Operational Risk Assessments

Midland Loan Services, a division of PNC Bank, N.A.

August 2017

Operational Classifications:	Commercial Mortgage Primary, Master, and Special Servicer
Rankings:	Commercial Mortgage Primary Servicer: MOR CS1 (Affirmed) Commercial Mortgage Master Servicer: MOR CS1 (Affirmed) Commercial Mortgage Special Servicer: MOR CS1 (Affirmed)
Forecast:	Stable – All Rankings
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Rationale

Morningstar Credit Ratings, LLC affirmed its MOR CS1 commercial mortgage primary-servicer, master-servicer, and special-servicer rankings for Midland Loan Services (Midland). Morningstar based its ranking affirmations on the following factors:

Primary and Master Servicing:

- Asset Administration: Midland has a lengthy and successful performance record as a primary and master servicer for commercial mortgage-backed securities transactions and other third-party investors. The company demonstrates proactive and controlled practices covering investor reporting, advancing, subservicer oversight and auditing, and other core loan-administration duties involving a diverse portfolio that includes not only commercial mortgage loans but also whole-business and single-family rental securitizations.
- Staff and Operational Stability: Midland's managers and portfolio-management staff are well-experienced. The company has an effectively designed operating structure and does not perform servicing functions offshore. The employee-turnover rate, while remaining elevated in 2016, declined in the first half of this year to a more moderate level.
- Technology: Midland has effective technology tools to provide automated loan administration and centralized data management for its large and complex servicing portfolio.
- Internal Audit and Compliance: Midland's audit function encompasses annual Regulation AB attestations, PNC Bank's internal-audit reports, and an annual Service Organization Controls report, known as a SOC 1. Midland also has a quality-control team to liaise with PNC Bank and external auditors, monitor servicing-agreement compliance, and conduct its own risk-control reviews. All recent audits have been satisfactory other than the latest PNC Bank-issued audit, which assigned a Needs Improvement rating because of exceptions resulting from bank-mandated heightened expectations, standards, and changing requirements and which do not provide for a phase-in period to avoid noncompliance. The audit did not cite any process breakdowns, high-risk-rated items, or medium-risk-rated issues related to servicing practices. Most items involved technical noncompliance, were not specifically servicing oriented, and have been resolved.

- Training: The company has an effective training function, which it has improved in recent years through the addition of a full-time manager, creation of a department rotation program, and expansion of its curriculum.
- Portfolio Management: Midland's portfolio-management and surveillance teams demonstrate sound practices to monitor asset-level collateral performance and loan-covenant compliance. Supported through its technology, the company has proactive workflow and approval procedures to address a high volume of borrower requests. Morningstar also recognizes Midland's increased attention to borrower-relationship management and efforts to improve borrowers' servicing experience.

Special Servicing:

- Achievement Record: Midland demonstrated successful asset-resolution results in 2016 that involved several challenging assets nationwide. Morningstar views Midland as an adept CMBS special servicer that has consistently obtained solid resolution results, including many assets fraught with document deficiencies and limited recovery options.
- Asset-Manager Experience: Midland has retained well experienced asset managers and the capacity to handle more volume.
- Asset-Resolution Practices: Midland has well-designed workflow and analytical practices to manage and resolve assets including a property-manager audit program for owned real estate, which is an industry best practice.
- Technology: The company has developed a new asset-management application, which it expects to activate in the first quarter of 2018; it should offer expanded functionality, including enhanced capabilities for asset plans and workflow management.

As of Dec. 31, 2016, Midland's primary- and master-servicing portfolio, inclusive of shared servicing, consisted of 29,724 loans with an aggregate unpaid principal balance of $436.10 billion. Midland was the master servicer on 98 CMBS transactions, the primary and master servicer on 171 CMBS transactions, and the primary servicer on 128 CMBS transactions. Midland's entire CMBS portfolio consisted of 7,051 loans with an aggregate UPB of $98.98 billion.

Midland was the named special servicer on 290 securitizations, including CMBS, Freddie Mac, single-family rental, and alternative asset-backed transactions, that contained 7,507 loans with a UPB of $155.48 billion. Its active special-servicing portfolio consisted of 76 loans (63 in CMBS) and eight real estate owned properties (all CMBS) with a combined UPB of $624.9 million.

As of Dec. 31, 2016, Midland was the master/primary servicer on 41 single-family rental transactions (including 34 securitizations) collateralized by 989 loans and 132,510 properties with an aggregate UPB of $17.61 billion. Midland also was the named special servicer on 24 single-family rental securitizations collateralized by 708 loans and 92,197 properties with an aggregate UPB of $11.71 billion.

Forecast

The forecast for all rankings remains Stable. Morningstar expects Midland to serve as an effective primary, master, and special servicer for CMBS and third-party investors and expects the rankings to remain unchanged during the next 12 months.

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Company Profile and Business Overview

Midland is a division of PNC Bank National Association, which is a wholly owned subsidiary of PNC Financial Services Group, Inc. Midland is part of PNC's real estate finance business and has a more than 20-year history as a commercial mortgage servicer and special servicer. As of Dec. 31, 2016, the Mortgage Bankers Association ranked Midland, including PNC Bank's own servicing portfolio, as the largest commercial mortgage master and primary servicer based on dollar volume and loan count.

The company's commercial-loan servicing business, besides CMBS master- and primary-serviced transactions, includes institutional and specialty-finance clients, government-sponsored enterprise portfolios, shared-servicing assignments, and third-party construction-loan administration. Midland's real estate solutions business line encompasses CMBS and other special-servicing work, whole portfolio and asset-level due-diligence assignments, and collateral-management assignments. Midland also has a complementary business line as an outsource provider of technology solutions and Shared Servicing® through its Enterprise! ® servicing system, which Midland licenses to third-party clients on a hosted basis.

Midland has achieved a substantial presence as a named CMBS special servicer predominantly through its numerous relationships with third-party B-piece buyers rather than as a B-piece buyer itself. However, The PNC Financial Services Group owns a minority interest of approximately 20% in BlackRock, a major investor in both investment-grade and below-investment-grade bonds. Midland acts as a master servicer and/or special servicer for several transactions in which BlackRock has an investment position. As of Dec. 31, 2016, Midland was a named special servicer for 18 Freddie Mac-sponsored commercial mortgage securitizations containing 1,233 loans with a UPB of $22.12 billion, including five transactions issued in 2016. It also was the primary servicer for two of these securitizations, one issued in 2013 and one in 2014.

As of Dec. 31, 2016, Midland employed 410 people for primary/master servicing and 28 people for special servicing. Most personnel are in Overland Park, Kansas. The company provides master/primary and special servicing in Overland Park for single-family rental securitizations and provides construction-loan administration in its Pittsburgh office for third-party lenders. The technology team for Enterprise! is based in Little Rock, Arkansas, and Pittsburgh.

Table 1 – Historical Total Servicing and Special-Servicing Volume

	Dec. 31, 2016		Dec. 31, 2015		Dec. 31, 2014	
	UPB (000s)	Loans	UPB (000s)	Loans	UPB (000s)	Loans
Primary Servicing*	396,847,630	27,887	367,039,921	27,205	306,621,465	27,847
Master Servicing**	39,256,117	1,837	28,684,608	1,595	19,933,867	1,163
Total	436,103,747	29,724	395,724,529	28,800	326,555,332	29,010
Active Special Servicing†	624,879	84	750,551	81	633,147	73

