

# Berkadia Commercial Mortgage LLC

Berkadia Commercial Mortgage LLC (Berkadia, or the company), a joint venture between Berkshire Hathaway and Jefferies Financial Group Inc. (Jefferies), is a commercial real estate (CRE) lender, broker, servicer and third-party outsource provider of CRE servicing functions. The company maintains three business lines: commercial mortgage banking, investment sales and commercial mortgage servicing. Berkadia originates commercial mortgage loans for government-sponsored entities (GSEs), third parties (such as life companies, private investors and institutional banks) and securitized transactions, as well as for its own portfolio.

Berkadia maintains a well-articulated business plan focused on adding and expanding third-party relationships and generally retaining servicing for approximately 90% of loans originated. The company also performs complimentary special servicing functions for third-party clients, including banks, life insurance companies, debt funds, Fannie Mae and the U.S. Department of Housing and Urban Development (HUD), as well as balance sheet loans.

In 2022, Berkadia originated \$35.2 billion in commercial mortgages, declining from a record \$40.4 billion in 2021 but above the \$26.9 billion originated in 2020. The company added more than 3,500 loans totaling \$98 billion in 2022, including third-party loans to the servicing portfolio. During the same period, Berkadia was named master servicer for 22 transactions, including single-asset-single-borrower (SASB), multiborrower (affordable housing), single-family rental (SFR) and CRE-collateralized loan obligation (CLO) securitizations. The company also added three new special servicing securitization assignments in 2022, for two multiborrower (affordable housing) transactions and one SASB securitization. In 2023, Berkadia became the named servicer for the West Edmonton Mall Property Inc. (WEMPI), Series C transaction, its first entry into the Canadian CRE servicing market.

Approximately 68% of Berkadia's servicing staff is located offshore through Berkadia Services India Private Limited (Berkadia India), the company's captive offshore platform for over 21 years. Operations are highly integrated between domestic and offshore teams, providing flexibility and scalability relative to its servicing volume.

The servicing portfolio comprises over 20,800 loans totaling \$397.4 billion as of June 2023, including master servicing for 77 transactions totaling \$24.0 billion and special servicing for more than 4,000 loans totaling \$60.9 billion.

## Servicer Ratings

- Fitch rates primary and master servicers, which protect the interests of the certificateholders in the trust by servicing and administering the mortgage loans.
- The primary servicer is responsible for day-to-day servicing functions, while the master servicer is responsible for monitoring the activities of primary servicers, investor reporting and timely remittance of funds to trustees.
- Fitch also rates special servicers, which are key to maintaining the credit quality of a pool containing nonperforming commercial mortgages and real estate-owned (REO) assets. The special servicer is responsible for working out loans, foreclosing and liquidating assets.
- In assessing and analyzing the capabilities of primary, master and special servicers, Fitch reviews several key factors, including the management team, organizational structure and operating history, financial condition, information systems and, with respect to the special servicer, workout and asset disposition experience and strategies.

## Ratings

Commercial Primary Servicer <sup>a</sup>	CPS1
Commercial Master Servicer <sup>b</sup>	CMS2+
Commercial Special Servicer <sup>c</sup>	CSS2

<sup>a</sup>Rating affirmed Nov. 20, 2023. <sup>b</sup>Rating upgraded from 'CMS2' on Nov. 20, 2023. <sup>c</sup>Rating assigned Nov. 20, 2023.

## Rating Outlooks<sup>d</sup>

Commercial Primary Servicer	Stable
Commercial Master Servicer	Stable
Commercial Special Servicer	Stable

<sup>d</sup>Rating Outlook assigned Nov. 20, 2023.

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- Fitch rates commercial mortgage primary, master and special servicers on a 1-to-5 scale, with “1” being the highest rating. Within each of these rating levels, Fitch further differentiates ratings by plus (+) and minus (-) along with the flat rating.

## Key Rating Drivers

**Company and Management:** Berkadia benefits from strong sponsorship support contributing to stable ownership and a growing servicing platform. Berkshire Hathaway and Jefferies each own 50% of the company, which has been servicing commercial mortgages since 1994. Berkadia maintains a well-articulated business plan focused on adding and expanding third-party relationships and retaining internal originations leading to continued growth in commercial mortgage servicing, which remains an integral component of the broader Berkadia platform.

**Staffing and Training:** Berkadia employs 68% of its servicing staff through its captive offshore operation, Berkadia India, the largest such percentage among Fitch-rated servicers. Offshore employees are extensively trained virtually and via frequent training visits to India, in addition to training key Indian personnel in the U.S. Berkadia’s offshore turnover has historically been below the market average of 25% for the financial services industry, which Fitch attributes to a strong corporate culture of active engagement and training.

The company maintains a deep and stable management team among which only one domestic and one offshore middle management departure occurred during the 12-month period ended in June 2023, resulting in very low turnover collectively. Domestic senior and middle managers average 24 years of industry experience and 16 years of tenure, while domestic staff-level employees average 16 years and eight years, respectively. Aggregate turnover of 10% among domestic primary and master servicing employees during the 12 months ended June 2023 is considered low. Offshore senior and middle managers are also highly experienced and average 14 years with the company. Staff turnover among offshore employees remained below market, at 18% during the 12 months ended June 2023, consistent with Fitch’s 2022 review.

Special servicing middle managers and staff are also highly experienced and tenured compared to other Fitch-rated special servicers. The group includes three asset managers who average 22 years of industry experience and 13 years of tenure and maintain a 13:1 assets-to-asset manager ratio, comparable to other Fitch-rated servicers of multiborrower securitizations. In 2022, domestic master and primary servicing employees completed an average of 49 hours of training while offshore employees completed 50 hours. Special servicing employees completed 45 hours of training during the same period.

**Technology:** Berkadia uses McCracken Strategy release 20, upgrading in 2022 from the prior version 17.6 as its primary servicing application. Special servicing functions are supported by a proprietary asset management system that supports creating business plans, evaluating alternative workout strategies and tracking inspections, appraisals, environmental reports and budgets. Berkadia has a demonstrated commitment to investing significant resources in technology development. Strategy is integrated with a suite of proprietary ancillary applications for which Berkadia maintains 30 development teams in the U.S. and India, all focused on continuously improving Berkadia’s applications.

The company continues to focus on building a single cloud-based database to improve processing times and create a single repository for data. The database is the basis for newer applications, including the Financial Analysis Application (FA App) and quality control (QC) module, used to assign workflows and automate QC reviews. Recent technology initiatives included expanding the use of the QC module to automate reviews of financial statement analyses and begin testing use with other servicing functions; examples include new loan boarding and data management, updating the FA App to provide variance comparisons over multiple periods, incorporating multifamily rent roll data via optical character recognition (OCR) technology and a complete overhaul of the company’s portal for third-party servicing clients.

**Corporate Governance:** Berkadia maintains a comprehensive reporting process to manage output from its servicing operations, using data validation reports, exception reporting and dashboards. Additionally, the company’s risk, control and compliance department samples servicing functions for compliance with internal policies, regulations and pooling and servicing agreements (PSAs). Special servicing is supported by a dedicated compliance officer who oversees special servicing workout; this includes performing loan consent approvals and the credit committee process.

## Company Experience Since:

CRE Servicing	1994
Securitized Servicing	1994
Overseeing Primary Servicers	1994

Source: Berkadia Commercial Mortgage LLC

## Operational Trends

Business Plan	▲	Growth in portfolio with demonstrated sponsor support investing in servicing infrastructure
Servicing Portfolio	■	Year-over-year loan count change of approximately 10%
Financial Condition	■	Outlook/Trend
Staffing	■	Staffing changed less than 12% +/-
Technology	■	Stable technology platform; system of record significantly behind current releases
Internal Controls	■	Stable control environment; no material audit findings
Servicing Operations	▲	Strong/consistent operations organized around servicing tasks relative to the portfolio; functional growth into new product types or business lines

Source: Fitch Ratings

# BERKADIA®

Berkadia performs annual enterprise-wide risk assessments to develop audit plans, and internal audits are performed on a 24-month rotation. Since Fitch’s prior review, internal audits were performed on cash receipts and cash disbursement processes in November 2022, with no findings reported. Additionally, internal audits for advances and forbearance and servicing funds transfer authority were performed in April and June 2023, respectively, and had no findings.

**Loan Administration:** Berkadia has extensive primary servicing experience, with CRE loans demonstrating the highest performance in servicing ability for a diverse set of loans, properties and clients. The company maintains a QC-focused platform for primary servicing, predominantly utilizing operational staff in India, providing significant scale and minimizing added costs while maintaining subject matter expertise in the U.S. Berkadia also demonstrates high performance in master servicing ability; however, the company performs fewer primary servicer audits than other active and highly rated master servicers due to its limited number of subservicers.

**Defaulted/Nonperforming Loan Management:** Berkadia has extensive experience in special servicing for multifamily and healthcare loans and maintains an experienced and tenured asset management team. Nonsecuritized loans represent the majority of recent special servicing activity, although the company has significant experience working out securitized loans and maintains the technology and policies and procedures to support securitization assignments. Since 2009, Berkadia has resolved more than 950 securitized loans totaling \$8.0 billion and over 250 nonsecuritized loans totaling \$3.7 billion.

**Financial Condition:** Fitch views the company’s short-term financial viability as adequate to support the servicing platform and its liquidity as sufficient to meet advancing obligations. Additionally, Berkadia is able to fund operations and advancing needs through a program guaranteed by one of Berkadia’s parent companies, rated ‘AA-’/Stable as of April 2023.

