FitchRatings

Structured Finance
Commercial Mortgage Servicer
North America

PGIM Real Estate Loan Services, Inc.

Ratings[a]

Commercial Master Servicer	CMS2+
Commercial Primary Servicer	CPS1
Commercial Loan-Level Special Servicer	CLLSS2

[a]Last Rating Action: Affirmed Jan. 14, 2021.

PGIM Real Estate Loan Services, Inc. (PGIM Loan Services, or the company), formerly known as Prudential Asset Resources, is the CRE loan servicer for PGIM Real Estate (PGIM RE) and is a subsidiary of PGIM Real Estate Finance, LLC (PGIM REF), a wholly owned subsidiary of Prudential Financial, Inc. (PFI). PGIM Loan Services performs loan servicing exclusively for loans originated by PGIM RE that are held in the company's general account, securitized in CMBS transactions or originated for government-sponsored entities (GSE) or other institutional investors.

PGIM Loan Services's commercial servicing portfolio mainly comprises nonsecuritized insurance company loans on behalf of PGIM RE, representing 54% of the portfolio by loan count. The company also performs servicing for GSEs and institutional investors, representing 35% and 10% of the portfolio by loan count, respectively. While PGIM Loan Services's loan servicing portfolio continues to be heavily weighted toward general account loans, new affiliate investment funds continue to contribute to growth in the servicing portfolio and property type diversification.

The majority of new loan originations are institutional loans for the general account and agency loans, a portion of which are securitized into Freddie Mac Capital Markets Execution (CME) transactions, which continue to provide the company with experience in servicing securitized loans given the runoff of its legacy CMBS portfolio. International servicing continues to increase by approximately $1 billion annually as PFI expands originations globally; this is demonstrated by the recent launch of the PRECap VII fund, a value-add real estate fund targeting European investments that are currently fund raising.

PGIM Loan Services granted approximately 150 affiliate, third-party and GSE loans with some form of debt relief as a result of the coronavirus pandemic. The majority of requests were secured by retail and hospitality assets.

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.
- 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.

Applicable Criteria

Criteria for Rating Loan Servicers (February 2020)

Criteria for Rating North American Commercial Mortgage Servicers (January 2020)

Related Research

Fitch Affirms PGIM's Commercial Mortgage Servicer Ratings (January 2021)

Fitch Affirms Prudential Financial's Ratings; Outlook Stable on Coronavirus Risk (May 2020)

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Key Rating Drivers

Company/Management: PGIM Loan Services has been servicing CRE loans since 1898 and continues to remain active in the servicing and origination of CRE loans, particularly for the general account and, to a lesser extent, for new vintage CMBS and GSEs. Servicing functions performed by the company are key to supporting the CRE originations of PGIM RE, providing a steady flow of new business.

The company also services the majority of CRE investments for PFI and performs servicing for affiliate CRE investment funds that includes high-yield and core-plus loans on behalf of the CRE investment funds. PGIM Loan Services also services approximately $8 billion of loans in seven currencies and 12 countries, representing one of the most diverse international portfolios of Fitch-rated servicers in North America.

Staffing and Training: The primary and master servicing management team of 35 managers averages 21 years of industry experience and 13 years of tenure, while staff members average 19 and seven years, respectively. Turnover among domestic and offshore servicing employees remained low in 2020, at 11%. The special servicing team, comprising one dedicated asset manager and three shared resources, has experienced 25% turnover involving one shared resource since Fitch's prior review. Turnover is high as a function of the group's small size, which remains appropriate, in Fitch's view, given the limited number of specially serviced loans. Employees completed 30 hours of training in 2020 using the company's new training application.

Technology: PGIM Loan Services maintains a highly integrated technology infrastructure for loan servicing anchored by McCracken's Strategy (version 19D) and supplemented by a proprietary application to support loan originations, asset management and workflow. The company also maintains propriety applications for borrower and investor communications, as well as a data warehouse. PGIM Loan Services has implemented optical character recognition (OCR) to automate the review process for the property insurance ACORD (Association for Cooperative Operations Research and Development) 25 form, and it expects the expand the technology in 2021 to include operating statements and rent rolls.

Procedures and Controls: PGIM Loan Services has a dedicated business strategy and support (BSS) group that is responsible for measuring performance, compliance and accuracy through a comprehensive process that includes monitoring over 250 metrics. The company is also subject to an internal audit review by the parent of PGIM RE, PGIM, Inc., a subsidiary of PFI, as well as external Regulation AB (RegAB) and various third-party client audits.

Financial Condition: Fitch affirmed PFI's Long-Term Issuer Default Rating (IDR) of 'A'/Stable in May 2020, reflecting the company's very strong business and financial profile that remains in line with rating expectations. The ratings on PFI also consider ongoing challenges due to low interest rates and competitive market conditions, as well as business and investment exposure due to the macroeconomic environment in Japan.

Loan Administration: PGIM Loan Services's core servicing system and proprietary ancillary systems are fully integrated into a robust technology platform that performs all servicing functions from origination to payoff and provides for key metrics to support compliance. While the company leverages both an offshore affiliate and an outsourcing vendor to perform certain servicing functions, the company retains all approval authority and has the ability to perform and monitor the functions domestically.

The company did not incur any tax penalties, Uniform Commercial Code (UCC) lapses or reporting errors or restatements during the 12-month period ended in September 2020, consistent with the highest levels of servicing proficiency. At three days, PGIM Loan Services maintains one of the fastest financial statement analysis processes among Fitch-rated primary servicers and is the only servicer to perform annual borrower satisfaction surveys.

Defaulted/Nonperforming Loan Management: PGIM Loan Services maintains well documented procedures for resolving defaulted loans. The asset management staff comprises dedicated and shared resources that are adjusted based on the volume of loan defaults. Senior management maintains an active oversight role throughout the workout process with approvals based on delegations of authority reflecting the concentration of nonsecuritized loans.

Company Experience Since:

CRE Servicing	1898
CMBS Primary Servicing	1999
CMBS Master Servicing	2001
CRE Loan Workout	1898
CMBS Workout	2003

Source: PGIM Real Estate Loan Services, Inc.

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	■	Stable outlook
Staffing	■	Staffing changed less than 12% +/–
Technology	■	Stable technology platform
Internal Controls	■	Stable control environment; no material audit findings
Servicing Operations	■	Stable operations; no material changes year-over-year

Source: Fitch Ratings.

PGIM REAL ESTATE FINANCE

Company Overview

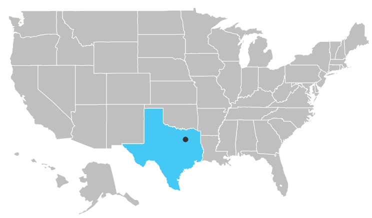
PGIM Loan Services provides services for a diversfied mix of issuers, including domestic and international affiliate funds, PGIM RE balance sheet loans, GSEs and third parties, all of which continue to contribute to growth in the servicing portfolio.

Servicing Portfolio Overview

	9/30/20	% Change	12/31/19	% Change	12/31/18
Total Servicing					
UPB ($ Mil.)	110,324.9	4	106,164.4	10	96,153.0
No. of Loans	4,734	1	4,694	3	4,558
Primary Servicing					
UPB ($ Mil.)	110,324.9	4	106,164.4	10	96,153.0
No. of Loans	4,734	1	4,694	3	4,558
Master Servicing					
UPB ($ Mil.)	91.9	(11)	103.6	(40)	172.0
No. of Loans	19	(5)	20	(35)	31
Special Servicing — Named					
UPB ($ Mil.)	81,921.0	7	76,758.1	7	72,041.0
No. of Loans	3,059	3	2,982	2	2,921
Special Servicing — Active[a]					
UPB ($ Mil.)	416.7	936	44.5	(55)	99.0
No. of Loans	9	80	5	(17)	6

[a]Includes REO assets.
UPB – Unpaid principal balance.
Source: PGIM Real Estate Loan Services, Inc.