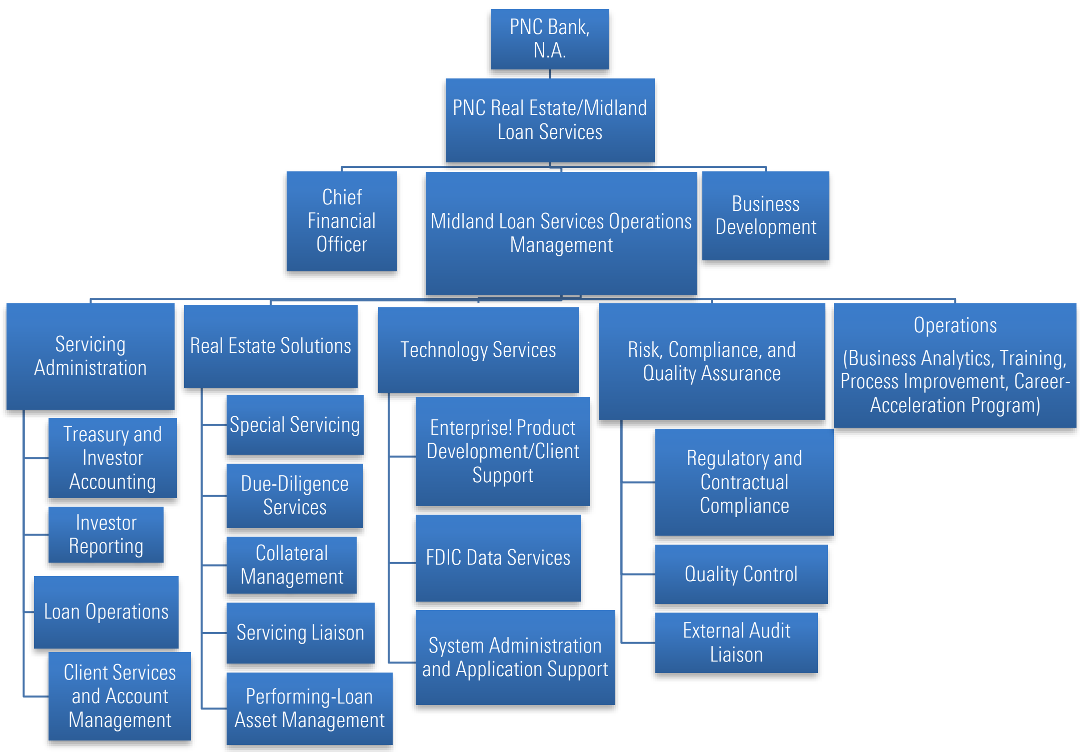
*Shared-servicing volume included in primary servicing.**Includes only loans subserviced by others. †Includes loans and real estate owned.

Operational Infrastructure

Organizational Structure

Midland's organizational structure reflects the hybrid nature of its business: functional yet portfolio-driven. Midland has four main departments: servicing administration; real estate solutions; technology services; and risk, compliance, and quality assurance. It also has an operations team for business analysis, process-improvement initiatives, and training.

Chart 1 – Organizational Structure



Servicing Administration

The servicing-administration department, through specialized units, encompasses all loan-administration, portfolio-management, investor-reporting, and accounting functions. The department also handles reserve and covenant administration. Midland aligns its teams for portfolio management and certain other asset-administration tasks by investor types such as CMBS, GSEs, insurance companies, and government-services clients. The department includes teams for portfolio transfers, shared-servicing assignments, subservicer oversight, special-servicer interaction, and single-family rental transactions.

Real Estate Solutions

This area comprises teams for special servicing, performing asset management, and collateral-management services. It also has a servicing liaison group. The real estate solutions department provides CMBS special servicing, special credits resolution services, investment due diligence, and collateral management services such as asset reviews and valuations, portfolio surveillance and risk management, and asset management. Midland's performing-loan asset-management group, which has dedicated staff for borrower-consent requests, is part of real estate solutions.

Technology

This division is responsible for servicing-system business development, account management, product support, and handling shared-servicing technology issues. In addition, it continues to handle data services for an FDIC contract.

Management and Staff Experience

The average experience of managers and portfolio-management staff in both primary/master and special servicing has remained high, as shown in Table 2. Special-servicing asset managers' average experience, while high at 16 years, declined slightly between year-end 2015 and 2016.

Table 2 – Management and Staff: Average Years of Experience

	December 2016		December 2015		December 2014	
	Industry	Company Tenure	Industry	Company Tenure	Industry	Company Tenure
Primary/Master Servicing						
Senior Management	28	23	28	21	29	21
Middle Management	20	16	19	15	19	15
Staff	9	7	9	7	9	7
Portfolio-Management Staff Only*	24	16	24	14	20	12
Special Servicing						
Senior Management	25	14	24	13	23	16
Middle Management	16	13	17	12	17	14
Asset Managers	16	11	18	11	17	10

*Servicing positions involving credit, collateral performance, or borrower-request analysis.

Management and Staff Turnover

Midland's primary/master-servicing staff turnover declined to a 12.2% annualized rate in the first half of 2017, after holding at 16.5% for the two prior years. Turnover in 2016 was slightly lower when netting out internal transfers. Midland's special-servicing staff-turnover was moderate based on an annualized rate of 13%-14% for the January 2016-June 2017 period. Morningstar continues to observe elevated turnover rates among some special servicers because of declining or stabilizing portfolio volumes.

Table 3 – Management and Staff Turnover Rates*

	2016		2015	
	Primary/Master	Special Servicing	Primary/Master	Special Servicing
Total Staff - Beginning of Period (# of Positions)	423	30	411	41
Total Turnover Rate (%)	16.5 (70 positions)	13.3 (4 positions)	16.5 (68 positions)	21.9 (9 positions)
Involuntary (%)	0.7	0	1.9	0
Voluntary (%)	15.8	13.3	14.6	21.9
Management Only (%)	1.9	3.3	1.4	7.3
Staff Only (%)	14.6	10	15.1	14.6
Total Turnover Rate Net of Internal Transfers (%)	15.4	13.3	16.5	21.9
New Hires (# of Positions)	57	2	75	1
Other Adjustments	0	0	5	(3)
Total Staff - End of Period (# of Positions)	**410	28	423	30

*Staff departures divided by number of staff at beginning of period. **Midland had 432 people at June 30, 2017, a 5.4% net increase while its total servicing portfolio increased 5.7% by loan count and 5.6% by UPB in the first half of this year. †Personnel returning from/beginning a leave of absence.

Workload Ratios

Primary/Master Servicing

Midland's ratio of loans serviced per employee increased to 73/1 at Dec. 31, 2016, from 68/1 at year-end 2015. For the past four years, the ratio has fluctuated in this range. The year-end 2015 and 2016 ratios also represent a decline from the 83/1 ratio in June 2013. The inclusion of smaller-balance and non-real-estate loans may be factors affecting Midland's workload ratios, which are higher than some other servicers.

Special Servicing

Midland had eight asset managers for special servicing as of Dec. 31, 2016, which corresponds to an 11/1 ratio of assets per asset manager. By comparison, Midland's ratio of assets per asset manager was 7/1 as of Dec. 31, 2015, and 5/1 as of Dec. 31, 2014. Midland does not usually separate loan and REO management functions among the asset managers.

> **Assessment:** Midland's management and staff are well-experienced, and its organizational depth and structure effectively address the company's complex servicing requirements. Although primary/master-servicing employee turnover was elevated in 2015 and 2016, it slowed to a more moderate level in the first half of this year. The primary/master-servicing workload ratio is higher than some other servicers and may reflect Midland's effective leveraging of technology and operating efficiencies. Midland's workload ratio for its special-servicing asset managers remains low compared with industry averages from a few years ago, when portfolio volumes

across the industry were high, and indicates sufficient capacity to absorb more assets. Midland also has experienced staff in other departments who can assist with nonperforming loans when necessary.

Training

Midland provides formalized training and mentoring for all servicing personnel. The company's core curriculum is known as the Midland Employee Enrichment Training, or MEET, program, which consists of bronze, silver, and gold level course requirements. The company enhanced its training regimen in 2015 with a full-time training manager and a departmental-rotation program for accelerated career-path development for nominated highest-potential employees. The training manager also coordinates certain activities with the PNC Bank training department. The curriculum for associate-level employees covers loan-administration functions such as cash management, payment processing, and investor reporting. Personnel use an intranet-based site to register for classes and track completed training hours. Midland requires employees to participate in at least 30 hours of training per year excluding conferences. During 2016, servicing and special-servicing employees well exceeded the minimum-hour requirement. In addition to interactive sessions, special-servicing employees attend "lessons learned" meetings to discuss pending asset workouts, industry webinars, and conferences, as well as training seminars from vendors, law firms, and other service providers. The company maintains all training materials and presentations on its intranet site.

Assessment: Midland has a thorough, effective training function, which it has improved in recent years through the addition of a full-time manager, creation of a department rotation program, and expansion of its curriculum.