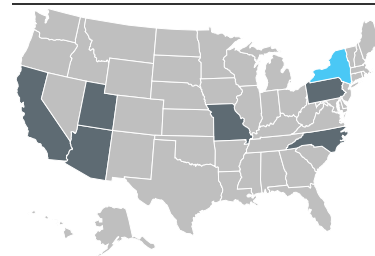
## Company Overview

### Servicing Portfolio Overview

	6/30/23 <sup>a</sup>	% Change	12/31/22	% Change	12/31/21
<b>Total Servicing</b>					
UPB (\$ Mil.)	397,355.0	1	393,009.3	17	337,202.6
No. of Loans	20,876	–	20,956	4	20,122
<b>Primary Servicing</b>					
UPB (\$ Mil.)	397,245.8	1	392,894.7	17	337,073.3
No. of Loans	20,861	–	20,933	4	20,091
<b>Master Servicing</b>					
UPB (\$ Mil.)	23,971.8	11	21,560.5	41	15,321.5
No. of Loans	1,365	–	1,359	12	1,215
<b>Special Servicing – Named</b>					
UPB (\$ Mil.)	60,925.6	4	58,464.0	6	55,016.4
No. of Loans	4,038	2	3,963	-1	3,988
<b>Special Servicing – Active<sup>a</sup></b>					
UPB (\$ Mil.)	744.4	265	203.9	-32	300.2
No. of Loans	47	194	16	-41	54

<sup>a</sup>June 30, 2023 primary servicing numbers include 3,841 loans that are limited subservicing. UPB – Unpaid principal balance. Source: Berkadia Commercial Mortgage LLC

### Office Locations



Primary Office: New York City

### Servicing Portfolio



Source: Berkadia Commercial Mortgage LLC  
Note: Special servicing includes loans actively in special servicing (including REO). Total excludes special servicing.

Berkadia is a limited liability company and, through a series of holding companies, it is ultimately a joint venture between Jefferies and Berkshire Hathaway Inc. In December 2009, the company began operations as Berkadia by acquiring the commercial mortgage origination and servicing business of Capmark Financial Group Inc. through Capmark's bankruptcy. The platform has been operating since 1994, previously as GMAC Commercial Mortgage.

In 2022, Berkadia originated \$35.2 billion in commercial mortgages, decreasing from a record \$40.4 billion in 2021 but above the \$26.9 billion originated in 2020, \$26.7 billion in 2019 and \$26.1 billion in 2018. In 2021, the company was the largest Freddie Mac lender, second largest Fannie Mae lender and third largest HUD lender. In 2022, Berkadia contributed over \$9.2 billion to Freddie Mac K-series transactions and approximately \$421.1 million to securitized conduit transactions. Berkadia also maintains annual origination volumes of approximately \$3.8 billion for life companies and roughly \$1.2 billion for its proprietary balance sheet loan program that, in addition to remaining focused on loans collateralized by stabilized properties seeking permanent GSE financing, is engaging with institutional partners to increase bridge lending.

The company services over 20,900 CRE loans totaling approximately \$392.9 billion across its client base, which includes GSEs, insurance companies, conduits, banks, third parties and its own proprietary portfolio. Berkadia's largest servicing clients include HUD, Freddie Mac and Fannie Mae. As of YE22, 54% (by loan count) of the total servicing portfolio was subserviced on behalf of third-party clients, while the remainder was serviced for GSEs (20%), securitized transactions (18%, including master and primary servicing), life companies (7%) and pre-securitized loans (1%).

Berkadia's subservicing portfolio consists of 11,389 loans totaling \$230 billion as of June 30, 2023. This portfolio has grown as the company continues to add new clients and expand existing relationships. Subservicing is performed for a diverse mix of 24 clients with portfolios ranging from less than 10 loans to nearly 2,500. Included within the subservicing portfolio is the company's longstanding relationship with KeyBank, dating back to 2012 and running through 2025. As of June 30, 2023, 615 loans totaling \$9.3 billion were serviced by Berkadia under the agreement. The KeyBank portfolio represents 5% (by loan count) of the subservicing portfolio for third parties and 4% of Berkadia's total servicing portfolio, down from 7% and in line with 4%, respectively, as of Fitch's prior review. Fitch expects the KeyBank portfolio to continue to decline as runoff exceeds additional assignments.

The company continues to add diversity to its portfolio through interim servicing for SFR loans pre-securitization, new SASB and SFR master servicing assignments and Freddie Mac small balance loan (SBL) lending and servicing. In 2022, Berkadia was named master servicer on two SFR transactions with 142 loans totaling \$587.6 million, as well as 14 SASB transactions totaling \$6.8 billion. The company also primary services 257 SBLs totaling \$724.8 million in 33 Freddie Mac small balance transactions.

Berkadia is headquartered in New York City. It maintains its U.S. servicing operations in Ambler, PA and most of its offshore operations in Hyderabad, India. The company has servicing staff based in 11 satellite offices, including New York City, Irvine, CA, St. Louis, Midvale, UT, Charlotte, NC and Scottsdale, AZ. Berkadia continues to place investment sales and mortgage banking personnel together to help improve customer service and expand business lines.

## Financial Condition

Fitch does not maintain a credit rating for Berkadia; however, Fitch performed a financial assessment of the company and determined its short-term financial viability as adequate to support the servicing platform. Financial condition carries greater weight in master servicer ratings given a master servicer's need to advance payments for securitized loans. Although Berkadia is not publicly rated and has a smaller balance sheet than its master servicing peers (which are typically divisions of investment grade banks or insurance companies), it maintains sufficient liquidity to meet advancing obligations. Additionally, Berkadia is able to fund operations and advancing needs through a program guaranteed by one of Berkadia's parent companies, rated 'AA-/Stable' as of April 2023.

Fitch's assessment of Berkadia noted continued strong profitability, low leverage relative to peers, a solid equity base, larger scale given its leading GSE franchise position, consistent revenue generation and increased master servicing activity. Berkadia relies heavily on short-term secured funding as the majority of its debt comprises one-year agency loan secured borrowing agreements and secured borrowing facilities with third-party lenders. Secured borrowings

Berkadia maintains a well-articulated business plan focused on adding and expanding third-party relationships and generally retaining servicing for approximately 90% of loans originated. Although loan originations decreased 13% by balance in 2022, the company boarded 3,521 loans totaling \$98 billion for the year, including new master servicing assignments for 14 SASB transactions totaling \$6.2 billion and two SFR transactions, three affordable transactions and one CRE-CLO transaction with a combined UPB of \$2.1 billion.

Berkadia is able to fund advancing requirements through a program guaranteed by one of its parent companies, rated 'AA-/Stable'.

Subsequent to data collected by Fitch, Berkadia was named servicer for the West Edmonton Mall Property Inc. (WEMPI), Series C first mortgage bond, representing the beneficial interest in a trust that holds a four-year, fixed-rate, IO CAD1.2 billion mortgage loan secured by a first priority mortgage lien on the fee simple interest of a 4.4 million sf super-regional mall in Edmonton, Alberta.

The appointment represents the company's first entry into servicing for Canadian transactions. In its role as servicer, Berkadia performs master and special servicing functions.

declined considerably in 2022 due to lower originations but increased in 1H23, consistent with historical metrics.

In November 2021, the company resumed historically high dividend payout rates following a pause during the pandemic, which limits growth of equity capital. Although there is no firm dividend policy or clear guidance, Berkadia historically has used cash earnings as a basis for dividends. Potential advancing obligations are supported by third-party credit facilities, cash and liquid investments on the company's balance sheet and the financial benefits of its parent's investment in the platform, providing liquidity to support advancing obligations in a market downturn.

## Employees

As of June 30, 2023, Berkadia maintained a master and primary servicing staff of 808 employees, up from 646 as of Dec. 31, 2021, as well as seven employees allocated to special servicing.

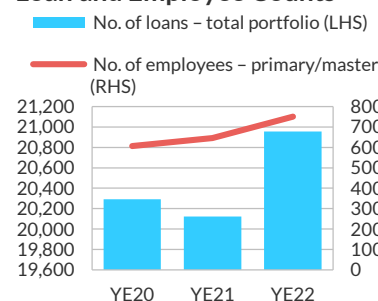
There are 566 employees based offshore, in the Hyderabad and Bengaluru offices, although the majority of staff are located in Hyderabad. The company maintains a domestic master and primary servicing staff of 242, the majority of which are located in the company's Ambler office, which serves as the head office for servicing. Sixty-eight servicing employees are located across 12 regionally diverse domestic offices. The number of master and primary servicing employees has increased 16% from Fitch's 2022 review, with additions split between onshore and offshore locations.

During the 12 months ended in June 2023, Berkadia experienced 10% turnover among domestic master and primary servicing employees and no turnover among special servicing employees, consistent with the prior year. Domestic turnover is low compared to other Fitch-rated servicers. Turnover among offshore employees remained materially consistent at 18% for the same period compared to 17% as of the prior review. Turnover among offshore employees remains low compared to the market, which typically ranges between 20% and 30% annually among financial services sector employees. In India, the primary drivers of turnover remain a combination of departures for other job opportunities, family obligations and educational aspirations. The vast majority of domestic and offshore employee departures were voluntary.

Notwithstanding employee departures, Berkadia added 35 domestic master and primary servicing employees averaging nine years of industry experience, along with 166 offshore employees who average less than a year of industry experience, during the 12 months ended in June 2023. Also as of June 2023, there were two domestic and 27 offshore open positions.

Fitch notes positively that overall turnover across both the U.S. and India continues to be stable and remains low compared to rated servicer peers. The company attributes low turnover to its corporate culture, focus on training and flexible work environment.

