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Servicer Evaluation: Midland Loan Services

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Ranking Overview

Servicing category	Overall ranking	Subrankings		
		Management and organization	Loan administration	Ranking outlook
Commercial primary	ABOVE AVERAGE	ABOVE AVERAGE	ABOVE AVERAGE	Positive
Commercial master	ABOVE AVERAGE	ABOVE AVERAGE	ABOVE AVERAGE	Positive
Commercial special	ABOVE AVERAGE	ABOVE AVERAGE	STRONG	Positive
Financial position				
SUFFICIENT				

Rationale

S&P Global Ratings' rankings on Midland Loan Services (Midland) are ABOVE AVERAGE as a commercial mortgage loan primary, master, and special servicer. On June 28, 2022, we affirmed our rankings on Midland (see "Midland Loan Services ABOVE AVERAGE Commercial Mortgage Loan Servicer Rankings Affirmed; Ranking Outlooks Positive," published June 28, 2022). The ranking outlook is positive for each ranking.

Our rankings reflect Midland's:

- Seasoned and experienced senior management team;
- Strong technology platform, including its widely used Enterprise! servicing system;
- Detailed policies and procedures, which are reviewed or updated at least annually;
- Comprehensive quality control and audit environment;
- Industry leadership in primary, master, and special servicing, buttressed by a lengthy operating history and track record;
- Diverse property types in its primary and master servicing portfolio, accompanied by strong geographic and investor diversity; and
- Substantial institutional commitment to the servicing platform and the CMBS business, accompanied by financial backing and shared resources provided by the PNC Financial Services Group Inc. (PNC).

Since our prior review (see "Servicer Evaluation: Midland Loan Services," published April 12, 2021), the following changes and/or developments have occurred:

- In March 2022, Midland made some organizational structure changes which included the establishment of the newly created role of senior manager of servicing operations; the position, overseeing five senior managers, was filled internally by a long-tenured servicing manager who reports to the head of Midland, who was newly promoted to executive vice president (EVP).
- Three of the aforementioned senior manager positions were newly filled by promotions of internal candidates: one who oversees complex loan administration, borrower services, single-family rental (SFR) servicing, interim

servicing, and CMBS servicing; one who has oversight of shared servicing, portfolio servicing, insurance company servicing, agency servicing, and bank servicing; and one who is responsible for tax and collateral services, insurance, and document management.

- Within the Real Estate Solutions (RES) group, the group's head now has five senior manager direct reports, including a newly created role, which has oversight of performing asset management and reserve administration, a position filled by a long-tenured manager.
- Primary and master servicing turnover totaled 19.5% during 2021 compared with 10.3%, during 2020. While turnover meaningfully rose in 2021, we observed higher than normal turnover throughout the industry during the year and note that Midland's turnover was below the level reported in 2019.
- Midland reported an elevated turnover rate of 38.6%, which was at the high end of its special servicing peers. At the same time, they maintained a relatively flat headcount in a year where special servicing volume meaningfully declined.
- Midland opened new offices in Birmingham, Ala. and Dallas each of which are focus markets for PNC.
- Midland outsourced additional tasks to its offshore vendor in India, whose services are currently utilized by collateral surveillance. All tasks are performed within Enterprise!, and subject to onshore quality control and review.
- Midland adopted Enterprise! version 20220.1.3, which included deployment of a new insurance module (June 2022) and a new covenant module framework (2021).
- Midland implemented several new robotic process automation (RPA) initiatives to improve efficiency, including imaged documents, investor reporting remittance automation, and sub-servicer remittance.
- Growth in Midland's primary/master serviced CMBS and Freddie Mac Capital Markets Execution (CME) investor clients led to overall growth of 4.1% to the portfolio's unpaid principal balance (UPB) as of Dec. 31, 2021, compared with year-end 2020. CMBS investor client portfolios increased to \$211.6 billion (41.0% of UPB) compared with \$183.7 billion (37.1% of UPB) as of year-end 2020, and the CME portfolio volume rose to \$89.3 billion (17.3% of total UPB) compared with \$68.9 billion (13.9% of total UPB). This growth was partially offset by a 14.8% decline (\$19.6 billion) in other third-party investor client UPB.
- Midland's aggregate volume of named special servicing appointments of U.S. CMBS and CME transactions decreased to \$129.4 billion of UPB, from \$143.7 billion of UPB as of year-end 2020. However, with the effects of the COVID-19 pandemic easing, special servicing saw a decrease in active volume to \$5.8 billion as of Dec. 31, 2021, compared with \$8.3 billion as of Dec. 31, 2020.

The ranking outlook on each ranking is positive. Midland's recently announced organizational changes are designed to enhance the efficiency of its operations, which we view positively. However, organizational changes have been a recurring theme during prior reviews and we believe the most recent organizational changes were enacted, in part, to mitigate the recent elevated turnover levels. At the same time, senior management remains intact from our prior review and the servicer was able to promote several experienced staff members to new leadership positions.

Additionally, the servicer's 2021 Regulation AB (Reg AB) certification contained no material instances of noncompliance, similar to the prior year and the various operational audits conducted across the platform all received the highest of its internal ratings. Nevertheless, the 2021 Service Organization Controls report (i.e., SOC-1) received a qualified opinion. The opinion was qualified owing to two self-identified matters within the RES group that were not

executed according to protocol. While Midland enhanced its policies and procedures to prevent recurrence of the issue, the qualified opinion, combined to a lesser extent with the potential for challenges in managing through the recent organizational changes inhibit higher rankings at this time.

Nonetheless, given Midland's track record of managing a substantial loan portfolio, including those with complex servicing structures, its sound technology environment and ongoing efforts at obtaining servicing efficiencies, we expect it to remain a highly effective servicer for all the portfolios it services.

In addition to conducting a virtual meeting with servicing management, our review includes current and historical Servicer Evaluation Analytical Methodology data through Dec. 31, 2021, as well as other supporting documentation provided by the company.

Profile

Servicer Profile	
Servicer name	Midland Loan Services.
Primary servicing location	Overland Park, Kan.
Parent holding company	A division of PNC Bank N.A.
Loan servicing system	Enterprise v20220.1.3.

Founded in 1991 and headquartered in Overland Park, Kan., Midland is a division of PNC Bank N.A. and a leading third-party provider of loan servicing, asset management, and technology solutions for the commercial real estate finance industry. PNC is one of the largest diversified financial services institutions in the U.S. with assets of \$541 billion as of March 31, 2022, and has businesses engaged in retail banking, corporate and institutional banking, asset management, and residential mortgage banking. In addition to its Overland Park headquarters, Midland has offices in Birmingham; Little Rock, Ark.; Dallas and Pittsburgh.

Midland's corporate objective is to grow its business through the delivery of loan servicing, special servicing, asset management services, and technology solutions to the commercial real estate finance industry. Midland expects its earnings growth will be accomplished by:

- Purchased servicing, the main focus of business growth opportunities;
- Retaining their leading market shares as a master and special servicer for single-borrower, single-family rental transactions;
- Obtaining the interim servicing for clients on selected borrower relationships to facilitate single asset single borrower (SASB) transaction assignments;
- Servicing of alternative asset-backed securities (ASB) including telecommunications tower transactions, outdoor advertising, franchise restaurants, media, intellectual property rights, triple net leases, data centers, and retail brand licensing;
- With special servicing above post crisis levels, Midland anticipates it will make a meaningful and sustained contribution to earnings; and
- Continue and finalize the strategic multi-year investment in the Enterprise! platform that was initiated in 2020.

