Issuer Operational Performance Profile (IOPP)

U.S. Department of Housing and Urban Development (HUD)

Ginnie Mae, Office of Issuer & Portfolio Management Version 1.0





Application Details

Application Information	Description
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Ginnie Mae SVP, Owner	
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1 INTRODUCTION

The purpose of this manual is to provide Issuers with clear, step-by-step guidance on accessing, navigating, and utilizing the **Issuer Operational Performance Profile (IOPP) application**, including its key features, reports, and metrics.

Below are links that address common topics that pertain to the IOPP application in the MyGinnieMae Portal:

- How to Register for an Account in MyGinnieMae
- Refer to the MyGinnieMae Getting Started User Manual for System Prerequisites
- Refer to IOPP Overview Page

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1.1 Application Overview

The Issuer Operational Performance Profile (IOPP) is a web-based application designed to help Issuers monitor and evaluate their operational and default performance in comparison to their peers. The IOPP tool provides actionable insights and benchmarking data, supporting Issuers in meeting Ginnie Mae's expectations and improving their own performance management.

The IOPP tool was designed to achieve these objectives:

- Enable our Issuer partners to better understand Ginnie Mae's expectations and what is important to Ginnie Mae.
- Provide Issuers with a framework and methodology from which they can gauge their effectiveness against a pre-determined set of Ginnie Mae expectations (metrics) as well as how they rank against their peers.
- Drive internal consistency in monitoring the business activities across the broader population of Ginnie Mae Issuers and lay the basis for providing constructive feedback to Issuers.

• Improve overall Issuer management through integrated and formalized processes and procedures that define and measure participant performance in Ginnie Mae programs.

The IOPP application is part of Ginnie Mae's Reporting and Feedback System (RFS) and is accessible through the MyGinnieMae (MGM) Portal by authorized users.

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1.2 Business Workflow

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2 USING THE APPLICATION

2.1 MyGinnieMae (MGM) Functional Roles - Accessing the Application

To access the IOPP application, users must first be <u>registered</u> through the MyGinnieMae (MGM) Portal. Registration is initiated and facilitated by the Organization Administrator within each organization (formerly known as Security Officers or Enrollment Administrators). The Organization Administrator is responsible for inviting users to register and coordinating appropriate access based on the user's job responsibilities. The table below lists the MyGinnieMae (MGM) functional roles required to access the IOPP application.

- SF Compliance & Oversight User
- SF Relationship User
- SF Compliance & Monitoring Authorized Signer
- MF Compliance & Oversight User
- MF Relationship User
- MF Compliance & Monitoring Authorized Signer
- HECM Compliance and Oversight User
- HECM Compliance & Monitoring Authorized Signer
- HECM –Agency Relationship User
- SS Compliance and Oversight User

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2.2 Navigating the Application

2.2.1 Overall Navigation and Display

- 1. Filter between Absolute and Relative Tier scores using the drop-down menu in the upper left corner of the page.
- 2. Select the desired reporting period in the upper right section of the page.
- 3. Navigate between program types using tabs at the bottom of the page.
- 4. Monthly and quarterly trend lines for scores are shown on a single graph.
- 5. The report that is currently being viewed can be printed using the print icons in the upper left corner of the page.
- 6. To print the Summary, Operational, Default, and Metrics Details pages together, use the Batch Print button in the upper right corner of the page.
- 7. To select a report to view, use the tabs with the report names at the top of the page.