## Loan and Employee Counts



Source: Berkadia Commercial Mortgage LLC

## Employee Statistics

	2023				2022 <sup>a</sup>			
	No. of Employees	Average Years Industry Experience	Average Years Tenure	% Turnover	No. of Employees	Average Years Industry Experience	Average Years Tenure	% Turnover
<b>Domestic Primary/Master Servicing</b>								
Senior Management	6	32	20	0	5	33	22	20
Middle Management	32	22	15	3	26	26	17	0
Servicing Staff	204	16	8	12	178	16	10	12
<b>Total</b>	<b>242</b>	<b>—</b>	<b>—</b>	<b>10</b>	<b>209</b>	<b>—</b>	<b>—</b>	<b>10</b>
<b>Offshore Primary/Master Servicing</b>								
Senior Management	4	21	11	0	3	19	13	0
Middle Management	6	17	17	20	4	16	11	0
Servicing Staff	556	4	4	18	430	5	5	17
<b>Total</b>	<b>566</b>	<b>—</b>	<b>—</b>	<b>18</b>	<b>437</b>	<b>—</b>	<b>—</b>	<b>17</b>
<b>Total Primary/Master Servicing</b>	<b>808</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>646</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Special Servicing</b>								
Senior Management	0	0	0	0	0	0	0	N.A.
Middle Management	4	25	11	0	4	25	16	N.A.
Servicing Staff	5	18	10	0	3	24	15	N.A.
<b>Total</b>	<b>8</b>	<b>—</b>	<b>—</b>	<b>0</b>	<b>7</b>	<b>—</b>	<b>—</b>	<b>N.A.</b>

<sup>a</sup>2022 employee metrics reflect data as of Dec. 31, 2021. N.A. - Not applicable  
Source: Berkadia Commercial Mortgage LLC



**Primary/Master Servicing**

Berkadia maintains an experienced and tenured domestic and offshore management team. In the U.S., six senior managers average 32 years of industry experience and 20 years with the company, while four senior managers in India average 21 years of industry experience and 11 years with Berkadia. Supporting senior management comprises 32 middle managers in the U.S. averaging 22 years of industry experience and 15 years of company tenure, along with six middle managers in India averaging 17 years of industry experience and 17 years with the company. Senior managers in India report directly to U.S. senior managers. The company continues to maintain a site director to manage operations in Hyderabad.

There was 3% management turnover among domestic middle managers and 20% turnover among offshore middle managers during the 12 months ended in June 2023, compared to no turnover during the prior review. While turnover among offshore middle managers appears high, it is due to the departure of one employee who had been with the company for less than three years. Berkadia continues to maintain an experienced senior leadership team, as demonstrated by additional management resources that added increased depth to the management team, both domestically and offshore, since Fitch’s prior review.

Berkadia maintains a highly experienced U.S. servicing staff of 204 employees averaging 16 years of industry experience and eight years of tenure. Staff are structured on a functional basis for specific tasks that include asset management, taxes and insurance and investor reporting. Client relations serves as the main point of contact for servicing clients. There is also a separate life company servicing group. The India servicing staff average four years of industry experience and four years of tenure; this group supports all aspects of servicing, including investor reporting, bank reconciliations, cash-managed loans, reserves, new loan boarding, Uniform Commercial Code (UCC) processing, taxes and insurance, escrow analysis and financial statement analysis.

Berkadia also maintains a small balance servicing platform in Hyderabad staffed by three subject matter experts with extensive cross-training; this group also assists other functional teams. While Berkadia does contact borrowers from India, Fitch was unable to assess the quality of these calls relative to other offshore operations. Borrower contact from India has been limited historically (less than 5% of all calls to borrowers).

**Special Servicing**

The special servicing group is primarily located at the company’s Irvine, CA office and comprises four fully dedicated employees and three cross-functional employees. Employees are responsible for loan and REO asset management, special request underwriting, compliance and performing loan surveillance. Cross-functional employees are allocated approximately 25% of the time to special servicing and share responsibilities for surveillance and special requests. Six of the seven special servicing employees are based in Irvine.

The special servicing group is led by a middle manager who is responsible for special servicing and performing loan surveillance and reports to the managing director responsible for client services. The head of special servicing has been with the company for 20 years and has over 30 years of industry experience. Collectively, the group’s middle managers average 16 years of tenure and 25 years of industry experience, while staff-level employees average 18 and 24 years, respectively. There was no turnover among special servicing employees during the 12-month period ended in June 2023, and the group was not actively recruiting.

While the seven-member special servicing team presents key person risk, it is appropriate given the current number of defaulted loans. Should defaults increase, the company would likely recruit additional experienced asset managers or reallocate staff from servicing or originations with prior workout experience.

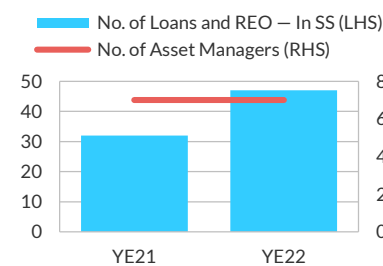
Fitch identified one middle manager, who is the head of special servicing, and two staff employees as asset managers currently assigned to defaulted loans. Asset managers average 13 years of tenure with the company and 22 years of industry experience. Fitch calculated an assets-to-asset manager ratio of 13:1, excluding secondary mortgage positions, comparable to other Fitch-rated servicers of multiborrower securitizations. While asset managers possess industry experience across all CRE asset types, current special servicing assignments comprise multifamily and healthcare assets.

There was 3% management turnover among master and primary servicing employees for the 12 months ended in June 2023, consistent with Fitch’s prior review. Berkadia continues to maintain a deep and stable management bench, with 48 senior and middle managers collectively averaging 23 years of industry experience and 16 years of company tenure.

Berkadia hired 201 new employees during the 12 months ended in June 2023. The majority of the new hires were in Hyderabad (83%). The financial statement analysis and insurance administration groups saw the most additions, consistent with Fitch’s observations for other rated primary servicers.

While the number of special servicing employees is small compared to other rated special servicers, the average employee tenure and industry experience are among the highest. Additionally, the presence of a dedicated compliance resource is uncommon among smaller servicers but consistent among highly rated servicers.

**SS Loan and Employee Counts**



REO – Real estate owned. SS – Special Servicing. Source: Berkadia Commercial Mortgage LLC

**Training**

Fitch found Berkadia’s training program to be comprehensive, allowing for employee development in the U.S. and India. Berkadia has a dedicated corporate trainer responsible for both the U.S. and India. Required training hours are based on a tiered approach relative to employee tenure ranging from 50 hours for employees with less than three years of tenure to 15 hours for domestic employees with more than 15 years of tenure. In 2022, domestic master and primary servicing employees completed an average of 49 hours of training while offshore employees completed 50 hours. Berkadia’s special servicing employees, which are among the most tenured of Fitch-rated servicers, completed 45 hours of training in the same period. Training courses offered in the past year included an overview of the new loan boarding process, investments on reserves, CRE valuation and the payoff.

Berkadia maintains a robust training program led by a corporate trainer. The company makes available a diverse program of training courses for its employees, both in the U.S. and India. The company mandates that each servicing employee complete training hours commensurate with their industry experience.

The company encourages employees to enroll in the Mortgage Bankers Association’s (MBA) commercial mortgage servicer programs. Approximately 31% of Berkadia’s servicing employees were enrolled in these programs, according to the most recent figures.

Berkadia conducts numerous training-related excursions between the U.S. and India, most recently occurring in 2022 (nine trips) and 2Q23 (six trips), along with quarterly functional training in India conducted by U.S.-based personnel and audio/videoconference training. However, due to the pandemic, most training-related visits continue to be held in a virtual format. The company also hosts an annual CRE Symposium, providing two days of topical industry discussion among a diverse group of industry leaders. This event is made available to all employees.

Berkadia continues to implement its employee development program, which seeks to provide an organizational foundation that supports learning and higher performance. As part of this program, Berkadia created four modules focusing on constructive feedback for employees, coaching, aligning expectations and developing employee capabilities. The company maintains Berkadia University, which provides on-the-job training and formalized classes.

Berkadia hired a diversity, equity and inclusion (DEI) director in 2021, formed a DEI committee with membership from across all business lines and created its first three employee resource groups (ERGs). Berkadia recently affirmed its commitment and support for these initiatives by rotating the chairs of the above-mentioned groups to expand leadership participation.

**Operational Infrastructure**

**Offshore Operations**

Fitch periodically reviews commercial mortgage servicers’ offshore captive affiliates or outsource firms that perform various servicing functions or portions of servicing functions to assess the effectiveness of processes and controls. As Berkadia’s business model relies heavily on its captive offshore resources, Fitch performed an onsite review of the company’s commercial loan servicing operations in Hyderabad in March 2019.

Fitch met with Berkadia’s U.S. senior managers and members of the India leadership team responsible for commercial loan servicing to understand: the infrastructure and role of the India operations within the broader company; employee training, education, experience and turnover; the company’s disaster recovery and technology infrastructure; and the implementation and oversight of Berkadia’s policies and procedures for commercial loan servicing. In addition, senior Fitch analysts toured the Hyderabad facilities and spent time with frontline employees as they performed servicing functions.

Berkadia has over 20 years of offshoring experience through its captive affiliate, Berkadia Services India, and its prior platform in Ireland. The company’s 1,229 offshore employees are grouped among day (49%), evening (18%), sunrise (6%), split (23%) and rotational (4%) shifts, maintaining continuous operations in a 139,509 sf dedicated office space.

In March 2023, Berkadia added a new 14,643 sf office in Gurgaon, which primarily supports their corporate operations and global production operations. The office has a seating capacity of 100 and currently hosts 26 employees.

Nearly all servicing functions can be performed in the Hyderabad office, and employees service loans utilizing a server farm in Ambler, providing greater security and efficiency from a centralized platform. Servicing functions performed offshore include loan boarding, loan administration, escrow account administration, payoff quotes, bank reconciliations, payment processing and financial statement and rent roll analysis. While these servicing functions predominately occur offshore, Berkadia maintains subject matter experts in the U.S. who are responsible for oversight and QC, using a mix of technology and ongoing training. In addition to performing servicing functions, the

offshore staff support back office corporate functions such as IT development and support, finance and accounts payable, production operations and proprietary lending.

