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Servicer Evaluation: PGIM Real Estate Loan Services Inc.

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Ranking overvie	w			
		Subranking		
Servicing category	Overall ranking	Management and organization	Loan administration	Ranking outlook
Commercial primary	STRONG	STRONG	STRONG	Stable
Commercial master	AVERAGE	STRONG	AVERAGE	Stable
Commercial special	ABOVE AVERAGE	STRONG	ABOVE AVERAGE	Stable
Financial position				
SUFFICIENT				

Rationale

S&P Global Ratings' rankings on PGIM Real Estate Loan Services Inc. (PRELS) are STRONG as a commercial mortgage loan primary servicer, AVERAGE as a commercial mortgage loan master servicer, and ABOVE AVERAGE as a commercial mortgage loan special servicer. On June 24, 2024, we affirmed the rankings (see "PGIM Real Estate Loan Services Inc. Commercial Mortgage Loan Servicer Rankings Affirmed; Ranking Outlooks Stable," published June 24, 2024). The ranking outlook is stable for each ranking.

Our rankings reflect PRELS':

- Experienced senior management and staff with significant company tenure;
- Institutional backing and financial support from PGIM Real Estate (PGIM RE) and its parent holding company, Prudential Financial Inc. (PFI), a global financial services provider and investment manager with approximately \$1.3 trillion in assets under management;
- · Lengthy track record of servicing commercial mortgage loans from a variety of capital sources;
- · Comprehensive audit and quality control environment;
- Integrated and effective technology tools and systems;
- Declining volume and lack of commercial mortgage loan subservicer oversight in master servicing; and
- Special servicing platform that was recently reorganized into a dedicated and centralized team after multiple years of decentralization and reporting through the primary and master servicing organization.

Since our prior review (see "Servicer Evaluation: PGIM Real Estate Loan Services Inc.," published Dec. 19, 2022), the following changes and developments have occurred:

- The special servicing portfolio, which primarily includes performing balance sheet loans with higher risk ratings, grew by unpaid principal balance (UPB) to \$6.4 billion from \$284.3 million.
- In response to higher volume, PGIM RE reorganized its special servicing team, which grew to five fully dedicated

domestic employees from one fully dedicated domestic employee.

- PGIM RE appointed an executive director with 24 years of industry experience and 10 years of company tenure as the global head of special servicing to lead the reorganized team. Prior to the reorganization, the lone employee in special servicing reported to the head of PRELS' Federal Housing Administration (FHA)/surveillance/construction asset management.
- PGIM RE redefined its real estate debt loan risk rating system and watchlist process to better align with the real estate equity line of its business.
- PGIM RE hired a new chief information officer with close to 30 years of experience after the retirement of the previous chief information officer.
- PGIM RE continued its initiative to modernize its proprietary pipeline and asset management system by migrating many of its origination and a few of its servicing system functions to a more modern, cloud-based version of the system. PGIM RE plans to migrate the remaining servicing system functionality by the first quarter of 2026.
- PRELS began to migrate certain treasury functions to a third-party system, which will eventually be used by the entire company.

The ranking outlook is stable for each ranking. PRELS has a lengthy track record of servicing commercial mortgage loans. The company has extensive institutional resources to help maintain a strong internal controls environment and has shown a dedication to servicing technology enhancements. The master servicing portfolio continues to run off; however, PRELS maintains the necessary experienced personal, and policies and procedures to service the portfolio according to the servicing standard. The newly reorganized special servicing team has substantial industry experience and can draw on additional resources within a large organization with real estate expertise when needed.

In addition to conducting an on-site meeting with servicing management, our review includes current and historical Servicer Evaluation Analytical Methodology data through Dec. 31, 2023, as well as other supporting documentation provided by the company.

Profile

Servicer profile	
Servicer name	PGIM Real Estate Loan Services Inc.
Primary servicing locations	Dallas
Parent holding company	Prudential Financial Inc.
Loan servicing system	Strategy version 19D

PRELS, the commercial mortgage loan servicing arm of PGIM RE, is a subsidiary of PGIM Real Estate Finance LLC and an indirect subsidiary of parent holding company PFI. As part of PGIM, the investment management business of PFI, PGIM RE operates as a fully integrated real estate equity and debt platform, offering global commercial mortgage origination, asset management, and loan servicing. PGIM RE had \$210 billion in assets under management and administration and over 1,200 employees as of Dec. 31, 2023.

PRELS' servicing portfolio primarily includes loans from the PFI general account, government-sponsored entities

(GSEs), other third-party companies (including high-yield loans on transitional assets), and commercial mortgage-backed security (CMBS) portfolios. It also services a growing international portfolio with loans from 15 countries, which is out of the scope of this review and is not included in any of the tables in this report. PRELS employs 153 professionals in primary and master servicing, mostly in Dallas and a PFI affiliate offshore office in Letterkenny, Ireland. The head of special servicing works from PGIM RE's Chicago office though the global team, which works from different PGIM RE offices across the world, and in addition to five full-time employees, includes eight part-time employees. As of Dec. 31, 2023, PRELS managed a primary and master servicing portfolio of approximately \$120.9 billion and a special servicing portfolio of \$6.4 billion (see tables 1 and 2).

Table 1

Total servici	ng portfolio					
	UPB (mil. \$)	YOY change (%)	No. of assets	YOY change (%)	No. of staff	YOY change (%)
Primary/maste	er servicing					
Dec. 31, 2023	120,879.5	3.3	4,564	0.7	153	0.0
Dec. 31, 2022	117,025.8	4.3	4,532	(0.4)	153	2.0
Dec. 31, 2021	112,168.7	7.2	4,548	1.1	150	11.1
Dec. 31, 2020	104,650.8	6.4	4,499	0.2	135	(2.2)
Dec. 31, 2019	98,330.6	9.9	4,492	2.3	138	(3.5)
Special servicin	ıg					
Dec. 31, 2023	6,405.8	60.5	90	45.2	5	400.0
Dec. 31, 2022	3,990.8	1122.4	62	785.7	1	0.0
Dec. 31, 2021	326.5	(20.6)	7	(22.2)	1	(50.0)
Dec. 31, 2020	411.3	829.5	9	80.0	2	0.0
Dec. 31, 2019	44.3	(55.3)	5	(37.5)	2	0.0

UPB--Unpaid principal balance. YOY--Year-over-year.