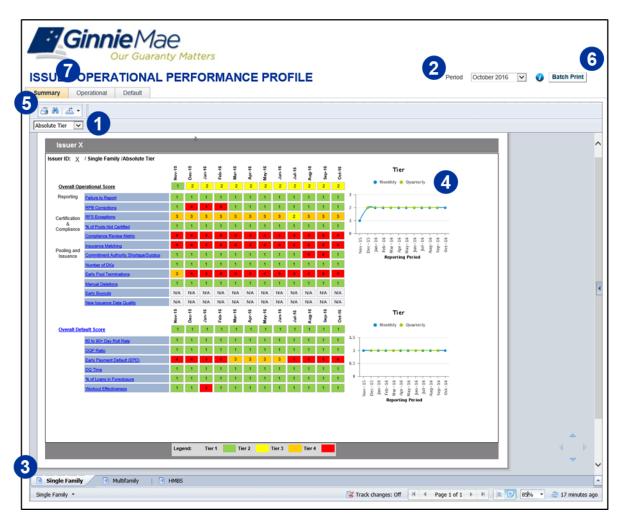


Figure 1 - Overall Navigation and Display

2.2.2 IOPP: Absolute vs. Relative Tier Scores

Absolute Tier scores are calculated based on benchmarks defined by Ginnie Mae. Absolute Tier scores for a given Issuer are independent of all other Issuers. In IOPP dashboards, Absolute Tier scores are displayed using color coding.

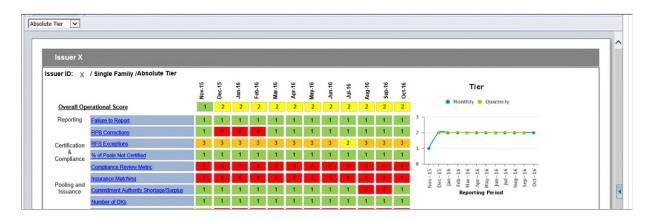


Figure 2 - Absolute Tier Scores

Relative Tier scores are calculated based on other Issuer scores within the same peer group. Tier cutoffs are determined by the quartiles of Issuer scores. Relative Tier scores are not displayed in color.

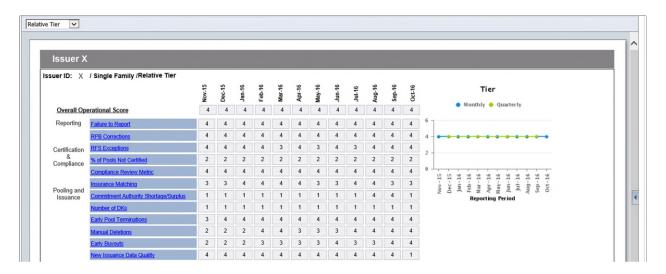


Figure 3 - Relative Tier Scores

2.2.3 Summary Dashboard

The Summary Dashboard displays the overall performance of the Issuer on the tier for each Operational and Default Metric. This includes the overall Operational and Default scores.

To view the Summary Dashboard:

- 1. The Summary page appears upon logging in to IOPP. The Program Type defaults to display Single Family. To change the Program Type, select the appropriate tab (Single Family, Multifamily, or HMBS). The applicable metrics will populate, including the overall operational score and overall default score.
- 2. Scoring defaults to display Absolute Tier scores. To change the view to display Relative Tier scores, use the drop-down in the upper left corner of the page.
- 3. On the graph, the tier values can be viewed by both monthly and quarterly trends.
- 4. Hover over each metric to view the metric definition.
- 5. Select each metric to view intermediate calculations leading to tier values. Select "Overall Operational Score" or "Overall Default Score" to view details for all operational or default metrics.
- 6. Hover over each tier in the legend to view the criteria for the tier.
- 7. Press the 'Print' button to generate a PDF file of the Summary page, which can be saved or printed.

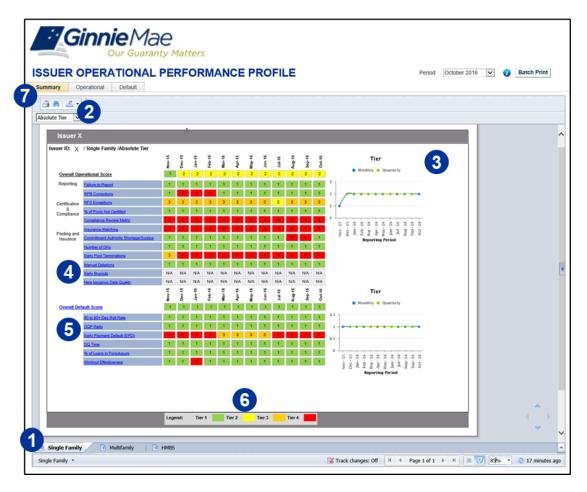


Figure 4 - Summary Dashboard

2.2.4 Operational Dashboard

The Operational Dashboard displays the overall tier and metric value for all Operational Metrics. These include Platinum Standard average, Peer Group average, and Issuer metric values.