Fitch observed firsthand servicing functions performed by offshore staff and found no discernable differences between domestic and offshore functions, which Fitch attributes to extensive employee training and domestic and offshore management teams that are highly engaged with staff. Fitch also observed the significant role technology plays in supporting offshore operations, such as Berkadia's proprietary Mega Work Flow application and real-time dashboard trending that measures and tracks touch times specific to each servicing function.

### Outsourcing

Berkadia does not outsource any core servicing functions; however, it does engage third-party vendors to provide tax processing, track UCC filings, prepare lien releases and perform property inspections, similar to other Fitch-rated primary servicers.

Similarly, no core special servicing functions are outsourced to vendors. The special servicing group maintains a list of vendors, including appraisers, receivers, brokers, property inspectors, environmental consultants and law firms, which may be engaged to support asset management and foreclosure responsibilities.

### Vendor Management

Berkadia contracts with vendors primarily for tax processing, UCC filings, preparing lien releases and property inspections to support primary servicing duties.

The company's risk control and compliance group is responsible for vendor management. Berkadia categorizes and reviews its vendors annually and has established a formal process to review vendors engaged by the company. The compliance officer of the special servicing group is responsible for monitoring vendors engaged during the workout and REO disposition processes. In 2023, the company purchased a third-party risk management tool to centralize and streamline the onboarding of new vendors and perform an annual risk assessment of all vendors.

Berkadia's vendor oversight includes reviewing the financial, operational and compliance environments to ensure vendors meet the terms of their contractual arrangements and can continue to do so. As part of this oversight, the company collects third-party audit reports (service organization control, or SOC reports). Work is monitored via service-level agreements and vendor report cards that are created quarterly. Vendors are tested as part of Berkadia's SOC1 and SOC2 audits. Monthly calls are also held with the company's vendors to address any issues that arise.

### Technology

Berkadia utilizes McCracken's Strategy, release 20, as its core servicing application. While on an application service provider (ASP) contract with McCracken, Berkadia maintains its servicing data on its own servers, allowing what the company believes to be faster processing speeds. Incorporated into and integrated with Berkadia's systems are workflow technologies through its Enterprise Productivity Management (EPM) suite, a proprietary document-imaging system.

Fitch notes that Berkadia was one of the first Fitch-rated servicers to adopt the most recent version of Strategy, having converted to release 20 from 17.6 in 2022.

Additional ancillary applications used by Berkadia include:

- Mega Work Flow, a proprietary application designed to automate workflows, manage work requests, track turnaround times and provide real-time status updates on outstanding requests to borrowers and investors. Berkadia maintains a QC module within Mega Work Flow, which automates the sampling and testing of financial statement analyses, QC testing of all loans boarded manually and a sample of loans bulk uploaded to Strategy, and QC testing of a sample of data request changes made to the servicing system post-loan boarding. QC analysts can see the pending number of reviews and out of office status to determine workflows and track turnaround times for QC reviews. Planned enhancements include expanding cash workflow to accommodate international wires, checks and opening/closing bank accounts, along with further usability enhancements and customizations.
- Financial Analysis Application (FA App), a proprietary application developed within Mega Work Flow that uses OCR and machine learning to ingest and analyze financial statements in any format. Financial statements that are received via the borrower website can be



automatically ingested and digitized by the FA App, which is used for all property types and currently processes more than 95% of all financial statements. The application is updated nightly with data from Strategy via a data lake and is linked to the document management system to show original financial statements.

- InvestorView, Berkadia’s portal for third-party servicing clients, providing portfolio-level dashboards, loan-level and property-level views and reporting with customizable export capabilities. InvestorView was recently updated with a complete user interface overhaul. Servicing clients can view and download loan and payment data that include operating statements, balances for escrows, billing statements, various reserves for capex, unfunded completion repairs and debt service, as well as rent rolls.
- LoanView, a mobile-friendly borrower website that provides access to loan-level information, related documents and electronic billing. LoanView allows borrowers to upload financial statements and other documents, including insurance policies and reserve requests, and to set up automatic payments on days within their respective contractual grace periods. Recent updates to LoanView include self-service functionality for internal client relation managers to publish reserve disbursement forms, as well as streamlining registration, document retrieval and bill payment processes.
- SmartView, a combination of the servicing data warehouse and IBM Cognos Business Intelligence tools that aggregates and extracts data used for operational and management reporting, along with customized reporting.
- EPM/EDM (Enterprise Productivity Management/Enterprise Data Management) – EPM is a proprietary document-imaging system that creates loan documents as images and makes them available to staff for viewing, faxing and printing. The EPM system is used to facilitate approval of cash transactions, both within servicing and corporate functions. The EDM system, which is also proprietary, contains the electronic loan file, servicing agreements and related documents. These two systems are integrated utilizing an electronic queuing system to facilitate movement of funds from the requester to the approver, providing an audit trail for all funds moved.
- Asset Surveillance 2.0, which analyzes financial statements, tracks property inspection results and records rent roll data.
- The Investor Reporting Information System (IRIS), a securitized deal-level database and advance tracking application that stores transaction information, indicators and parameters for the investor reporting and surveillance groups. The advance module stores advance parameters, tracks loan-level advances (such as principal and interest and escrows) and calculates advance interest where applicable.
- The Reporting Utility Deal Interface (RUDI), an investor reporting tool that allows for loan-level reporting by combining data from Berkadia’s core servicing system with those from its data warehouse.
- Investor Query, a website that provides investors, rating agencies and other interested parties with reports, documents, data and general information pertaining to Berkadia’s securitized transactions.
- CertInView, a proprietary commercial insurance risk-mitigation application that monitors investor requirements, exposures and compliance at the transaction, property and policy levels.

Berkadia utilizes a proprietary application known as the Asset Information Management System (AIMS) for special servicing functions. Berkadia originally introduced the application prior to 2000 and has made incremental enhancements as needed. AIMS is the system of record for all workouts and retains the history of workouts since its initial introduction. AIMS-provided asset management functions include creating business plans, evaluating alternative workout strategies and tracking of inspections, appraisals, environmental reports and budgets. The application also contains PSA abstracts to identify key servicing requirements and deliverable deadlines, which are available for asset managers to reference and used to create compliance ticklers within the system.

Fitch notes as a strength Berkadia’s commitment to investing significant resources in technology development. Berkadia maintains 30 development teams of five to eight employees each. Berkadia continues to focus on building a single cloud-based database across the company to improve processing times and create a single repository for data. The database is intended to form the foundation for other applications, such as Berkadia’s proprietary interactive market analysis, Mega Work Flow and IRIS applications.

LoanView, Berkadia’s external borrower portal, is used by approximately 95% of borrowers. This is among the highest utilization rates of Fitch-rated servicers. The portal allows borrowers to access loan information, update payment information, download loan documents, pay online and submit financial statements, payoff requests and reserve disbursement requests.

Recent technology initiatives include the implementation of Rabbet, a third-party budget management application adopted by the company in May 2023 to manage and track construction loan administration.

Berkadia’s AIMS application for special servicing supports the creation and tracking of business plans, net present value analysis of alternative resolution strategies and compliance tracking.

AIMS receives nightly loan data updates from Strategy for Berkadia-serviced loans. All business plans are developed and maintained within AIMS, including workflows to track the formal review and approval of business plans and credit committee reviews.

Berkadia's servicing systems are integrated via a nightly process that disseminates data from McCracken Strategy into SQL (structured query language) server databases. These databases support CRE Finance Council (CREFC) investor reporting, SmartView, LoanView and Investor Query applications. Berkadia's reporting platform is automated through IRIS and Strategy. Static daily and monthly reports are run automatically on a scheduled basis. Custom queries, created and run through SmartView, track and monitor servicing information on an as-needed basis.

Future technology initiatives include enhancements to Mega Work Flow to accommodate internal financial transactions, enhancements to client-facing portals to improve usability, expended modernization of document management and migration of certain applications to cloud-based environments from datacenters.

Strategy is internally supported by Berkadia's IT servicing support resources and the ASP, McCracken. Berkadia's servicing support department handles security access requests (user administration) and other application support. McCracken provides application management support as needed. Berkadia's IT staff consists of approximately 95 employees dedicated to servicing operations. The Hyderabad staff is an extension of the U.S. IT workforce, with responsibilities across all IT areas that include infrastructure, system development and support, customer support, program management and IT management.

### **Cybersecurity**

Berkadia addresses information security through dedicated groups responsible for information security governance, risk management, security engineering, application security, security training and awareness, and incident response and remediation. The groups collectively comprise approximately 30 employees.

The company has an established internal security operations center that performs constant monitoring over its network. Precautions include regular vulnerability scans, application code analysis, e-mail and firewall reviews, cloud application security scans, endpoint security scans and intrusion detection tools, among others.

Annual penetration tests are performed by a third-party vendor to supplement ongoing monitoring. Remediation plans are developed to address any vulnerabilities and monitored for timely completion. Results of the company's information security program and annual audits are reviewed by the audit and comprehensive information security program (CISP) committees. The CISP committee meets quarterly to review IT security and cybersecurity risks. The CISP committee was created from the committee of sponsoring organization (COSO) framework for designing, implementing and evaluating internal controls.

Berkadia continues to expand its cybersecurity initiatives, including the frequency of phishing campaigns to train staff and mitigate the rise in increased phishing attacks and wire fraud. Berkadia currently runs biweekly phishing campaigns. Berkadia achieved a click rate of 1.6% in 2023, which is approximately 4% lower than the industry average.

The company did not experience any security breaches during the 12-month period ended in June 2023, and it maintains cyber-liability insurance coverage.

### **Disaster Recovery/Business Continuity Plan**

Berkadia maintains disaster recovery and business continuity plans that are managed in-house, with all critical functions and applications tested annually. The company maintains its primary datacenter at a tier 3 facility in Valley Forge, PA. Berkadia has a server cage within the facility managed by Berkadia personnel. The company also maintains a hot site at a third-party facility in Philadelphia, approximately 18 miles from the operations center in Ambler, where critical servers are backed up and reproduced in real time. The replication of critical data in real time results in less than 15 minutes of lost data in the event of a disaster, consistent with other highly rated servicers.