Office Locations



Primary Office: Dallas.

PGIM Loan Services is the commercial mortgage servicing entity of PGIM, Inc., a wholly owned subsidiary of PFI. PFI is one of the world's largest financial services organizations, with operations in the U.S., Asia, Europe and Latin America and over $1.4 trillion in total assets under management (AUM) as of June 2020. PGIM comprises seven business lines covering real estate debt and equity, public fixed income, public equity and private fixed income and equity investments.

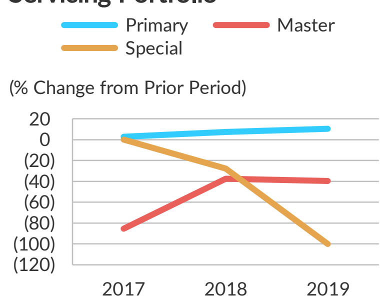
As of September 2020, PGIM Loan Services's total servicing portfolio consisted of 4,734 loans totaling $110.3 billion, of which about $9.6 billion is securitized. PGIM Loan Services retains all primary servicing responsibility for loans originated by PGIM RE, as well as special servicing for nonsecuritized loans. The company also retains servicing responsibility for loans originated by PGIM RE for international clients seeking and debt financing products outside of the U.S.

PGIM Loan Services's commercial servicing operations continue to focus on loans originated by PGIM RE for the general account, GSEs (e.g. the Federal Housing Administration [FHA], Fannie Mae and Freddie Mac) and other third-party investors. PGIM RE originated approximately 750 CRE loans totaling $19.5 billion in 2020. While the number of loans serviced has remained largely stable since 2017, the average balance of loans serviced has increased 20% over the last three years. In addition to CRE servicing, PGIM Loan Services performs general ledger accounting, transfers, debt valuations and total return reporting for insurance company loans, new loan forecasts, loan quality ratings and loan fee accounting for PGIM RE.

PGIM Loan Services supports PGIM RE debt funds and multiple third-party investment funds. The company currently provides services for 22 third-party clients for various debt funds and servicing-only assignments for 10 distinct clients.

PGIM RE was previously an active originator of CMBS loans through a joint venture with Perella Weinberg known as Liberty Island Group. The venture, which had a five-year term, concluded in June 2016, having originated and contributed 312 loans representing $4 billion, for which PGIM Loan Services retained primary servicing responsibilities.

Servicing Portfolio



Note: Special servicing includes loans actively in special servicing (including REO). Total excludes special servicing.
Source: PGIM Real Estate Loan Services, Inc.

PGIM Real Estate and PGIM RE formed a partnership in 2016 for a high-yield real estate debt investment platform named the PGIM Real Estate U.S. Debt Fund. The platform, which combines PGIM RE's debt origination and management abilities with PGIM Real Estate's investment management and capital-raising abilities, invests in transitional whole loans and mezzanine/preferred equity, for which the company retains servicing responsibility. The PGIM Real Estate Debt U.S. Fund began originating loans in 2018 and, as of September 2020, it had originated approximately 46 loans totaling $2.2 billion. Loan originations, all of which PGIM Loan Services retains, are expected to continue contributing to growth in the servicing portfolio. In 2020, PGIM Real Estate Finance was formally aligned with PGIM RE's equity business.

Principal servicing operations and the majority of the servicing staff are located in Dallas, with offshore servicing staff located in Letterkenny, Ireland, through an affiliate company, Pramerica (PFI's offshore captive platform). PGIM Loan Services has consistently expanded international commercial loan servicing yoy by over 10%. As of September 2020, the company had serviced over 200 loans from the Dallas office totaling $7.8 billion, comprising loans denominated in seven foreign currencies across 12 countries.

PGIM Loan Services provides servicing for approximately $8 billion of loans in seven currencies and 12 countries, representing one of the largest and most diverse international portfolios of Fitch-rated servicers in North America.

Financial Condition

Fitch affirmed PFI's Long-Term IDR at 'A'/Stable on May 18, 2020.

PFI's Stable Rating Outlook reflects Fitch's view that, although expected losses tied to the economic fallout from the pandemic will pressure the company's earnings and capital, financial performance and balance sheet fundamentals are expected to remain largely in line with rating expectations. PFI's expected losses are primarily driven by the company's exposure to asset risk and, to a lesser extent, mortality and variable annuity (VA) hedge breakage.

The ratings assigned to PFI continue to reflect the company's very strong business and financial profile, which remain in line with rating expectations. The ratings also consider ongoing challenges due to low interest rates and competitive market conditions, as well as business and investment exposure to the macroeconomic environment in Japan.

Fitch notes that continued business growth in recent years has improved the diversification of PFI's business risk profile. Mortality-based earnings and cashflow from Japan and other non-U.S. insurance markets provide an offset to the company's more capital market-sensitive businesses in the U.S. insurance market, including its large VA business, which are more vulnerable to adverse market conditions. Within the U.S. insurance market, relative exposure to legacy VA business has declined due to faster growth in other business segments, including retirement and group insurance.

Employees

As of September 2020, PGIM Loan Services maintained a master and primary servicing staff of 144 employees, unchanged from Fitch's prior review. Thirty staff members (up from 27) are located in Letterkenny as part of Pramerica. Additionally, the number of special servicing employees, the majority of which are shared resources with primary servicing due to the low number of loan defaults, remains unchanged yoy irrespective of the separation of one employee that was subsequently replaced.

Senior management monitors staffing levels on a monthly basis. Senior managers proactively manage recruitment relative to turnover to ensure staffing levels remain adequate to meet servicing obligations. Employee performance is monitored with midyear and annual performance appraisals, 360-degree peer feedback, mentoring programs, customer survey feedback and ongoing staffing discussions.

Aggregate domestic and offshore employee turnover is 11%, which is low compared to other large institutional Fitch-rated servicers.

Employee Statistics

	2020				2019			
	No. of Employees	Average Years Industry Experience	Average Years Tenure	% Turnover	No. of Employees	Average Years Industry Experience	Average Years Tenure	% Turnover
Domestic Primary/ Master Servicing								
Senior Management	4	32	14	0	4	31	13	0
Middle Management	26	21	14	11	28	21	12	4
Servicing Staff	84	19	7	14	84	18	9	13
Total	**114**	—	—	**13**	**116**	—	—	**10**
Offshore Primary/ Master Servicing								
Senior Management	0	—	—	0	0	—	—	0
Middle Management	5	14	12	0	5	13	11	0
Servicing Staff	25	8	4	0	22	7	3	19
Total	**30**	—	—	**0**	**27**	—	—	**17**
Cumulative Total	**144**	—	—	**10**	**143**	—	—	**11**
Special Servicing								
Senior Management	1	31	7	0	1	30	6	0
Middle Management	2	24	13	0	1	34	17	0
Servicing Staff	1	17	9	50	2	22	13	0
Total	**4**	—	—	**25**	**4**	—	—	**0**

Source: PGIM Real Estate Loan Services, Inc.

Primary/Master Servicing

The primary and master servicing team is organized functionally across servicing, asset management, investment operations and the business support services group. Given the limited number of master servicing duties as a result of legacy payoffs, there is no dedicated master servicing staff, as master servicing duties are integrated across the functional teams. Servicing teams are generally staffed at the associate, analyst and senior levels to provide advancement opportunities and crossteam support.

