and covered bonds comprise a large portion in some of the Bloomberg securitized indices, we strip out these holdings to better compare securitized credit exposures across indices

CREDIT RATINGS

The credit rating of bonds found in all four US Securitized Credit indices are overwhelmingly investment grade, with most being AAA-rated. It is worth noting that numerous securitized credit bonds in the CABS Index and the two Bloomberg securitized indices were downgraded during the global financial crisis (2007 – 2009). While the charts below (Figure 8) show market value decreases in AAA bonds and increases in AA, A, and BBB bonds as a result of the bond downgrades following the GFC, they do not capture the percentage of bonds that were downgraded to below investment grade (IG). According to the product guides for both the CABS Index and Bloomberg securitized indices, the minimum ratings of bonds for inclusion must be BBB- (using the middle of S&P, Fitch, and Moody's ratings). As a result, securities downgraded to non-investment grade (non-IG) are removed from the indices. This phenomenon can cause the performance and quality of these indices to be higher than what it otherwise would be if the constituent securities were held in the indices until their respective maturities.

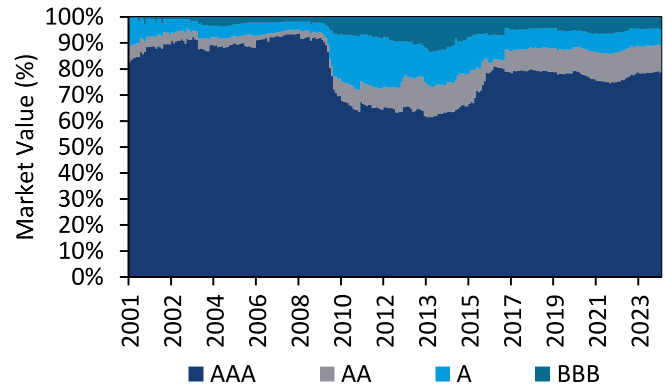
FIGURE 8

Historical Rating Distribution of ICE BofAML US ABS CMBS (CABS) Index



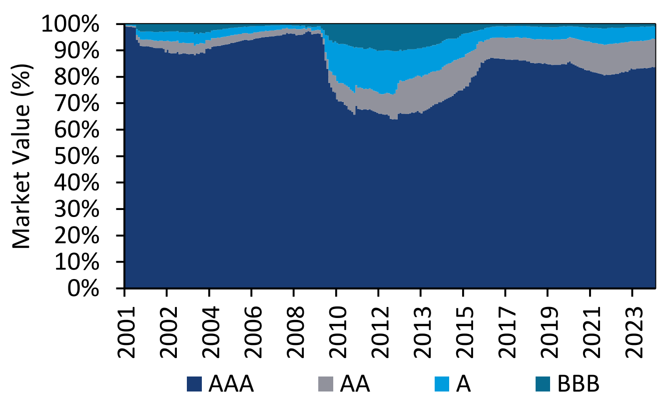
As of 31 Dec 23: 75% MV 11% MV 8% MV 6% MV

Historical Rating Distribution of Bloomberg Global Securitized Index (Securitized Credit Only)



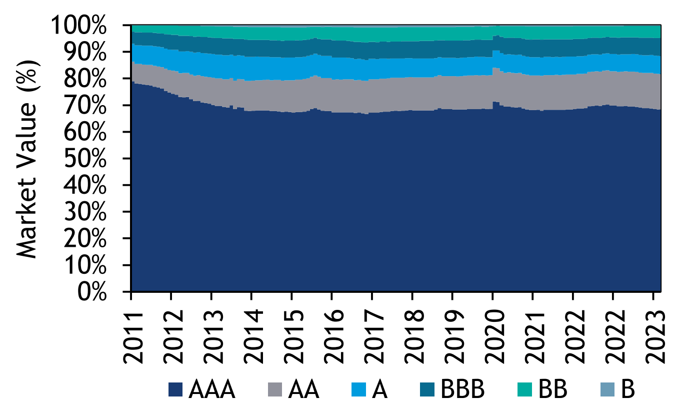
As of 31 Dec 23: 79% MV 11% MV 6% MV 5% MV