Berkadia conducts an annual business impact analysis in which core systems and processes are identified. Systems identified as critical have redundant backup capability and are able to be

recovered within 24 hours, the same timeframe for processes deemed critical to operations. These departments are assigned seats at co-location facilities and are tested at the facility annually to ensure all primary and secondary work can be performed at SunGard. Processes not considered critical are prioritized according to work significance. In addition, all employees can work remotely as needed via a VPN (virtual private network) connection that is tested during semiannual business continuity tests.

The operation center in Hyderabad is equipped with a diesel-powered backup generator, as is its hotsite in Bangalore, India, approximately 354 miles from the operations center. The Bangalore site maintains dedicated equipment and 94 dedicated seats for each shift (day, night and split shifts), including eight laptop stations. The hotsite provides for a backup data circuit and fully equipped business continuity seats that include phone, PC, fax and copying capabilities. Berkadia also has first access to an apartment complex onsite to house its employees in the event of a disaster.

Disaster recovery on premises and cloud-based is tested annually; testing occurred most recently in October 2022 for the U.S. operations and was considered successful.

## Corporate Governance

Berkadia has a strong, comprehensive control environment that incorporates its technology platform and multiple layers of secondary reviews and quality checks, including sampling work performed for accuracy, internal audits and external audits performed by GSEs, life companies, banks and master servicers. The control environment includes dashboard and workflow technology to track employee output and quality; managerial supervision and work review; monthly and quarterly QC sampling by the risk, control and compliance group; an annual risk assessment created in conjunction with the annual audit plan; and training aimed at reducing operational breakdowns. Additionally, the company is subject to multiple third-party external audits, including Regulation AB (RegAB), Uniform Single Attestation Program (USAP), SOC1 and SOC2 audits.

### Policies and Procedures

Berkadia's risk, control and compliance group (RCC), which reports to the president and contains a separate internal audit group, monitors and reviews servicing policies and procedures as necessary. Policies and procedures are formally reviewed by management annually and, when a policy/procedure is updated, the respective manager/supervisor sends the updated document(s) to the risk, control and compliance group. The policies, procedures and related forms and templates are centralized on the company's intranet, allowing accessibility to all employees.

Fitch reviewed several of Berkadia's policies and procedures and found them to be detailed, providing step-by-step instructions on how to perform specific servicing functions and associated tasks. The policies and procedures manual compares favorably with those of other highly rated servicers and is updated annually and on an as-needed basis. There have been no material updates within the past 12 months.

### Compliance and Controls

Berkadia's day-to-day controls are incorporated into its policies and procedures manual and involve process-driven reviews facilitated through its technology platform, tickler systems, exception reporting, workflow processes and dashboard management. Servicing managers run reports against SmartView to identify process exceptions. Some of the reports run daily include delinquency, maturity, suspense, outstanding financial statement and escrow shortage exception reports. Berkadia also runs data validation reports from SmartView to ensure servicing data is properly captured.

The company also performs QC checks through random sampling to determine if processes and procedures are performed as expected. Subject matter experts (experienced employees who are not managers) generally sample 5%–8% of the work volume processed in a given month. Managers use the results as part of the employee performance development process. The risk, control and compliance group also performs monthly cash control testing of cash disbursements. The risk, control and compliance group is comprised of 13 members.

The company centralized know your customer and Office of Foreign Assets Control reviews to ensure consistency in searches and document retention. It also implemented a new due diligence monitoring tool where individuals and companies are logged and continuously monitored. Berkadia also revised and updated its compliance antifraud training to increase employees' awareness of potential fraudulent activity and required steps.

Berkadia's servicing compliance group reviews various areas of the servicing platform on a rotating basis. The group is leveraged to develop senior staff into middle managers. One middle manager with 15 years of industry experience leads the group and has three direct reports and two indirect reports, along with the intention of rotating more staff into these roles.

Berkadia's transformation group functions as a secondary level of review, aggregating data from Mega Work Flow to measure productivity, QC and process deviations or outliers on a monthly basis. The transformation group generates dashboards to track productivity, quality and spare capacity among employees. These dashboards are generated from data captured in Mega Work Flow. Dashboards are reviewed monthly with operational managers and senior servicing managers.

Compliance within special servicing functions is administered by a dedicated compliance officer with more than 38 years of industry experience and 27 years of tenure. The compliance officer oversees all aspects of special servicing reviews, including performing loan consent approvals and workouts through the credit committee process. Servicing agreement abstracts are created for all engagements outlining key requirements and delivery timelines, which are recorded in AIMS to create a compliance framework. The compliance officer monitors ongoing compliance through monthly exception reporting within AIMS of key dates and approval of all business plans. Additionally, the officer is responsible for verifying fund transfers for all specially serviced loans, as well as recording credit committee reviews and approvals of all assets.

**Internal Audit**

Berkadia has a dedicated internal audit team comprised of four fulltime auditors who report directly to the company's audit committee and administratively to the head of RCC. The internal audit group performs operational, financial and IT audits on an annual rotation based on an annual risk assessment. Each functional area is risk-rated based on qualitative and quantitative factors, and internal audits are performed on a 24-month rotation but may not touch all servicing functions. The annual audit plan is submitted to and approved by the company's audit committee comprising executive management.

Berkadia performs an annual risk assessment at the enterprise level, coordinating the assessment across all business units. Fitch reviewed the most recent risk assessment, which covered: employees, cybersecurity and data security, cash movement/fiduciary risk, regulatory compliance, innovation, technology, reputational risks, bad loans, forbearance and fraud, as well as servicing. The assessment includes an examination of compliance, reputational, operational, liquidity, credit, market and vendor risk related to servicing functions. The assessment is robust in scope as it identifies the potential risks of specific servicing functions, their potential impact and possible mitigants to derive an overall risk rating.

The most recent assessment included insurance, banking administration, cash processing and management, advances, reserves, taxes and investor reporting, among others, and concluded with 10 servicing functions with moderate inherent risks, of which eight controls were strong and two were effective. Additionally, there were 10 servicing functions with low inherent risks, of which nine controls were strong and one was effective.

The internal audit group most recently performed an audit on servicing advances and forbearance in April 2023. This audit inspected advances collectability on distressed loans; servicing escrow advances; tax and insurance payments on applicable loans; interest accruals on advances; advance processes with regard to Freddie Mac, Fannie Mae, Ginnie Mae and HUD loans; and portfolio requests (active, approvals, rescinded and denied). Fitch reviewed a copy of the audit, which resulted in a satisfactory rating with no findings. In November 2022, internal audit also performed a cash disbursement process audit that included sample cash disbursements testing, policies and procedures review and interviews with management personnel, resulting in a satisfactory outcome with no findings.

**External Audit**

Berkadia is subject to annual RegAB and USAP audits on its portfolio as a primary and master servicer. Fitch reviewed the annual RegAB and USAP reports issued by Grant Thornton on Feb. 15, 2023, which contained no findings. USAP and RegAB testing is global and incorporates both the U.S. and India platforms.

Berkadia also states it is subject to numerous reviews and audits throughout the year from its clients, including the GSEs, life companies and banks. Additionally, master servicers for securitized transactions for which Berkadia primary services loans perform yearly subservicer audits. Annual SOC1 and SOC2 audits are performed by nationally recognized accounting firms.

The special servicing group maintains a dedicated compliance officer who is responsible for monitoring compliance with servicing agreements and credit committee reviews. While Fitch views positively a resource dedicated to compliance, the compliance officer reports to the head of special servicing and portfolio surveillance, which limits the effectiveness of independent reviews.

Each month, Berkadia's internal audit group randomly selects 100 cash movement transactions to determine if approvers are authorized and approving within the limit of their signing authority, if there is adequate supporting documentation and if there are any irregularities in the movement of cash.

Berkadia performs an annual risk assessment at the enterprise level to examine all company operations, including core servicing functions. Since Fitch's prior review, additional internal audits were performed on the cash receipts process in November 2022 and servicing funds transfer authority in June 2023. There were no findings in either instance.

The SOC1 report is an audit of the entire servicing platform relevant to internal controls over financial reporting and related technology. The SOC2 report details the control environment with respect to the company’s internal controls involving security, availability, processing integrity, confidentiality and privacy. Berkadia received satisfactory opinions for the SOC1 and SOC2 audits in 2023.

### Primary Servicing

As of June 30, 2023, Berkadia’s primary servicing portfolio consisted of more than 20,000 loans totaling \$397.2 billion, including 4,662 securitized loans totaling \$82.0 billion. Securitized loan servicing includes SASB, small balance, multiborrower, Freddie Mac Capital Markets Execution (CME), SFR and CRE-CLO transactions. Nonsecuritized servicing includes balance sheet loans, Fannie Mae and third-party client portfolios. Within the current servicing portfolio, approximately 1,150 loans totaling \$41.2 billion are scheduled to mature through June 2024, representing approximately 10% of the portfolio by balance and 6% by loan count.

Berkadia is one of two Fitch-rated servicers that perform servicing for single-borrower and multiborrower SFR loans, having entered the SFR market in 2018. The company currently services 15 Freddie Mac SFR loans collateralized by over 2,400 properties totaling approximately \$835.0 million, as well as more than 40 loans totaling \$112.0 million for a third-party client. The company also performs interim servicing for SFR loans pre-securitization and is currently named primary and master servicer on 10 SFR transactions collateralized by approximately 1,000 loans totaling \$3.1 billion as of June 2023.

Servicing functions performed for SFR loans include tax monitoring and payment, homeowners association fees, insurance, escrow, reporting, financial statement analytics, watchlist management inspections, billing and payment processing, customer service and asset management functions. SFR loans are serviced within Strategy and Berkadia ancillary applications for functions such as reporting. There are currently no dedicated functions specific to SFR products aside from a dedicated client relations team responsible for borrower and investor contact.