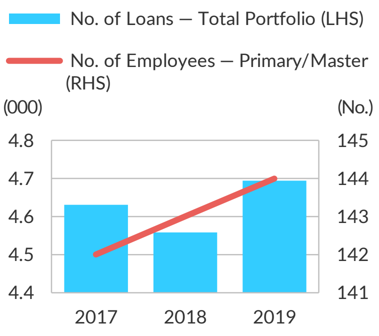
The primary and master servicing group continued to experience low overall turnover of 13% in 2020, up slightly from 10% the prior year as a result of 15 employee separations in Dallas. Turnover included two internal transfers that, if excluded, would reduce turnover to 11%. There was no turnover among offshore employees in Letterkenny. Management turnover consisted of three middle management separations, including one retirement and one internal transfer, resulting in 11% management turnover. Turnover among domestic staff-level employees remained largely unchanged from the prior year at 14%. Domestic and offshore average employee industry experience and tenure were not negatively affected by turnover.

The senior management team is led by four managers who average 33 years of experience and 14 years of tenure, consistent with the prior year. There are 26 domestic middle managers who average 21 years of experience and 14 years of tenure, as well as five offshore managers who average 14 years and 12 years, respectively. PGIM Loan Services maintains an experienced and tenured domestic combined management team of 30, providing sufficient depth and support to the group's 84 domestic staff-level employees.

Domestic staff-level employees average 19 years of experience and seven years of tenure, which compares favorably to highly rated Fitch servicers. Offshore staff-level employees, which increased by three from 2019, average eight years of experience and four years with the

In 2020, PGIM Loan Services was named servicer for two PGIM RE European Value Add funds that, in addition to ongoing international debt investments, have grown the company's international portfolio to approximately $8.0 billion. The international loan servicing team, which added a London-based team leader in 2020, now comprises 13 employees across Dallas, Ireland and London.

Loan and Employee Counts



Source: PGIM Real Estate Loan Services, Inc.

company and are solely dedicated to servicing. At the time of Fitch's review, PGIM Loan Services had five open positions for asset management, surveillance and operations support.

Special Servicing

The special servicing group consists of one senior manager, two middle managers and one staff-level employee. The middle manager is fully dedicated to special servicing, while the remaining three employees support PGIM RE and primary servicing and are available as needed. Fitch noted that PGIM Loan Services has a deep bench of experienced staff with workout experience to draw upon should the volume of defaults increase. While the special servicing management team is small and presents potential key-person risk, Fitch believes these risks are mitigated by the depth of experience and tenure of the entire group, as well as the resources available within master/primary servicing and PGIM RE.

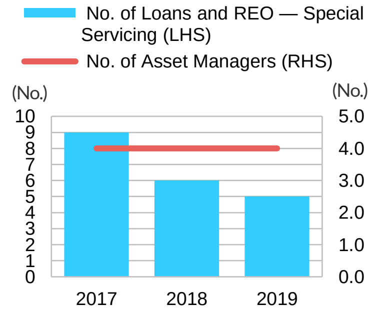
The special servicing group is led by a senior manager with 31 years of experience and seven years of company tenure. The manager has prior asset management and servicing experience within PGIM Loan Services and is also responsible for certain master/primary servicing functions. Two middle managers, one of whom acts as the group's primary asset manager, have 24 years of experience and 13 years of tenure. The group's staff-level employees average 17 years of experience and nine years with the company. Currently, all special servicing employees are shared resources given the minimal level of loan defaults.

The special servicing group experienced one staff-level departure involving a shared resource in 2020, resulting in 25% aggregate turnover for the group. Turnover is high as a function of the small size of the group. The special servicing team has historically had limited turnover, and Fitch noted that while the special servicing group is small and draws on support from master/primary servicing employees, middle and asset managers have remained largely consistent for several years.

PGIM Loan Services does not maintain a separate REO group due to its limited number of REO assets. However, its experienced asset managers are responsible for foreclosure and REO management functions. As is common among non-third-party special servicers with low loan defaults, the special servicing team includes both employees dedicated to special servicing and employees who perform other asset management functions for PGIM Loan Services and PGIM RE.

PGIM Loan Services has demonstrated proficiency in adjusting its staffing needs relative to market conditions. During times of increased defaults, the company has increased the size of the special servicing team by drawing experienced real estate professionals from other areas within PGIM RE, such as originations. In addition, as PGIM RE has expanded geographically, Prudential has placed asset managers in PGIM RE offices within highly distressed regions.

Special Servicing Loan and Employee Counts



Source: PGIM Real Estate Loan Services, Inc.

Training

PGIM Loan Services maintains a tiered training requirement structure. Employees with less than three years of tenure are required to complete 40 training hours annually, while employees with greater than three years of tenure must complete 30 hours annually.

PGIM Loan Services's training program, called myLearning, is administered by the corporate compliance group and a training committee comprising the departmental representative and the BSS group vice president, who serves as committee chair. All training for servicing employees is delivered and tracked by the company's myLearning application, which PGIM Loan Services adopted in 2020. myLearning monitors all training, including soft skills, servicing-specific topics, business processes, employee electives and external learning opportunities.

Training is provided through a variety of methods, including Web-based training, vendor-sponsored webinars and outside instructor-led training. Annual training curriculums focus on improving individual skillsets, developing leadership competencies and departmental crosstraining opportunities. PGIM Loan Services also requires all new employees to complete level one of the Mortgage Bankers Association's (MBA) Certified Commercial Mortgage Servicer (CCMS) certification program within 12 months of being hired. The company also provides employees the opportunity to complete level two of the MBA CCMS certification.

Annually required training courses/topics for PGIM Loan Services employees include a corporate policy refresher, ethics training, anti-bribery/anti-corruption and privacy and information security awareness. Training topics added to myLearning include State of the U.S. Retail Market, Mortgage Servicing and Subservicing, Ordinance or Law Insurance, Libor Training, GSE Loan Servicing, Group Lease Training and Loan Workout 101. In addition to myLearning, the company offers financial support to employees for undergraduate and postgraduate studies and professional certifications.

In 2020, the servicing group transitioned to a new training platform called myLearning. The new platform includes traditional servicing-specific and soft skills topics but offers a more individualized approach and shared content among teams.

PGIM Loan Services employees responsible for both primary and special servicing functions averaged 30 hours of training in 2020, down from 42 hours the prior period. However, training would exceed 40 hours if on-the-job training, virtual conferences and team meetings were included. Most Fitch-rated servicers reported lower training hours in 2020 as travel restrictions limited employee participation in external training events. The reduction in average training hours also reflects the company's move to tiered training requirements based on experience.

In 2019, PGIM Loan Services became the first Fitch-rated servicer to successfully implement OCR to automate the review process for the property insurance ACORD 25 form. The newly automated review process has materially reduced the average review time from 40 minutes to eight minutes per form. The company estimates it saved over 6,000 hours of processing time in 2020, as a result.

Operational Infrastructure

Offshore Operations

Pramerica is a captive offshore affiliate located in Letterkenny, Ireland that supports various Prudential-affiliated companies. In November 2020, PFI entered into a strategic relationship with Tata Consultancy Services (TCS) through which the majority of Pramerica employees transitioned to TCS but continued to support various PFI business lines. PGIM Loan Services retained 30 Pramerica employees dedicated to supporting the platform.

Although PGIM Loan Services utilizes employees of an offshore affilate, the offhsore employees are fully integrated with the servicing group and report directly to domestic managers.

Prior to the TCS transaction, PGIM Loan Services realigned Pramerica staff to report directly to managers in Dallas who utilize key performance indicator reports to monitor multiple performance metrics around servicing functions and track volume, productivity and quality. As such, there was no change in the support or operations of PGIM Loan Services. In addition to day-to-day interfaces, PGIM Loan Services formally holds approximately 20 knowledge exchanges between Dallas and Letterkenny, either in person or through videoconferences.