Historical Rating Distribution of Bloomberg US Securitized Index (Securitized Credit Only)



As of 31 Dec 23: 84% MV 11% MV 5% MV 1% MV

Historical Rating Distribution of J.P. Morgan CLOIE Index



As of 31 Dec 23: 68% MV 13% MV 7% MV 7% MV 5% MV <1% MV

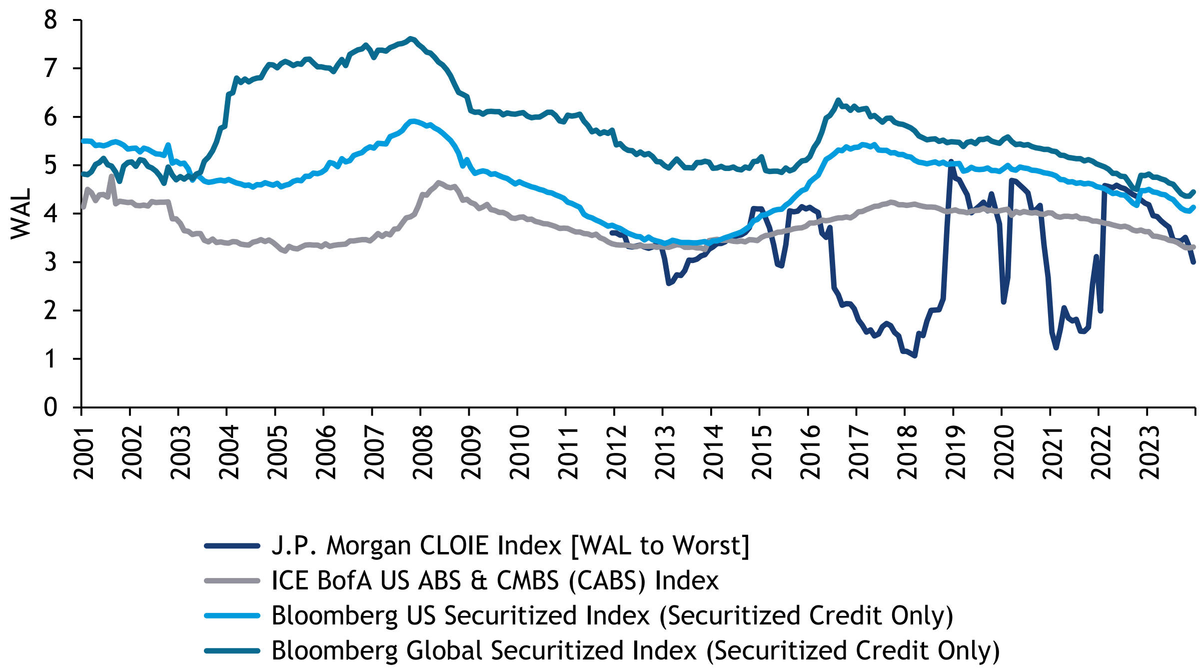
Source: Bloomberg, ICE BofA, and JPMorgan *as of 31 December 2023.*
Indices are unmanaged and do not incur fees. It is not possible to invest directly in an index.
Past market experience is no guarantee of future results.

WEIGHTED AVERAGE LIFE (WAL)

The WAL of securitized credit holdings in many of these indices generally drifted over time between 3 and 6 years (Figure 9). The Bloomberg Global Securitized Index tends to have a somewhat longer WAL given its unique non-dollar commercial ABS exposure, and the CABS Index often displays a bit shorter WAL given its significant weighting in 1-3 year consumer ABS. The J.P. Morgan CLOIE Index has had a much more volatile WAL over time than the other indices, varying dramatically between 1 and 5 years. The greater variability of WAL for the CLOIE index is due to CLOs' high embedded issuer optionality. Model WAL can dramatically shorten when bond spreads make it more economical for issuers to refinance CLO deals and lengthen greatly when issuers are less incentivized to refinance deals.