### Primary Servicing Portfolio Overview

	6/30/23 <sup>a</sup>	% Change	12/31/22	% Change	12/31/21
<b>Securitized</b>					
No. of Transactions – Primary Servicer	726	1	718	9	659
UPB – Primary Servicing (\$ Mil.)	81,989.6	1	81,288.7	13	72,195.5
No. of Loans – Primary Servicing	4,662	-4	4,854	10	4,414
<b>Nonsecuritized</b>					
UPB (\$ Mil.)	315,256.2	1	311,606.0	18	264,878.8
No. of Loans	16,199	1	16,079	3	15,677

<sup>a</sup> June 30, 2023 primary servicing nonsecuritized numbers include 3,841 loans that are limited subservicing. UPB – Unpaid principal balance  
Source: Berkadia Commercial Mortgage LLC

### Loan/Portfolio Onboarding

For loans originated by Berkadia, a report is generated identifying loans that have closed, and loan packages are reviewed upon receipt. Prior to boarding a loan, missing documents are tracked in the new loan boarding database, and outstanding documents are tracked via a tickler.

For externally originated loans, the new loan boarding team is notified of upcoming transfers or acquisitions, and prior servicer data files are forwarded to new loan boarding for scrubbing, formatting and electronic boarding. Loan document packages are forwarded directly to the workflow management team for imaging. Loan boarding will upload all loans to a test environment to ensure data validity. After passing an edit check in a test environment, loans are loaded into the production environment, with missing information requested from the originating/transferring party. Exception reports are generated from SmartView to track missing documents.

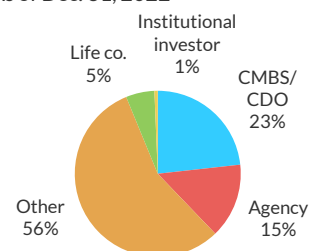
Loans originated by Berkadia are generally boarded within 10 days of receipt of the complete loan package or, in the case of transferred loans, within five days of closing the transaction.

Berkadia had four instances of a report restatement during the past 12 months, up from two instances as of the prior review. The restatements were due to payment application errors or system coding, and the issues were identified and have been addressed.

Berkadia services more than 1,150 loans totaling \$41.2 billion that are scheduled to mature through June 2024.

### Primary Servicing Product Type

As of Dec. 31, 2022



Note: Percentages based on number of loans.  
Source: Berkadia Commercial Mortgage LLC



Monthly reports are prepared to measure the time taken to obtain loan packages after closing and the time taken to board loans once packages are received. All loans boarded into the servicing system are subject to edit checks and a QC sampling. Berkadia’s risk, control and compliance department performs new loan setup and cash control testing monthly.

**Accounting and Cash Management**

Loan payments are expected to be posted within 24 hours of receipt by the payment processing team. Payments posted are batched in Strategy and reconciled by a bank reconciliations team to daily data transmissions received from banks. Reconciliations of accepted and rejected payments are completed daily to ensure rejected items were managed appropriately and funds were applied properly. Payment clearing, disbursement clearing and selected critical accounts are reconciled each day. All other reconciliations are completed within 30 days of statement cutoff. The company’s banking relationships include three banks; funds for securitized transactions are maintained at banks with minimum ratings of ‘A’ or ‘F1’.

Reconciliations are assigned and completed through workflow in the EDM system. Reconciliations are reviewed and approved with a signature time and date stamp into the workflow by an approver who is separate from the preparer. All critical reconciliations and a 10% sample of the remaining population move into a second approval queue for review and approval by a manager who is separate from the preparer and first approver.

Berkadia currently services 455 active cash-managed loans. Cash management and loan agreements are reviewed by a manager or senior analyst in the dedicated cash-managed loans group. Each cash-managed loan is assigned to an analyst and placed on his or her calendar by distribution date, with ticklers established for each upcoming distribution date. Berkadia uses electronic waterfall templates that are approved prior to disbursement of funds. All fund disbursements require dual signatures.

The company services more than 1,100 loans with a springing lockbox, typically based on performance triggers in the loan documents. In 2022, lockboxes were triggered for 47 loans. An additional 69 loans were triggered during 1H23.

Lockbox accounts are opened pursuant to the cash management agreement or cash management section of the loan agreement as hard or soft lockbox accounts. For springing lockboxes, trigger events are communicated to the cash-managed loans group, and loan documents are reviewed for trigger events and the appropriate cash management procedures. In the event a lockbox is triggered, the client relations manager notifies the borrower of the trigger event and the new procedures for payment.

The reserves group is responsible for tracking and reviewing LOCs that may be pledged as additional loan collateral. LOCs are tracked within Strategy, which records key fields and account information. Bank ratings for LOCs are reviewed monthly to confirm compliance with loan terms. Borrowers are notified 60 days prior to expiration dates and issuing banks are contacted 30 days prior to expiration to confirm extensions. LOCs that have not been extended are drawn upon prior to expiration. As of June 2023, Berkadia was responsible for monitoring 196 LOCs.

**Reporting**

The investor reporting group generates CREFC investor reporting packages (IRPs) via IRIS, which aggregates loan data from Strategy and SmartView. IRIS also allows analysts to upload data from special servicers and subservicers. RUDI performs automatic data checks, including reconciliations between the calculated scheduled ending balance and the balance maintained in Strategy. An investor reporting analyst reviews and researches any differences or exceptions noted by the system and makes adjustments as needed.

In addition to the data checks performed by IRIS, Berkadia has a dedicated group within investor reporting that reviews each transaction’s CREFC IRP, either on or prior to the reporting date. After the reporting date but before the distribution date, the research team within the investor reporting group will review the transaction report for discrepancies before posting the IRP to the Investor Query website.

**% Payment Collections Via:**

ACH	74
Wires	22
Checks	4

ACH - Automated clearing house  
Source: Berkadia Commercial Mortgage LLC

### Escrow Administration

Berkadia performs escrow analyses annually for escrowed loans, typically when annual taxes have been paid. An escrow analysis report is prepared monthly to determine the workload for a particular month, with the final analysis run at the end of the month. Taxes for non-escrowed loans are tracked by a third-party vendor that provides reports for uploading into Strategy; these reports are also verified for accuracy.

For insurance, payments are verified on non-escrowed loans upon analysis of the annual renewal. A paid receipt confirmation is requested from the agent on an annual basis. In addition, Berkadia verifies that the lender is named as mortgagee/loss payee/additional insured so that, if a notice of cancellation for nonpayment is issued, the company will receive a copy and the notice can be addressed accordingly. Berkadia monitors due dates for both escrow and non-escrow insurance coverage with reports generated from Strategy. To track insurance, Berkadia uses CertInView, its proprietary insurance monitoring tool that tracks insurance at the portfolio, loan, property and policy levels.

Reserve requests are imaged in EDM and uploaded onto a SharePoint site. The requests are assigned to a processor responsible for reviewing and processing the request. Once the review is completed, the analyst will submit the request for managerial approval.

UCC filings are loaded into Strategy for tracking purposes. In conjunction with their respective vendors, the UCC groups in Ambler and Hyderabad will continue, terminate, amend or assign the appropriate filings. Berkadia prepares continuations within six months of expiration. Reports are used to monitor UCC due dates and compliance and are managed through monthly dashboards. In addition, QC testing is performed on the work to ensure accuracy and performance is measured through the dashboards. There were no lapsed UCC filings during the 12-month period ended in June 2023.

Berkadia maintains a lender forced placed insurance policy to provide commercial property insurance for collateral assets when necessary. Assets are placed under forced placed coverage when Berkadia is unable to confirm minimum coverage requirements are met. As of June 2023, there were approximately 45 loans covered under the company's policy, the premiums for which are billed to the borrower.

### Asset Administration

The client relations group is responsible for monitoring delinquent payments through daily reports generated from SmartView. At the end of the grace period, the client relations manager makes at least three attempts within 30 days to contact the borrower. All attempts are noted in Strategy. Delinquency letters are then generated, and when the loan is two payments delinquent, or in accordance with the loan documents, a default letter is generated and sent to the borrower. The loan is then coded as a default in Strategy.

The servicing operations group is responsible for the collection, analysis and reporting of operating statements and rent rolls. The client relations group is leveraged for contacting borrowers who have not submitted financial statements. Berkadia typically takes 30 days to spread financial statements from the date of collection. Servicing agreements and PSA requirements are tracked in asset surveillance, and performance is monitored through weekly exception reporting. For rent rolls, Berkadia's dedicated rent roll team uploads rent rolls to store electronically and performs a full rollover analysis annually.

Berkadia's surveillance department utilizes the CREFC guidelines for watchlist reporting. Internal guidelines focus greater attention on loans with DSCRs below 1.0x, upcoming maturities, borrower-expressed hardships and other significant or large loans in the pool. The surveillance group utilizes RUDI for watchlist reporting. A surveillance analyst reviews watchlist loans every month.

Property inspections are performed in accordance with servicing agreements stored in Investor Matrix. Approximately 98% of site inspections are outsourced, and the company's property inspections department reviews all of them for quality and completeness. Berkadia issues follow-up letters for deferred maintenance items, which are tracked until cleared in Strategy's asset surveillance module. Unresolved deferred maintenance items are reported to investors.

### % Portfolio Escrowed for:

Taxes	55
Insurance	50

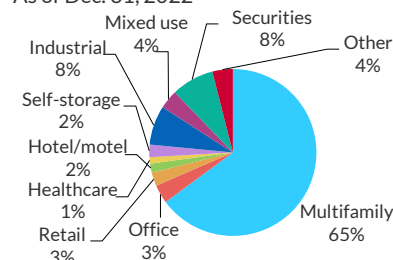
Source: Berkadia Commercial Mortgage LLC

Berkadia incurred approximately 30 tax penalties in 2022, resulting in approximately \$150,000 in penalties, up from 25 penalties in 2021 and 21 the prior year. The increase in tax penalties was associated with the company changing banking relationships for certain accounts. Penalties continue to represent a small fraction of total tax payments processed.