Pramerica, which originally began as a business continuity platform for servicing, has grown to become an integral part of daily operations and extends PGIM Loan Services's workday by an additional five hours. Pramerica employees are able to perform and/or participate in payment processing, CMBS surveillance, investor reporting, loan accounting, lease consents, repair monitoring, reserve disbursements and treasury and servicing functions for international loans.

Outsourcing

PGIM Loan Services outsources limited servicing functions to a third-party vendor in Gurgaon, India and a second vendor in Chennai, India. The Gurgaon vendor performs data entry for rent rolls and financial statement data entry spreading within PGIM Loan Services's LoanConnect application, along with bank reconciliations, loan quality ratings and various other data entry functions. The vendor in Chennai performs insurance policy data inputting, also within LoanConnect. The work product of both vendors is reviewed by PGIM Loan Services, which also maintains the ability to perform both functions internally if needed.

The vice president of the BSS group oversees third-party vendors with the goal of continuous process improvement to further leverage offshoring opportunities, intended to maximize efficiency of the overall platform. Fitch noted that PGIM Loan Services's internal key metric report contains multiple measures of work performed by vendors.

Similar to other CRE servicers, PGIM Loan Services engages third parties for tax payment and reporting, UCC filings and property inspections. Fitch does not view the current level of outsourcing as material given its limited scope, and the company retains the expertise to perform the functions in-house.

Vendor Management

Vendor management is the responsibility of Prudential's enterprise vendor governance office (EVGO), which comprises employees from legal, compliance, audit, risk management and the individual business lines. EVGO maintains processes for selecting and engaging vendors, and it analyzes the financial condition, capabilities and controls around outsourced functions, along with performing a risk rating analysis of the vendor. Additionally, PGIM Loan Services has a business services support team that is specifically responsible for working with the EVGO and the PGIM RE risk management group on behalf of PGIM Loan Services to ensure vendors are monitored and assessed for the appropriate risk level.

Prior to engaging a vendor, a performance monitoring plan is developed that includes monthly, quarterly and annual reporting. Additionally, the BSS team actively solicits feedback from PGIM Loan Services line managers to confirm ongoing monitoring and identify any material changes that may impact the risk assessment of the vendor. Managers are responsible for monitoring and validating the work of their teams, including quality control (QC) testing. The vice president of the BSS group is responsible for monitoring the performance of offshore vendors. Vendor performance is also tracked by the servicing function in PGIM Loan Services's Key Indicator Report, which contains multiple metrics to monitor each servicing function.

Information Technology

PGIM Loan Services uses McCracken's Strategy, version 19D, as its primary system for all loans, including loans for non-U.S. collateral. In addition, the following secondary systems and applications are integrated with Strategy:

- LoanConnect, a proprietary asset management and workflow application.
- BorrowerConnect, a proprietary borrower website.
- DataConnect, a consolidated data warehouse.
- InvestorView, a proprietary investor website.
- PruXchange, a website for document exchange.
- IBM Content Manager, a third-party document imaging and content management system.
- Argus, a third-party property valuation system.
- The MIAC (Mortgage Industry Advisory Corporation) system, used for third-party servicing portfolio valuation.
- PRIDE/AMLS, a third-party check production and Office of Foreign Assets Control (OFAC) verification application.
- Oracle, a third-party general ledger.

Nightly data feeds from Strategy are used to populate DataConnect for reporting purposes and LoanConnect. Microsoft Power BI is the primary report writer for DataConnect and LoanConnect. Additional reporting is available through preprogrammed reports in Strategy, along with ad hoc reporting through Crystal Reports and the AS400 query tool. Robot Reports is used to schedule, distribute and store all key reports.

Recent technology enhancements include migrating all employees to virtual desktops to improve remote working, various servicing and asset management enhancements to support banking data for the international portfolio, the creation of an automated task management calendar to track investor reporting and remittance deliverables and a new borrower welcome package.

PGIM Loan Services has also implemented OCR technology to collect data from ACORD 25 forms. Fitch was provided with a demonstration of the technology, which the company has utilized for over a year. This tool has significantly reduced the time needed to review the forms and increased data accuracy. Future planned technology initiatives include expanding OCR and artificial intelligence technologies to automate operating statements and rent rolls, which is common among highly rated servicers of similar portfolio size. Additional technology enhancements include modernization of the borrower and investor websites, continued development of the international loan monitoring tool and additional quantitative risk rating tools.

Application and technology support is provided by a team of 24 IT professionals located in Dallas, Atlanta and Newark, NJ. Additionally, the company is able to utilize Pramerica IT resources to support development and data analysis needs. Network and desktop support services are provided by the Prudential global business and technology support groups. Security administration and oversight are provided by PGIM REF's business security office.

PGIM Loan Services successfully transitioned all employees to remote-based work in March 2020 due to the onset of the pandemic without experiencing any operational interuptions.

Disaster Recovery/Business Continuity Plan

PGIM Loan Services maintains a business continuity plan that is distributed to senior management and disaster recovery teams annually. The primary business plan includes both a work-from-home strategy and an alternative Prudential office located roughly 20 miles from the main office in North Dallas. This location is equipped with IT hardware should it be needed.

Business-critical associates are equipped with laptops, allowing remote access to all critical Prudential systems. The plan includes information cards and a call tree listing critical phone numbers, contact information and meeting places that are distributed to all employees. In addition to the formal business continuity plan for U.S. operations, PGIM Loan Services is able to leverage Pramerica to perform critical servicing functions such as cash processing.

The Strategy loan servicing system is hosted by McCracken in its Billerica, MA data center. The data center has a redundant power supply along with a disaster recovery contract with SunGard for 24-hour recovery. The most recent vendor disaster recovery test occurred in November 2020 and was deemed successful with no material findings. LoanConnect is classified as a mission-critical application with an expected recovery time of four hours or less.

All other PGIM Loan Services applications are hosted by Prudential's data center in Fort Washington, PA, which also has a redundant power supply. In addition, Prudential maintains a secondary production data center in Minneapolis that can become the primary production site within a few hours of a failure at the primary data center. The most recent data center failover test occurred in October 2020 with successful results. The company expects minimal data loss in the event of a power loss due to ongoing data replication between its data centers.

The disaster recovery plan and activation of the North Dallas recovery location are tested annually. The most recent successful test occurred in March 2020 with no material issues cited.

Internal Control Environment

PGIM Loan Services maintains a very strong, multifaceted internal control environment. Controls are established through formal policies and procedures, and compliance is actively monitored by dedicated QC resources, largely through comprehensive metrics for accuracy and timeliness. The company is also subject to annual internal audit reviews by PGIM, a subsidiary of PFI whose coverage includes PGIM RE and PGIM Loan Services, as well as external, RegAB and third-party client audits.

Policies and Procedures

PGIM Loan Services's policies and procedures are available to all employees electronically through the company's internally developed LoanConnect application. Unless business needs require a change, policies and procedures are formally reviewed once every two years by the respective department director, the BSS vice president and the responsible team director. The policies and procedures reflect the original implementation date and the date of the most recent revision. There were no material updates to policies and procedures during the 12-month period ended in September 2020, reflecting PGIM Loan Services's mature servicing platform.

Policy and procedure training occurs during new employee orientation and for all employees throughout the year as needed. The BSS group coordinates training for material policy or procedure changes.

In addition to policies and procedures, LoanConnect contains pooling and servicing agreements (PSAs) and PSA abstracts for all transactions where PGIM Loan Services is the named master servicer. Fitch reviewed a sample of Prudential's policies and procedures and found them to be complete, with step-by-step instructions and illustrations for servicing tasks. The policies and procedures sampled by Fitch had variable last review dates; however, they had all been reviewed within 24 months, pursuant to the company's policy.