FIGURE 9

Historical WAL of Securitized Credit in Indices



Source: Bloomberg, ICE BofA, and JPMorgan *as of 31 December 2023.*
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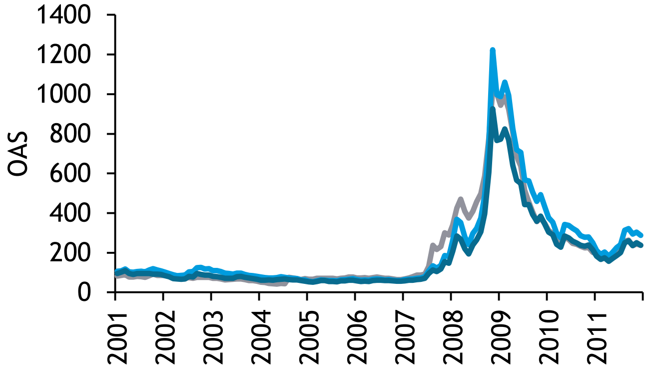
OPTION ADJUSTED SPREAD (OAS)

The following left-hand chart shows how securitized credit spreads performed during the GFC (Figure 10). Spreads on the Bloomberg US Securitized Index, Bloomberg Global Securitized Index, and CABS Index widened to over 1,000 basis points during the GFC. Since 2012, securitized credit spreads had been relatively stable between 100-300 bps, with the exception of the COVID-19 pandemic in early 2020. However, even during COVID, securitized credit spreads never reached their GFC wides, and they tightened much faster from that risk-off event.

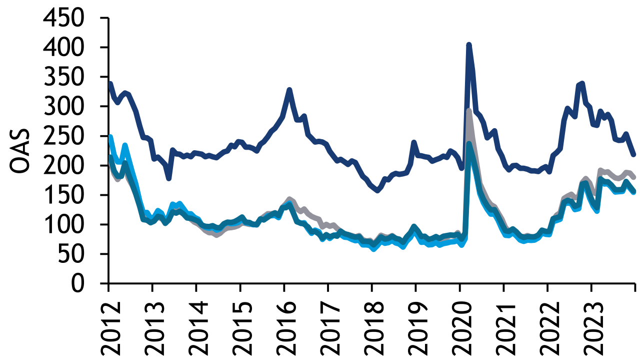
FIGURE 10

Historical OAS of Securitized Credit in Indices (Pre-2012)



Source: Bloomberg as of 1 January 2001 to 31 December 2011

Historical OAS of Securitized Credit in Indices (Post-2012)