The company also incurred 41 tax penalties during 1H23, the majority of which involved a single SFR loan with 33 separate tax parcels that did not have the correct due date information recorded during the boarding process.

### Securitized Servicing by Property Type

As of Dec. 31, 2022



Source: Berkadia Commercial Mortgage LLC

All property inspections, which are generally performed by a third-party contractor, undergo a QC review by the company's property inspections department.

Berkadia contacts borrowers at 12 months and again at six months prior to maturity in an attempt to understand their intentions and whether they plan to refinance.

**Borrower Relationship Management**

Client relations managers are the main points of contact for all primary and master/primary borrower inquiries, which can be made by phone, e-mail or online chat via Berkadia’s customer website, LoanView. The site provides 24-hour online access to loan-level information, transaction histories, borrower notices, monthly billing statements and related documents so that borrowers can make payments, obtain balances, review reports and export information to Excel. Over 95% of Berkadia’s borrowers use LoanView.

Borrower and payoff requests are received by a client relations manager who then reviews the loan documents and the PSA to determine permissibility. The required documentation is then processed by the appropriate business unit. The client relations manager will monitor progress via SmartView and Mega Work Flow and correspond with borrowers as appropriate.

The payoff processing unit calculates the payoff amount, which is verified and approved by two approvers within the payoff group. Upon final approval, the client relations manager is notified via e-mail that the quote is available within the imaging system for distribution to the borrower. Requests for payoffs are turned around within 48 hours.

Berkadia measures customer satisfaction through an annual electronic survey sent to a subset of borrowers requesting feedback and ratings on the various services and systems provided. A summary report of the feedback is distributed to senior management and client relations managers are responsible for following up on any comments or issues.

**Master Servicing**

As of June 30, 2023, Berkadia was the named master servicer on 77 securitized transactions encompassing 1,365 loans totaling approximately \$24 billion, up 11% by balance since YE22. As master servicer, Berkadia is responsible for the oversight of three primary servicers whose portfolios range from one to 13 loans. Master servicing assignments include SASB, SFR, multiborrower and CRE-CLO transactions issued between 1997 and 2023. Growth in the master servicing portfolio is driven primarily by SASB transactions; for 2022, the company added 14 SASB assignments. Berkadia typically acts as both master and primary servicer for a majority of its master servicing assignments, thereby limiting the number of primary servicers it oversees.

**Master Servicing Portfolio Overview**

	6/30/23	% Change	12/31/22	% Change	12/31/21
No. of Transactions – Master Servicer	77	–	77	15	67
UPB – Master Servicing (\$ Mil.)	23,971.8	11	21,560.5	41	15,321.5
No. of Loans – Master Servicing	1,365	0	1,359	12	1,215
No. of Primary Servicers Overseen	3	-25	4	-20	5

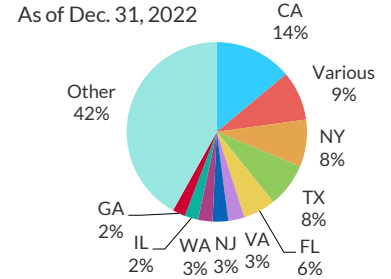
UPB – Unpaid principal balance  
Source: Berkadia Commercial Mortgage LLC

**Primary Servicer Oversight**

A client relations manager is assigned as the primary contact for subservicers and is responsible for monitoring subservicer financial statement collection and analysis, investor reporting remittance timeliness and accuracy and compliance with USAP and RegAB reporting requirements. The client relations manager also performs monthly reporting on the subservicer portfolio and shares the results with the risk, control and compliance group.

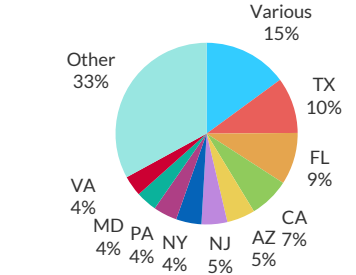
Financial reporting from subservicers is entered into Strategy and analyzed automatically. The remitting and reporting practices of each subservicer are monitored and reviewed on a monthly basis. Receipt of funds and reports is matched against an electronic calendar to monitor compliance. All remittances, reporting and bank reconciliations are reviewed based on the individual contract requirements. On a quarterly basis, financial statement collections and analysis are monitored to ensure compliance with all PSAs, and property inspection data are

**Nonsecuritized Servicing by State**



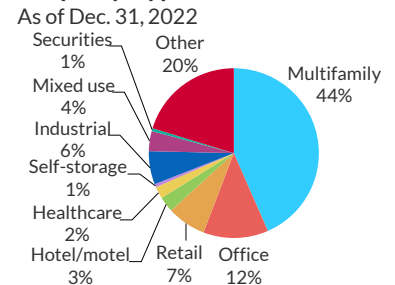
Source: Berkadia Commercial Mortgage LLC

**Securitized Servicing by State**



Source: Berkadia Commercial Mortgage LLC

**Nonsecuritized Servicing by Property Type**



Source: Berkadia Commercial Mortgage LLC

Berkadia performs fewer primary servicer audits than other active master servicers. It has the smallest subservicer portfolio, reflecting limited experience with multiborrower and CME securitizations. Annual primary servicer reviews, inclusive of regular onsite audits, are a best practice. However, Fitch notes Berkadia’s primary servicers have significantly smaller portfolios, ranging from one to 20 loans, reducing the effectiveness of onsite reviews and random sampling of loans. Berkadia reported completing an onsite review of its largest subservicer in 4Q23.

reviewed. In addition, each subserviced loan is fully loaded into Strategy and updated monthly to ensure the servicing record is up-to-date and intact.

Berkadia’s internal audit group performs desktop audits of subservicers. Of Berkadia’s three subservicers, only the subservicer with the largest portfolio received a desktop audit in 2022. At this time, two subservicers have not received an audit in over five years; however, they only service one loan each. Additionally, Berkadia reported having completed an onsite review of its largest subservicer in 4Q23.

**Advancing**

Servicing advances are tracked in Strategy and in a dedicated database that tracks advances at the loan level. P&L advances are also tracked in a separate database by the investor reporting group. These systems are compared monthly to ensure information is current and accurate.

As a master servicer, Berkadia’s recoverability decisions consider the special servicer’s business plan and resolution strategy. Local market conditions, including occupancy and rental rates, inventory, competition and general economic conditions within the area, are also considered. The most recent appraisal is reviewed for reasonableness and possibly a broker’s opinion of value (BOV). All of this information is summarized in an advancing memo, which is prepared and updated monthly for each loan with an outstanding advance. Discussions are conducted with the special servicer to monitor the disposition process and expenses incurred to date. Potential future property protection expenditures are considered when determining the overall advance exposure amount and total advances outstanding for the transaction.

The securitized portfolio manager organizes a monthly advance meeting for loans with the greatest exposures. All loans with advances are presented to the advance committee a minimum of once every 90 days, and volatile loans are discussed monthly. The advance committee comprises the executive vice president of Berkadia; the senior vice president of asset management; the vice presidents of investor reporting and financial analysis; and analysts from the risk, financial analysis and CMBS asset management teams.

A determination is made regarding whether to continue advancing, stop future advancing or stop future advancing and recover all or a portion of current advances from the trust cash flow. When a determination is made to cease advancing on a loan, it is then classified as nonrecoverable. For the 18 months ended in June 2023, Berkadia deemed five loans as nonrecoverable.

**Investor Reporting**

Communication with special servicers occurs at a minimum of every 90 days and loans that have higher risk factors are discussed monthly. All loans with advances are presented to Berkadia’s advance committee at a minimum of every 90 days with an update from the special servicer on the resolution strategy, timeline and collateral value. Collateral valuations are generally obtained annually via an appraisal, BOV or third-party opinion of value. Berkadia contacts the special servicer for changes in collateral value during the period between formal value updates.

Berkadia’s investor reporting group is responsible for monthly investor reporting via the IRIS system. The company maintains good QCs over remittance reporting with multiple reviews of remittance reports prior to distribution. Investors can view the most current loan and property details on Berkadia’s Internet portal, Investor Query. The site includes all CREFC reports and allows users to view operating statement analysis reports, net operating income worksheets, borrower financial statements and rent rolls.

**Special Servicing**

**Special Servicing Portfolio**

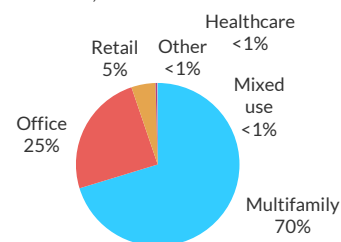
As of June 2023, Berkadia was named special servicer for over 4,000 loans totaling \$60.9 billion. Approximately 90% of special servicing assignments are currently nonsecuritized on behalf of third-party clients that include banks, life insurance companies, debt funds, Fannie Mae and HUD. Nonsecuritized loans also represent the majority of recent special servicing activity, although the company has significant experience working out securitized loans and maintains technology, policies and procedures to support securitization assignments.

Named securitized special servicing includes 15 transactions comprised of 386 loans totaling \$5.1 billion as of June 2023. Securitization assignments include SASB, multiborrower and ABS

As of June 2023, Berkadia had approximately \$58.9 million in outstanding advances, of which approximately \$26.5 million is associated with loans in securitized transactions. Advance levels have increased from \$51.4 million as of YE22.

**Securitized Named Special Servicing by Property Type**

As of June 30, 2023



Source: Berkadia Commercial Mortgage LLC

Since 2009, Berkadia has resolved more than 950 securitized loans representing \$8.0 billion and 276 nonsecuritized loans totaling \$3.7 billion.

transactions. Berkadia is also a primary and master servicer for securitization assignments, which currently limits its interactions with other external master servicers. Special servicing assignments are sourced through mortgage banking originations and third-party appointments.