Table 2

Portfolio overview										
	Dec. 31, 2	023	Dec. 31, 2	Dec. 31, 2022		Dec. 31, 2021		020	Dec. 31, 2	019
	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.
Primary loans	119,669.5	4,445	115,730.3	4,400	110,849.3	4,396	103,490.7	4,315	96,851.4	4,253
Master (SBO) loans	1,210.0	119	1,295.5	132	1,319.4	152	1,160.2	184	1,479.2	239
Total servicing	120,879.5	4,564	117,025.8	4,532	112,168.7	4,548	104,650.8	4,499	98,330.6	4,492
Average loan size	26.5		25.8		24.7		23.3		21.9	
Special servicing										
Loans	6,405.8	90	3,990.8	62	326.5	7	411.3	9	44.3	5
REO properties	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total special servicing	6,405.8	90	3,990.8	62	326.5	7	411.3	9	44.3	5

Totals may not add due to rounding. SBO--Serviced by others. REO--Real estate owned. UPB--Unpaid principal balance.

Table 3

	UPB (mil. \$)	UPB (%)	No. of properties	Properties (%)
Туре				
Multifamily	61,135.7	50.6	2,617	45.1
Warehouse	14,514.4	12.0	1,053	18.1
Office	10,768.0	8.9	212	3.6
Retail	6,852.9	5.7	203	3.5
Healthcare	5,861.4	4.8	244	4.2
All others	21,747.2	18.0	1,480	25.5
Total	120,879.5	100.0	5,809	100.0
State				
California	34,765.3	28.8	1,423	24.5
Texas	11,211.6	9.3	613	10.6
New York	8,367.0	6.9	260	4.5
Florida	6,851.5	5.7	318	5.5
New Jersey	4,746.0	3.9	277	4.8
All others	54,735.0	45.3	2,918	50.2
Total	120,879.5	100.0	5,809	100.0

Note: Totals may not add due to rounding. (i)As of Dec. 31, 2023. UPB--Unpaid principal balance.

Table 4

Primary/master portfolio by investor product type(i)

Loan type	UPB (mil. \$)	UPB (%)	Loan count	Loan (%)
On own or parent's balance sheet	52,370.6	43.3	1,698	37.2
Fannie Mae	25,059.4	20.7	1,058	23.2
Other third-party investors	20,915.4	17.3	506	11.1
Freddie Mac K-Series	12,031.9	10.0	529	11.6
FHA & Ginnie Mae	5,452.5	4.5	484	10.6
Freddie Mac (excluding K-Series deals)	2,504.7	2.1	143	3.1
Life insurance companies	1,356.9	1.1	34	0.7
CMBS/CDO/ABS	1,188.2	1.0	112	2.5
Total	120,879.6	100.0	4,564	100.0

Note: Totals may not add due to rounding. (i)As of Dec. 31, 2023. UPB--Unpaid principal balance. FHA--Federal Housing Administration. CMBS--Commercial mortgage-backed securities. CDO--Collateralized debt obligations. ABS--Asset-backed securities.

Management And Organization

The management and organization subrankings are STRONG for commercial mortgage loan primary, master, and special servicing.

Organizational structure, staff, and turnover

PRELS' primary and master commercial mortgage loan servicing group is organized into six functional departments:

servicing, which performs tax and insurance monitoring and new loan boarding, among other responsibilities; two separate asset management departments (balance sheet/CMBS/Freddie/Fannie Mae and FHA/surveillance/construction); investment operations, which performs investor reporting and loan accounting, among other responsibilities; business strategy and support, which performs a variety of different functions including overseeing quality control and metrics; and international and high-yield asset management and servicing. Each department head reports to the company president, who has more than 40 years of industry experience.

PRELS' primary and master servicing teams utilize both an offshoring and outsourcing strategy. At PGIM Ireland, 36 employees conduct offshore international and high-yield servicing and provide support on PRELS' domestic portfolios. Since our last review, PGIM Ireland moved to a new office location in Letterkenny with increased capacity to support further staff growth. The employees in PGIM Ireland are integrated into PRELS' six different primary and master departments, ultimately reporting to the Dallas-based department head.

PRELS outsources other servicing and asset management functions to two third-party providers based in India. One vendor performs insurance support, including insurance accord and policy data entry and verification, while the other performs property financial and rent-roll data entry, reserve disbursement preparation and set-up, and investor reporting support, among other responsibilities. The outsourced servicing responsibilities do not include any borrower-facing activities, and PRELS provides quality control on the work completed by the vendors. Overall, we found the offshore and outsource processes and scope to be well defined and adequately monitored.

The special servicing team was reorganized in 2023, as the special servicing portfolio grew to approximately \$6.4 billion as of Dec. 31, 2023, from \$284.3 million as of June 30, 2022, around the time of our last review. Previously, special servicing was conducted by one fully dedicated employee who was a part of the aforementioned FHA/surveillance/construction asset management team. The new special servicing team has five fully dedicated employees who now report to the global head of special servicing. The global team is organized by investor type. There is a large team focused on domestic balance sheet assets which includes two senior housing experts, a team focused on high-yield transitional assets, and an agency multifamily special servicing expert. Though the special servicing team has not managed any real estate-owned (REO) assets for some time now, PGIM RE also has a large real estate equity team that can provide resources for REO asset management and operations when needed.