To view the Operational Dashboard:

- 1. Select the 'Operational' tab at the top of the page.
- 2. The Program Type defaults to display Single Family. To change the Program Type, select the appropriate tab at the bottom of the page (Single Family, Multifamily, or HMBS). The applicable metrics will populate for the Issuer, as well as the Peer Group and Platinum Standard. See appendix for these calculations.
- 3. Scoring defaults to display Absolute Tier scores. To change the view to display Relative Tier scores, use the drop-down in the upper left corner of the page.
- 4. On the graph, the Tier values can be viewed by both the metric trend and the tier trend, by either month or quarter.

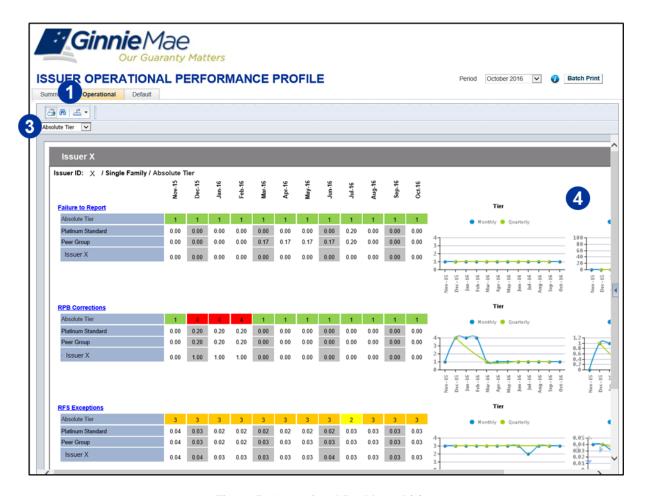


Figure 5 - Operational Dashboard (1)

5. Hover over each metric to view the metric definition.

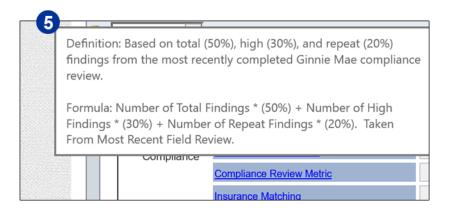


Figure 6 - Operational Dashboard (2)

- 6. Select each metric to view intermediate calculations leading to tier values.
- 7. Hover over each tier in the legend to view the criteria for the tier.
- 8. Press the 'Print' button to generate a PDF file of the Operational Metrics dashboard.

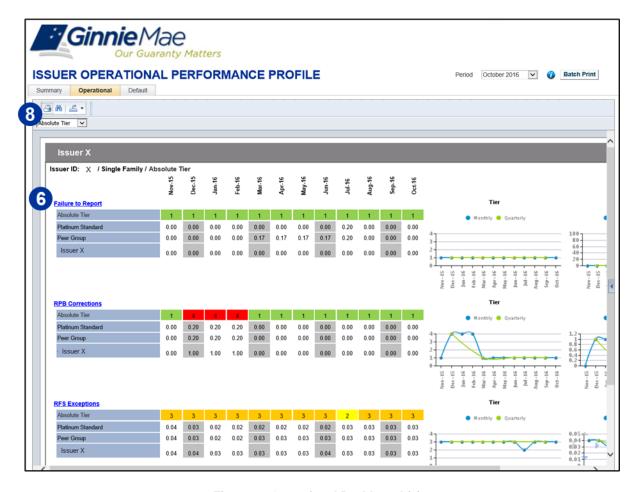


Figure 7 - Operational Dashboard (3)

2.2.5 Default Dashboard (SF Issuers Only)

The Default Dashboard displays the overall tier and metric value for Default Metrics. These include the Platinum Standard, Controlled Peer Group average, and Issuer metric values.