The company was actively working out 47 nonsecuritized loans totaling \$744.0 million as of June 2023, all secured by multifamily or healthcare assets with no REO assets. Active special servicing includes eight second mortgages where Berkadia is also the servicer for the first mortgage. During the 12-month period ended in June 2023, the company resolved 27 loans on 24 properties totaling \$255.7 million in outstanding balance. Resolutions included 17 loans sold at foreclosure (63% by count), six returned to performing status (22%), three full payoffs (11%) and GSE repurchases (4%).

### Special Servicing Portfolio Overview

	6/30/23	% Change	12/31/22	% Change	12/31/21
<b>Securitized</b>					
No. of Transactions – Special Servicer	15	5	14	8	13
UPB – Special Servicer (\$ Mil.)	5,135.0	5	4,889.4	13	4,327.9
No. of Loans – Named Special Servicer	386	2	380	1	375
UPB – Actively Special Servicing (Non-REO; \$ Mil.)	0.0	–	0.0	–	0.0
No. of Loans – Actively Special Servicing (Non-REO)	0	–	0	–	0
UPB – REO Assets (\$ Mil.)	0.0	–	0.0	–	0.0
No. of REO Assets	0	–	0	–	0
<b>Nonsecuritized</b>					
UPB – Named Special Servicer (\$ Mil.)	55,790.6	4	53,574.1	6	50,688.5
No. of Loans – Named Special Servicer	3,652	2	3,583	-1	3,613
UPB – Actively Special Servicing (Non-REO; \$ Mil.)	744.4	265	203.9	-32	300.2
No. of Loans – Actively Special Servicing (Non-REO)	47	194	16	-41	27
UPB – REO Assets (\$ Mil.)	0.0	–	0.0	–	0.0
No. of REO Assets	0	–	0	–	0

UPB – Unpaid principal balance  
Source: Berkadia Commercial Mortgage LLC

### Loan Administration

The special servicing group shares responsibility for surveillance across Berkadia's portfolio. Surveillance of performing loans is facilitated via watchlist reporting based on either industry-standard or client-specific criteria, along with internal guidelines based on property performance, the sponsor and loan maturity.

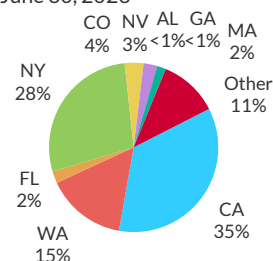
For loans where Berkadia is the primary servicer, loan surveillance is performed in RUDI by an assigned surveillance analyst responsible for providing updated performance commentary based on property performance data within the application. Certain agency and balance sheet loans are formally reviewed by the surveillance team each quarter to reevaluate risk ratings. The surveillance manager reviews risk rating changes and coordinates formal monthly reviews.

Berkadia also performed enhanced surveillance of loans where it is named special servicer, including stress testing related to maturing loans to identify potential defaults. The company also utilizes data from third-party analytics firms, as well as its own internal proprietary Pyxis application. The Pyxis application consolidates multiple internal and external data sources to provide detailed market information for multifamily assets located across the country, including cap rates; sales, occupancy, income and expense data; population trends; and property rents, among others.

The surveillance team also performs heightened surveillance of SASB office loans where current performance may not fully reflect refinance risks. The team analyzes recent rent roll data to identify current and future rollover exposure versus current market rental rates and vacancies and their

### Securitized Named Special Servicing by State

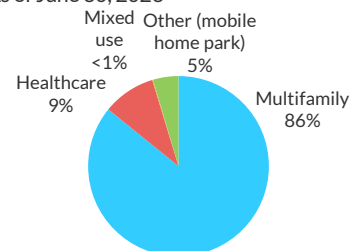
As of June 30, 2023



Source: Berkadia Commercial Mortgage LLC

### Nonsecuritized Named Special Servicing by Property Type

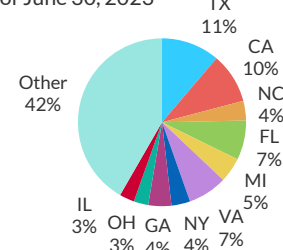
As of June 30, 2023



Source: Berkadia Commercial Mortgage LLC

### Nonsecuritized Named Special Servicing by State

As of June 30, 2023



Source: Berkadia Commercial Mortgage LLC



impact on cash flow. Additionally, Berkadia's analysis considers hypothetical refinancing at current interest rates to determine loan-to-value or debt yield shortfalls, which can be impactful for short-term floating-rate loans.

### **Defaulted/Nonperforming Loan Management**

The special servicing team maintains a specific policy, "Communication with Master Servicers," to ensure the smooth transition of defaulted loans to special servicing. The special servicing team meets regularly with the surveillance and client relations teams to identify potential transfers and holds formal monthly meetings with the senior management team and credit and risk group. For loans not primary serviced by Berkadia, the special servicing group maintains regular contact with master servicers to identify potential defaults. When a loan formally becomes specially serviced, it is activated in AIMS by the compliance officer and special servicing assigns an asset manager based on capacity, asset type, nature of default, sponsor and region. The compliance officer also verifies that key loan fields within AIMS are current or populates the fields if Berkadia does not service the loan.

Asset managers develop workout strategies after assessing the reason for default and consultation with the loan sponsor subsequent to executing a pre-negotiation letter. The asset manager performs a site inspection within 60 days of transfer, and annually thereafter, to assess the physical condition of the asset and local market. Additional due diligence is performed using a variety of external data analytics providers and Pyxis, as well as updated title information and sponsor financial statements.

Concurrently, appraisals are obtained for monetary defaults or as otherwise required by the specific servicing agreements. Berkadia outsources all appraisals to third-party vendors based on asset type and location. The company also engages a third-party firm to review the validity of appraisal values and the assumptions used to derive values. Additionally, the asset manager conducts a thorough review of the appraisal draft and communicates with both the appraiser and the review appraiser to ensure the valuation derived represents a supportable conclusion of value. Updated appraisals are obtained annually unless there is an earlier material change to the asset or market.

A workout plan is determined based on the asset manager's due diligence and willingness of the loan sponsor to remediate the default. The asset manager's ultimate resolution recommendation is based on a net present value analysis of multiple resolution strategies, including modification, foreclosure and note sale, among others, within AIMS.

Berkadia's business plans are based on system-generated templates, allowing for efficient reporting and review of the active portfolio. Business plans are updated in the event of new material information and/or a change in resolution strategy. These plans and recommendations are reviewed by the head of special servicing and formally presented to the credit committee for approval. The credit committee for specially serviced loans comprises the head of servicing, managing director of servicing, head of special servicing and surveillance and head of special requests. An additional secondary credit committee approval is required for Berkadia balance sheet assets.

### **REO Management**

Given the limited number of REO assets, Berkadia does not currently maintain a separate REO team. Before taking title to a property, the asset manager performs an updated review of the property, market, potential environmental issues and property condition. The asset manager also identifies potential management companies if an independent company has not already been appointed through a receiver action, as well as a broker or leasing agent. Updated credit committee approval is obtained prior to taking title to an asset.

Upon foreclosure, the property manager arranges property insurance either through Berkadia's forced placed coverage or an insurance broker. Within 90 days of foreclosure, the asset manager completes an REO business plan that addresses any property condition deficiencies, ongoing property operations, a marketability analysis based on broker feedback and a budget and timeline for stabilization. BOVs are obtained as soon as possible after the REO date as part of the listing request for proposal.

Asset managers review the performance of REO assets each month during hold periods. The property management company submits monthly reporting packages containing updated operating budgets and expenses, which are reviewed for material variances from business plans. Updated appraisals are obtained annually unless there is an earlier material change to the asset or market. The special servicing compliance officer also monitors the timely reconciliation

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and use of funds in REO operating accounts and security deposit accounts. Additionally, the compliance manager maintains an REO checklist to monitor and track key milestones in the foreclosure process.

REO assets are evaluated regularly against business plans by the asset manager, special servicing manager and controlling class representatives to assess hold times and progress on any value-add strategies. Case memoranda are created by asset managers for the final sale and disposition of assets. The cases include the expected sales price and timing, broker selection, a summary of marketing efforts, analysis of offers received and expected disposition proceeds. Final disposition memos are approved via credit committee or delegations of authority depending on the requirements of servicing agreements. Approval of controlling class holders is also sought for securitized loans where required.

## **Governance and Conflicts of Interest**

### **Managing Potential Conflicts**

Potential conflicts of interest in special servicing can arise through various forms, particularly as investors retaining controlling positions in securitizations or specific loans have influence on workout strategies and the ability to select the special servicer.

The special servicing group manages client expectations through ongoing transparent discussions throughout the workout process to ensure all parties are informed. All workouts are overseen by an experienced manager and reviewed by a credit committee or under delegated authority depending on the servicing assignment. Additionally, a dedicated compliance officer reviews all workouts and tracks approvals.

Employees are required to follow a Code of Business Practice established by one of the company's owners. Fitch reviewed the September 2021 version of the code, which addresses reporting violations or raising concerns; compliance with laws, rules and regulations; conflicts of interest; and confidentiality and insider trading restrictions, among others. The policy includes guidance for confidential reporting of potential violations and complaints.

Fitch reviewed a sample of business plans for approximately 10 active specially serviced loans. The plans were found to be complete and included detailed histories of the loan, the sponsor and circumstances surrounding the initial default; a net present value analysis of alternative workout scenarios where appropriate; reasonable assumptions; a clear rationale for the chosen workout plan; and documented signature approvals. Fitch also discussed a random sample of six loans with asset managers to better understand the workout process. Asset managers were extremely knowledgeable about market conditions, property performance and viable workout alternatives allowed by servicing agreements.

### **Affiliate Companies**

Berkadia currently does not provide real estate management services or CRE property brokerage services for specially serviced loans, nor does it use affiliates to do so. The company or affiliated entities may provide CRE financing options to maturing loans or specially serviced loans.

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