Audit, Compliance, and Procedural Completeness

As a division of a federally regulated PNC Bank, Midland undergoes stringent testing by PNC's internal-audit division, which conducts its audits on an approximate 12-month cycle using a risk-based approach. Although the latest PNC Bank-issued report assigned a Needs Improvement rating, most of the exceptions came from bank-mandated heightened expectations, standards, and changing requirements and which do not provide for a phase-in period to avoid noncompliance. The audit did not cite any process breakdowns, high-risk-rated items, or medium-risk-rated issues related to servicing practices. Most items involved technical noncompliance, were not specifically servicing oriented, and have been resolved.

Midland also undergoes an annual SOC 1 report that tests various operational, technology-related, and employee-access controls. The most recent SOC 1 covering the period October 2015 to September 2016 contained only two exceptions, which were minor and cleared through satisfactory management responses or further sampling results.

Midland annually undergoes Regulation AB attestations, which did not cite any exceptions for the past several calendar years through 2016. It also undergoes GSE audits and periodic examinations by the Office of Comptroller of the Currency. Midland stated that these reviews reported no material findings.

Midland's independent quality-control and compliance team manages the company's documented policies and procedures. It also coordinates the auditing activities performed by PNC Bank, external consultants, and government agencies; monitors various servicing activities; and conducts quarterly reviews, including vendors' contract compliance and PSA compliance. The company assigns internal control requirements to department managers who review and certify to the operating effectiveness of the controls each quarter, with the results reported to senior management.

Assessment: Based on the frequent and extensive PNC Bank examinations, the SOC 1, external client reviews, the Regulation AB attestations, and Midland's own independent compliance program, Midland has a thorough audit regimen in line with best practices. Midland's internal audits help mitigate operational risks based on the frequency, scope, and outcome of its various auditing activities. The company also has been proactive in remediating audit exceptions. In addition, Midland's policies and procedures are well-detailed, soundly address the company's myriad servicing duties, and are effectively managed to control content revisions.

Legal Liability and Corporate Insurance

Midland reported that it was not involved in any pending litigation that would materially and adversely affect its servicing operations. The company reported that it did not receive any notices of servicing-agreement default or citations related to special-servicing performance. Furthermore, it reported that it has directors and officers, errors and omissions, and mortgage impairment insurance coverage in place.

Assessment: The company's fidelity bond and E&O coverage amounts meet the insurance minimum set forth by GSE seller/servicer guidelines. Based on the company's representations, it is not involved in any material lawsuits related to, or which could negatively affect, Midland's operations.

Technology and Disaster Recovery

Midland uses the latest version of the Enterprise! servicing system, which is widely used in the commercial mortgage servicing industry. The system operates in an application service provider hosted environment and interfaces with the general ledger and a data warehouse for specialized queries and reporting. Midland's special-servicing unit also uses the servicing system in conjunction with a relational database for data management and internal reporting referred to internally as the special-servicing asset-management system. However, the company is nearly finished developing a new asset-management application, Asset Insight, which Midland expects to activate during the first quarter of 2018. The new application is integrated with the servicing and other applications and built on an upgraded Web-accessible operating structure. Based on a review of the prototype, Morningstar concurs that the new application should provide enhanced asset and resolution tracking and workflow-management and other functionality improvements.

Midland's technology platform includes other proprietary and vendor-supported applications such as bank reconciliation and a transaction-processing application that automatically processes disbursements, by using the servicing system and a proprietary cash workstation, to allow servicing personnel and shared-servicing clients to request checks, wires, and automated clearing house disbursements electronically. To comply with SOC 1 and other financial-control requirements, Midland has approval controls embedded in the application. The servicer also scans loan documentation and stores it in an electronic file-management system through the servicing system. Midland offers dedicated websites for its borrowers and investors with data directly fed from the servicing system.

Midland also provides technology and servicing support for PNC's real estate division. Such services have included converting PNC's loan administration and consolidated collateral data to the servicing system for PNC's collateral-management reviews and regulatory reporting process. Midland's special-servicing area uses the servicing system for consolidating loan, property, and pool-level information for CMBS transactions in which Midland is also the named special servicer.

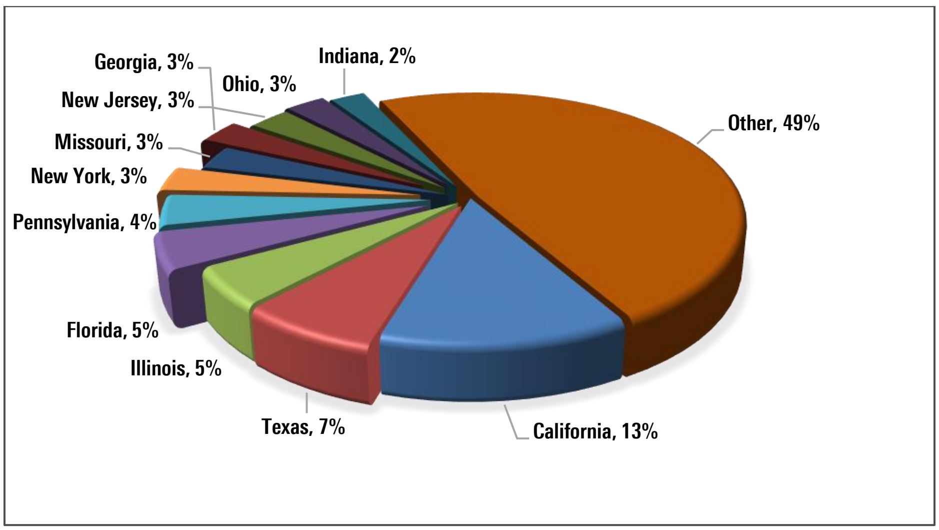
Midland conducts disaster-recovery testing every April and again in October if the test uncovers issues. The April 2017 test indicated that all applications were fully recovered, and there was a successful testing of the personnel calling tree. Alternate sites for data and business recovery are appropriately distanced and operate on separate power grids from their respective primary sites. The company backs up and moves data off-site daily and replicates data on a real-time, mirrored basis to alternate servers at multiple data recovery sites. Midland stated that it can restore cash-management and investor-reporting functions within 24 hours, and the actual restoration time was less than 12 hours during the past test. This year, the company is changing its primary data center from Kansas to PNC Bank's data center campus in Virginia, which will have enhanced cybersecurity features and real-time backup with the bank's secondary site in the Pittsburgh area.

> **Assessment:** Midland's technology provides a high degree of process automation, centralized data management, and functionality to address the reporting requirements for a range of investors. The newly developed asset-management system should further strengthen the technology platform. Midland has sound disaster-recovery and data back-up protocols.

Primary- and Master-Servicing Portfolio Administration

Midland was the second-largest servicer by volume for year-end 2016 based on its Morningstar-submitted data, which exclude PNC Bank's direct servicing of other balance loans. (Midland/PNC Bank combined was the largest-volume servicer as reported by the Mortgage Bankers' Association at year-end 2016.) Accordingly, Midland services a diverse and complex portfolio in terms of property types, geography, borrower profiles, transaction structures, and investor-reporting requirements.

Chart 2 – Total Servicing Portfolio State Concentration by Property Count (Dec. 31, 2016)*



*Midland serviced loans in all 50 states and some U.S. territories. Does not include single-family rental properties.