The company's monthly Key Indicator Report, which is used to monitor operational compliance across servicing functions, is a highly effective monitoring tool with well defined metrics and risk tolerances for each function.

Compliance and Controls

PGIM Loan Services's BSS team is responsible for measuring performance, compliance and accuracy through a comprehensive metric process. This process includes over 250 key performance metrics to track accuracy and timeliness on a monthly basis. The team comprises 10 members, including the BSS vice president, who reports directly to the president of PGIM Loan Services. The BSS group also regularly performs independent testing of various processes, including new loan setup, delinquency monitoring, adjustable-rate loans and payoffs. Exception reports are automated in LoanConnect or DataConnect and monitored by the BSS team.

Examples of internal controls monitored by the BSS team and reported monthly include investor report timeliness as specified in the servicing agreement, financial statement collections, outstanding property inspections, UCC lapses and LOC lapses, among others. Fitch reviewed the September 2020 Key Indicator Report used to monitor performance in areas such as advancing, bank account reconciliation, monthly cash activity, investor reporting, collateral monitoring, insurance, asset management and surveillance functions, among others. Fitch found the report, which included prior-month results and prior YE averages, to be a highly effective tool to monitor compliance and servicing performance. The report, which Fitch views as best in class among highly rated servicers, did not contain any material negative findings or trends.

In addition, the BSS team prepares quarterly QC reports for FHA-insured and Ginnie Mae loans, which are provided to and countersigned by senior management. Fitch also reviewed a QC report for FHA loans as of 2Q20, which sampled 11 loans for compliance with servicing terms. The report contained no material findings.

A dedicated compliance team with PGIM oversees the compliance activities of PGIM Loan Services with support from the BSS group. The compliance team is part of the boarder Prudential Financial compliance organization that reports to the chief compliance officer of PFI. Compliance examinations occur annually across the enterprise given PGIM's designation as a registered investment advisor.

Internal Audit

PGIM has a separate audit team of approximately 25 auditors at the corporate level, with employees allocated to PGIM RE and PGIM Loan Services based on the scope of the internal audit. The team performs annual audits of PGIM Loan Services servicing functions with varying scopes based on a risk assessment of each function, along with other audits in a given year and annual Sarbanes-Oxley (SOX) audits.

PGIM Loan Services is subject to an annual internal audit by PGIM, although the scope varies and is based on a broader annual risk assessment of all PGIM RE entities. PGIM Loan Services is considered a medium-risk entity subject to a full internal audit every two years to three years, and it receives process- or product-specific, limited scope reviews in between full scope audits.

PGIM Loan Services is subject to multiple internal and external audits annually. The most recent internal audit, which Fitch noted had a broad scope and contained detailed sample testing, identified only minor operational findings, which management addressed through remediation plans.

The most recent full scope internal audit, which focused on agency asset management and reporting, was completed in 1Q20. Fitch discussed the scope of the audit, sample testing procedures and results with two PGIM internal audit representatives. The audit's scope included loan setup, trigger setup and administration, site inspections, credit actions, financial statement and rent roll analysis and reporting for Fannie Mae loans from September 2018 through August 2019. The audit contained three findings that Fitch deemed minor and which management responded to with corrective remediation plans. One of the findings was remediated in 1Q20, while the remaining two were remediated in 2Q20. While the audit was focused on a specific loan type, Fitch noted that the audit is applicable to the entire servicing portfolio, as PGIM Loan Services follows the same servicing procedures for all loans irrespective of loan type.

External Audit

PGIM Loan Services is also subject to annual RegAB audits for its servicing portfolio. Fitch reviewed PricewaterhouseCoopers LLP's (PwC) 2019 RegAB audit of PGIM Loan Services, issued in February 2020. The audit confirmed PGIM Loan Services's compliance with servicing criteria and contained no negative findings. PGIM Loan Services does not undergo a Uniform Single Attestation Program (USAP) audit; instead, a RegAB audit is conducted for its entire portfolio. The company's 2020 RegAB audit is expected to be completed in February 2021, and there have been no preliminary negative findings reported to date.

In addition to the RegAB audit, PGIM Loan Services was subject to either desktop or full reviews by one CMBS master servicer, operational reviews by Freddie Mac and Ginnie Mae and five targeted audits by PwC for specific products or processes in 2020. None of these external reviews or audits resulted in unsatisfactory ratings or material findings, according to the company.

Primary Servicing

As of September 2020, PGIM Loan Services's commercial loan portfolio comprised over 4,700 loans totaling $110.3 billion. Of this portfolio, 4,149 loans totaling $100.7 billion are nonsecuritized balance sheet loans serviced on behalf of affiliates (54% by loan count), GSEs (35%) and institutional investors (10%). The remaining 585 loans were originated by PGIM affiliates and contributed to CMBS and Freddie Mac transactions. Since 2017, the number of loans serviced by the company has increased 2% by loan count and 23% by balance, reflecting higher balance new loan originations as the primary driver of growth.

PGIM Loan Services did not incur any tax penalties, UCC lapses or reporting errors or restatements during the 12-month period ended in September 2020, consistent with the highest levels of servicing proficiency.

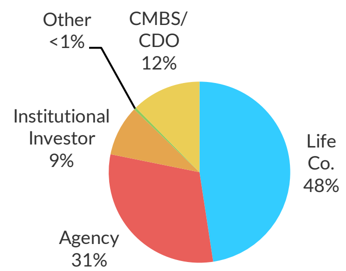
Primary Servicing Portfolio Overview

	9/30/20	% Change	12/31/19	% Change	12/31/18
CMBS					
No. of Transactions — Primary Servicer	195	5	186	11	168
UPB — Primary Servicing ($ Mil.)	9,669.9	7	9,034.3	6	8,523.0
No. of Loans — Primary Servicing	585	3	569	2	557
Non-CMBS					
UPB ($ Mil.)	100,655.0	4	97,130.0	11	87,630.1
No. of Loans	4,149	1	4,125	3	4,001

UPB – Unpaid principal balance.
Source: PGIM Real Estate Loan Services, Inc.

Primary Servicing Product Type

(As of Sept. 31, 2020)



Source: PGIM Real Estate Loan Services, Inc.

New Loan Setup

PGIM Loan Services works closely with PGIM RE's regional offices to set up newly originated loans. Loan closers in Prudential's regional offices enter required data elements into LoanConnect, which are then transferred to Strategy via an automatic feed once the loan has closed. While PGIM Loan Services maintains the ability to set up loans in bulk, it does this infrequently as most new loan servicing assignments are sourced from regional offices.

Following the receipt of executed loan documents, PGIM Loan Services performs a QC review on all data points prior to releasing the loan into production. New loanboarding takes approximately one hour as a result of data feeds from LoanConnect, and the company's goal is to set up all new loans within two days of closing. Post-loanboarding, a secondary servicing team member performs a formal QC review of each loan and completes a QC checklist. Additionally, the BSS team monitors loanboarding timelines through exception reports and crosschecks 20% of new loans against the original loan documents.

Less than 10% of PGIM Loan Services's servicing portfolio comprises floating rate loans based on Libor on behalf of affiliates and GSEs. The company already services floating rate loans based on SOFR (the Secured Overnight Financing Rate) and does not expect any operational impact from the phasing out of Libor.

Throughout the loan origination process, loan covenants are captured by several groups across PGIM REF and PGIM Loan Services. Originators and loan closers are responsible for the initial input of loan covenants into LoanConnect. A QC review is performed both at the regional office where the loan was originated and by PGIM Loan Services, as it is responsible for monitoring and managing all postclosing covenant actions and boarding the loans into Strategy, which is accomplished primarily through a nightly data feed. Reports and e-mail reminders are sent to responsible parties within PGIM Loan Services once loan covenants are tripped. An asset manager reviews the loan documents for lockbox covenant requirements and captures the data in LoanConnect for tracking and compliance administration.