Midland's commercial loan servicing business activities include its investment in the Enterprise! loan management system, a widely used commercial mortgage servicing platform. Including the Midland and PNC affiliate portfolios, management reports there are 20 company users with approximately \$1.4 trillion in UPB serviced on Enterprise!. Midland also provides servicing, infrastructure, and technology to support PNC Real Estate and other PNC Bank N.A. business activities.

Midland's primary and master servicing volume has increased 4.1% since our last review, in terms of UPB, and stands at \$515.8 billion as of Dec. 31, 2021, compared to \$495.3 billion as of Dec. 31, 2020 (see tables 1-4). However, loan count declined 13.1% to approximately 24,300 assets from approximately 28,000 due primarily to the loss of a large client who brought its servicing in-house.

Midland is amongst the largest named special servicers of CMBS/CME loans, with an appointed special servicing portfolio of commercial real estate loans (CMBS, CME, CRE-collateralized loan obligation [CRE-CLO], and SFR) that exceeded \$152 billion as of Dec. 31, 2021. However, with the effects of the COVID-19 pandemic easing, special servicing saw a decrease in active volume to \$5.9 billion as of Dec. 31, 2021, compared with \$8.3 billion as of Dec. 31, 2020.

We note that the portfolio statistics throughout this report and the scope of this review excludes whole business ABS and other specialized asset classes that Midland also services. When including those asset classes, Midland's 2021 year-end primary/master servicing portfolio includes 27,540 loans totaling \$693 billion, and its named special servicing portfolio includes 6,758 loans aggregating \$204 billion according to the Mortgage Bankers Assn. (MBA). Each of the aforementioned rankings places Midland second in the industry.

Table 1

Total Servicing Portfolio						
	UPB (mil. \$)	YOY change (%)	No. of assets	YOY change (%)	No. of staff	YOY change (%)
Primary/master servicing						
Dec. 31, 2021	515,841.2	4.1	24,358	(13.1)	417	(4.4)
Dec. 31, 2020	495,290.3	(7.9)	28,019	(27.3)	436	(0.5)
Dec. 31, 2019	537,788.0	18.9	38,556	25.5	438	9.5
Dec. 31, 2018	452,295.2	9.0	30,710	3.4	400	(2.4)
Dec. 31, 2017	414,859.7	7.6	29,709	4.7	410	0.0
Special servicing						
Dec. 31, 2021	5,894.3	(29.0)	286	(27.2)	43	(2.3)
Dec. 31, 2020	8,306.1	431.0	393	214.4	44	41.9
Dec. 31, 2019	1,564.1	67.1	125	98.4	31	19.2
Dec. 31, 2018	935.9	28.2	63	(25)	26	(3.7)
Dec. 31, 2017	729.9	16.8	84	0.0	27	(3.6)

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

Table 2

Portfolio Overview										
	Dec. 31, 2021		Dec. 31, 2020		Dec. 31, 2019		Dec. 31, 2018		Dec. 31, 2017	
	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.
Primary/master servicing										
Loans	396,798.3	19,371	399,415.6	23,877	460,969.0	35,012	388,109.6	27,865	361,757.2	27,416
Master (SBO) loans	119,042.9	4,987	95,874.7	4,142	76,819.0	3,544	64,185.6	2,845	53,102.5	2,293
Total servicing	515,841.2	24,358	495,290.3	28,019	537,788.0	38,556	452,295.2	30,710	414,859.7	29,709
Average loan size	21.2	--	17.7	--	13.9	--	14.7	--	14.0	--
Special servicing										
Loans	5,730.3	277	8,069.4	383	1,405.2	115	863.9	58	600.7	75
REO properties	164.0	9	236.6	10	158.9	10	72.0	5	129.2	9
Total special servicing	5,894.3	286	8,306.1	393	1,564.1	125	935.9	63	729.9	84

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

Table 3

Primary/Master Portfolio Breakdown By Property Type And State(i)				
Type	UPB (mil. \$)	UPB (%)	No. of properties	Properties (%)
Multifamily	196,747.2	38.1	20,647	7.2
Office	79,705.8	15.5	8,687	3.0
Retail	47,636.5	9.2	5,453	1.9
Single family rental	36,438.5	7.1	223,890	77.7
Mixed-use	34,550.4	6.7	1,776	0.6
All other	120,762.7	23.4	27,821	9.7
Total	515,841.2	100.0	288,274	100.0
State				
Calif.	73,941.4	14.3	8,541	3.0
N.Y.	50,293.7	9.7	3,557	1.2
Texas	44,319.8	8.6	2,759	1.0
Fla.	34,063.1	6.6	4,222	1.5
Ill.	16,753.9	3.2	3,109	1.1
All other	296,469.2	57.5	266,086	92.3
Total	515,841.2	100.0	288,274	100.0

Note: Totals may not add due to rounding. (i)As of Dec. 31, 2021. UPB--Unpaid principal balance.

Table 4

Primary/Master Portfolio By Investor Product Type(i)				
Loan type	UPB (mil. \$)	UPB (%)	Loan count	Loan (%)
CMBS/CDO/ABS	211,587.0	41.0	9,789	40.2
Other third-party investors (REITs, investment funds, etc.)	112,410.9	21.8	5,421	22.3

Table 4

Primary/Master Portfolio By Investor Product Type(i) (cont.)				
Loan type	UPB (mil. \$)	UPB (%)	Loan count	Loan (%)
Freddie Mac K-series	89,280.5	17.3	3,489	14.3
Life insurance companies	66,292.9	12.9	2,681	11.0
Banks/financial institutions	12,000.4	2.3	245	1.0
On own or parent's balance sheet	11,285.4	2.2	1,788	7.3
Warehouse/held for sale	9,560.9	1.9	310	1.3
FHA and Ginnie Mae	3,370.0	0.7	605	2.5
Fannie Mae	53.3	0.0	30	0.1
Total	515,841.2	100.0	24,358	100.0

Note: Totals may not add due to rounding. (i)As of Dec. 31, 2021. FHA--Federal Housing Administration. CMBS--Commercial mortgage-backed securities. CDO--Collateralized debt obligations. ABS--Asset-backed securities. UPB--Unpaid principal balance.

Management And Organization

The subrankings for management and organization for primary, master, and special servicing are ABOVE AVERAGE.

Organizational structure, staff, and turnover

Midland's commercial loan servicing operation is led by a highly experienced EVP who serves as the head of Midland. This position reports to the co-heads of PNC Real Estate, and has five SVP direct reports, including a chief operating officer (COO), a servicing operations group manager (SOGM) and the head of RES. The two other SVP direct reports are responsible for client technology solutions and client account management and business development, respectively.