Chart 3 – Total Servicing by Investor Type (UPB) Dec. 31, 2016

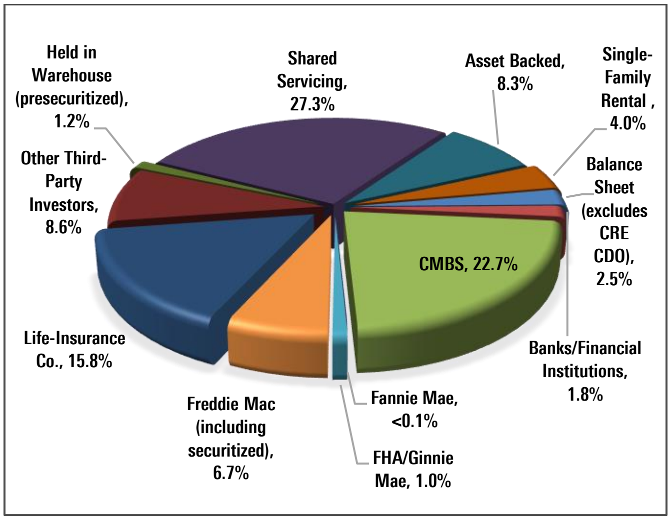


Chart 4 – Total Servicing by Investor Type (# Loans) Dec. 31, 2016

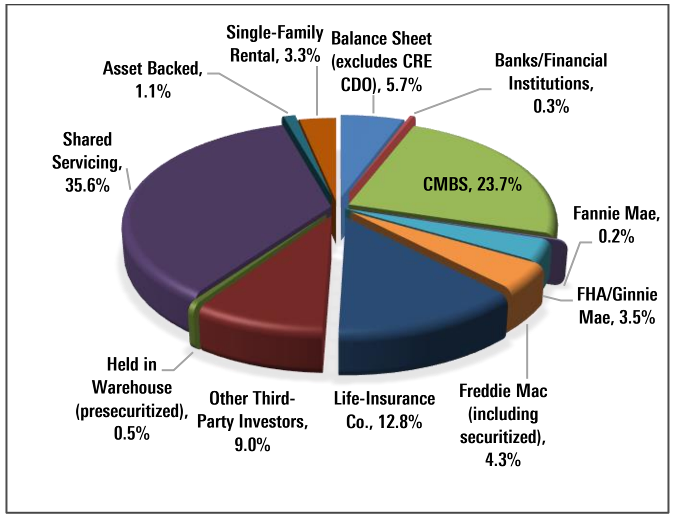


Table 4 – Total Servicing Volume by Investor Type (Dec. 31, 2016)

Investor Type	UPB (000s)	Loans	Average Size (000s)
Balance Sheet (excludes CRE CDO)	10,941,561	1,689	6,478
Banks/Financial Institutions	7,690,838	99	77,685
CMBS	98,976,012	7,051	14,037
Fannie Mae	97,661	62	1,575
FHA & Ginnie Mae	4,237,672	1031	4,110
Freddie Mac (including securitized)	29,224,409	1281	22,814
Life-Insurance Companies	68,900,307	3814	18,065
Other Third-Party Investors	37,709,939	2665	14,150
Held in Warehouse (presecuritized)	5,316,007	142	37,437
Shared Servicing	119,079,601	10,579	11,256
Alternative Asset Backed	36,316,105	322	112,783
Single-Family Rental Transactions	17,613,635	989	17,810
Total	436,103,747	29,724	14,672

Chart 5 – Total Servicing by Property Type (UPB) Dec. 31, 2016

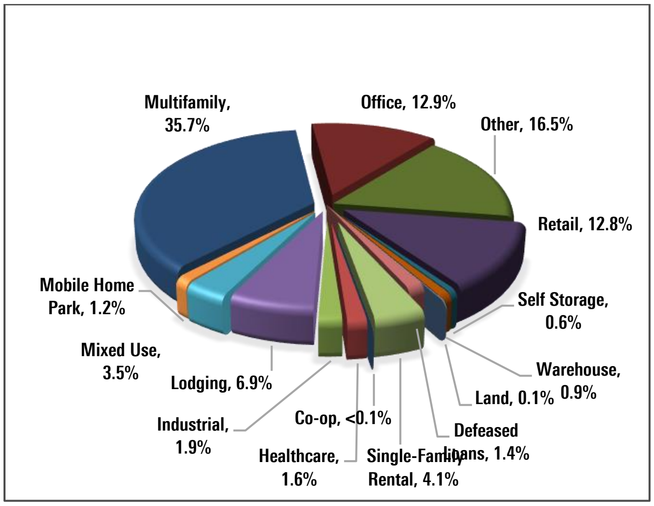


Chart 6 – Total Servicing by Property Type (# Loans) Dec. 31, 2016

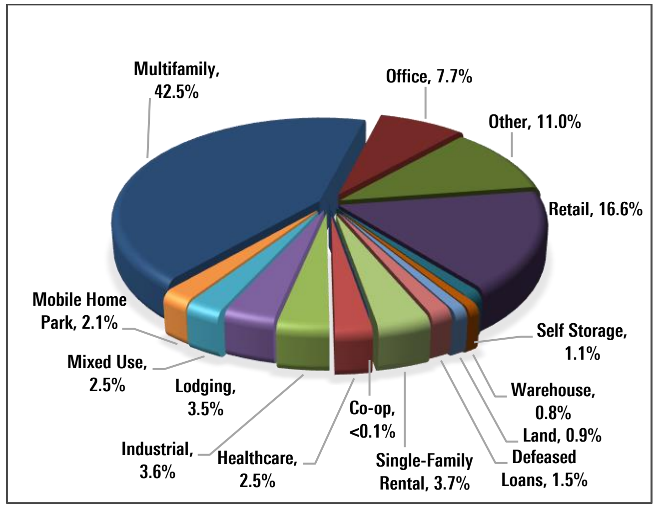


Table 5 – Total Servicing Volume by Property Type (Dec. 31, 2016)

Property Type	UPB (000s)	Loans	Average Size (000s)
Cooperative	33,477	6	5,579
Healthcare	6,846,789	757	9,045
Industrial	8,204,765	1,065	7,704
Lodging	30,059,353	1,055	28,492
Mixed Use	15,384,313	741	20,762
Mobile Home Park	5,113,029	618	8,274
Multifamily	155,672,325	12,626	12,330
Office	56,040,817	2292	24,451
Others	72,098,566	3259	22,123
Retail	55,623,785	4,924	11,296
Self-Storage	2,666,208	331	8,055
Warehouse	4,054,738	238	17,037
Land	462,406	279	1,657
Defeased Loans	5,980,418	440	13,592
Single-Family Rentals	17,862,758	1,093	16,343
Total	*436,103,747	*29,724	14,672

*Collateralized by 46,894 commercial and 132,510 single-family rental properties in all 50 states and U.S. territories, plus Treasury securities for defeased loans.

Loan Boarding, Hedge Agreements, Letters of Credit, and UCCs

During 2016, Midland, as a primary or primary/master servicer, boarded 1,091 CMBS loans with a total UPB of approximately $34.0 billion. By comparison, during 2015, it boarded approximately $50.59 billion of new CMBS loan balances, consisting of 2,147 primary (or primary/master combined) serviced loans. Midland targets 10 days to board new loans with data necessary to conduct payment processing and investor reporting. During the boarding phase, it creates and then centrally maintains summaries of deal-specific critical servicing and related PSA requirements. PNC's loan-origination application is interfaced with Midland's servicing system. Loan-boarding procedures require staff to compare system inputs with source data and include a secondary level of review. The servicing system provides exception reporting for timeliness and accuracy and issues borrower welcome letters with compliance requirements within three days of closing. It also tracks borrower compliance items, covenant triggers, and missing documents although some supplemental applications will also support these tasks. Midland places an introductory call to new borrowers and noted that the assigned account manager will review the loan's compliance covenants and triggers with the borrower as needed.

The company services some loans with interest-rate cap agreements and loans with letters of credit as supporting collateral, which are stored on-site in a vault or with a custodian depending on the agreement. Midland centrally tracks these items and credit rating changes of counterparties and LOC expirations. Midland successfully renewed all LOCs that were due to expire during 2016. The company tracks UCC filing expiration dates via the servicing system and uses a third-party vendor to assist with filing UCC continuation statements. The company reported no lapsed UCC filings during 2016. As a master servicer, Midland monitors UCC filing compliance through quarterly reports submitted by its subservicers.

> **Assessment:** Loan-boarding practices are proactive and controlled. The company's stated practice of boarding new loans within 10 days of closing is in line with the industry average. Its practice of issuing borrower welcome letters within three days of closing is proactive and faster than some other servicers. Morningstar recognizes Midland's proactive approach for contacting new borrowers and reviewing loan document requirements with them. Midland has sound practices for hedge agreements, letters of credit, and UCC filings.

Payment Processing

As of Dec. 31, 2016, Midland stated that nearly 100% of loan payments are set up to be received, deposited, and system-posted electronically (lockbox, wire, ACH). Lockbox payments are first deposited to a central clearing account and then automatically swept to investor custodial accounts, unless flagged as a suspense item. The lockbox interfaces with the servicing system. Midland segregates payment posting, depositing, and system-balancing tasks among the staff. The servicing system reconciles payment receipts daily for review by management. Midland routinely validates rate indexes, and it maintains current balances and paid-to dates of subserviced loans on its servicing system. As of Dec. 31, 2016, approximately 42% of payments were structured for lockbox processing, 39% as ACH direct deposits, and 19% as wire transfers. Midland noted that it receives a negligible number of live checks at its street address.