The primary, master, and special servicing teams all receive organizational support from PGIM RE's IT, human resources, compliance, vendor management, internal audit, legal, and finance departments. The IT team recently hired a new chief information officer with 30 years of experience after the retirement of the previous chief information officer.

PRELS' primary and master servicing management team and staff exhibit levels of industry experience and company tenure that are higher than or in line with servicers that have STRONG management and organization subrankings. The industry experience and tenure of the five employees fully dedicated to special servicing are also comparable to ranked peers, though the staff-level experience is slightly lower (see table 5).

Years of indus	try experien	ce/company	y tenure(i)										
	Senior managers Middle managers Asset managers Staff												
	Industry experience	Company tenure	Industry experience	Company tenure	Industry experience	Company tenure	Industry experience	Company tenure					
Primary/master	30	19	22	15	N/A	N/A	13	7					
Special	24	10	24	17	24	17	11	8					

Table 5

(i)As of Dec. 31, 2023.

During 2022 and 2023, PRELS experienced a moderate level of employee turnover in primary and master servicing; 12.0% and 12.9%, respectively. Most of the turnover occurred within the onshore staff, with only one employee departing from PGIM Ireland during this time. Since reorganization in early 2023, PGIM RE reported no turnover of special servicing staff.

Training

PRELS provides its management and staff with a variety of ongoing, formal internal and external training. It has established annual training targets of 40 hours for employees with less than three years of tenure and 30 hours for all other employees. Servicing employees averaged 44 hours and 51 hours of training during 2023 and 2022, respectively.

Other aspects of PRELS' staff training program include that:

- A customized training system powered by third-party software allows employees to personalize their training experience, providing a wide variety of training topics and pathways to improve skillsets. The system tracks employee training hours.
- The business strategy and support department coordinates additional instructor-led cross-training and virtual industry, soft skills, business process, and technology training.
- PRELS actively participates in various employee training and development initiatives offered by the Mortgage Bankers Association (MBA), Fannie Mae, Commercial Real Estate Women, the Commercial Real Estate Finance Council, and other industry organizations, which includes attending industry conferences. Several senior members of the team also maintain the MBA's commercial certified mortgage servicer designation.
- As part of a large organization, PRELS employees are required to take regular regulatory and compliance training courses on topics including privacy and information security awareness, anti-money-laundering, and preventing workplace discrimination and harassment.

Systems and technology

PRELS has effective technology to meet its primary, master, and special servicing requirements. The company continues to focus on technology enhancement projects to further streamline and automate servicing tasks across various loan administration functions. A dedicated technology staff of 23 full-time employees supports PRELS and PGIM RE's origination platform. PFI has well-designed data backup routines and disaster recovery preparedness.

Servicing system applications

PRELS' key systems include:

• McCracken's Strategy (Strategy) version 19D, a third-party loan accounting and servicing system used as the main

system of record. PRELS participates in and chairs Strategy user feedback committees.

- LoanConnect, a proprietary pipeline and asset management system that PGIM RE uses to manage loans from origination through payoff. PRELS uses LoanConnect to help manage servicing and asset management activities, including insurance, special servicing business plan management after creation outside of the system, and loan trigger monitoring.
- BorrowerConnect, a secure website for borrowers to access loan balance and payment information, billing statements, loan documents, and forms as well as submit requests to their PRELS contact.
- DataConnect, a proprietary data warehouse containing data from the asset management and servicing systems for ad hoc reporting.
- InvestorView, a secure website for investors, rating agencies, and special servicers to access loan and portfolio information.
- Microsoft Power BI, a reporting platform used for dashboard reporting and performing ad hoc queries using DataConnect and a data lake that hosts unstructured data from the debt and equity businesses.

PRELS continues to enhance its systems and technology environment. The focus of the new chief information officer has included system integration and improving the user's experience with company systems. PGIM RE has continued to make progress on its multiyear OMNIA initiative to modernize LoanConnect, which includes moving system functionality to the cloud. IT has started to migrate servicing functions to OMNIA after finishing the migration of many origination functions. The investment operations team has also started to use a new enterprise-wide third-party treasury system that will replace treasury functions within LoanConnect. Finally, PGIM RE continues to investigate and implement ways to use robotic process automation and artificial intelligence to enhance its operations which includes partnering with PGIM's operations and innovations team.

Business continuity and disaster recovery

PFI maintains thorough disaster recovery (DR) and business continuity (BC) plans as part of its preparedness strategy. PFI leverages its multiple data centers and third-party cloud solutions for data backup and recovery. All internally developed applications, including LoanConnect and DataConnect, are housed at a production data center and replicated hourly to backup data centers that are more than 25 miles away. PFI data centers have received tier III certification from the Uptime Institute, an advisory organization providing independent DR certification. This is the second-highest tier on its four-tier scale.

The last corporate full internal systems DR test, conducted in December 2023, cited no material issues. PRELS last conducted a seven-day failover test of its MIMIX replication of Strategy in December 2023, with no material items cited.

PFI maintains a centralized enterprise business continuation management (EBCM) group that develops standard operating procedures for BC across the company. EBCM oversees the BC plans of PFI's different business and corporate functions, each of which must have a designated BC officer. The plans are reviewed annually and updated as needed. PRELS has a work-from-home BC policy if employees are unable to go to the office.

Cyber security

PFI maintains a cross-functional team addressing cyber security for the organization. Senior management regularly receives cyber security briefings and conducts exercises on responding to cyber incidents. The chief information security officer has day-to-day responsibility over the information security program, with support from business units.