Since our last review, Midland underwent various organizational changes to better align its operational teams. In particular, Midland created the aforementioned new role of SOGM, elevating a long tenured SVP loan servicing manager to the position. The SOGM has five VP direct reports including heads of investor reporting, institutional and portfolio servicing, financial services, tax and insurance, and complex loans. As a part of the reorganization, two teams that have traditionally been in the servicing operations group, reserve administration and covenant administration, have been moved into RES. The resulting teams within servicing operations combine similar functions.

The RES group performs traditional special servicing tasks for both CMBS and non-CMBS clients, as well as asset management activities. The head of RES has five direct reports, including an SVP-chief operating officer, who also maintains responsibility for collateral surveillance and the covenant administration team (previously a part of servicing operations). The other four managers respectively have oversight of balance sheet asset management, performing loan asset management and reserve administration (previously a part of servicing operations), special servicing and collateral management services, and special servicing loan administration.

Midland further leverages selected activities (e.g., technology, human resources, risk compliance and quality assurance [RCQA], corporate legal, and finance) from PNC. We believe Midland's revised organizational structure fully covers all servicing activities with logical and effective reporting lines and appropriate segregation of duties.

Midland offshores a limited amount of CMBS financial statement analysis and data entry activities to a vendor in India, primarily within the collateral surveillance area and expects to expand the scope of this relationship to include SFR payoffs later in 2022. Management indicated vendor performance to date has been positive.

As of Dec. 31, 2021, Midland's servicing organization comprises 460 employees, with 417 devoted to primary and master servicing, and 43 positions within special servicing. Since our last review, Midland staffing levels have decreased in primary/master servicing at a rate of 4.4%, while its asset count declined by 13.1%. Staffing was largely steady in special servicing, despite a 27.0% decline in asset count. As a result, its special servicing asset-to-asset manager ratio dropped to 13.6% compared with a relatively high level above 16.0% as of our last review. We believe that current staffing levels are adequate across the platform.

Within primary/master servicing, senior management industry experience and tenure levels remain strong and slightly improved from our prior site visit. Midland's reported average experience was 26 years while tenure averaged 21 years (see table 5). We note that the average experience reported as of Dec. 31, 2021, which management indicated should not be meaningfully impacted by the March 2022 reorganization, restores the metric to approximately where it was as of Dec. 31, 2019 (25 years).

Table 5

Years of Industry Experience/Company 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	26	21	21	17	N/A	N/A	8	6
Master	26	21	21	17	N/A	N/A	8	6
Special	20	19	20	13	14	7	11	5

(i)As of Dec. 31, 2021

Primary and master servicing turnover totaled 19.5% during 2021 compared with 10.3%, during 2020. While the turnover rate meaningfully rose in 2021, we observed higher than normal turnover throughout the industry during the year, and note that Midland's turnover was below the level reported in 2019.

At the same time, despite maintaining relatively flat headcount in a year where special servicing volume meaningfully declined, Midland's turnover rate of 38.6% was at the high end of all special servicers and compared with only 9.7% during 2020 when the portfolio was increasing. This high turnover has led to degradation in the group's experience and tenure metrics. In particular, special servicing senior management's average experience (20 years versus 34 years at our last site visit) and tenure (19 years versus 26 years) declined significantly. Additionally, middle management's average experience and tenure declined to 20 years (from 23 years) and 13 years (from 19 years), respectively. Further, the special servicing asset managers' average experience and tenure dropped to 14 years (from 16 years) and seven years (from nine years), respectively. We will continue to monitor these metrics, particularly following the recent organizational changes.

Training

Training is overseen by Midland's COO, who recently expanded his responsibilities to include this area. In conjunction

with that move, in the first quarter of 2022, Midland appointed a manager who had been a learning and development consultant with PNC for the prior two years of her 14-year tenure with the bank, into a similar role dedicated to Midland. At the same time Midland will continue to leverage PNC's human resources department (i.e., PNC University) to help with training and development efforts.

In our view, employee training is overall on par with other highly ranked servicing organizations. Employee training goals are 30 hours per year, although those with less than three years of experience have a 40-hour requirement. In 2021, the actual average training fulfilled was approximately 56 and 57 hours for primary/master servicing and special servicing employees, respectively, well in excess of target goals.

Other aspects of training include:

- Midland utilizes MyLearning, PNC's learning management system, to track required and risk-based training.
- The training program, known as Midland Employee Enrichment Training (MEET), is diverse, well-focused, and incorporates internal and external training opportunities. MEET is offered at bronze, silver, and gold levels, which, in addition to satisfying the curriculum, requires a minimum of two, five, and eight years of Midland tenure to successfully complete each level, respectively.
- Additional training curriculum is also offered for the client solutions and RES groups.
- There are eight MEET working group members, including the COO, the SOGM, the learning and development manager, three MLS loan servicing vice presidents, and two administrators.
- Senior managers and external subject-matter experts provide many of the course offerings, and the programs address job-specific needs across most positions and departments.
- RES also participates in training and presentations offered by outside legal counsel and service providers on topics relevant to certain jurisdictions or of interest to the asset managers.
- Employees have continuous access to iLearn, a learning tool providing a collaborative employee-driven learning experience integrated with MyLearning. There are nearly a dozen featured providers on iLearn offering thousands of skill-building courses covering a variety of subjects including customer service, communication, and decision making, as well as courses targeting financial markets. iLearn also includes resources to support diversity and inclusion, remote work, and mental well-being.
- Midland leverages the classes and materials offered by the MBA, to provide a series of web-based, self-paced learning modules covering servicing topics.
- In 2021, Midland partnered with a third-party to provide a virtual negotiation skills workshop to approximately 60 employees to help them develop a better understanding of how to achieve objectives during client interactions. The course will continue to be offered in 2022.
- While not included in reported training hours, employees also attend conferences specific to servicing and the CMBS industry.

Systems and technology

Midland's technology platform centers on its Enterprise! servicing system that promotes automation and efficiency, is scalable to accommodate its substantial servicing volume, and is integrated with AM Insight for special servicing. Midland has well-designed data backup routines and disaster recovery (DR) preparedness and has established robust

cybersecurity protocols. Key elements of its systems and applications, business continuity (BC) and DR programs, and security environment are described below.

Servicing system applications

- Enterprise! version 20220.1.3, adopted in March 2022, is the loan servicing and asset management system. Enterprise! integrates loan accounting, servicing, asset management, borrower customer service, and investor reporting into a single system. Its investor reporting functionality meets CMBS investor reporting package requirements, as well as formats for other investors, including government-sponsored enterprise and life insurance companies. Enterprise! is integrated with the general ledger and corporate treasury functions.
- A strategic multi-year investment was started in 2020 to enhance the Enterprise! platform with a focus on continued user enhancements, modernization, and transformation for a digital future. Several enhancements have been implemented, including a new insurance module in June 2021. Additional enhancements are expected to be rolled out throughout 2022, including automated processes for property financial statements and a new process to add collateral records to the system.
- Midland utilizes AM Insight, which is fully integrated with Enterprise!, as the special servicing asset management system. The system, a proprietary browser-based application, offers case management, electronic approvals, and additional workflow and alerts to address recent industry or regulatory requirements, and provide efficiencies in managing defaulted assets.
- Midland utilizes a host of in-house developed applications outside of Enterprise!, all of which facilitate accounting, loan boarding, and advancing functions, including those used in cash management (Cash Workstation), transaction processing and remittance data calculations (Automated Transaction Processing [ATP], which contains the Automated Investor Reporting system), and cash managed/waterfall loan administration (Waterfall Loan Management).
- Other applications include Document Insight®, a document management module; Borrower Insight®, a web portal that allows borrowers to securely view loan information; CMBS Investor Insight® and Portfolio Investor Insight®, which are secure websites that provide portfolio, asset, and property-level information to assess pool and loan performance for CMBS and private-loan portfolio investors, respectively; Dimensions, an internally developed data warehouse and reporting solution; and Midland Document Exchange, a secure Microsoft SharePoint environment to facilitate the exchange of documents with outside parties.
- Since our last review, Midland implemented several time-saving RPA initiatives, also known as BOTs, to improve efficiency, in sub-servicer remittance posting and investor remittance reporting. Other BOT initiatives are also underway.