Accounting and Cash Management

The cash management team is responsible for monitoring bank accounts, posting transactions and verifying account reconciliations daily, while the servicing team is responsible for resolving unidentified payments and suspense reconciliations. The treasury team oversees money movements, check and wire disbursements and overall checks and balances. Finally, the accounting team independently verifies all receipt account activity daily to ensure aged or unidentified receipts are resolved. PGIM Loan Services reviews all receipt and disbursement accounts daily, while all bank accounts are formally reconciled every 30 days. Reconciliations are recorded in a bank reconciliation database, and compliance is monitored monthly.

% Payment Collections Via:

ACH	69
Lockbox	30
Wire	—
Other	1

Source: PGIM Real Estate Loan Services, Inc.

A dedicated cash management team within servicing works with banks, borrowers and internal and external counsel to ensure cash management is timely and accurate. The team's core responsibilities include covenant monitoring, document negotiation, waterfall management and review of budgets on a loan-by-loan basis, as well as overall management and administration of the cash management process. The group also verifies bank account ratings quarterly to confirm compliance with servicing agreements.

As of September 2020, PGIM Loan Services had serviced 244 loans with cash management agreements, less than 7% of which were being actively managed by the cash management team. For the 12 months ended in September 2020, the cash management team activated seven loans with springing lockboxes.

LOCs, which may be posted as additional loan collateral, are recorded and monitored in LoanConnect. Renewal notices are sent 90, 60 and 30 days prior to LOC expiration. In the event an LOC is not renewed, the loan servicing team will make several attempts to contact the borrower before drawing on the LOC before expiration. Additionally, the compliance group monitors bank ratings for issuance of LOCs to confirm rating requirements quarterly. As of September 2020, PGIM Loan Services was responsible for monitoring 32 LOCs.

Escrow Administration

PGIM Loan Services administers tax and insurance escrows for approximately 29% of the entire portfolio serviced and 64% of CMBS loans serviced. Tax and insurance escrow accounts are reviewed annually to confirm sufficient funding for the year. This process utilizes monthly reports from the servicing system to identify loans due for updated escrow analysis. A monthly exception report identifies any lapse in a loan's annual escrow review. PGIM Loan Services did not incur any tax penalties during the 12-month period ended in September 2020 and historically has had very few, if any, late payments.

Tax payments for nonescrowed loans are monitored and tracked similarly to escrowed loans to ensure taxes are paid in a timely fashion, with the assistance of the company's tax vendor. Weekly tax monitoring reports are generated from the servicing system to identify all loans with either delinquent taxes or taxes due within 30 days.

The servicing team is responsible for reviewing tenant improvement and leasing escrow draw requests and distributions. Following receipt of a borrower's draw request, with proper documentation, the request is reviewed, independently approved and disbursed in accordance with the loan documents. All escrow due dates and any compliance items are tracked in LoanConnect.

Property insurance monitoring begins at loan setup, when insurance reviews are performed and requirements are documented in LoanConnect. Borrowers are contacted prior to insurance expirations to remind them of the expiration and which coverage levels are required per the loan documents. Insurance renewals are reviewed and updated in the new insurance module within LoanConnect and compared to loan document requirements. Any deficiencies are communicated directly to the borrower and, if not corrected in a timely manner, could result in forced placement insurance by PGIM Loan Services. In 2019, PGIM Loan Services implemented OCR to review and extract data from the ACORD 25 form, which has improved accuracy and lowered the time necessary to review insurance compliance (*as mentioned previously*).

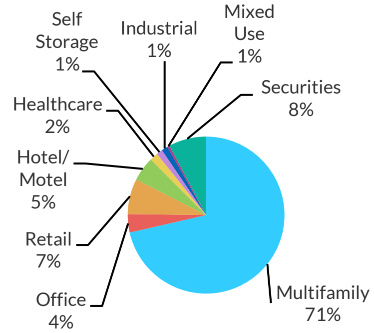
The loan servicing team is also responsible for UCC administration. UCC continuations are automatically generated by the servicing system six months prior to expiration and sent to a vendor for renewal. PGIM Loan Services did not have any UCC lapses during the 12 months ended in September 2020, consistent with the prior review. Exception reports are run weekly to identify any missing or expired UCC dates. Additionally, the BSS team runs queries to identify delinquent taxes or insurance, as well as lapsed or missing UCCs, as part of the team's monthly QC oversight.

Investor Reporting

The investor reporting group, which is part of the loan accounting group, is responsible for monthly reporting and remittance distributions. Investor reporting analysts maintain reporting calendars for all assigned portfolios and are responsible for entering and reviewing data in LoanConnect prior to the reporting date. The investor reporting analyst validates the reports, and validations receive a secondary review from an investor reporting manager prior to distribution.

CMBS Servicing Property Type

(As of Sept. 31, 2020)



Source: PGIM Real Estate Loan Services, Inc.

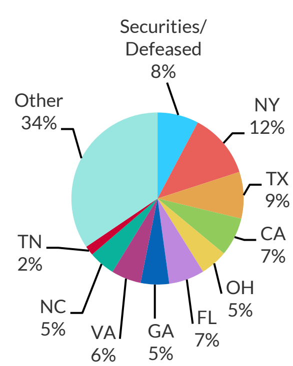
% Portfolio Escrowed for:

Taxes	29
Insurance	27

Source: PGIM Real Estate Loan Services, Inc.

CMBS Geographic Distribution

(As of Sept. 31, 2020)



Source: PGIM Real Estate Loan Services, Inc.

The majority of investor reports are generated from the loan system, with any manual inputs or adjustments verified against source documents. Investor reporting managers create a monthly compliance and reporting calendar to monitor and confirm reporting and remittance deadlines. In addition to investor reporting managers, the BSS team also tracks investor reporting metrics monthly to identify potential issues.

PGIM Loan Services reported no instances of reporting restatements, errors or late submissions during the 12-month period ended in September 2020.

Asset Administration

The servicing team monitors loan payment due dates using exception reports from Strategy. The borrower is contacted two days after the grace period, and a delinquency letter is sent when loans are 10 days past the grace period. If a payment is not received within 30 days, collection efforts are transferred to the asset management team and the loan may be transferred to special servicing. All efforts to contact the borrower are recorded in LoanConnect.

The surveillance team is responsible for collecting and analyzing borrower financial statements and rent rolls quarterly with assistance from the company's offshore vendor. Borrowers are sent e-mail reminders quarterly of financial statement and rent roll submission requirements, with additional follow-up reminders as necessary. Financial statement analysis is typically completed within two to three business days from the date all documentation is received, imaged and indexed. PGIM Loan Services reported a 98% collection and analysis of 2019 financial statements for securitized loans.

Tenant and financial statement data are entered into LoanConnect, which can be used to generate ad hoc queries and performance reports detailing tenant rollover and exposure. Detailed rent roll data for all tenants is updated quarterly for commercial properties, while summary information is recorded for multifamily properties. The surveillance team monitors the financial statement and rent roll data entry process in the workflow system and reviews the data based on an internal matrix. In addition, the system provides various checks and balances as the information is entered. Monthly management and metrics reports ensure all required information is received and available.

Either quarterly or upon receipt of new collateral performance information from the borrower, the surveillance group performs a compliance test as part of its property financial review and analysis process. If lockbox covenants are tripped, the surveillance group immediately notifies the cash management group. The cash management group then works through a checklist of events to ensure proper parties are notified and proper documents are executed.