As of Dec. 31, 2016, Midland did not report any unreconciled items aged more than two days in its clearing account. It also did not have any non-special-servicing-related suspense items aged more than 60 days. However, Midland did have 55 items in suspense (with a balance of approximately $6.3 million) connected with specially serviced loans pending direction or resolution from the corresponding special servicer. This compares with 73 suspense items (approximately $12.4 million) associated with specially serviced loans as of Dec. 31, 2015.

Assessment: Midland has a sound and efficient payment-processing function based on its automated processes, controlled practices for balancing cash accounts, minimal aging of suspense-account items excluding specially serviced loans, and clear audit results in this area. The company is well-experienced in handling a high volume of loans with complex cash-management structures.

Table 6 – Primary-Servicing Floating-Rate and Cash-Managed Loans

	Dec. 31, 2016		Dec. 31, 2015	
	UPB(000s)	Loans	UPB(000s)	Loans
Floating-Rate Loans	83,625,989	4,872	73,159,553	5,142
Component of Primary Servicing (%)	21.1	17.5	19.9	18.9
Cash-Managed Loans*	73,671,951	1,482	68,358,253	1,514
Component of Primary Servicing (%)	18.6	5.3	18.6	5.6

*Active hard lockbox agreements.

Real Estate Tax, Insurance, and Capital-Expenditure Reserve Administration

As of Dec. 31, 2016, approximately 52% of Midland's primary-serviced CMBS loans were escrowed for real estate taxes. Midland incurred negligible nonreimbursable tax penalties during 2015 and 2016, especially relative to its total escrow-account disbursements. Midland noted some tax penalties existed before Midland assumed control of the loan servicing. The company generally remits tax payments within early pay discount periods. The servicing system tracks tax-payment due dates and the payment status for all loans, whether escrowed or not. A tax service tracks and remits payments to tax authorities for escrowed loans and reports unpaid taxes on nonescrowed loans. For nonescrowed loans, Midland sends a delinquent tax notice to the borrower and tracks the delinquent tax until paid. The servicing system also automatically generates tax notices.

As of Dec. 31, 2016, approximately 32% of Midland's primary-serviced CMBS loans were escrowed for insurance payments. Midland handles insurance administration in-house but does use external insurance consultants to assist with policy reviews. The servicing system tracks expirations, coverage requirements, and auto-generates reminder letters 30 days before policy expirations. The company reviews insurance carrier ratings prior to renewal for compliance. As of Dec. 31, 2016, it reported 0.3% of all primary-serviced loans on its forced-placed policy compared with 0.5% on Dec. 31, 2015. Its current forced-placed policy provides for 120 days of retroactive coverage. The forced-placed insurer is Great American Assurance Co., which had a financial strength rating of A+ effective as of May 2016 by A.M. Best Co., Inc. Midland also reviews insurance exception reports from its subservicers quarterly.

Portfolio managers review expenditure requests and release funds escrowed in capital-reserve accounts. The company uses the servicing system to manage workflows, track reserve funds, record disbursements, and reanalyze accounts. Prior to disbursement, management must approve all reserve-account disbursement requests. Midland's reserve-account management may also involve interest-reserve analysis and funding on construction and/or tenant build-out projects. For larger capital-improvement or tenant build-out projects, Midland's procedures address lien-waivers and periodic inspections of work progress.

Assessment: Midland's tax- and insurance-administration practices are proactive, as shown by its low incidence of tax penalties and use of external consultants to assist with insurance reviews. However, some servicers, to be extra proactive, issue their first borrower-reminder notices at 60 rather than 30 days before policy expiration. Midland's forced-placed policy's retroactive coverage provision is sound. Midland has effective oversight practices for capital-expenditure funding requests and reserve-account management with experience involving a range of property types and complex loan structures.

Investor Reporting and Accounting

Midland uses the servicing system and its investor-reporting module to produce the most current version of the Commercial Real Estate Finance Council investor-reporting package for CMBS assets. Management must approve investor remittance and reporting tasks, and the company tracks custodial banks' credit ratings for servicing-agreement compliance. The company segregates investor-report preparation, investor remittance, and account-reconciliation tasks. It also requires a secondary level of review and sign off for custodial-account reconciliations. Employees have online access to custodial-account activity, and investor-reporting and custodial bank account-reconciliation processes are largely automated. Midland reconciles bank account activity daily, with more formal reconciliations performed at month-end.

As of Dec. 31, 2016, as a primary and master servicer, Midland managed an average of 2,710 investor remittances per month, including an average of 830 involving CMBS transactions. Last year, Midland incurred a few reporting and/or remittance errors, and a few late report submissions. Most of the reporting and remittance errors were for non-CMBS investors, occurred during the early reporting months, or involved miscellaneous trailing fees collected by the client. The CMBS errors mostly involved late reporting from an external primary servicer or special servicer, with a few cases requiring minor CREFC loan periodic field corrections. For the year, Midland had two CMBS reporting restatements with one involving a small redistribution fee charged to Midland. No errors resulted in any CMBS trust losses.

Assessment: Midland has controlled practices for investor-accounting and reporting functions based on clear audit results in this area, a high degree of automation, and its segregation of staff duties. Midland's reporting/remitting errors were generally minor, and the company's error rates have been low relative to total transaction volume.

CMBS Advancing

As a master servicer, Midland advances principal, interest, and property protection expenses on CMBS transactions. It tracks each loan's cumulative advances versus its current value or net liquidation amount. Midland does not have an absolute cutoff level for advancing. However, when advances reach 50% of estimated value or liquidation proceeds, or when a pool contains only a few assets, it will advance with extra caution or curtail advances altogether. As a pool winds down, it may also begin recovering outstanding advances. As advances increase relative to value, decisions to continue advancing require levels of approvals based on an authorization matrix. Senior managers review advancing decisions and appraisal update efforts through a monthly advance analysis report.

Table 7 – Midland CMBS Advancing Activity

	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2014
Total Advances Outstanding ($ Volume) *	253,671,345	238,224,753	286,987,461
Total Advances Outstanding (# Loans)	603	724	934
Average Advanced Per Loan ($)	420,682	329,040	307,267
Total O/S Advances to CMBS Servicing Volume (%) †	0.30	0.24	0.27

*Includes principal and interest and property-protection advances. † CMBS Servicing Volume- UPB of primary/master combined and master only.

Assessment: Midland's advancing and nonrecoverability-determination practices are sound. Midland's stated policy of assessing the timing and cash flow impact to the trust before recapturing advances is a customary best practice.

Portfolio Management and Surveillance

Financial-Statement Analysis and Property Inspections

The company uses a vendor to assist with a portion of its financial-statement data input work. However, the collateral surveillance group, principally using the servicing system, reanalyzes financials and completes operating statement analysis reports. For its CMBS portfolio, Midland, as a CMBS primary servicer, has consistently obtained 95% or more of required annual property financial statements by May 31. As a CMBS master servicer, its collection rate has consistently been above 90%. The company did not provide financial-statement collection and analysis results for the non-CMBS portion of its servicing portfolio because it contains a significant volume of small-balance and other loans that do not require borrowers to submit financial statements, property operating statements, and rent rolls.

Midland uses a vendor for most property inspections, although Midland staff conducted approximately 350 inspections in 2016. During 2016, within primary-servicing, the company completed 90% of all required inspections by or within 30 days of their due dates; for CMBS properties, the rate was also approximately 90%. The servicing system tracks inspection reports and the resolution of deferred maintenance issues.

Table 8 – Full-Year Financial Statement Collection Rates (%)

	By May 31, 2016	By May 31, 2015	By May 31, 2014
CMBS Primary-Servicing Portfolio:			
Statements Received	96.2	95.8	95.9
Statements Spread and OSARs Reported*	97.0	98.9	96.7
CMBS Master-Servicing Portfolio:			
Statements Received	90.8	91.5	90.3
OSARs Reported*	94.9	95.0	92.9

*As of June 30 and based on total number of required statement submissions. OSAR- operating statement analysis reports.