Midland's Enterprise! loan servicing system has been widely adopted throughout the industry and, as of our visit, was used by 20 other commercial mortgage servicers (including Midland affiliates), according to the company. Midland provides technical support for the system and leadership in system developments. As a major application system provider to the commercial mortgage industry for the Enterprise! application, the overall corporate organization ensures data backup and redundancy for all its clients.

Business continuity and disaster recovery

Midland's DR and BC plans include well-detailed and daily data backup routines, off-site data storage and retrieval,

and fail-over mechanisms.

PNC has established a technical environment supported by three data centers, which are replications of one another, located in Richmond, Va. (the primary data center), Ashburn, Va., and Pittsburgh, respectively, for quick system failover and recovery of business processes should a disaster occur. Data is replicated in a near real-time/asynchronous manner to the secondary data centers that will allow for continuous access in the event of primary data center loss. The latest DR test was conducted remotely in May 2021, with no material issues reported. The plan calls for all critical servicing applications to be restored within 24 hours.

The Midland BC plan addresses all core systems and operational areas; it is tested at least annually and is reviewed and approved by business process owners. The PNC office in Little Rock, which is located more than 300 miles from the main office location in Overland Park (OPK), serves as an alternate work site for OPK employees. The OPK office, in turn, serves as a reciprocal office for employees located in Birmingham, Ala.; Little Rock, Dallas, and Pittsburgh. Nonetheless, staff remain fully capable to work from home, which is the main BC strategy, after the changes made responding to the COVID-19 pandemic.

Cybersecurity

Management reported that it maintains a formal cybersecurity plan. Employees are sent phishing emails at least quarterly (employees in high-profile, high-risk positions receive them more frequently) to test compliance. Midland utilizes a third-party company to handle both internal and external network penetration testing on a recurring basis, and there were no significant issues reported during the most recent testing, which was completed in November 2021. In addition, a policy is in place to remediate any issues identified with timeline requirements. Certain vendors (depending upon risk level) receive a cybersecurity review, which includes an assessment of specific information security and related policies. Midland also has specialized legal counsel available for cybersecurity matters and maintains a stand-alone cyber insurance policy.

Internal controls

Midland maintains strong internal controls that include extensive and well-documented policies and procedures, internal and external audits, and a dedicated RCQA group that supports strong and responsive risk avoidance and correction procedures. Features are described below.

Policies and procedures

Midland's policies and procedures are comprehensive and easily navigable and cover all aspects of servicing activities. Each functional area also maintains a process workflow chart accompanied by a descriptive narrative. The company's policies and procedures:

- Are accessible to all employees via a shared network drive;
- Have a standardized electronic format template;
- Are updated by a staff member in the loan servicing group, who coordinates the annual updating with department managers from the business units, compliance, and legal groups;
- Are reviewed by senior managers for change authorization;

- Indicate the date of the most recent change/update; and
- Are updated and electronically communicated via the company intranet for consistent dissemination.

Compliance and quality control

RCQA is led by an SVP/director who reports to the co-heads of PNC Real Estate with dotted line reporting to the head of Midland. The director is dedicated to the function, which includes 16 full-time equivalents (FTEs). RCQA operates independently from servicing operations, and provides guidance and support on PNC risk programs, policies, and procedures. The group works closely with Midland to maintain the Risk and Control Self-Assessment (RCSA), which is the book of record for all internal controls that are in place to mitigate risk. Quality assurance efforts include quarterly reporting on control effectiveness along with associated risk tiering of the controls.

RCQA also performs testing of the RCSA controls to ensure they are designed properly and operating effectively. When issues are identified, RCQA coordinates with the issue owner to determine the remediation plan, tracking remediation efforts through the issue lifecycle, validating completion prior to closure. The department also acts as the liaison for both internal and external audits, as well as regulatory reviews.

RCQA also provides BC oversight, which includes planning, maintenance, and testing for Midland, as well as coordinating with clients when necessary. RCQA provides physical security oversight and support, technology audit support, and is a liaison to PNC's BC management organization.

Internal and external audits

Midland is subject to an annual Reg AB (platform-wide) certification. The 2021 certification contained no material instances of non-compliance. Service Organization Controls reports (i.e., a SOC-1 and SOC-2) are also conducted annually. The 2021 SOC-1 report received a qualified opinion. The opinion was qualified owing to two self-identified matters within RES that were not executed according to protocol. Midland enhanced its policies and procedures to prevent a recurrence of the issue. Minor exceptions were noted in the 2021 SOC-2 report pertaining to Midland's Enterprise! system, which otherwise contained a clean opinion.

PNC's internal audit (IA) department also conducts annual operational reviews. During 2021, the IA department conducted operational process audits that included: a May review of the area responsible for specialized servicing and treasury management; a December review of the Enterprise! government services application; and a December review of investor reporting and operational accounting. The overall audit opinions noted in each of the three audits were satisfactory.

For the aforementioned Midland internal audits, 12 issues were identified, eight of which are considered owned by Midland management. One of the Midland-owned findings was deemed high rated. Of the owned findings, five have been fully remediated, two are pending validation, and one (the high rated issue) is targeted for remediation later this year.

Vendor management

Midland adheres to an enterprise third-party management (ETPM) program. The ETPM program requires the completion of various risk assessments for each third-party vendor relationship, both initially and on an ongoing basis.

The breadth and depth of the risk assessments are influenced by various factors, including the statement of work, data, and technology maintained by the third-party vendor. These risk assessments are jointly completed by both PNC/Midland and the vendor, as required. An ETPM portal provides management and RCQA tools to own relationships while mitigating and managing risk. The line of business owns the ongoing monitoring and oversight of the contract relationship.

The company engages several outside firms for various servicing and special servicing activities such as taxes, Uniform Commercial Code-1 filings (UCCs), insurance, financial statement analysis, inspections, appraisals, environmental review, property management and brokerage, and legal services. Engagements are handled by senior management for platform-wide services (i.e., taxes, UCCs, financial statement analysis/data entry), while asset-level vendor assignments are recommended by assigned asset managers and approved by department heads for special servicing activities. For environmental site assessments, Midland utilizes environmental legal counsel to engage firms from a pre-approved list and then reviews their work product for quality and accuracy.

Vendor performance ratings are completed monthly, quarterly, or annually, based on the respective vendor risk level as scored by the servicer's vendor management system. We believe Midland's third-party vendor processes are well-monitored and enable the company to have appropriate controls over its vendors.