Source: Bloomberg as of 1 January 2012 to 31 December 2023

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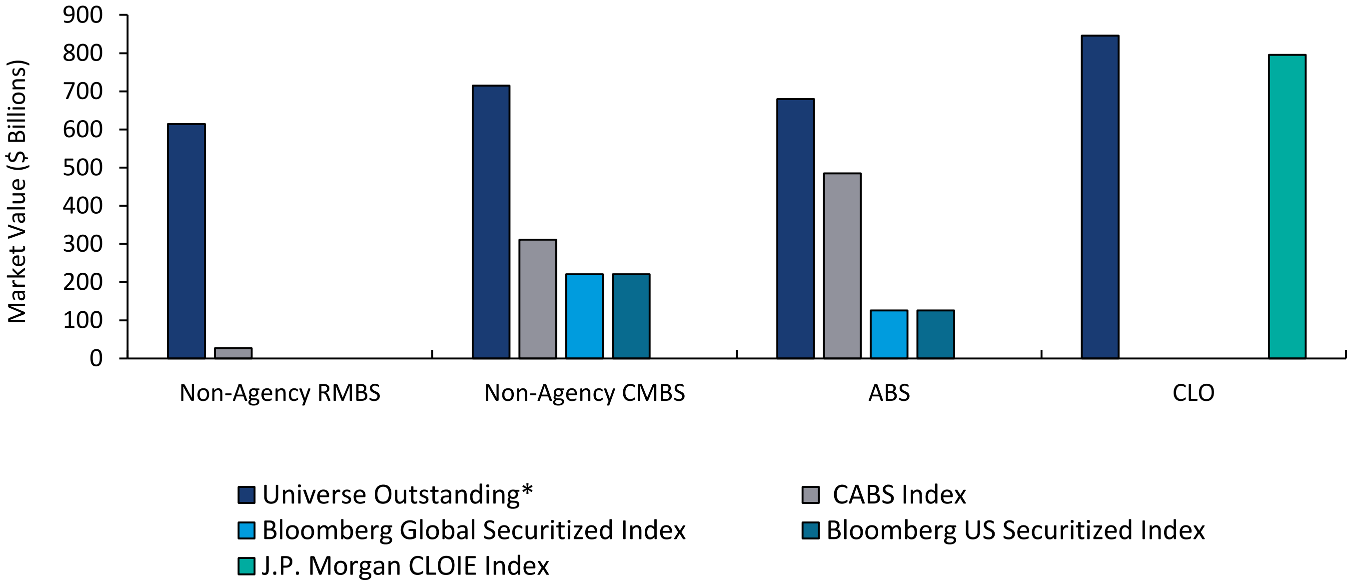
MARKET VALUE OF SECURITIZED CREDIT EXPOSURES IN THE UNIVERSE VS. INDICES

One of the best ways to understand whether an index is a fair representation of securitized credit, in our opinion, is to compare the market value of bonds held in the index relative to those in the universe. Figure 11 below shows the CABS Index holds a greater portion of the non-agency CMBS and ABS universe than both the Bloomberg Global Securitized Index and Bloomberg US Securitized Index. The CABS Index's wider representation of the securitized credit universe reinforces our view that it is our preferred benchmark for this sector. The J.P. Morgan CLOIE Index has strong coverage of the CLO universe and is our preferred benchmark for this portion of the Securitized Credit universe.

FIGURE 11

US Securitized Credit Exposures across Indices
As of 12/31/2023



**'CLO Universe' includes only Broadly Syndicated Loan CLO debt. CLO Universe' is estimated based on JPMorgan's CLOIE Product Guide, which states the index covers 94% of the CLO debt stock, excluding Middle Market CLOs and Equity tranches (as of 30 September 2021). Universe Outstanding, as defined by JPMorgan*

Source: Bloomberg as of 31 December 2023.
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Summary Chart Comparing Securitized Indices

Figure 12 on the following page provides a helpful reference table for investors and consultants who are interested in understanding the basic differences between the six securitized credit indices discussed in this paper. Specifically, the table highlights index sector exposures and inclusion rules surrounding minimum bond ratings, maturities, and liquidity requirements.

Most importantly, the table reiterates our team's view for investors and consultants to use the CABS Index as a benchmark for broad securitized credit strategies and the J.P. Morgan CLOIE Index for CLO-only mandates.

