VIEW POINT

DIGITALIZATION OF THE MORTGAGE SERVICING FUNCTION

Abstract

Cost containment is a priority for mortgage loan servicing. Mortgage servicing costs in the US have increased dramatically over the years for performing and non-performing loans. The COVID-19 pandemic has also further accelerated the pace of digitalization in the mortgage market. Servicers that adopt new technologies like RPA, IOCR, and AI/ML based data analytics solutions are realizing dramatic efficiencies. This paper examines various challenges that the US mortgage servicers face and a few possible digital transformation use-cases in this space.

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How to tell if a nudge is a sludge

Since the great recession in 2008, mortgage industry in the US had to grapple with ever-increasing operational expenses and the need for improved customer experience. Mortgage servicing costs have increased by almost 200% and 350% for performing and non-performing loans respectively. It now costs a mortgage servicer approximately $2000-$2500 in the US to service a delinquent loan[1]. Non-banks such as Quicken Loans, Loan Depot, and Lending Tree have embraced digitization and are much ahead of some big shot traditional banks in the US. For example, Quicken Loans is the 3rd largest residential mortgage lender in the US, ahead of traditional banks such as Citigroup and Bank of America.

The mortgage value-chain

The entire mortgage value-chain consisting of origination, core servicing and default servicing is depicted below.

Mortgage Origination

Acquisition → Application → Processing → Underwriting → Closing & Funding → Post-closing

Mortgage Core Servicing

Loan Boarding Audit → Escrow Analysis → Cashiering → Tax Research → Customer Service → Credit Bureau Disputes → Mortgage Insurance → Hazard Insurance → Special Loans

Mortgage Default Servicing

Collections → Loss Mitigation → Foreclosure & REO → Bankruptcy

*Unlike Mortgage Origination, In the Mortgage Core Servicing function the sub processes don't follow a sequential order as depicted in the diagram.

[1] https://www.lab49.com/insights/the-us-mortgage-servicing-industry-has-reached-a-technological-tipping-point/

Triad of challenges

Below are some of the major challenges which are prevalent across the US mortgage servicing industry:

- **Impact of regulation:** Lending and loan servicing costs have increased due to regulatory compliance like RESPA, TILA, HMDA, and FCRA, instituted to curb predatory lending practices and increase borrower confidence. The fear of non-compliance has led to more work being performed in the back-office, and regulations have led to a 2-3x costs for servicing performing loans.
- **Lack of efficiency and accuracy due to manual effort:** Most of the activities in mortgage servicing today includes data entry, data validation and workflow management activities, which are done manually. This leads to inefficiency and lack of accuracy. Automation improves efficiency by reducing the QC team headcount and improves accuracy dramatically.[2]
- **Lack of workflow management solutions:** In most of the mortgage servicing processes like customer service, tax research, credit bureau disputes, and escrow analysis, there is a need for a workflow management solution to manage tasks, assign tasks to team members, and update status. Currently most servicers use excel sheets to manage workflow and this leads to increase in the average handling time (AHT), decrease in accuracy, and low agent experience.

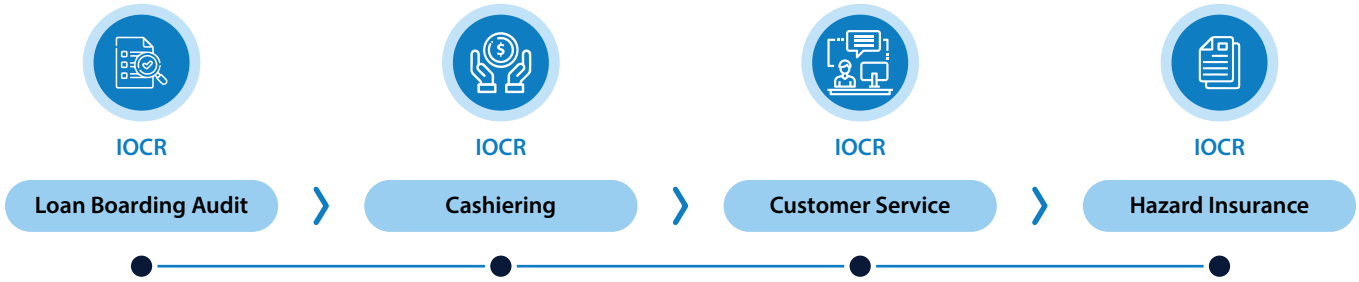
[2] https://www.lab49.com/insights/the-us-mortgage-servicing-industry-has-reached-a-technological-tipping-point/