During 2021, PNC's compliance group undertook a review of the compliance risk assessment process for third-party vendors who are engaged to provide services in support of PNC activities, including Midland engagements. The purpose of the review is to ensure completion and updates of compliance risk assessments where required and reviewing a sample of vendor engagements where compliance risk assessments were deemed not required.

Insurance and legal proceedings

Midland has represented that it maintains adequate directors and officers, as well as errors and omissions insurance coverage given the size of its servicing portfolio. Management analyzes the effectiveness of purchased insurance coverage on an annual basis at each policy renewal and makes changes where it deems appropriate. As of the date of this report, management has indicated no servicing litigation matters other than those in the ordinary course of business. Management believes none of these matters will have a material adverse effect on its ability to perform under the related servicing agreement.

Loan Administration--Primary Servicing

The loan administration subranking is ABOVE AVERAGE for primary servicing.

Strong geographic (all U.S. states are represented) and property-type diversity is evident in the primary/master servicing portfolio, with an emphasis on multifamily (38.1% of UPB; see table 3). Investor diversity is broad (see table 4), with the largest concentrations evident in CMBS (41.0% of UPB) and other third-party investor types (21.8%).

Since our last review, Midland's primary/master serviced CMBS and CME investor clients fueled an overall 4.1% of portfolio UPB growth as of Dec. 31, 2021, compared with year-end 2020. CMBS investor client portfolios increased 15.2% to \$211.6 billion, inclusive of \$36.4 billion of single-family rental loans. CME portfolio volume rose by 29.5% to

\$89.2 billion from \$68.9 billion as of year-end 2020. This aforementioned growth was offset in part by a 14.8% decline (\$19.6 billion) in other third-party investor client UPB and a 13.1% (\$10 billion) drop in life insurance loan UPB and over the same period. Consistent with other servicers, reported delinquencies have decreased after the height of the COVID-19 pandemic and totaled 2.4% as of Dec. 31, 2021 (see table 6).

Table 6

Primary Servicing Portfolio										
	Dec. 31, 2021		Dec. 31, 2020		Dec. 31, 2019		Dec. 31, 2018		Dec. 31, 2017	
	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.
Primary loans	396,798.3	19,371	399,415.6	23,877	460,969.0	35,012	388,109.6	27,865	361,757.2	27,416
Average loan size	20.5	--	16.7	--	13.2	--	13.9	--	13.2	--
Delinquent (%)										
30 days	0.12		0.48		0.13		0.03		0.09	
60 days	0.09		0.38		0.13		0.04		0.05	
90+ days	2.24		3.22		0.99		0.95		1.47	
Total	2.44		4.08		1.25		1.03		1.61	

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

New loan setup

Midland effectively administers the loan setup process. Most new loan setups are accomplished via electronic file downloads, and the data validation process is facilitated by document imaging procedures and error checking features within the servicing system. New loan setup features include the following:

- Borrower welcome letters are system-generated and issued within three business days of loan activations.
- A dedicated CMBS servicing group oversees the negotiation and administration of pooling and servicing agreement (PSA) requirements and is an integral part of setup activities. Abstracts of key servicing requirements and trigger events are integrated into reminders throughout the Enterprise! platform.
- Data integrity controls include a secondary review by a senior file review specialist to verify documentation against the servicing system.
- Formal tracking and the pursuit of missing documents resulted in Midland reporting no trailing documents outstanding on CMBS loans boarded more than six months prior, as of Dec. 31, 2021.
- Midland's quality control process tracks boarding timeliness metrics and confirms accuracy.

Payment processing

Midland has a well-established track record of processing complex payment structures in a highly automated manner. Highlights include the following:

- Payments are processed within ATP where possible, with exceptions handled by the responsible servicing group, which is also through ATP. The treasury group is responsible for the receipt and transmission of wire transfers.
- The electronic payment capture rate is nearly 100%, including Automated Clearing House (approximately 64.0%), wire transfers (approximately 18.0%), and lockbox (approximately 15.0%).
- Of the remaining 3.0%, 1.0% represents payments by check, which are deposited electronically via remote deposit

and an internal system.

- The CMBS portfolio contains nearly 2,800 cash-managed (hard lockbox) loans as of Dec. 31, 2021. In addition, Midland monitors loan covenants for activating springing lockboxes across its entire portfolio, of which 570 were triggered during 2021 (down from 737 during 2020).
- Online bank account access balances the payment clearing account and performs a complete daily reconciliation, including aging of open items. Midland reported a relatively high 338 suspense items aged more than 60 days (up from one as of our prior site visit) existed as of Dec. 31, 2021. Management indicated that the increased amounts of suspense items, which rose to \$3.8 million from \$817,000 at year-end 2020, were due to the change in upfront fee deposits for legal fees and third-party reports for assumptions and non-permitted transfers of ownership as well as an increase in deposits related to defeasance activity.
- Midland services nearly 1,600 adjustable-rate loans within its CMBS portfolio and performs regular adjustable-rate audits on those loans.

Investor reporting

Midland has 64 dedicated staff members for the various investor reporting and operational accounting activities that are properly segregated for reporting, remitting, and related account reconciliation processes. The company also has a high level of asset-specific knowledge and responsiveness in handling investors and other inquiries, including highly structured credits.

Other highlights include the following:

- The servicing system is interfaced with the general ledger to facilitate ledger entries and balance reconciliations.
- Outgoing wires are processed under dual controls.
- Automated fund transfers from payment clearing to custodial accounts occur nightly by the servicing system.
- Midland performs daily bank reconciliations of its disbursement and clearing accounts, which is similar to most highly ranked servicers. Bank reconciliations of its custodial accounts are also performed daily, which is more frequent than most servicers we rank.
- Midland reported no unidentified items aged more than 60 days; it reported 13 occurrences of CMBS reporting errors requiring restatement during 2021, which was similar to the prior year.

Escrow administration

Midland has sound controls for all escrow administration activities, which include dedicated teams for tax and insurance. Asset managers within RES handle loan-level reserve monitoring and analysis for other escrowed events such as tenant improvement and replacement reserves. Other features include the following:

- Taxes and insurance are tracked in Enterprise!. Loans escrowed for taxes and insurance were approximately 68.0% and 32.0%, respectively, of the portfolio.
- A tax service is used for escrowed and non-escrowed loans.
- Insurance policies are annually reviewed internally for compliance.
- Renewal notices are system-generated for insurance policies. Enterprise! also automatically generates letters on non-escrowed tax accounts to send to borrowers to verify payment.

- Forced-placed policies provide for 120-day and 180-day look-back periods, respectively, for property and flood. As of Dec. 31, 2021, 59 loans have force-placed coverage.