Aspects of PRELS' cyber security considered in our assessment include the following:

- A corporate password policy calls for password changes in accordance with guidelines that include complexity, aging, and limited password reuse.
- Rotating vendors perform network and penetration testing annually. The last test was conducted in February 2024.
- Internal vulnerability scans occur daily for externally facing IP addresses.
- PFI maintains a documented patch management process and subscribes to alert and patch notification services for all major vendors. PFI deploys patches based on a triage, risk assessment, and testing process. Patches can be escalated and deployed within 24 hours in a "code red" situation.
- PRELS' business strategy and support department reviews and recertifies user access to servicing systems annually.
- The platform includes ongoing virus and malware protection and data loss prevention and monitoring tools with 24/7 incident response capabilities.
- Employees receive regular social engineering training which focuses on phishing awareness.
- PFI maintains an enterprise-wide third-party risk management program to help manage vendor security, business continuity, and privacy risk. The program provides a framework and established requirements for consistent management of third-party risk across the organization from planning through termination.
- PFI maintains cyber liability insurance at the enterprise level.

Over the past two years, PFI has notified the public about two separate cyber attacks that exposed some customers', contractors', and employees' personally identifiable information (PII). Primarily, in May 2023, a PFI vendor was affected by a cyber attack on a third-party information transfer system, MOVEit, which exposed PII associated with hundreds of companies and organizations. The unauthorized actor did not gain access to PFI's systems, and PFI's operations were not affected. According to a regulatory filing, the unauthorized actor acquired PII associated with PFI's retirement customers. Separately, in February 2024, PFI disclosed, through SEC filings, that a different unauthorized actor gained access to certain PFI systems and obtained certain client information and PII. Upon discovery, PFI immediately activated its cyber security response process, notified law enforcement of the incident, engaged external experts to mitigate the threat, and launched an in-depth investigation to determine the scope of data affected. PFI's investigation determined that the unauthorized actor gained access to a limited amount of administrative and user data from certain IT systems and a small percentage of company user accounts, certain PII for customers, prospective customers, Prudential employees, and other Prudential contacts associated with PFI's U.S. retail advisory business, and certain Prudential business information and internal and external business contact information. According to management, PFI has taken, and will continue to take, proactive measures to protect its systems and data, including enhancing access controls and security protocols, and implementing additional monitoring technologies and procedures.

Internal Controls

PRELS maintains a comprehensive internal control environment, which includes policies and procedures (P&Ps), a thorough quality assurance program, internal audits, and frequent external audits.

Policies and procedures

PRELS' P&Ps are accessible via LoanConnect's user documentation module, and each P&P has a designated owner who is a subject-matter expert. The appropriate department reviews company P&Ps at least every two years. While we note that most of PRELS' STRONG ranked peers review their P&Ps annually, we believe that PRELS' P&Ps are comprehensive, well-written, and adequately updated.

Quality assurance

As a part of its first line of defense, PRELS maintains a proactive and diligent quality assurance program to measure regulatory compliance (e.g., compliance with the Sarbanes-Oxley Act [SOX], Regulation AB [Reg AB], U.S. Department of Housing and Urban Development [HUD], etc.), adherence to servicing agreements and P&Ps, outstanding advances, timeliness, and accuracy. The business strategy and support department tracks more than 250 separate metrics on a monthly basis and continuously performs testing and process monitoring. Results are reported monthly to senior management and are available for employees to review in LoanConnect. As a part of regulatory requirements, the business and strategy support department, in conjunction with HUD asset management, also conducts separate quarterly control testing on a sample of loans from the HUD portfolio, which is reviewed and signed off on by senior managers.

PFI's compliance department administers PRELS' second line of defense, which provides expertise, support, monitoring, and testing on risk-related matters.

Internal and external audits

PRELS' third line of defense is provided by PFI's internal audit department. PFI has a large internal audit group with two members dedicated to PGIM RE. A separate dedicated PFI group performs annual SOX compliance testing on PRELS. The internal audit department is independent from the PRELS business units and reports directly to the audit committee of the board of directors.

The internal audit group conducts an annual risk assessment evaluating each business unit's inherent risk and control effectiveness. Based on this assessment, internal audit currently deems that PRELS has a moderate level of inherent risk with a high level of control effectiveness. Accordingly, management indicated that some aspect of an internal audit involves PRELS annually, but they are not always audits that directly review PRELS' operations.

The internal audit department classifies audits by the degree that they cover PFI's different business units. Level 1 audits involve direct coverage of PRELS, level 2 audits occur at the PGIM RE level and only indirectly cover PRELS, and level 3 audits are at the PGIM level. The internal audit rating scale is satisfactory, satisfactory with limited exceptions, partially satisfactory, and unsatisfactory.

In 2022 and 2023, the internal audit group conducted several PRELS level 3 audits, including IT shared services, General Data Protection Legislation privacy programs, and private debt innovation and operations, and one PRELS level 2 audit. The level 2 audit, which included the aforementioned debt and equity data lake and involved reviewing data feeds from Strategy and LoanConnect, was clean, with no material issues noted. The internal audit department conducted a level 1 audit of PRELS in 2024 focused on special servicing operations, with no significant issues noted.

PRELS is subject to numerous external operational audits and reviews, including Reg AB audits, SOC-1 audits, CMBS master servicer reviews, and Ginnie Mae, Freddie Mac, and Fannie Mae audits. The Reg AB year-end audits for 2023 and 2022 reported no findings. PRELS also received satisfactory results on its most recent Fannie Mae audit, conducted in 2023, with several recommendations noted. The 2022 Ginnie Mae audit noted no issues, while the 2023 and 2022 Freddie Mac Lender Assessment audits noted four and seven minor findings, respectively, an increase from previous years, when very few minor issues were noted. Though the number of findings and the occurrence of repeat findings are of concern, PRELS still received a satisfactory audit score and all issues were labeled minor. Finally, the 2023 SOC audit was clean. Typically, all business departments meet to discuss the results of third-party audits and formulate corrective action plans to address any findings.