Digital transformation use-cases

Mortgage servicing is ripe for digital transformation either using robotic process automation (RPA), intelligent optical character recognition (IOCR) solution, or using analytics. Several large mortgage servicers in the US have either partially or fully automated some of the core servicing processes like escrow analysis, customer service, credit bureau disputes, and payoff statement generation.

1. **Digital transformations solution in mortgage core servicing processes:** Today, most servicers realize the importance of implementing IOCR solution as part of the servicing processes such as loan boarding audit, cashiering, customer service, and special loans, which can result in cost optimization, improvement in accuracy and improved operational efficiency. The IOCR solution needs to be integrated with document repositories like FileNet and the servicing platform using application programming interfaces (APIs). This will effectively transform the current "stare and compare" manual process performed by agents in the below mentioned core servicing processes.

   The below diagram illustrates the use-cases of implementing IOCR solution across core servicing processes.



IOCR is often used to index documents, scan and compare the data from documents stored in the document repository with the data from servicing platforms, and identify the discrepancies.

Cheques can be scanned & signatures can be validated using IOCR solution to improve accuracy.

IOCR is also used to identify incoming servicing documents via barcodes - primarily forms that have been mailed to customer for return (i.e., third party authorization, name change, address change, etc.)

IOCR solution can be used by large banks wherein agents can match the digital data present in servicing platforms against flood certificates and other hazard insurance documents present in the document repository.

Automation possibilities in Core Servicing: In almost every process, there is a potential opportunity for automation using RPA or scripts. Below are a few automation use-cases possible in core servicing domain.

Process/ domain mapping	Opportunity/ use-case description	Digital lever

Escrow analysis	• The escrow analysis is performed on all escrow accounts at least once every 12 months
	• Escrow analysis process is ripe for automation; almost all the sub processes can be automated using RPA/ scripts. This includes:
	  • Escrow balance refund (overage/ shortage) for non-escrowed loans
	  • Task to check if loan has lender-placed insurance (LPI) in escrow account
	  • Shortage coupon discount given to borrower to remove shortage post receipt of payments from them
	  • Refund collections
		RPA/ Scripts

Customer service	• RPA can be used for most of the customer service processes like change request, validation of third-party authorization process, death of borrower, and credit inquiry letter process. RPA extracts information from customer service request ticket, identifies change, and updates the servicing platform.	RPA/ Scripts
Credit bureau disputes	• Partial automation of some of the rule-based tasks in both direct and indirect credit bureau dispute process can be automated • Data extraction from servicing platforms like MSP and updation in e-Oscar using VB scripts/ macros • Automation for saving the copy of the completed automated credit dispute verification (ACDV) form/ automated universal data (AUD) form and uploading in the case management tool • Automated letter generation to borrower for direct disputes process	RPA/ Scripts

Automation in letter generation/ letter audit in core servicing: Comprehensive automated letter generation/ letter audit solutions are available as a wrapper solution and these can be integrated with servicing platforms like mortgage servicing platform (MSP) for processes like escrow analysis, credit bureau disputes, customer service, and special loans process.

Data analytics and AI/ML solutions in core servicing: Mortgage servicers already have large amount of customer data available with them. Using the data sets like customer demographic data, payments data, claims data, and weather data, it is possible to build data analytics solutions for core servicing which will help improve efficiency, manage risks as well as improve profit margin. Below are a few examples:

- Using the customer data, servicers can predict the customers most likely to move to the regulatory bodies like CFPB, and therefore better manage risks as well as the bank's reputation
- Determining the list of credible customers who pay off their loans before the maturity date for potential refinancing opportunities. Hence existing customer will be targeted for better refinance opportunities leading to increase in revenue and customer retention
- Detecting fraud in mortgage applications with analytical models using property appraisal data, income data, etc.
- Forecasting the expected volume of mortgage insurance claim requests based on the customer data which can help banks in gaining better control and visibility on expected claims

2. **Digital transformations solution in Mortgage Default Servicing processes:** The default servicing value-chain starts once the customer has stopped making payments for their mortgage loans and consists of processes like collections, loss mitigation, foreclosure, and bankruptcy.