FIGURE 12

		Bloomberg US Mortgage Backed Securities (MBS) Index	ICE BofA US ABS & CMBS (CABS) Index	Bloomberg US Securitized Index	Bloomberg Global Secuitized Index	J.P. Morgan CLOIE Index	Bloomberg Pan European Floating Rate ABS Index, Hedged to Euro
Index Preference for Benchmark		**Suggested Benchmark for US Agency MBS**	**Suggested Benchmark for US Securitized Credit**			**Suggested Benchmark for US CLOs**	**Suggested Benchmark for European Securitized Credit**
Ticker		LUMSTRUU Index	CABS Index	LD19TRUU Index	I03444US Index	JCLOAGTR Index	H21892EU Index
Market Value, as of 12/31/2023		$7.1trn	$949bn	$7.7trn	$9.1trn	$795bn	€55bn
Inception Date		1/1/1976	12/31/1997	1/1/1997	9/1/2000	12/30/2011	1/1/2004
Currency Denomination		USD	USD	USD	USD	USD	EUR
Coupon Type		Fixed	Fixed (ABS, CMBS) and Floating (ABS)	Fixed	Fixed	Floating	Floating
Allow Rule 144A securitized credit bond (without registration rights)		no	yes	no	no	yes	No
Minimum Rating		US Agency MBS is assigned the same rating as US government debt.	Investment Grade (BBB-), using middle rating of S&P, Moody's, and Fitch.	Investment Grade (BBB-), using middle rating of S&P, Moody's, and Fitch.	Investment Grade (BBB-), using middle rating of S&P, Moody's, and Fitch.	B- minimum rating, using lowest of S&P, Moody's, and Fitch.	Investment Grade (BBB-), using middle rating of S&P, Moody's, and Fitch.
Maturity		Pool aggregates must have a weighted average maturity of at least one year.	At least one year remaining until final stated maturity	(1) Agency MBS must have a weighted average maturity of at least one year. (2) CMBS and ABS must have a remaining average life of at least one year.	(1) Agency MBS must have a weighted average maturity of at least one year. (2) CMBS and ABS must have a remaining average life of at least one year.	None.	At least one year of remaining average life.
Sector Exposure, as of 12/31/23	Agency MBS	100%		93%	78%		
	Agency CMBS*		14%	3%	2%		
	Consumer ABS		39%	1%	1%		39%
	Commercial ABS		13%	0%	0%		
	Non-Agency CMBS**		32%	3%	3%		0%
	Non-Agency RMBS		2%		0%		61%
	Covered Bonds				16%		
	CLOs					100%	
Minimum Liquidity Req.	Agency MBS	(1) Conventional/Ginnie Mae coupon vintage cohorts must have at least $1bn amount outstanding. Any Conventional coupon vintage cohort greater than $10bn is further partitioned into specified cohorts that have at least $300mm amount outstanding.		(1) $1bn par amount outstanding at the cohort level	(1) $1bn par amount outstanding at the cohort level		
	ABS		(1) $250mm min original deal size; (2) Current deal size is greater than or equal to 10% of original deal size; (3) Min outstanding tranche size of $50mm for senior tranches and $10mm for mezz/subordinated tranches	(1) $500mm min original deal size; (2) $25mm min outstanding tranche size	(1) $500mm min original deal size; (2) $25mm min outstanding tranche size		(1) 500mm EUR min original deal size; (2) 300mm EUR AAA min outstanding tranche size; (3) 25mm EUR AA - BBB min outstanding tranche size
	Agency CMBS & Non-Agency CMBS		(1) $250mm min original deal size; (2) Current deal size is greater than or equal to 10% of original deal size; (3) Min outstanding tranche size of $50mm for senior tranches and $10mm for mezz/subordinated tranches	(1) $500mm min original deal size; (2) $25mm min outstanding tranche size; (3) $300mm amount outstanding remaning in the deal	(1) $500mm min original deal size; (2) $25mm min outstanding tranche size; (3) $300mm amount outstanding remaning in the deal		
	CLOs					(1) No min tranche size	

**Senior, Guaranteed Agency CMBS **Includes Mezzanine, Non-Guaranteed Agency CMBS*

LOOMIS | SAYLES

Additional Disclosure

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the actual or expected future performance of any investment product. Information, including that obtained from outside sources, is believed to be correct, but Loomis Sayles cannot guarantee its accuracy. This information is subject to change at any time without notice.

Past performance is no guarantee of future results.

Any investment that has the possibility for profits also has the possibility of losses, including the loss of principal.

Diversification does not ensure a profit or guarantee against a loss.

Market conditions are extremely fluid and change frequently.

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