Vendor management

PRELS engages outside vendors for various primary, master, and special servicing tasks, including financial statement processing, property inspections, insurance, appraisals, legal services, and property taxes. PGI's enterprise vendor governance office (EVGO) is required to approve all new vendor relationships and review any existing vendor relationships when a material change occurs in the vendor's scope of work. The EVGO utilizes a risk-rating tool that evaluates key factors, including financial loss, information security, risk management, and regulatory compliance.

Each vendor is assigned an internal vendor process manager who helps oversee the relationship. The business strategy and support department reviews the work of the process managers to ensure that they are upholding monitoring plans for their respective vendors. The monitoring plans include validating work completed by vendors, performing periodic quality control testing, holding periodic calls with vendors, and reviewing invoices.

Special servicing maintains approved vendor lists for appraisers, engineering and environmental firms, and attorneys. A separate group within PGIM RE closely monitors the performance of engineering and environmental firms.

Insurance and legal proceedings

PRELS has represented that its directors and officers, as well as its errors and omissions insurance coverage, is in line with the requirements of its portfolio size. As of the date of this report, there were no material servicing-related pending litigation items.

Loan Administration--Primary Servicing

The loan administration subranking is STRONG for commercial mortgage loan primary servicing.

Over the last five years, PRELS' primary servicing portfolio has grown steadily and slowly by UPB, while the loan count has flatlined, especially over the last three years (see table 6). The portfolio has a high level of geographic diversity and contains all major collateral property types, though there is a relatively high concentration of multifamily properties, which is not uncommon for a ranked servicer, and of properties located in California (see table 3). Furthermore, the servicing team has demonstrated experience with loans from a variety of different capital sources

(see table 4). Despite the rise in loans in special servicing, the delinquency rate has remained low as of Dec. 31, 2023, similar to the last five years (see table 6).

Primary servi	rimary servicing portfolio														
	Dec. 31, 2023		Dec. 31, 2	022	Dec. 31, 2	021	Dec. 31, 2	020	Dec. 31, 2019						
	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.					
Primary loans	119,669.5	4,445	115,730.3	4,400	110,849.3	4,396	103,490.7	4,315	96,851.4	4,253					
Average loan size	26.9		26.3		25.2		24.0		22.8						
Delinquent (%)															
30 days	0.1		0.0		0.0		0.1		0.0						
60 days	0.1		0.0		0.1		0.4		0.0						
90+ days	0.1		0.1		0.1		0.3		0.1						
Total	0.3		0.2		0.2		0.7		0.1						

Table 6

Note: Totals may not add due to rounding. UPB--Unpaid principal balance.

New loan boarding

Based on its stated practices and written procedures, PRELS has an effective loan setup function. Control and other features of new loan setup include that:

- PRELS boarded 352 loans during 2023, down from 558 loans during 2022, due to a slower loan origination market in 2023 across the industry.
- A LoanConnect interface exports key loan data to Strategy after loan closing. LoanConnect is also used by PGIM RE's origination team.
- A servicing analyst reviews data imported automatically into Strategy against the loan documents and manually inputs any additional data if necessary.
- A second analyst performs a secondary review before the loan is passed to the Strategy production environment no more than two days after closing.
- Borrower welcome letters are issued within a few days of closing, although PRELS has 15 days to issue welcome letters according to the service level agreement.
- The business strategy and support department utilize accuracy metrics to track data integrity.
- As of year-end 2023, there were no trailing documents on loans boarded more than six months prior, which is consistent with previous years.

Payment processing

PRELS' practices and integrated technology tools efficiently address payment processing for cash-managed and other complex loan structures with proper segregation of duties. Highlights of payment processing include that:

- As of Dec. 31, 2023, 100% of payments were processed electronically through a bank lockbox, wires, and automated clearing house, as the servicer reported that it no longer receives any payments by check.
- · Accounting personnel reconcile payments posted on Strategy against the general ledger daily.
- Servicing personnel perform audits on the less than 10% of loans in the portfolio that have an adjustable rate.

- PRELS transitioned its remaining LIBOR-based loans to SOFR in the first half of 2023.
- The servicing department monitors suspense accounts daily. As of Dec. 31, 2023, the number of items in its suspense accounts aged more than 90 days (excluding special servicing loans) was 15, which was not out of line with ranked peers.

Investor reporting

PRELS is highly experienced with CMBS, GSE, and customized third-party reporting requirements. Investor reporting and operational accounting activities are properly segregated for reporting, remitting, and related account reconciliation processes. Other highlights include that:

- Investor reports for the variety of different investor types are generated directly from LoanConnect and Strategy by the investor reporting team.
- Monthly bank account statements are uploaded to LoanConnect for account reconciliation, which require review by a senior manager.
- The accounting area is responsible for releasing payments to trustees and investors via wire transfer.
- PRELS indicated that there were no remittance or reporting errors causing investor reporting recalculation or restatement in 2023 and 2022.

Escrow administration

PRELS has effective controls for escrow administration activities. The servicing department administers tax and insurance activities covering all portfolios. It is assisted by a tax service vendor and a third-party vendor in India that performs insurance data entry. Key features of escrow administration include that:

- As of Dec. 31, 2023, 33% of loans in the servicing portfolio were escrowed for taxes, and 27% were escrowed for insurance.
- A servicing analyst reconciles a tax report from Strategy against the vendor's system for loans with tax payments due within the next 30 days.
- Tax payments are wired to the vendor for payment to the tax authority.
- PRELS reported a minimal amount of tax penalties during 2022 and none in 2023.
- Insurance notices are issued 45 and 10 days before expiration with demand letters and the threat of force-placed insurance is issued 10 days post-expiration via certified mail.
- A module within LoanConnect provides significant event reporting (i.e., from natural disasters) on properties in affected areas in accordance with the specifications outlined by the MBA.
- The insurance analyst reviews life-of-loan flood insurance certifications at loan setup and reviews flood coverage and map changes annually.
- PRELS' force-placed policy provision has a 365-day look-back period for all perils other than flood coverage, which has a 120-day look-back provision, an increase in the number of days since the time of our last review. There were seven loans on force-placed coverage as of Dec. 31, 2023.