PGIM Loan Services uses CRE Finance Council (CREFC) watchlist criteria, which are automated within LoanConnect. The surveillance team formally reviews all watchlist loans monthly and updates commentary as appropriate. The surveillance team also reviews all flagged loans for possible escalation to special servicing.

Third-party vendors perform property site inspections for the majority of loans serviced (99%) pursuant to loan servicing agreement requirements. PGIM Loan Services utilizes industry-standard inspection forms, which are reviewed within 30 days of receipt by the company's third-party vendor and the surveillance team. Any deferred maintenance findings are recorded in LoanConnect and elevated by an asset manager who monitors any major repair items.

Pending loan maturities are also monitored in LoanConnect by the servicing group. Borrowers are provided notice of loan maturity up to 12 months in advance, and loans are added to the watchlist six months to 12 months in advance of maturity depending on loan type. PGIM Loan Services has only six loans, totaling $47.3 million, that are scheduled to mature through September 2021.

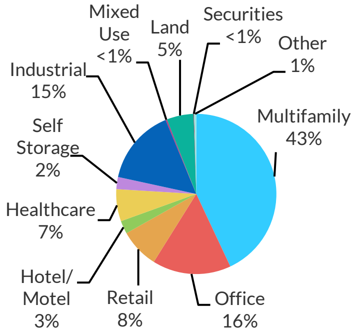
Customer Service

Borrower inquiries received by mail, a customer service line and BorrowerConnect are routed to servicing and asset management staff for resolution. Staff respond to most borrower inquiries immediately and provide payoff quotes within 72 hours. PGIM Loan Services maintains a relationship management team for top borrower relationships in an effort to improve customer service.

PGIM Loan Services is one of the few Fitch-rated servicers that performs an annual borrower satisfaction survey, for which it consistently scores highly.

Non-CMBS Servicing Property Type

(As of Sept. 31, 2020)

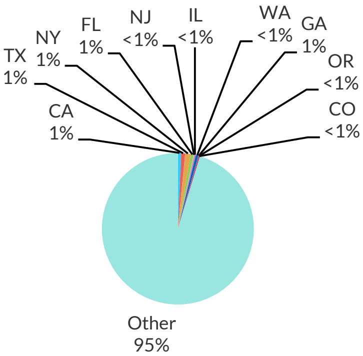


Source: PGIM Real Estate Loan Services, Inc.

At three days, PGIM Loan Services maintains one of the fastest financial statement analysis processing times among Fitch-rated primary servicers.

Non-CMBS Geographic Distribution

(As of Sept. 31, 2020)



Source: PGIM Real Estate Loan Services, Inc.

The company performs a formal borrower satisfaction survey for the entire portfolio annually and a survey following any credit actions, such as assumptions and lease approvals. Additionally, senior management tracks feedback against benchmarked goals and follows up on low survey scores.

Master Servicing

As of September 2020, PGIM Loan Services was named co-master servicer for 12 legacy CMBS transactions consisting of 19 loans totaling $91.9 million, down from $103.6 million yoy. PGIM Loan Services acts as co-master servicer for legacy CMBS transactions up through the 2007 vintage. The company's master servicing portfolio is expected to continue to runoff, as the company does not currently retain master servicing for loans contributed to new issue CMBS or agency CME transactions.

Master Servicing Portfolio Overview

	9/30/20	% Change	12/31/19	% Change	12/31/18
No. of Transactions — Master Servicer	12	—	12	(20)	15
UPB — Master Servicing ($ Mil.)	91.9	(11)	103.6	(40)	172.0
No. of Loans — Master Servicing	19	(5)	20	(35)	31
No. of Primary Servicers Overseen	0	—	0	—	0

UPB – Unpaid principal balance.
Source: PGIM Real Estate Loan Services, Inc.

Although PGIM Loan Services maintains a small master servicing portfolio, it has demonstrated proficiency in managing advancing across multiple loan products. As of September 2020, the company had approximately $3.2 million of funds advanced for 13 loans and has not made any changes to its advancing procedures.

Primary Servicer Oversight

Although PGIM Loan Services primary services all loans in its master servicing portfolio, the company maintains policies and procedures for primary servicer oversight. Subservicers would be required to submit quarterly reports and annual USAP/RegAB attestations, as well as tax and insurance certifications. PGIM Loan Services would also conduct either a desktop or onsite audit of subservicers who service 20 or more loans. The purpose of the review is to confirm compliance with loan documents and servicing agreements. Subservicers who service fewer than 20 loans would be required to submit quarterly reports and provide annual USAP/RegAB attestations and tax and insurance certifications.

PGIM Loan Services shadow services all primary serviced loans by setting them up on its servicing system and recording all monthly payments, as well as tax and insurance payment status on a quarterly basis. The PGIM Loan Services investor reporting group reviews reporting and remittances on a monthly basis. Any property inspections performed by subservicers would be tracked and managed in LoanConnect, as are all deferred maintenance issues.

Advancing

All principal and interest advance requests are initiated by the investor reporting group, which is responsible for the remittance of funds, subsequent tracking of interest on advances and the repayment of advances. The investor reporting group works with PGIM Loan Services's accounting group to ensure advances are repaid in a timely manner. Advance recoverability determinations are made jointly by the vice presidents of servicing, asset management and accounting based on the total amount outstanding relative to the most recent valuation of the asset, collateral type and composition of the securitization for which the advance was made.

Outstanding advances are tracked in LoanConnect and reviewed monthly to protect PGIM Loan Services and the individual securitizations from over-advancing. Due to PGIM Loan Services's declining master servicing portfolio and its role as co-master servicer, its advancing threshold is generally lower than those of other master servicers, particularly for highly concentrated transactions in which it is the master servicer. However, loans are evaluated individually, with consideration given to the size of the entire CMBS transaction.

Investor Reporting

PGIM Loan Services adheres to the CREFC watchlist criteria with an automated process that the surveillance team manages within LoanConnect. Once the team has input the watchlist criteria, the system runs a nightly check of all loans and identifies those that have tripped the criteria. This information is reviewed by the surveillance group on a monthly basis and reported as part of the

CREFC investor reporting package. PGIM Loan Services reviews and refreshes watchlist comments on a monthly basis, which Fitch views as a best practice for highly rated servicers.

Special Servicing

Special Servicing Portfolio

As of September 2020, PGIM Loan Services was designated special servicer for 3,059 nonsecuritized commercial mortgage loans totaling $81.9 billion. Non-CMBS special servicing and asset management duties are exclusively for PGIM RE-originated and retained CRE loans. The company was also named special servicer on three CMBS loans for three legacy conduit transactions totaling $17.1 million, none of which are in special servicing.

As of the same date, nine loans totaling $416.8 million were in default, none of which involved REO assets. Additionally, the company resolved four non-CMBS loans totaling $39.0 million during the 12-month period ended in September 2020, with two of the loans returned to performing, one loan paid off and the remaining loan resolved via a discounted payoff. While PGIM Loan Services has had limited REO assets for several years, the company has experience in foreclosing and selling CRE assets nationwide and generally sells assets through receivership.

Special Servicing Portfolio Overview

	9/30/20	% Change	12/31/19	% Change	12/31/18
CMBS					
No. of Transactions — Special Servicer	3	—	3	—	3
UPB — Special Servicer ($ Mil.)	17.1	(40)	28.6	(33)	42.8
No. of Loans — Named Special Servicer	3	—	3	—	3
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 — ¾ REO Assets ($ Mil.)	0.0	—	0.0	—	0.0
No. of REO Assets	0	—	0	—	0
Non-CMBS					
UPB — Named Special Servicer ($ Mil.)	81,903.9	7	76,729.5	7	71,997.7
No. of Loans — Named Special Servicer	3,059	3	2,982	2	2,918
UPB — Actively Special Servicing (Non-REO) ($ Mil.)	416.6	838	44.5	(55)	99.2
No. of Loans — Actively Special Servicing (Non-REO)	9	80	5	(17)	6
UPB — REO Assets ($ Mil.)	0.0	—	0.0	—	0.0
No. of REO Assets	0	—	0	—	0

UPB – Unpaid principal balance.
Source: PGIM Real Estate Loan Services, Inc.