To view the Default Dashboard:

- 1. Select the 'Default' tab.
- 2. Default metric values for the Issuer will be displayed for the 12-month period. Additionally, Platinum Standard and Controlled Peer Group average will be shown. See appendix for calculations.
- 3. On the graph, the tier values can be viewed by both the metric trend and the tier trend, by either month or quarter.
- 4. Hover over each metric to view the metric definition.
- 5. Select each metric to view intermediate calculations leading to tier values.
- 6. Hover over each tier in the legend at the bottom of the page to view the criteria for the tier.
- 7. Press the 'Print' button to generate a PDF file of the Default Metrics dashboard.

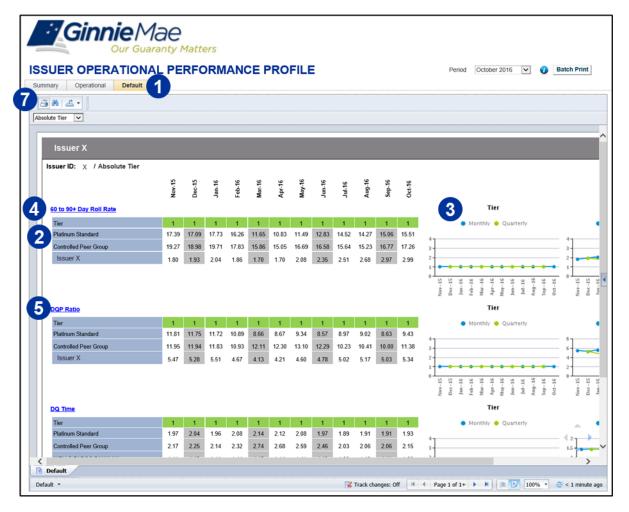


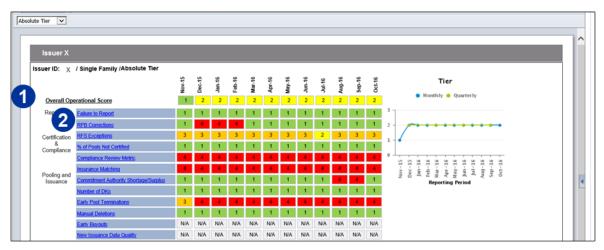
Figure 8 - Default Dashboard

2.2.6 Metric Details

Metric Details allow users to view the intermediate scores leading to overall metric calculations.

To view Metric Details:

- 1. View all operational or default metric details on a single page:
 - A page containing all operational metric details can be accessed by selecting "Overall Operational Score" from the Summary page.
 - A page containing all default metric details can be accessed by selecting "Overall Default Score" from the Summary page.
- 2. View details for a single metric:
 - A page containing the metric details for one given operational metric can be accessed by clicking on that individual metric either on the Summary or Operational Metrics page.
 - A page containing the metric details for one given default metric can be accessed by clicking on that individual metric either on the Summary or Default Metrics page.



Metric Details Displayed upon clicking "RPB Corrections" Hyperlink:

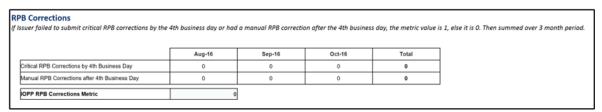


Figure 9 - Metrics Details

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3 METRIC DEFINITIONS

3.1 Operational Metrics

Metric	Definition	Formula	Applicable Program(s)
Failure to Report	Failure to report remaining principal balance (RPB) or 10D through GinnieNet or to report Monthly Investor Reporting through RFS	The number of times Issuer fails to report RPB, 10D, or Monthly RFS Pool Reporting over the past 6 months	SF, MF, HMBS
RPB Corrections	Binary metric for whether an Issuer has failed to submit critical RPB corrections timely or has had to submit manual RPB corrections after the 4th business day in at least one month during a 3-month rolling period	If an Issuer has failed to submit critical RPB corrections by the 4th business day in at least one month in the past 3 OR if Issuer has had a manual RPB correction after the 4th business day in at least one month in the past 3 months, then the metric is 1. Else it is 0	SF, MF, HMBS
RFS Exceptions	The percentage of loans and pools with exceptions from RFS reporting	(Number of Pools with Errors and Critical Exceptions / Number of Active Pools) * (30%) + (Number of Loans with Errors and Critical Exceptions / Number of Active Loans) * (30%) + (Number of Pools with High, Medium and Low Exceptions / Number of Active Pools) * (20%) + (Number of Loans with High, Medium and Low Exceptions / Number of Active Loans) * (20%)	SF, MF
HRA Exceptions	The percentage of loans and pools with exceptions from HRA reporting	(Total # of Pool Exceptions/ Pools Reported) *(50%) + (Total # of Loan Exceptions/ Loans Reported) *(25%) + (Total # of Participation Exceptions/ Participations Reported) *25%)	HMBS