Asset and portfolio administration

PRELS has extensive procedures covering asset and portfolio administration tasks. The asset management department, with the assistance of the offshore team and a vendor, performs asset and portfolio administration on the servicing portfolio.

PRELS outsources the majority of its property inspections to third-party vendors and requires annual inspections for all properties regardless of loan size. Inspection reports are reviewed and uploaded to LoanConnect and deferred maintenance items are centrally tracked for follow-up. Of the 1,131 property inspections performed on the portfolio in the second half of 2023, 5% were received 30 days past the due date.

System triggers capture borrower loan covenants, post-closing items, and event-based requirements such as debt service coverage ratio (DSCR) and loan-to-value (LTV) ratio requirements in LoanConnect, which are set up and monitored by asset management throughout the loan's term. On loans originated by PGIM RE, PRELS works with the origination team to standardize loan covenant terms and reporting to ease tracking and compliance.

PRELS has well-defined P&Ps for portfolio surveillance. Property-level operating statements and rent rolls are collected, input, and analyzed primarily by a vendor. PRELS' surveillance team provides quality assurance. By year-end 2023, asset management received and analyzed 95% of the portfolio's year-end 2022 operating statements, a slightly lower percentage reported than for most of its ranked peers.

Watchlists are generated in LoanConnect for different loan investor types based on predetermined criteria, though loans can be added manually based on performance concerns or market conditions. Asset managers review watchlist loans, provide commentary, and escalate loans to portfolio managers as necessary. If performance has improved, the asset manager recommends removing the loan from the watchlist, and the loan is then reviewed per PRELS' delegation of authority (DOA).

The servicing team monitors Uniform Commercial Code (UCC) administration using Strategy and LoanConnect. PRELS has approximately 4,000 loans that require UCC filings and reported no lapsed refilings during 2023 or 2022.

Borrower requests

PRELS addresses borrower requests in a proactive manner.

The asset management department handles any borrower requests with credit implications, and the servicing department handles all other requests. During 2023, PRELS processed 15 assumptions, 222 leasing consents, 162 property releases, 23 defeasance requests, 93 property management changes, five substitutions of collateral, and 194 that fall into the "other" category. PRELS reported that it processed all of the borrower consents in its role as a primary servicer. The asset manager completes a case plan for any request with credit implications, which is required to be approved per the internal DOA.

The company distributes borrower satisfaction surveys to borrowers annually and after every major credit event. Management indicated that the servicing team continues to maintain high and stable customer satisfaction ratings.

Early-stage collections

PRELS' early-stage collections procedures are thorough. Features include that:

- The servicing department handles early-stage collections up to the 30th day of delinquency. After the 30th day, the loan is transferred to the asset management team for increased attention and review, except in the case of HUD loans, which are transferred directly to the FHA.
- Borrowers are called two days after the due date or expiration of the grace period if the payment is not received.
- Written notices are system-generated and sent 10 days after the payment due date.
- Collection comments are centrally stored in LoanConnect.

Loan Administration--Master Servicing

The loan administration subranking is AVERAGE for commercial mortgage loan master servicing.

We based our subranking on PRELS' P&Ps for subservicer oversight, prudent advancing procedures, and investor reporting capabilities. As of Dec. 31, 2023, PRELS served as a CMBS master or combined primary and master servicer on only five loans, aggregating \$5.4 million in UPB. PRELS does not have any CMBS loans for which it is only the master servicer and therefore has no CMBS primary servicer oversight responsibilities which require more extensive oversight. However, it has certain subservicer oversight responsibilities on some non-CMBS loans, mostly in its agriculture portfolio in conjunction with PFI agricultural field offices, though there are also a few affiliated B-notes or co-investments for which another company is the servicer. (See tables 2 and 7 for loans for which PRELS has some subservicer oversight responsibilities.)

ig portfolio										
Dec. 31, 20)23	Dec. 31, 20)22	Dec. 31, 20)21	Dec. 31, 20	020	Dec. 31, 2019		
UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.	
1,210.0	119	1,295.5	132	1,319.4	152	1,160.2	184	1,479.2	239	
	20		19		17		15		15	
10.2		9.8		8.7		6.3		6.2		
0.0		0.0		0.0		0.0		0.0		
1.2		0.2		0.0		0.0		0.0		
0.0		0.0		0.0		0.0		0.0		
1.2		0.2		0.0		0.0		0.0		
	Dec. 31, 20 UPB (mil. \$) 1,210.0 10.2 0.0 1.2 0.0	Dec. 31, 2023 UPB (mil. \$) No. 1,210.0 119 20 10.2 0.0 1.2 0.0 0.0 0.0 0.0	Dec. 31, 2023 Dec. 31, 20 UPB (mil. \$) No. UPB (mil. \$) 1,210.0 119 1,295.5 1.210.0 119 1,295.5 10.2 9.8 0.0 0.0 1.2 0.0 1.2 0.0 0.0 0.2	Dec. 31, 2023 Dec. 31, 2022 UPB (mil. S) No. UPB (mil. S) No. 1,210.0 119 1,295.5 132 20 19 10.2 9.8 0.0 9.8 11.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Dec. 31, 2023 Dec. 31, 2022 Dec. 31, 2021 Dec. 31,	Dec. 31, 2023 Dec. 31, 2022 Dec. 31, 2021 UPB (mil. S) No. UPB (mil. S) No. UPB (mil. S) No. 1,210.0 119 1,295.5 132 1,319.4 152 20 19 17 10.2 9.8 8.7 0.0 0.0 10.2 10.2 9.8 8.7 10.2 0.0 8.7 10.2 0.0 8.7 10.2 0.0 9.8 8.7 11.2 0.0 0.0 0.0 11.2 0.0 0.0 - 0.0	Dec. 31, 2023 Dec. 31, 2022 Dec. 31, 2021 Dec. 31, 2021 Dec. 31, 2021 Dec. 31, 2021 UPB (mil. \$) No. IPB (mil. \$) IPB	Dec. 31, 2025 Dec. 31, 2025 Dec. 31, 2021 Dec. 31, 2021 Dec. 31, 2021 UPB (mil. \$) No. UPB (mil. \$) No. UPB (mil. \$) No. UPB (mil. \$) No. 1,210.0 119 1,295.5 132 1,319.4 152 1,160.2 184 20 19 17 15 10.2 9.8 8.7 6.3 0.0 9.8 0.0 6.3 10.2 9.8 8.7 6.3 0.0 9.8 0.0 6.3 10.2 9.8 0.0 6.3 10.0 0.0 0.0 0.0 11.2 0.0 0.0	Dec. 31, 2023 Dec. 31, 2022 Dec. 31, 2021 Dec. 31, 2020 Dec. 31,	