Watchlist, Trigger Events, and Early-Stage Collections

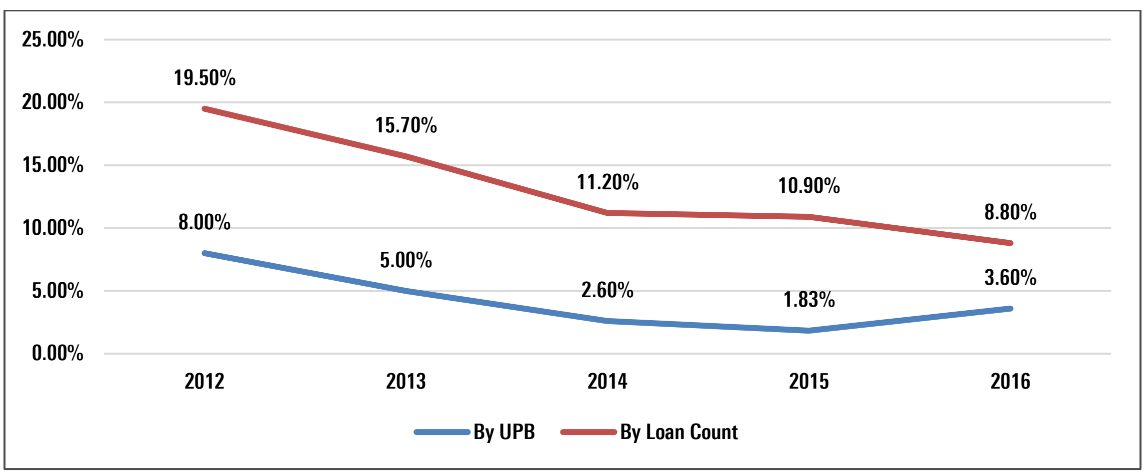
The surveillance group handles watchlist management and overall loan performance. Midland follows CREFC portfolio-review guidelines to issue a watchlist trigger report based on inspection data, financial-statement spreads, and other information. Midland maintains its own risk-rating system for balance sheet loans, GSE loans with loss-sharing components, and for clients on a subset of its CMBS pools on a contractual basis. Midland has other watchlists for non-CMBS loans with criteria inclusive of any investor-established requirements. As of Dec. 31, 2016, Midland reported 9.5% of its primary-serviced (or primary/master combined) CMBS loans on its CREFC watchlist and 9.1% of its master-serviced-only CMBS loans on its CREFC watchlist. By comparison, as of Dec. 31, 2015, it had 11.3% of its primary-serviced (or primary/master combined) CMBS loans on its CREFC watchlist and 10.6% of its master-serviced-only CMBS loans on its CREFC watchlist.

The company sends automated collections notices to borrowers one day after a missed due date based on daily delinquency reports. As a practice, it will contact borrowers by phone within five days of a missed due date, and place follow-up calls thereafter. The company maintains a centralized chronology of collection efforts and borrower comments on its servicing system.

During 2016, Midland reported that 143 loans (77 in the first half of the year and 66 in the second half) in primary servicing had their springing-lockbox provisions activated. It reported that, on average, it took 51 days to establish the cash-management accounts. By comparison, during 2015, Midland reported that 131 loans (54 in the first half of the year and 77 in the second half) in primary servicing had their springing-lockbox provisions activated. It reported that, on average, it took 85 days to establish the cash-management accounts.

> **Assessment:** Midland has proactive practices for financial-statement collections, property-inspection reviews, trigger-event and loan covenant monitoring, and watchlist management. Midland's ability to generate automated collection notices is an efficient way to manage the process.

Chart 7 – Midland Primary-Servicing Portfolio Delinquency Percentages*



*At year-end, based on all loans 30+ days delinquent plus REO, but excluding master-serviced-only loans.

Master Servicing: Subservicer Auditing and Compliance

Midland has dedicated personnel for subservicer auditing and compliance oversight. The investor-accounting team also balances remittances and reviews compliance reports from subservicers. As of Dec. 31, 2016, Midland had 41 subservicers. It analyzes each subservicer annually to determine whether a desktop or full on-site audit is warranted. Midland considers a subservicer's monthly reporting and remitting performance, CMBS loan volume, loan types serviced, latest Regulation AB attestation, and other compliance certifications to make that determination. Midland stated that it conducts either desktop or on-site audits annually for 95% of its subservicers, although the audit cycle may be less frequent for certain low-volume subservicers or those with consecutive clean audits.

Subservicers receive a pre-audit questionnaire, and Midland formally communicates the audit results to each subservicer. Findings are tracked for resolution. The audit scope covers all core loan-administration areas including cash processing, accounting, tax and insurance, and portfolio management. Midland also reviews subservicers' quarterly certifications for real estate tax, insurance, and UCC activity.

During 2016, the company performed 12 on-site audits and 13 desktop audits. In lieu of conducting its own audits, Midland also relied on 14 subservicer audits performed by Freddie Mac in 2016. Midland convenes quarterly with Freddie Mac to review audit results. The 2016 audits, including Freddie Mac's audits, covered most of the active subservicers that Midland oversaw during the year.

> **Assessment:** Midland has sound subservicer oversight controls. It has strong subservicer audit practices based on the reach and scope of the program. Midland is not the only master servicer now relying on Freddie Mac audits for certain subservicers principally servicing Freddie Mac pools. Morningstar believes this is an acceptable approach based on the strength of that audit program.

Borrower-Consent Requests

The asset-management staff underwrites borrower-consent requests including defeasance, loan assumptions, lease approvals, and partial property releases. The special-servicing area includes a consent-processing team to address requests that require Midland's approval as the named special servicer; Midland noted that most of these consent cases come from external servicers. Asset managers submit cases, using templates for common request types, to obtain approval based on established delegations of authority. Midland manages approvals through the servicing system, which provides assignment-status and exception reports to asset managers. Midland may periodically use a vendor to underwrite some borrower requests for Midland's review and approval. As Midland expands its use of the Asset Insight system, it plans to leverage the new application for consent requests.

Table 9 – Borrower-Consent Average Processing Times (Days)

	Full-Year 2016			Full-Year 2015			Full-Year 2014		
Consent Type	Processed (#)	Internal Time Only	*Total Time	Processed (#)	Internal Time Only	*Total Time	Processed (#)	Internal Time Only	*Total Time
Assumptions	145	49	70	165	53	80	207	38	54
Leasing	804	33	56	893	37	51	1,095	36	40
Defeasance	156	16	16	227	12	12	225	12	12
Partial Releases	82	32	59	29	58	117	41	49	55
Total	1,187			1,314			1,568		

*Servicer's internal time plus third-party review time only for those transactions requiring external party consents.

> **Assessment:** Midland has suitable workflow practices and staffing for analyzing and approving a high volume of borrower consents. Morningstar also recognizes Midland's ongoing efforts to streamline consent processing and improve borrowers' servicing experience.

Special-Servicing Administration

Chart 8 – Total Active Portfolio by Property Type (UPB)*

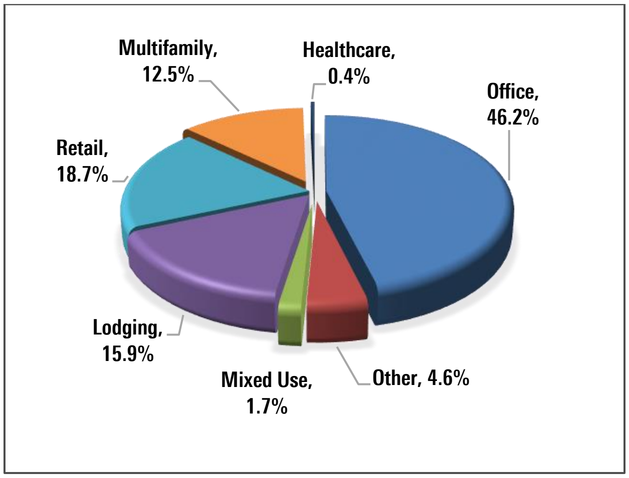
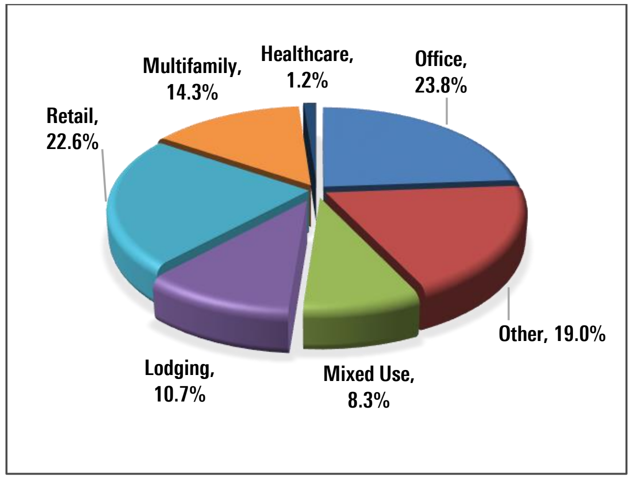


Chart 9 – Total Active Portfolio by Property Type (Asset Count)*



*Loans plus REO properties as of Dec. 31, 2016. Portfolio by property count does not total 100% because of rounding.