Asset and portfolio administration

Midland has an experienced staff and diligent procedures covering asset and portfolio administration tasks. As previously noted, asset management and reserve administration is handled within a unit of the RES group, as well as the newly added covenant administration team. Other notable features include the following:

- Policies and procedures are well-designed, including processes for monitoring complex loan structures.
- A detailed, centrally controlled watchlist process has automated triggers for CMBS and non-securitized loans utilizing CREFC watchlist criteria.
- Servicing analysts review principal and interest (P&I), property protection advance needs, and watchlists. They also monitor specially serviced loans.
- The tracking of operating statements is automated through Enterprise! and Midland maintains proactive procedures to obtain and review these reports.
- As of Dec. 31, 2021, Midland had collected 98.3% and reviewed 98.3% of the prior year-end operating statements of its CMBS loans, which is slightly down from the 99.0% achieved for each of these from the prior year.
- Midland's offshore vendor provides financial comments on a portion of the CMBS portfolio, which are subject to an onshore quality control (QC) review of more than 50.0% of the work product. For the remainder of the portfolio, an onshore vendor performs the data entry, and Midland surveillance analysts are responsible for the analysis, borrower contact, and quality control.
- Tracking inspections is also automated through Enterprise!. We note that Midland's delinquent inspections (i.e., those not received within 30 days of the due date) normalized since our last review. Delinquent inspection levels were concentrated in the U.S. Department of Housing and Urban Development portfolio, which had been subject to an inspection moratorium, and were reported at 1.2% as of Dec. 31, 2021. That number was well-below the 12.6% level reported as of Dec. 31, 2020.
- UCCs are tracked through Enterprise!. During 2021, the portfolio had more than 31,500 filings occurring with two lapses reported. These lapses were caused by incorrect information loaded to Enterprise!. Both were corrected and new filings were put into place when the error was identified and no loss of lien position occurred.

Borrower requests

Midland addresses borrower requests in a proactive and efficient manner. Highlights include the following:

- A team of approximately 28 staff members within the performing loan asset management team, handles borrower consents at Midland in its capacity as a primary and master servicer.
- Midland tracks borrower requests on the servicing system with notations of issues or delays in completing requests.
- A third-party vendor occasionally processes or underwrites the request for Midland's review and approval (primarily loan assumptions, transfers of interest, and leasing matters).
- Approvals are based on delegations of authority, and larger credit matters are controlled through a committee process and may involve review by the special servicing area for approvals.
- Midland leverages a PNC-wide system to track customer complaints. It does not conduct an annual borrower

satisfaction survey.

- Midland's borrower consent activity in its role as a primary and master servicer was substantial during 2021, albeit somewhat below 2020 volume. Specifically, Midland reported that it processed 1,386 CMBS consent requests aggregating approximately \$50 billion of UPB. More than 66.0% (921) of the consents pertain to leasing activity, 13.0% were assumption related (185), defeasance requests represent 11.0% (151), and property management changes comprise 8.0% (111) of the volume.

Early-stage collections

Midland's asset management group has three dedicated staff members to handle early-stage collections. Noteworthy features include the following:

- All collection letters are system-generated. Notice letters are automatically issued when the grace period expires.
- Borrower telephone contact is initiated within two days after the due date or grace period expires, and a chronology of time-stamped collection comments is centrally maintained in Enterprise!.
- Delinquency reports are produced no less than monthly.

Loan Administration--Master Servicing

The loan administration subranking is ABOVE AVERAGE for master servicing.

Within its total servicing portfolio of \$515.8 billion (24,358 loans), Midland oversees 29 subservicers, who service \$119.0 billion in UPB, consisting of 4,987 CMBS and CME loans. Since our last review, the portfolio delinquency level declined from 1.8% as of Dec. 31, 2020, to 0.48% as of Dec. 31, 2021, comparable to more recent historical levels following the resolution of issues caused by COVID-19 during the year (see table 7).

Table 7

Master Servicing Portfolio										
	Dec. 31, 2021		Dec. 31, 2020		Dec. 31, 2019		Dec. 31, 2018		Dec. 31, 2017	
	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.	UPB (mil. \$)	No.
Master (SBO) loans	119,042.9	4,987	95,874.7	4,142	76,819.0	3,544	64,185.6	2,845	53,102.5	2,293
Subservicers	--	29	--	29	--	29	--	30	--	31
Average loan size	23.9	--	23.1	--	21.7	--	22.6	--	23.2	--
Delinquent (%)										
30 days	0.02		0.68		0.00		0.00		0.00	
60 days	0.03		0.24		0.00		0.08		0.00	
90+ days	0.43		0.93		0.18		0.41		0.50	
Total	0.48		1.84		0.18		0.49		0.50	

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

Subservicer oversight is handled jointly by an allocated staff of 11 FTE from RCQA and the subservicing oversight department. The subservicing oversight department handles day-to-day transactional activities, while RCQA oversees subservicers' compliance requirements and audits. As a master servicer, borrower requests are channeled through

servicing within the operations group's borrower services or the RES team, depending on the source and nature of the request.

New loan setup

The company follows the same protocols to set up new subserviced loans as it does with those that it primary services. Because these loans are all serviced by other servicers, the setup process occurs via electronic file downloads.

- After the file download, the loan records are checked by loan administration using the same standard of internal controls that is used for primary serviced loans.
- Subservicers distribute imaged documents and they are incorporated with the loan record through the imaging system.
- Online investor deal summaries and PSAs assist in monitoring subservicer reporting procedures.
- Loans are set up for "shadow servicing" to record loan-level P&I payment records, and tax and insurance information is not loaded at the loan level but monitored via quarterly officer certificates and monthly subservicer reports.
- All loans are boarded so that payments can be processed no later than the first determination date.

Subservicer accounting and reporting

Midland has appropriate controls for recording subservicer remittances. Midland is well-experienced in overseeing many subservicers. Additionally, accounting staff in investor reporting reconcile incoming subservicer remittances monthly to the servicing system and perform daily bank account reconciliations.

Subservicer oversight

Escrow administration

Midland takes proactive measures to monitor subservicer activity relating to the tracking of real estate taxes, insurance, UCC filings, and reserve account receipts and disbursements.

- Monthly subservicer electronic downloads update expiration and paid-to dates on Enterprise!, and the company uses quarterly exception reports to resolve open items with subservicers.
- Subservicers are required to provide quarterly officer certifications in compliance with subservicing agreements.

Asset and portfolio administration

Midland's subservicer asset administration oversight activities are proactive and include reviewing subservicer property inspections, re-analyzing property financial statements, and monitoring watchlist triggers for subserviced loans. Furthermore, Midland:

- Reviewed 96.2% (up from 86.7% as of our last review) of the inspections received from its subservicers during the last six months of 2021 and maintains formal procedures to follow up with subservicers to resolve inspection issues.
- Uses a third-party vendor to enter data into the OSARs and upload the report to the Document Insight® portal. Midland's subserviced OSAR BOT automates the process of retrieving the OSAR's from the portal and uploading it into Enterprise!. The BOT performs QC rollups to confirm accurate sums have been entered. In 2021, phase III of the BOT was implemented to include additional property types (such as office, industrial, hotels, etc.) and

automatically flag the analysis for multifamily, healthcare and retail properties so it is ready for reporting to investors and clients.

- No longer re-analyzes the property financial statements submitted by subservicers. Rather, following the above-noted BOT implementation, the statements are monitored for outliers.
- Collected and reviewed approximately 94.6% of the prior year-end financial statements of its CMBS loans, as of Dec. 31, 2021, below the 99.0% level reported as of Dec. 31, 2020.
- Places master serviced loans on the watchlist following the same criteria used for primary serviced loans.