Loan Administration

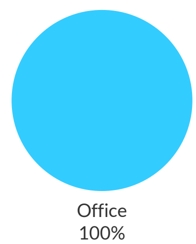
PGIM Loan Services has a shared surveillance team under the asset management group monitoring all assets serviced by the company. The portfolio surveillance team is responsible for credit monitoring the general account, Fannie Mae and interim portfolios and any CMBS assets for which the company is the named special servicer. The special servicing team also has regular communication with the master servicing team regarding potential defaults.

With respect to non-CMBS loans, the special servicing team participates in monthly and quarterly watchlist reviews with various capital sources within Prudential, and asset managers prepare a closely monitored list quarterly that serves as a watchlist of potential loan defaults across the portfolio. The vice president of special servicing is also a member of the Prudential Mortgage Capital Company (PMCC) risk management committee, which meets quarterly to review risks by identifying problem markets, sponsors, tenants and other issues.

PGIM Loan Services resolved four non-CMBS loans totaling $46.5 million during the 12-month period ended in September 2020, with the return of two loans to performing status, one full payoff and one discounted payoff.

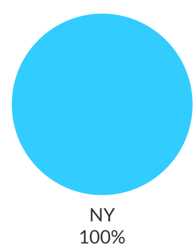
The special servicing group provides asset resolution support for all affiliate capital business lines secured by CRE assets and is expected to continue to add named special servicing assignments.

Named CMBS Special Servicing Property Type
(As of Sept. 31, 2020)



Source: PGIM Real Estate Loan Services, Inc.

Named CMBS Special Servicing Geographic Distribution
(As of Sept. 31, 2020)



Source: PGIM Real Estate Loan Services, Inc.

Defaulted/Nonperforming Loan Management

Following the transfer of a loan to special servicing, a special servicing code is placed on the loan to notify the master servicing group of the new status. The special servicing group provides written direction to the master servicer on the application of any funds received while the loan is in special servicing.

The assigned asset manager is responsible for conducting a full loan file review, including trust documentation, to identify potential breaches of the loan sellers' representations and warranties. In addition, the asset manager performs a physical inspection of the collateral and obtains current rental, sales and comparable information from a variety of third-party research providers, along with current borrower and guarantor financial statements. In accordance with the timeframe provided in the PSA or other documents, the asset manager is also responsible for drafting an asset status report upon a servicing transfer event, typically within 60 days of the transfer.

Asset status reports are approved based on established delegations of authority and contain a full collateral description that includes: improvements; a narrative discussion of the loan and circumstances surrounding the default; the anticipated foreclosure date (if applicable); appraised value and associated valuation methodology; and possible and recommended resolution strategies. Any changes to the resolution strategy or material deviations in resolution times or budgets must be reviewed and approved according to the company's delegations of authority.

The special servicing group conducts a quarterly review of all specially serviced assets, including CMBS and non-CMBS, using detailed asset summaries that include a review of property and market performance, as well as resolution strategy status and prognosis.

Fitch previously reviewed a sample of three business plans provided by PGIM Loan Services for nonsecuritized loans, including active and resolved loans. Fitch found the asset strategy reports to be well documented and thorough as necessary for the action contemplated. The reports documented clear descriptions of events surrounding the default, property conditions, financial data for the borrower and property and the consideration of alternate resolution strategies, with a proposed strategy based on a net present value analysis.

REO Management

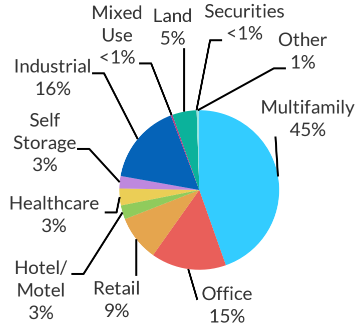
PGIM Loan Services follows a dual-track methodology, similar to most special servicers, under which foreclosure proceedings occur simultaneously with workout discussions to protect the interest of the trust.

When a workout with the borrower is not feasible, the asset manager is responsible for performing a pre-foreclosure inspection and appraisal update, obtaining an environmental site assessment, performing a delinquent tax search and working with legal counsel to determine all liens on the property and which, if any, are senior to the subject lien. The asset manager generally solicits multiple bids from prospective property managers to ensure the proper scope of services and pricing is obtained. Property managers are required to complete annual operating budgets and provide detailed monthly operating reports to the asset manager and to PFI for independent review. Loans in the foreclosure process are subject to enhanced monitoring not only by PGIM Loan Services special servicing but also from the broader PGIM RE organization, inclusive of senior management, finance and legal.

The asset manager prepares a property strategic plan (PSP) within 60 days of title transfer to PGIM Loan Services. The PSP includes operational, capital expenditure and disposition plans for the asset and is approved by the special servicing credit committee. While assets may require lease-up or capital improvements before being marketed, asset managers generally attempt to liquidate REO assets as quickly as possible, with each asset analyzed and managed to achieve the highest possible recovery. In developing a liquidation strategy, asset managers contact multiple brokers to obtain opinions of value, additional market color and prospective marketing plans. Listing brokers are selected based on market and asset experience, as well as fees.

Named Non-CMBS Special Servicing Property Type

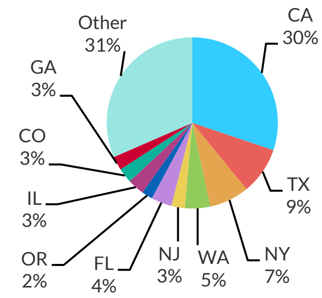
(As of Sept. 31, 2020)



Source: PGIM Real Estate Loan Services, Inc.

Named Non-CMBS Special Servicing Geographic Distribution

(As of Sept. 31, 2020)



Source: PGIM Real Estate Loan Services, Inc.

Governance and Conflicts of Interest

Managing Potential Conflicts

Potential conflicts of interest in special servicing 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.

PGIM Loan Services acts as special servicer only for loans originated by PGIM RE and currently does not pursue third-party special servicing appointments. Additionally, neither PGIM Loan Services nor any other affiliate PFI companies currently invest in subordinate CMBS B-pieces or subordinate loans for which PGIM Loan Services might be appointed special servicer.

PGIM Loan Services has an information barrier policy that separates physical and electronic data from business units, including PGIM RE's investment division and certain other U.S.-based business and corporate departments. The policy includes compliance monitoring and employee training and acknowledgment of the policy. In the event that PGIM Loan Services was working out a loan where a PFI-related entity held an investment, the policy would be applied to mitigate potential conflicts and separate the decisionmaking process.

Prudential has additional company policies to address conflicts of interest and mitigate risk. Fitch reviewed the company's policies relating to personal conflicts of interest, protection and use of material nonpublic information and vendor agreements and compliance. The policies were well documented, in Fitch's view, and demonstrate how Prudential organizationally takes conflicts of interest seriously.

Affiliate Companies

Neither PGIM Loan Services nor PGIM RE or PFI have affiliate companies that provide real estate management or brokerage services. Affiliate Prudential companies may provide CRE financing or equity investments for sponsors of CMBS loans.

The ratings above were solicited and assigned or maintained at the request of the rated entity/issuer or a related third party. Any exceptions follow below.