Table 7

Notes: Totals may not add due to rounding. UPB--Unpaid principal balance. SBO--Serviced by others.

Subservicer accounting and reporting

PRELS has the resources and procedures in place to monitor and aggregate remittances from subservicers and provide consolidated reporting. It currently monitors payments only from agricultural subservicers.

Subservicer oversight

Escrow administration

According to PRELS' P&Ps, subservicers are required to submit quarterly reports to verify that taxes and UCCs are current along with documentation on the most recent escrow analysis as part of PRELS' desktop audit review process. Quarterly reports from subservicers are also reviewed by collateral management to ensure that insurance is current and coverage is adequate.

Asset and portfolio administration

Subservicers are required to submit quarterly reports on UCCs to the collateral management group, and property and borrower financials to the surveillance group. The servicing department reviews the information from the subservicer.

Audit and compliance

According to its P&Ps as a master servicer, PRELS will conduct a desktop or on-site audit of subservicers that service more than 20 loans. All other subservicers are required to provide quarterly reports and provide annual Uniform Single Attestation Program/RegAB attestations. Based on the composition of its master servicing portfolio, PRELS does not currently conduct any desktop or on-site audit reviews of subservicers.

Investor reporting, CMBS advancing, and special servicer interaction

An advancing review committee composed of senior management meets monthly to make advance recoverability determinations based on several factors, including the total outstanding UPB of, collateral value of, and remaining assets in the securitization. The advance limit is 36% of the most recent appraised value for CMBS loans, though the advancing review committee will evaluate each unique situation and adjust as necessary. An advancing report is prepared and reviewed by the committee. The accounting team reconciles the general ledger against reported advances, tracks the aging of advanced funds, and establishes reserves as necessary.

PRELS communicates with external special servicers to discuss any problematic loans in its small CMBS portfolio.

Loan Administration--Special Servicing

The loan administration subranking is ABOVE AVERAGE for special servicing.

PGIM RE has a lengthy track record of successfully managing and disposing troubled assets nationwide (see table 9). As of Dec. 31, 2023, the active special servicing portfolio contained general account (64% by UPB), GSE (3%), other third-party investor (29%), and life insurance company (4%) loans that were collateralized by office (55%), retail (16%), healthcare and senior housing (14%), multifamily (13%), and retail (2%) properties. PRELS is no longer the named special servicer on any CMBS loans.

Of the current employee base, PGIM RE reported that two full-time employees work as asset managers and are supported by two full-time analysts. Based on this information, PGIM RE has a very high ratio of assets to full-time asset managers; however, we note that the vast majority of the loans in special servicing are performing loans that,

according to PGIM RE's risk-ranking descriptions, have no current expected principal loss and no loan specific reserves. Furthermore, the full-time asset managers already have support from five part-time asset managers, and because of the depth of institutional resources, management can bring in additional full- or part-time asset managers if volume increases or more loans require heavier special servicing asset management.

Since our last review, PGIM RE redefined its real estate debt loan risk-rating system to better align with the real estate equity line of its business. The system now has a four-point rating scale, instead of five, with loans that have the two highest ratings being classified as "in special servicing." Loans with a risk rating of "closely monitored" or "materially challenged" are sent to special servicing for increased oversight and resolution if necessary. Closely monitored loans are performing loans that are included on the special servicing department's watchlist due to at least one of seven factors, including a loan maturing within twelve months with a high LTV ratio and low DSCR, an uncooperative borrower, a borrower request for a loan modification or loan concessions, and a breach of a material loan covenant. Loans currently or likely soon to be in default or that have an established loss reserve are classified as "materially challenged," the highest rating category. As of Dec. 31, 2023, only six of the 90 loans were classified as "materially challenged."

Table 8

	Dec.	31, 2	023	Dec. 31, 2022		Dec	Dec. 31, 2021			. 31, 2	2020	Dec. 31, 2019			
	UPB (mil. \$)	No.	Avg. age (i)	UPB (mil. \$)	No.	Avg. age (i)	UPB (mil. \$)	No.	Avg. age (i)	UPB (mil. \$)	No.	Avg. age (i)	UPB (mil. \$)	No.	Avg. age (i)
Active in	ventory														
Loans	6,405.8	90	10.3	3,990.8	62	1.8	326.5	7	11.8	411.3	9	7.8	44.3	5	13.2
Real estate owned	0.0	0	N/A	0.0	0	N/A	0.0	0	N/A	0.0	0	N/A	0.0	0	N/A
Total	6,405.8	90	10.3	3,990.8	62	1.8	326.5	7	11.8	411.3	9	7.8	44.3	5	13.2

Note: Totals may not add due to rounding.(i)Average age reflects the time in months from the date the loan first became specially serviced to the reporting date.