Audit and compliance

Overall, Midland's procedures denote sound subservicer audit practices through a combination of desk reviews and on-site audits. Highlights include the following:

- Before initiating an audit, the RCQA manager completes a quality control checklist, and the subservicer completes a subservicer compliance questionnaire.
- Subservicer audits are accomplished by RCQA through either an on-site or desk review, which are annual if the subservicer is associated with any of the top 10 loans in a CMBS transaction. During 2021, Midland performed 29 audits of its U.S. subservicers. All of them were conducted as desk audits due to COVID-19 restrictions with a virtual component for six of the audits.
- A detailed audit template is used for reviewing subservicer performance for all core functional areas. Subservicer audit results are used to designate either acceptable or unacceptable performance, and the subservicer receives a conclusion summary communicating observations, exception items, and recommendations.

Investor reporting, CMBS advancing, and special servicer interaction

The servicing system automatically incorporates subserviced and primary serviced loans for reporting to investors, and all reporting is handled through electronic file delivery or a secured investor website and corresponding wire transfers for the remittance. Advancing and recovery are also handled through the servicing system with good oversight procedures.

- Monthly investor reporting and remitting occurs in the investor reporting department, which is aligned by investor type.
- The reporting analyst reviews the monthly reports (primary and subserviced loans) for accuracy and other information, such as complete watchlist information.
- The review also determines whether loans are transferred to the special servicer.
- Advances are monitored through a series of monthly system-generated advance exposure reports that highlight the advance type (P&I, property protection, etc.), valuations, and the ratio of advances to appraised values and unpaid balances.
- Midland maintains procedures to monitor special servicers' appraisal updates and regularly conducts calls with special servicers regarding advancing decisions.
- An eight-member advance review committee meets monthly, and monitors and controls the amount and recoverability of advances for trusts that Midland services. Its advance determination criteria involve a four-level

analysis based on the magnitude of the advance amount, the advance-to-value ratio, and the delinquency of the loan, along with an analysis of the remaining portfolio. When a loan is assigned a level above one, closer scrutiny of the loan is received monthly. A variety of thresholds are used as a basis to determine non-recoverability; such loans are classified at a level four rating.

- Midland's CMBS advancing procedures attempt to avoid interest shortfalls and reduce loss severity.

Loan Administration--Special Servicing

The loan administration subranking is STRONG for special servicing.

Midland has a demonstrated track record of resolution activity and continues to invest in its AM Insight special servicing system. According to management, Midland has resolved approximately 3,500 specially serviced assets since 2005 on over \$36 billion of UPB. During 2021, active special servicing UPB volume decreased substantially, totaling \$5.9 billion (277 loans; nine real estate-owned [REO] properties) at year end compared with \$8.3 billion (383 loans; 10 REO) as of Dec. 31, 2020 (see table 8).

Table 8

Special Servicing Portfolio															
	Dec. 31, 2021			Dec. 31, 2020			Dec. 31, 2019			Dec. 31, 2018			Dec. 31, 2017		
	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 inventory															
Loans	5,730.3	277	18.4	8,069.4	383	9.0	1,405.2	115	11.8	863.9	58	15.7	600.7	75	13.8
Real estate owned	164.1	9	43.0	236.6	10	32.1	158.9	10	18.7	72.0	5	35.8	129.2	9	35.8
Total	5,894.3	286	19.2	8,306.1	393	9.6	1,564.1	125	12.4	935.9	63	17.3	729.9	84	16.2

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

Special servicing assignments have historically been based on relationships with unaffiliated B-piece buyers. In aggregate, as of Dec. 31, 2021, Midland was the named special servicer on more than \$152 billion of UPB contained across 394 transactions, including 297 CMBS, 63 SFR, 31 CME, and three CRE-CLOs. We note that, according to published reports, Midland's largest B-piece client has announced plans to form its own special servicing operation later this year. According to management, Midland is appointed by this client on 60 trusts aggregating over \$43 billion in UPB.

As of Dec. 31, 2021, the special servicing group included 43 FTEs, which is one employee less than our last review (despite a 27.0% decline in asset count), of which 21 (down from 24 since our last review) are asset managers who work on both defaulted loans and REO assets. In our view, the resulting assets per asset manager of approximately 13.6 compared with 16.4 during our last review is more manageable.

During 2021, resolution activity was at a multi-year high, exceeding \$2.8 billion. While the 2021 average resolution

period was 13.7 months (see table 9), above the multi-year low of 8.6 reported in 2020, it was in-line with historical norms. More than 56.0% of the resolution activity related to loans that returned to master servicer and had an average hold time of 12 months, in-line with peers. At the same time, 25.0% of the loans were full payoffs, which averaged 13.1 months to resolve, a bit lengthier than its peer average. Resolution activity in 2021 was almost exclusively for CMBS trusts and was diversified amongst property type, albeit skewed towards retail (32.9% of loan count), lodging (32.3%), single-family rental (15.8%) and multifamily (9.5%).

Table 9

Total Special Servicing Portfolio--Loan Resolutions															
	2021			2020			2019			2018			2017		
	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	2,774.2	154	13.4	2,045.7	107	7.9	467.3	43	13.7	231.0	33	15.2	175.0	45	15.7
Foreclosed loans	55.9	4	25.3	101.3	5	24.6	149.9	8	15.4	109.6	7	37.6	30.7	4	17.5
Total	2,830.0	158	13.7	2,147.0	112	8.6	617.1	51	13.9	340.5	40	19.2	205.7	49	15.8
Resolution breakdown															
Returned to master	2,095.9	88	12.0	1,637.7	66	6.2	240.1	20	7.3	94.5	15	13.5	52.0	13	13.9
Full payoffs	417.1	39	13.1	102.6	22	4.4	137.5	10	12.4	65.4	8	11.3	36.8	16	6.6
DPO or note sale	261.1	27	18.6	305.4	19	17.9	89.6	13	24.6	71.1	10	21.1	86.2	16	26.1
Foreclosed loans	55.9	4	25.3	101.3	5	24.6	149.9	8	15.4	109.6	7	37.6	30.7	4	17.5
Total/average	2,830.0	158	13.7	2,147.0	112	8.6	617.1	51	13.9	340.5	40	19.2	205.7	49	15.8

Totals may not add due to rounding. (i)Avg. 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.

Loan recovery and foreclosure management

Midland displays effective, well-disciplined, and proactive loan recovery and foreclosure management protocols.

Highlights include the following:

- Asset managers complete file reviews and property inspections, assemble local market data, and develop a loan resolution plan within a relatively concise 45-day target (or, in accordance with the timeframe established in the PSA).
- Midland requires borrowers/guarantors to sign pre-negotiation letters before entering into workout discussions.
- Valuation and net present value analysis are integrated within AM Insight, which maintains all workout plans.
- Asset managers engage vendors, which are tracked within the asset management application, and provide for timeline monitoring. Vendor tracking also provides for feedback regarding quality of work.
- Plans are presented to a special servicing committee for approval, per Midland-delegated authority.
- Workout plans are updated as negotiations dictate.