Metric	Definition	Formula	Applicable Program(s)
Percentage of Pools not Certified	The percentage of polls is not certified after 12 months	Number of Pools Issued More Than 12 Months Ago Not Certified / Number of Pools Issued More Than 12 Months Ago	SF, HMBS
Compliance Review Metric	Based on total (50%), high (30%), and repeat (20%) findings from the most recently completed Ginnie Mae compliance review	Number of Total Findings * (50%) + Number of High Findings * (30%) + Number of Repeat Findings * (20%). Taken From a Most Recent Field Review	SF, MF, HMBS
Commitment Authority Shortage/Surplus	Commitment Authority outstanding compared to 4-month usage rate	Commitment Authority Available / Commitment Authority Used Over Past 4 Months	SF, HMBS
Insurance Matching	The percentage of loans that are found in agency endorsement guarantee data within 7 to 12 months of pool issuance	Number of Matched Loans in Pools Issued 7 to 12 Months Ago / Number of Loans in Pools Issued 7 to 12 Months Ago	SF, HMBS
Single Family Prepayment Rate	The annualized percentage of the existing mortgage pool is expected to be prepaid in a year	N/A	SF
Number of Don't Knows (DKs)	The number of Don't Knows over a 12-month period. A Don't Know is a failed transaction	Number of DKs in Past 12 Months / Number of Pools Issued in Past 12 Months	SF, MF, HMBS
Early Pool Terminations	The number of Early Pool Terminations over a 12- month period	Number of Early Pool Terminations in Past 12 Months / Number of Pools Issued in Past 12 Months	SF, HMBS
Manual Deletions	Pools require a manual removal from GinnieNet	Number of Manual Deletions in the Past 3 Months	SF, MF, HMBS

Metric	Definition	Formula	Applicable Program(s)
	due to varying circumstances		
Failure to Purchase Participations when Mandatory Event Occurs	Number of participations related to a HECM not purchased when the outstanding principal balance of the related HECM equals or exceeds 98% of the maximum claim amount	Number of Loans with UPB Greater Than 98% of Maximum Claims / Number of Loans	HMBS
Early Buyouts	The number of early buyouts from loans liquidated was issued within the past 6 months	Number of loans liquidated due to reason codes 1, 5, and 6 from loans that were issued within the past 6 months / Total issuances over the past 6 months	SF
New Issuance Data Quality	The number of data quality instances with loans issued in the past 6 months	Number of pooled loans issued in the most recent 6 months where any of the following apply: • Upfront MIP Rate is Invalid (FHA, Loan Purpose = 1 only) PLUS • Annual MIP Rate is Invalid (FHA, Loan Purpose = 1 only) PLUS • Credit Score in (100, 200) where Loan Purpose = 1 PLUS and Agency is not PIH • Debt to Income (DTI) > 65% where Loan Purpose = 1 PLUS • Debt to Income (DTI) < 10% where Loan Purpose = 1 PLUS • LTV > CLTV PLUS • LTV > 125 PLUS • LTV < 10 PLUS • CLTV < 200 PLUS • CLTV < 10 / Number of pooled loans issued in the past 6 months	SF, HMBS
Minimum Net Servicing Fee	Minimum Net Servicing Fee is a binary metric that determines if an Issuer	(Sum (Weighted Gross Servicing Spread)/sum (UPB)) – GFEE Weighted Gross Servicing	SF