Loan recovery and foreclosure management

PRELS displays effective and proactive loan recovery and foreclosure management protocols to efficiently resolve special servicing loans across a variety of property types. Highlights include:

- Borrowers are required to sign pre-negotiation agreements before PRELS will enter into workout discussions.
- Loan business plans (known internally as asset strategy reports) are completed in the time frame outlined in the servicing agreement but no longer than 60 days after transfer.
- Asset strategy reports include a description of the property, description of the problem, review of the borrower or guarantor, cash flow analysis, and net present value analysis.
- Key decisions require sign-off from PRELS, PGIM, and PGIM RE management through a DOA matrix, as well as from third parties, as outlined in the asset strategy report.
- A risk committee composed of senior managers from PGIM meets quarterly to review specially serviced assets and associated asset strategy reports as presented by the asset manager.

- Asset managers are required to complete a foreclosure asset strategy report that includes a foreclosure bid worksheet and post-REO book value to determine bid price and request approval per the DOA.
- Prior to foreclosure, the asset manager begins interviewing possible property managers and real estate brokers to make a recommendation based on property type and location.

Loan resolution volume increased slightly in 2023 and will likely continue to increase in the near term due to recent transfer activity. All but one of the 19 resolutions in 2023 and 2022 were full payoffs and returned-to-master loan modifications, which is not surprising, given that the majority of the loans in special servicing are not in default. Recent full payoff resolutions have included performing loan maturities that were included in special servicing because of a high LTV and low DSCR but were successfully refinanced. Several office loans were also modified to extend the maturity date in hope of better refinancing conditions at a later date.

Table 9

		2023		2022			2021			2020			2019		
	UPB (mil. \$)	No.	Avg. age(i)	UPB (mil. \$)	No.	Avg. age(i)	UPB (mil. \$)	No.	Avg. age(i)	UPB (mil. \$)	No.	Avg. age(i)	UPB (mil. \$)	No.	Avg. age(i)
Resolutions															
Loans	924.6	12	9.4	396.9	7	13.1	135.4	5	9.9	58.2	6	17.8	76.2	5	22.0
Foreclosed loans	0.0	0	N/A	0.0	0	N/A	25.0	2	11.7	0.0	0	N/A	0.0	0	N/A
Total	924.6	12	9.4	396.9	7	13.1	160.4	7	10.4	58.2	6	17.8	76.2	5	22.0
Resolution break	down														
Returned to master	31.6	3	11.4	233.6	5	16.3	0.0	0	N/A	30.3	4	12.7	30.5	3	21.9
Full payoffs	893.0	9	8.7	9.4	1	2.3	131.5	4	8.5	7.9	1	15.6	0.0	0	N/A
DPO or note sale	0.0	0	N/A	153.9	1	8.0	3.9	1	15.5	19.9	1	40.2	45.7	2	22.1
Foreclosed loans	0.0	0	N/A	0.0	0	N/A	25.0	2	11.7	0.0	0	N/A	0.0	0	N/A
Total/average	924.6	12	9.4	396.9	7	13.1	160.4	7	10.4	58.2	6	17.8	76.2	5	22.0

Note: Totals may not add due to rounding.(i)Average age reflects the time in months from the date the loan first became specially serviced to the reporting date. UPB--Unpaid principal balance. DPO--Discounted payoff.

REO management and dispositions

PRELS maintains P&Ps that describe proactive REO management and sales oversight, even though it has not handled any REO dispositions recently. Notable aspects include that:

- REO business plans, known internally as property strategic plans (PSPs), are typically completed within 60 days of title transfer and are prepared by the same asset manager who worked on the asset before foreclosure.
- PSPs focus on active property management, marketing strategy, ongoing operations, and the capital budget.
- An REO committee comprising the PRELS vice president of asset management and relevant PGIM RE portfolio manager (at a minimum) meets quarterly to review progress on REO assets as presented through PSPs.
- Asset managers are required to obtain a proposal from at least two possible brokers before listing the property for

sale.

PRELS has historically had a low volume of REO assets and sales, as many of the loans in its portfolio were conservatively underwritten and have strong sponsors. The company completed its last REO sale in 2015.

REO accounting and reporting

PRELS' controls and procedures for property-level accounting and oversight are sound, according to its P&Ps.

Third-party property managers prepare monthly reporting packages that include income statements, balance sheets, bank account reconciliations, and rent rolls. PRELS has a standard contract to engage approved property managers, who typically present an operating budget for approval within 60 days of the asset becoming REO. The PGIM RE finance group then reviews the reporting package and communicates with the special servicing asset manager as necessary. Separate receipt and disbursement accounts for incoming rents and outgoing expenses are used, which we view favorably.

The special servicing asset manager keeps PRELS' management and the PGIM RE finance group up to date on REO assets by providing various operating and sales reports from the property management and brokerage firms.

Legal department

Special servicing operations are supported by one in-house attorney from the PGIM Real Estate Debt Law department. A list of approved third-party law firms is maintained on LoanConnect, and asset managers utilize standard engagement letters when hiring outside counsel. The asset manager consults PRELS' legal counsel division to assist in estimating legal costs before commencing foreclosure or other legal action. Asset managers review legal bills before authorizing payment. Overall, we believe that PRELS' legal function is adequately controlled.

Related Research

- PGIM Real Estate Loan Services Inc. Commercial Mortgage Loan Servicer Rankings Affirmed; Ranking Outlooks Stable, June 24, 2024
- Select Servicer List, May 17, 2024
- Research Update: Prudential Financial Inc. 'A' Rating Affirmed And Off CreditWatch On Revised Capital Model Criteria; Outlook Stable, Feb. 16, 2024
- Prudential Financial Inc., Dec. 21, 2022
- Servicer Evaluation: PGIM Real Estate Loan Services Inc., Dec. 19, 2022
- Servicer Category Descriptions Expanded And Revised, Feb. 28, 2022
- Analytical Approach: Global Servicer Evaluations Rankings, Jan. 7, 2019

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