Asset-Review Process

Upon the transfer of loans to special servicing, asset managers require borrowers to sign prenegotiation letters before commencing workout discussions. Asset managers prepare loan resolution plans generally within 45 days of a loan transfer and prepare REO resolution plans within 45 days of taking title. Asset managers submit an updated asset status report, or asset business plan, which includes a net present value analysis of alternative resolution strategies, to obtain approval for specific terms of negotiated resolutions. The company's delegations of authority require a formal committee process for the approval of initial and updated business plans. The asset-management system tracks the status of approved resolutions. Once Midland completes its technology upgrade to the Asset Insight application toward year-end, asset managers will prepare their asset-resolution reports and cases directly in the new system. For CMBS assets, Midland monitors master servicers' outstanding advances against property values and expected recoveries and stated that it will routinely consult with them on their advancing decisions. As noted, Midland does not have separate loan recovery and REO departments. Its asset managers are accountable for the entire life cycle of their assigned specially serviced assets from initial loan transfer through REO sale. Although asset managers must have or develop expertise in managing all property types, senior management will assign the more challenging assets to the most experienced asset managers. The RES liaison group also provides support to asset managers when receiving assets from other servicers.

> **Assessment:** Midland has controlled and proactive asset-recovery practices. Midland's new asset-management system also should boost the company's data-management and reporting capabilities. Midland's decision to assign both loan and REO assets to the same asset manager is reasonable given its moderate volume of REO properties, the fact that most of its specially serviced portfolio has consisted of loans, and the effectiveness of this organizational approach to date.

REO Property Management

Midland has experience managing diverse and large-scale property types involving extensive property-management oversight. It uses single custodial trust accounts rather than separate rent collection and expense accounts for REO property management. The collateral-management services group reviews monthly property-manager reports for accuracy/variances, reconciles bank account activity, and assists asset managers and property managers with resolving any issues. The quality-control department also performs a review of REO properties annually. Through Midland's investor site supported through the servicing system, investors can view property-management reports and other REO property-performance information. Midland engages property managers using its own form of agreement and provides them with a standard reporting procedure manual. Although its REO portfolio volume has been moderate and has been shrinking, Midland has maintained its property-manager audit program. As of this report date, it had two such audits in process.

> **Assessment:** Midland's REO management function is soundly controlled as demonstrated by the company's monthly reporting standards for property managers, asset managers' oversight duties, and respective leveraging of the quality-control department and collateral-management services group for REO property compliance reviews and bank-account reconciliations. Midland's property-manager audit program further mitigates operational risk.

Vendor and Legal Oversight

Midland maintains a list of approved firms for appraisals, environmental and engineering assessments, legal counsel, property managers, and brokers. It also has a formal vendor-performance review process, conducts a request-for-proposal bidding process for certain engagements, and uses its own form agreements for most engagements. Using the asset-management system, support staff tracks the receipt of completed vendor assignments and work products. An external law firm with expertise in the environmental field also provides assistance in reviewing those reports. Midland adheres to PNC Bank's vendor-relationship management program, in which Midland's quality-control department conducts a risk assessment of each vendor's work product quality and capabilities including its data-security controls and technology. Midland has a five-person legal department to coordinate law firm engagements and support asset managers with their workout strategies and asset-resolution analyses.

> **Assessment:** Midland's process for engaging vendors is controlled and predominantly centralized. The company's process for qualifying, engaging, and tracking vendor assignments for special-servicing work, including the use of standardized forms for all vendors, adds efficiency and consistency, and is an industry best practice. Midland's leveraging of in-house legal resources to support asset management also mitigates risk.

Managing Conflicts of Interest

The company reported that it may selectively engage in fee-sharing arrangements to obtain or retain assignments. Midland documents these arrangements in a written agreement that is provided to the trustee for dissemination through its website or to the controlling certificateholder. The company also makes them available for review by any party to the transaction. Midland further noted that for new CMBS transactions, the offering document also discloses the agreement between Midland as special servicer and the controlling certificateholder. Midland does not have or use affiliated brokers on REO sales, nor does it use affiliates or related parties for property management or for resolution strategies other than note sales. Its stated practices are not to collect special-servicing fees from the trust that it also collects from borrowers or other sources, and not to collect amounts that exceed the trust contractual fee as outlined in the related servicing agreement. PNC Bank owns a minority interest in BlackRock, an investor in CMBS transactions including some that Midland serves as special servicer. However, Midland stated that, as a division of a regulated bank, it must comply with federal regulations in its interaction with affiliates, and as a result, must treat BlackRock as it would any third-party client.

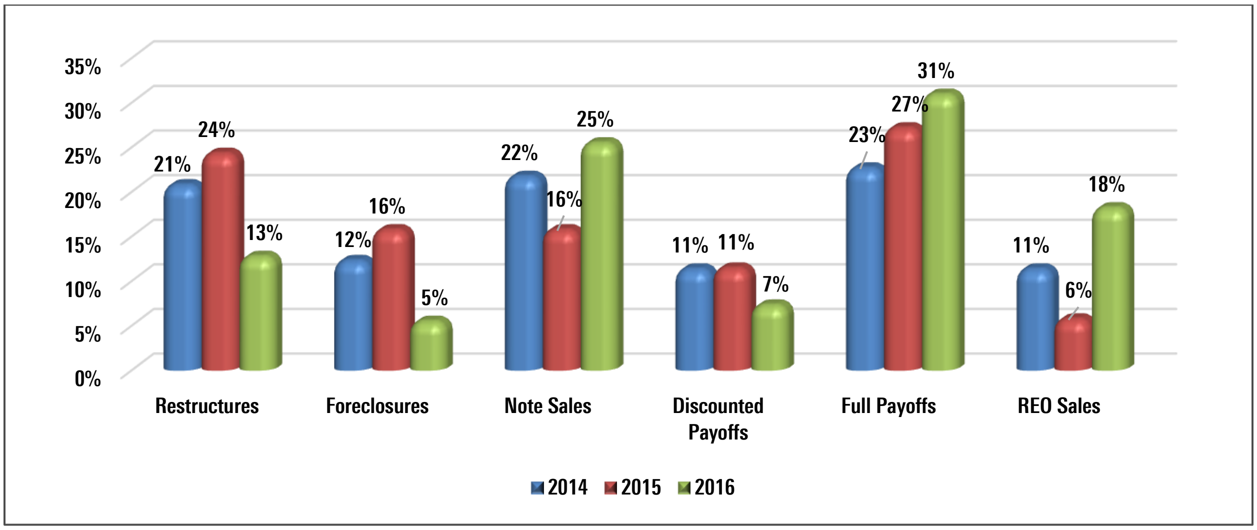
Assessment: Midland has sound policies to manage and inform interested parties of any potential conflicts of interests, including its practices to provide investors with information about fee-sharing arrangements and agreements with controlling classholders. It also appropriately addresses conflicts of interest by complying with Federal regulations in its interactions with BlackRock and by disclosing the sources of fees it receives as a special servicer.

Asset-Resolution and Recovery Performance

Asset-Resolution Volume and Disposition Methods

During 2016, Midland resolved 42 loans with an aggregate balance of $228.0 million through various disposition methods. It also sold 10 REO properties with average net proceeds of $6.8 million per sale. By asset count, approximately 87% of the resolutions were in CMBS transactions.

Chart 10 – Special-Servicing Resolution Type Percentages by Asset Count (2013-16)*



*Note sales include some loans that paid off at foreclosure or were liquidated through bulk sales.

Asset-Resolution Hold Times

As shown in the table below, Midland's average resolution times increased in 2016 for completed loan modifications, individual note sales, discounted payoffs, and REO sales. However, Midland's resolution times are in line with or shorter, by some comparisons, than the averages of most other Morningstar-ranked special servicers.