Metric	Definition	Formula	Applicable Program(s)
	has a weighted average servicing spread of at least 25 bps for their Ginnie Mae portfolio comprised of forward, fixed-rate, Single-Family loans	Spread = (Mortgage Rate – Security Rate) * UPB	
Disclosure Edits	Number of database corrections over a 3-month period	Number of Corrections in Past 3 Months	MF
New Pool Errors	Number of errors at the time of pool submission over a 3-month period	Number of Errors at Time of Pool Submission in Past 3 Months	MF
Insufficient Commitment Authority	Number of pooling errors due to insufficient commitment authority over a 3-month period	Number of Pooling Errors Due to Insufficient Commitment Authority in Past 3 Months	MF
Late Pool Recertifications	Multifamily pools passed due to recertification following a servicing or document custodian transfer	Number of Multifamily pools currently past due for re-certification	MF

Table 1 - Operational Metrics

3.2 Default Management Metrics (SF Issuers Only)

Metric	Definition	Formula
60 to 90+ Day Roll Rate	The percentage of loans that move from at least 60 days delinquent to 90 or more days delinquent within a given period based on a rolling 3-month average	Rolling 3 Month Average of (Number of DQ60 that Transition to DQ90 + / Number of Initial Period DQ60 Loans)
DQP Ratio	Amount of cumulative delinquent principal and interest (P&I) divided by monthly P&I for all pooled loans	Sum of Cumulative Delinquent P&I / Sum of Monthly P&I
Early Payment Default (EPD)	The percentage of loans that become 60 days or more delinquent in the first 6 months	Number of DQ60 + Loan in Pools Issued within Past 6 Months / Number of Loans in Pools Issued within Past 6 Months
DQ Time	The average number of months that loans remain delinquent from the point of the last paid installment	Average of (Reporting Date - Last Payment Date) for all Delinquent Loans
Percentage of Loans in Foreclosure	The percentage of loans with a foreclosure status	Number of Foreclosed Loans in Pools / Total Number of Loans in Pools
Workout Effectiveness	The percentage of loan modifications is currently after 6 months	Number of Current (Non-Delinquent) Loan Modifications Pooled in Past 6 Months / Number of Total Loan Modifications Pooled in Past 6 Months

Table 2 - Default Management Metrics

3.3 Peer Groups

3.3.1 Single Family Program

Single Family Issuers are grouped into nine groups based on institution type and total portfolio size as measured by total loans.

Group	Definition
Very Small – Depository	Depository issuers with less than or equal to 2,500 loans
Very Small – Non-Depository	Non-Depository issuers with less than or equal to 2,500 loans
Small – Depository	Depository issuers with greater than 2,500 and less than or equal to 10,000 loans

Group	Definition
Small – Non-Depository	Non-Depository issuers with greater than 2,500 and less than or equal to 10,000 loans
Medium – Depository	Depository issuers with greater than 10,000 and less than or equal to 75,000 loans
Medium – Non-Depository	Non-Depository issuers with greater than 10,000 and less than or equal to 75,000 loans
Large – Depository	Depository issuers with greater than 75,000 and less than or equal to 400,000 loans
Large – Non-Depository	Non-Depository issuers with greater than 75,000 and less than or equal to 400,000 loans
Mega	Issuers with greater than 400,000 loans
Very Small	Less than or equal to \$250 Million
Small	Greater than \$250 Million and less than or equal to \$1 Billion
Medium	Greater than \$1 Billion and less than or equal to \$5 Billion
Large	Greater than \$5 Billion

Table 3 - Peer Groups (Single Family)

3.3.2 Multifamily Program

Multifamily Issuers are grouped into four groups based on portfolio RPB.

Group	Definition	
Very Small Less than or equal to \$250 Million		
Small	Greater than \$250 Million and less than or equal to \$1 Billion	
Medium	Greater than \$1 Billion and less than or equal to \$5 Billion	
Large	Greater than \$5 Billion	

Table 4 - Peer Groups (Multifamily)