Implementation of IOCR solution as part of the default servicing processes like pre-referral, paid loans, and loss mitigation (document review) will result in cost optimization, improvement in accuracy, and improved operational efficiency.

A few automation use-cases in default servicing value-chain are as below:

Process/ domain mapping	Opportunity/ use-case description	Digital lever
Loss mitigation (Document review team)	• RPA can be used for checking payment deferrals in case of borrower hardship, identifying if loan has deferral eligibility, and closing the workflow based on the business rules	RPA
Loss mitigation (Income calculation/ proof of income)	• Income calculation and debt calculation can be automated using RPA	RPA
Foreclosure (File referred to attorney)	• Teams generally use Black Knight Financial Services (BKFS) desktop for referring file to attorney, and automation can be used to update the data from servicing platforms like MSP into BKFS desktop for multiple loans. • (Servicemembers Civil Relief Act (SCRA) review validations	RPA
Bankruptcy opening	• Automation can be used for setting up the bankruptcy workstation, putting foreclosure on hold, and updating MSP based on Lexis Nexis details	RPA/ scripts
Bankruptcy re-instatement	• If the bankruptcy is dismissed, then customers plead guilty and request to be moved back to bankruptcy. When they come back to bankruptcy, it is called re-instatement. Automation can be used to setup the workstation by following certain rule-based steps/ activities	RPA / scripts
Bankruptcy payment change notification (PCN)	• In case there is a change in the payment amount of the customer as per bankruptcy plan, bank needs to notify the customer • Automation to update the details of the 410F form in BKFS desktop to file with Attorney so that it can be taken to court	RPA/ Scripts

Data analytics and AI/ML solutions in collections domain: There are analytical solutions available in the market, which can be integrated with existing collections platform/servicing systems. These can also provide insights and recommendations to improve operational efficiency, reduce delinquency rates, etc.

- Using early delinquency prediction models accurately, can help banks create proactive outreach plans for their customers and reduce delinquencies
- It can help banks to prioritize which customer to call, the best day and time to call, and send reminders based on historical payment data from servicing systems
- It also leverages credit history, customer behavioral scores, and macroeconomic factors for accurate segmentation and prioritization of delinquent accounts. It helps debt collectors reduce delinquency rates and charge-offs, improve operational efficiencies, and enhance customer experience. It can also provide recommendations into the right resolution strategy which ensures the most desired outcomes for both the borrower and the lender.
- The following collections KPIs are impacted significantly:
  - Dollars collected per hour
  - Promises made as a percentage of right party contacts (RPC)
  - Promises kept per hour
  - Agent productivity
- Use of full-fledged high accuracy AI/ML based default prediction system helps identify customers who can move to foreclosure, and accordingly, work with them proactively. This is based on Loan-to-value ratio, past payments data, employment sector data etc.

The way ahead

Cost containment is a priority for mortgage loan servicing. To get there, lenders that adopt new technologies like RPA, IOCR, and AI/ML based data analytics solutions are realizing dramatic efficiencies. A process that used to take hours of human interpretation can now be streamlined and done in seconds with enhanced accuracy. Those firms that leverage technology for both sides of the coin — consumer-facing mortgage originations as well as internal operations in mortgage servicing, will stand out from the crowd.

Authors

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Navonil is a Senior Consultant with over 9 years of industry experience in various roles in the Banking and financial services domain like Consulting, Pre-Sales and Business Development, Solution architect & Delivery. His current role involves working on Consulting engagements in the Mortgage domain, identifying gaps and proposing digital solutions to address those gaps. Prior to this role, Navonil has played the role of a Cloud and Infrastructure solution architect, Banking solution design consultant managing bids in the Financial Services domain.

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