Table 10 – Midland Average Asset-Resolution Times (Months)*

	2016	2015	2014	Three-Year Average (unweighted)
Corrected/Restructured	18	6	13	12
Note Sales**	19	10	14	14
Discounted Payoffs	11	11	14	12
Full Payoffs	8	9	1	6
REO Sales	18	11	16	15
Completed Foreclosures	13	18	12	14

*Rounded to nearest whole month. Based on time Midland managed the asset. REO sales times are based only on the period Midland held the asset as an REO. **Includes only individual note sales.

Asset-Resolution Recovery Proceeds

While it has resolved many large-balance loans, Midland's asset recoveries, especially those involving REO properties, have included smaller-balance assets, some of which have been in CMBS or balance-sheet lenders' pools. The preponderance of poorly collateralized assets and other deficiencies have been factors limiting recovery potential of many assets. Midland also noted that its resolution of three distressed retail malls constrained total recoveries last year.

Table 11 – Asset Recovery Net Proceeds Versus Collateral Values and Unpaid Principal Balances

	2016 Entire Portfolio	2016 CMBS Only	2015 Entire Portfolio
Net Recovery Proceeds-to-Value (%)			
Individual Note Sales	*75.3	75.2	92.5
Loans Sold in Bulk Sale	N/A	N/A	**53.5
Discounted Payoffs	67.9	107.3	107.9
Paid Off at Foreclosure	N/A	N/A	101.5
REO Dispositions	101.3	101.3	105.3
Net Proceeds-to-UPB (%)			
Individual Note Sales	*89.5	89.5	68.6
Loans Sold in Bulk Sale	N/A	N/A	**49.0
Discounted Payoffs	93.3	74.2	80.5
Paid Off at Foreclosure	N/A	N/A	64.2

*Eleven of 14 sales had a UPB less than $1 million. **Based a non-CMBS bulk sale of small-balance loans with terms controlled by a third-party client.

Table 12 – Total Special-Servicing Loan Portfolio Activity (2016)

	Total Vol ($ Mil)	Total Loans	Total Properties	CMBS Vol ($ Mil)	CMBS Loans	CMBS Properties
Loan Portfolio at Beginning of Period	473.9	63	90	463.8	51	76
Loans Transferred Into Portfolio:						
Retransferred/Redefaulted Loans	0.3	2	2	0	2	2
Pre-Existing From Another Special Servicer	0	0	0	0	0	0
New Nonmonetary/Imminent Default Transfers	298.1	24	209	298.1	24	209
New Monetary Default Transfers	103.2	42	89	91.4	34	81
Total Transfers into Special Servicing	401.7	68	300	389.5	60	292
Loans Fully Resolved:						
Modified or Corrected Loans	(133.8)	(7)	(9)	(133.8)	(7)	(9)
Individual Note Sales	(44.0)	(14)	(15)	(43.8)	(13)	(14)
Discounted Payoffs	(4.4)	(4)	(3)	(1.5)	(3)	(2)
Removed through Rep and Warranty Claim Settlement	(1.1)	(1)	(10)	(1.1)	(1)	(10)
Full Payoffs	(45.8)	(17)	(17)	(44.0)	(12)	(12)
Total Loan Resolutions	(229.1)	(43)	(54)	(224.2)	(36)	(47)
Completed Foreclosures	(20.9)	(3)	(3)	(20.9)	(3)	(3)
Adjustments, Charged-Off Loans, and Other Transfers Out	(109.6)	(9)	(15)	(109.5)	(9)	(15)
Loan Portfolio at End of Period	516.0	76	318	498.7	63	303
Average Loan Size at End of Period	6.8			7.9		

Table 13 – Total REO Portfolio Activity (2016)

	Total Vol ($ Mil)	Total Properties	CMBS Vol ($ Mil)	CMBS Properties
REO Portfolio at Beginning of Period	*276.7	18	*267.8	18
Completed Foreclosures	20.9	3	20.9	3
REO Sold During Period	(67.7)	(10)	(67.7)	(10)
Other REO Transferred Out	(41.0)	(3)	(41.0)	(3)
Other Adjustments	(80.0)	0	(71.1)	0
REO Portfolio at End of Period	108.9	8	108.9	8
Average REO Size	13.6		13.6	

*The difference reflects a non-CMBS B note on the same property.

Table 14 – Total Special-Servicing Loan Portfolio Activity (2015)

	Total Vol ($ Mil)	Total Loans	Total Properties	CMBS Vol ($ Mil)	CMBS Loans	CMBS Properties
Loan Portfolio at Beginning of Period	633.2	73	92	519.8	62	73
Loans Transferred Into Portfolio:						
Retransferred/Redefaulted	17.8	10	10	8.7	5	5
New Nonmonetary/Imminent Default	311.4	23	48	305.8	17	33
New Monetary Default	205.7	35	42	193.0	16	20
Total Transfers Into Special Servicing	534.9	68	100	507.5	38	58
Loans Fully Resolved:						
Modified or Corrected Loans	(160.8)	(17)	(19)	(151.4)	(11)	(13)
Individual Note Sales	(79.5)	(6)	(7)	(78.6)	(5)	(6)
Bulk Note Sale	(2.0)	(5)	(5)	0	0	0
Discounted Payoffs (Excludes Note Sales)	(15.0)	(8)	(9)	(11.4)	(3)	(4)
Full Payoffs	(223.0)	(19)	(35)	(138.8)	(10)	(10)
Loan Paid Off at Foreclosure	(4.0)	(2)	(2)	(4.0)	(2)	(2)
Total Loan Resolutions	(484.3)	(57)	(77)	(384.2)	(31)	(35)
Completed Foreclosures	(154.0)	(11)	(10)	(145.0)	(10)	(10)
Adjustments, Charged-Off Loans, and Other Transfers Out	(55.9)	(10)	(15)	(34.3)	(8)	(10)
Loan Portfolio at End of Period	473.9	63	90	463.8	51	76

Table 15 – Total REO Portfolio Activity (2015)

	Total Vol ($ Mil)	Total Properties	CMBS Vol ($ Mil)	CMBS Properties
REO Portfolio at Beginning of Period	128.0	15	126.0	11
Completed Foreclosures	154.0	10	145.0	10
REO Sold During Period	(2.9)	(5)	(0.4)	(2)
Other REO Transferred Out	(1.0)	(1)	0.0	0
Other Adjustments	(1.4)	(1)	(2.8)	(1)
REO Portfolio at End of Period	*276.7	18	*267.8	18

*The difference reflects a non-CMBS B note on the same property.

Assessment: Midland demonstrates successful asset resolutions for CMBS and other clients. Its net recovery proceeds relative to collateral values and time frames in 2016 were generally in line with and often better than those of some other special servicers. The company's resolutions also reflect many assets with poor collateral and adverse characteristics. Taking this into consideration, Midland performed effectively to resolve loans and REO properties expeditiously to realize their maximum recovery potential.

Investor and Master-Servicer Reporting

Midland's special-servicing procedures cover its reporting requirements with respect to property-protection advances, realized losses, appraisal subordination entitlement reductions, and communicating with master servicers on asset-management decisions. As a CMBS special servicer, Midland typically provides its initial and updated asset status reports to the trustee. It stated that it also provides its final asset-resolution plans containing the specific terms and details of a workout or liquidation to the trustee. The surveillance department has a reporting team responsible for communication with investors and rating agencies (in compliance with SEC Rule 17g-5 requirements for post-2010 securitizations) regarding special-servicing portfolio activity and asset-level workout updates.

Assessment: Midland is well-experienced with special servicer-related reporting and has sound capabilities and controls to address CMBS and other investor requirements.

Ranking Definitions

The numerical scale of MOR CS1 to MOR CS4 is defined as follows:

1	Exceeds prudent loan servicing standards in key areas of risk
2	Demonstrates proficiency in key areas of risk
3	Demonstrates compliance in key areas of risk
4	Demonstrates lack of compliance in one or more key areas of risk

A servicer assigned a ranking of at least MOR CS3 is deemed to comply with what we view as the minimum prudent loan servicing standards and requirements for the servicer's operational category and role. For access to Morningstar's Operational Risk Assessments of Commercial Servicers: Methodology and Process and other published reports, please visit www.morningstarcreditratings.com.

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