3.3.3 Weighting of Metrics for Overall Operational Scores

	Metric	Weight (SF)	Weight (HMBS)	Weight (Multifamily)
	Failure to Report		10%	
	RPB Corrections		25%	
Donorting	RFS Exceptions	5%	n/a	10%
Reporting	HRA Exceptions	n/a	5%	n/a
	Disclosure Edits	n/a	a	10%
	New Pool Errors	n/a	a	15%
	Percentage of Pools not Certified	109	%	n/a
Certification	Compliance Review Metric			
and Compliance	Failure to Purchase Participations when Mandatory Event Occurs	n/a 10%		n/a
	Insurance Matching	10%		n/a
Compliance	Compliance Review Metric	n/a	а	10%
	Commitment Authority Shortage/Surplus	5%	n/a	
	Number of Don't Knows (DKs)	10%	10% 5%	
Pooling and Issuance	Early Pool Terminations	10% 5%		n/a
	Manual Deletions	5%		5%
	Insufficient Commitment Authority	n/a	10%	
	Late Pool Re- certification	n/a	a	5%

Table 5 - Weighting of Metrics for Overall Operational Scores

3.3.4 Weighting of Metrics for Overall Default Scores (SF Issuers Only)

	Metric	Weight (SF)
	60 to 90+ Day Roll Rate	14.167%
	DQP Ratio	24.167%
Default Management (SE Only)	Early Payment Default (EPD)	14.167%
Default Management (SF Only)	DQ Time	14.167%
	% of Loans in Foreclosure	19.167%
	Workout Effectiveness	14.167%

Table 6 - Weighting of Metrics for Overall Default Scores

4 METHODOLOGY

The IOPP application uses a comprehensive methodology to score and rank Issuers based on their operational metrics. This section outlines the relative and absolute tier scoring methodologies used by the application.

4.1 Relative Tier Scoring Methodology

Relative Tier scores are calculated based on other Issuer scores within the same peer group. Tier cutoffs are determined by the quartiles of Issuer scores.

4.1.1 Operational Metric Relative Tier Calculation

Prior to the tier calculation, the individual metric score is calculated for each Issuer in each peer group.

- In this example, we will consider Issuer X and its tier ranking for the Compliance Review Metric.
- The Compliance Review metric is calculated as 50% of an Issuer's total findings, plus 30% of an Issuer's "High" findings, plus 20% of an Issuer's repeat findings for a given month in its most recent field review. Issuer X has a metric value of 3.6.

Issuer Number	Issuer Name	High Findings	Total Findings	Repeat Findings	Compliance Review Value
1234	IssuerX	2	6	0	3.6
1111	IssuerA	3	8	0	4.9
2222	IssuerB	2	7	0	4.1
3333	IssuerC	4	10	0	6.2
4444	IssuerD	0	9	1	4.7
5555	IssuerE	3	8	4	5.7
6666	IssuerF	1	5	3	3.4
7777	IssuerG	2	9	5	6.1
8888	IssuerH	2	8	1	4.8
9999	Issuerl	2	6	0	3.6
1010	IssuerJ	0	0	0	0
1212	IssuerK	3	8	3	5.5

Table 7 - Metric Scores

Note: all values in this example are hypothetical

Following the metric score calculation, tiers are calculated within a peer group.

- An Issuer's relative tier ranking is determined by its relative performance within its peer group.
- Issuers in the same peer group are sorted by metric value, from the worst metric value to best metric value.

lssuer Number	Issuer Name	Compliance Review Value
3333	IssuerC	6.2
7777	IssuerG	6.1
5555	IssuerE	5.7
1212	IssuerK	5.5
1111	IssuerA	4.9
8888	IssuerH	4.8
4444	IssuerD	4.7
2222	IssuerB	4.1
1234	IssuerX	3.6
9999	Issuerl	3.6
6666	IssuerF	3.4
1010	IssuerJ	0

Table 8 - Peer Group

Next, the peer group is bucketed into 4 tiers, with 25% of the peer group in each tier.

- Since there are 12 Issuers in the peer group, each tier initially contains 3 Issuers.
- The 3 Issuers with the worst metric values are placed into tier 4, the next 3 Issuers into tier 3, and so on.
- Issuer X is initially placed into tier 2.