The company's foreclosure process is controlled and well-managed. Recommended foreclosure actions are followed by an REO resolution plan, which includes a bidding process for property management and brokers. Detailed pre- and post-foreclosure checklists ensure that all time-sensitive issues surrounding the asset, such as environmental and appraisals, are completed before taking title.

REO management and disposition

Midland demonstrates proactive REO management and sales oversight. Property manager and broker selection is controlled through approved vendor lists. Standard contracts are used (with limited exceptions for leasing brokers), and the engagement of the manager/broker is tracked and administered within the company's servicing systems. Other notable aspects include the following:

- Asset managers monitor property managers' adherence to a Midland-issued procedure manual for reporting and compliance.
- Asset managers prepare an REO business plan and budget within a relatively concise 45-day period (or, if shorter, the timeframe established in the PSA) from acquisition. The approval process is by committee review, per Midland-delegated authority.
- The company has a well-controlled broker engagement process and performs periodic REO revaluations to monitor advances and non-recoverability determinations.
- All sale disposition cases must be submitted to the appropriate delegated authority, which may require a credit committee for final approval. The asset managers, in conjunction with engaged external counsel and Midland's legal department (if needed), coordinate the closing process.

REO disposition activity was moderate since our last review (albeit comparable to recent historical levels), with only five sales completed during 2021, compared with three during 2020 (see table 10). Gross and net sales proceeds relative to market value during 2021 (94.8% and 94.4%) was largely in line with its historical experience. Further, the average REO hold period during 2021 of 10.7 months was lower than the average of 12.4 months reported during 2020 and compared favorably to peers.

The REO inventory as of Dec. 31, 2021, aggregated \$164.1 million of UPB for nine REO loans. This remaining active REO portfolio has been in special servicing a relatively lengthy period, averaging 43.0 months. However, this unfavorable metric, is mitigated by its remaining small inventory and recent track record of the aforementioned generally faster REO dispositions than peers.

Table 10

Total Special Servicing Portfolio--Real Estate-Owned Sales															
	2021			2020			2019			2018			2017		
	Amount (mil. \$)	No.	Avg. REO hold period (mos.)	Amount (mil. \$)	No.	Avg. REO hold period (mos.)	Amount (mil. \$)	No.	Avg. REO hold period (mos.)	Amount (mil. \$)	No.	Avg. REO hold period (mos.)	Amount (mil. \$)	No.	Avg. REO hold period (mos.)
Estimated market value	35.8	5	10.7	9.3	3	12.4	38.3	6	16.6	67.1	11	11.6	28.5	4	28.0
Gross sales proceeds	34.0	--	--	9.3	--	--	37.7	--	--	65.8	--	--	26.6	--	--

Table 10

Total Special Servicing Portfolio--Real Estate-Owned Sales (cont.)															
	2021			2020			2019			2018			2017		
	Amount (mil. \$)	No.	Avg. REO hold period (mos.)	Amount (mil. \$)	No.	Avg. REO hold period (mos.)	Amount (mil. \$)	No.	Avg. REO hold period (mos.)	Amount (mil. \$)	No.	Avg. REO hold period (mos.)	Amount (mil. \$)	No.	Avg. REO hold period (mos.)
Net sales proceeds	33.8	--	--	8.7	--	--	36.6	--	--	56.3	--	--	26.0	--	--
Gross sales proceeds/market value (%)	94.8	--	--	99.4	--	--	98.3	--	--	98.0	--	--	93.4	--	--
Net sales proceeds/market value (%)	94.4	--	--	93.4	--	--	95.4	--	--	83.8	--	--	91.3	--	--

REO accounting and reporting

Midland has a properly controlled property management accounting function including sound monthly bank account reconciliation procedures.

Midland's REO accounting and reporting procedures are primarily overseen by the asset managers who monitor monthly property management operating account activity. In addition, the RES collateral management services group provides a second review of the property management operating account activity. The RCQA group conducts periodic reviews of the REO property managers throughout the year and focuses on the cash receipt and disbursement processes. Furthermore:

- Property managers electronically submit monthly reporting packages to the asset managers, which are received and uploaded to AM Insight.
- Property incomes and expenses are controlled through dual operating accounts that are reconciled monthly.
- On-site audits of property managers are detailed within the company's procedures. During each of 2020 and 2021, no audits were conducted as such on-site reviews were restricted due to PNC's travel policy. At this time, there is no plan to complete onsite audits of property management vendors in 2022 given its relatively small current REO volume. Management note that should the REO portfolio expand substantially, the onsite property management audit may re-commence in 2023.

Borrower requests

Midland addresses borrower requests in a proactive and efficient manner for loans that require special servicer consent. Highlights include the following:

- Borrower consents that are handled by the special servicer are reviewed and processed by the collateral management services (CMS) team within the RES group.
- The CMS team works closely with the performing asset management team for loans where Midland is both master and special servicer, and where the consent request will require both special servicer and directing certificate holder (DCH) approval.
- The review and approval processes for all borrower consents and specially serviced loans are subject to the same

delegations of authority to ensure consistency for the level of review required for asset management and default management activities.

- In its capacity as special servicer, Midland's borrower consent activity declined by more than half during 2021, when compared to 2020. Volume was concentrated in leasing consent activity (47.0%) while the servicer reported 40% in the "other" category.

Performing loan surveillance

Midland has proactive surveillance procedures to effectively monitor its named special servicing portfolio by the CMS team. Notable features include the following:

- Midland receives a nightly feed of all publicly available CMBS and CME portfolios from Trepp, which includes loan, property, financial, and watchlist commentary. That feed is loaded into a series of tables in Enterprise!. As previously noted, a browser-based surveillance module is used to monitor the named special servicing portfolio.
- Midland has designed reports to identify watchlist loans, loans of concern identified by the B-piece investor during the due diligence process, maturing loans, covenant compliance issues, and loans with deteriorating conditions, in order to facilitate proactive surveillance and also quickly assess the impact of major credit events such as natural disasters, tenant bankruptcies, store closings, etc.
- Asset managers utilize the various reports and information to conduct monthly surveillance calls with master servicers and DCH to review changes within the portfolio and discuss loans of concern.

Legal department

Servicing and special servicing staffs have access to Midland's four-attorney legal department. The legal staff controls the engagement process and case management oversight involving external law firms. Asset-level legal costs, which must be approved for payment by the assigned asset managers, are tracked within the servicing system to facilitate monitoring of special servicing's actual legal costs to budgets within asset status plans.

Financial Position

The financial position is SUFFICIENT.

This report does not constitute a rating action.

Related research

- Midland Loan Services ABOVE AVERAGE Commercial Mortgage Loan Servicer Rankings Affirmed; Ranking Outlooks Positive, June 28, 2022
- Select Servicer List, April 19, 2022
- The PNC Financial Services Group Inc., March 21, 2022
- Servicer Category Descriptions Expanded And Revised, Feb. 28, 2022

- [Servicer Evaluation: Midland Loan Services, April 12, 2021](#)
- [Servicer Evaluation Spotlight Report™: Environmental, Social, And Governance Factors Have Consistently Powered Our Servicer Evaluation Rankings, Nov. 16, 2020](#)
- [Analytical Approach: Global Servicer Evaluations Rankings, Jan. 7, 2019](#)

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