Issuer Number	Issuer Name	Compliance Review Metric Value	Tier
3333	IssuerC	6.2	4
7777	IssuerG	6.1	4
5555	IssuerE	5.7	4
1212	IssuerK	5.5	3
1111	IssuerA	4.9	3
8888	IssuerH	4.8	3
4444	IssuerD	4.7	2

Issuer Number	Issuer Name	Compliance Review Metric Value	Tier
2222	IssuerB	4.1	2
1234	IssuerX	3.6	2
9999	Issuerl	3.6	1
6666	IssuerF	3.4	1
1010	IssuerJ	0	1

Table 9 - Tier Assignment

If any Issuer has the same metric value as an Issuer in a higher tier, then that Issuer is moved to the higher tier.

- Issuer X has the same metric value as Issuer I, so it is moved from tier 2 to tier 1.
- The "IOPP Displayed Tier" column shows the tiers for the Compliance Review Metric that would be displayed on the IOPP tool.

Issuer Number	Issuer Name	Compliance Review Metric Value	Tier	IOPP Displayed Tier
3333	IssuerC	6.2	4	4
7777	IssuerG	6.1	4	4
5555	IssuerE	5.7	4	4
1212	IssuerK	5.5	3	3
1111	IssuerA	4.9	3	3
8888	IssuerH	4.8	3	3
4444	IssuerD	4.7	2	2
2222	IssuerB	4.1	2	2
1234	IssuerX	3.6	2	1
9999	Issuerl	3.6	1	1
6666	IssuerF	3.4	1	1
1010	IssuerJ	0	1	1

Table 10 - Displayed Tier

Issuers with a null metric value are initially assigned an N/A tier.

- Null metric tiers are excluded from Overall Metric Score calculations.
- In this example, we will consider Issuer X and its tier ranking for the Early Pool Termination metric.

- Issuer X has a null metric value for Early Pool Terminations and is assigned an N/A tier accordingly.
- The rest of the Issuers are bucketed and tiered against each other as per usual relative tier treatment.

Issuer Number	lssuer Name	Early Pool Termination Metric Value	Tier	IOPP Displayed Tier
8888	IssuerH	4	4	4
1111	IssuerA	3	3	3
2222	IssuerB	2	2	2
9999	Issuerl	1	1	1
1234	IssuerX	Null	N/A	N/A

Table 11 - Null Values

4.1.2 Default Metrics Tier Calculation (SF Issuers Only)

Default metrics tier calculations rank based on a Controlled Metric Value rather than the Issuer's metric value.

- The Controlled Metric Value is calculated using the controlled peer group average, which buckets loans by cohort, state/region and loan purpose.
- This allows the default metrics to compare loans with similar characteristics to each other.
- First, we will calculate the controlled peer group average for Issuer X for the % of Loans in Foreclosure metric. Below is a sample of buckets for Issuer X.

Bucket		Issuer's Total Loan Counts Issuer's		Issuer's % of	% of Loans in Foreclosure of Peer Loans in	[A] x	
State	Cohort	Purpose	in a Bucket	Loan Counts	Loans [A]	Same Buckets [B]	[B]
VA	2012	Purchase	190	237,109	0.08%	1.1%	0.001%
VA	2012	Refinance	142	237,109	0.06%	3.7%	0.002%
VA	2012	Modification	1399	237,109	0.59%	1.2%	0.007%
	0				0		o
	0				0		o
	Total – AllBuckets				100%		34.2%

Table 12 - Default Relative Tier Calculation (Using Controlled Metrics)

Note: all values in this example are hypothetical

To calculate the controlled peer group average, calculate the below values.

- Issuer's % of Loans [A]
 - % of loans in each bucket for Issuer X, the sum of which is 100%.
- % of Loans in Foreclosure of Peers' Loans in Same Bucket [B]
 - % of Loans in Foreclosure of all Large Loans that are in each bucket, EXCEPT for Issuer X's Loan.
- [A] x [B]
 - Weighted average % of Loans in Foreclosure of Peer Group, excluding Issuer X, where the weighting is based on Issuer X's distribution of loans across buckets.
- Sum of [A] x [B]
 - Equals Controlled Peer Group Average of Loans in Foreclosure.

	Bucket		Bucket		Bucket		Issuer's Loan	Total Issuer's	Issuer's % of Loans	% of Loans in Foreclosure of Peer Loans in	[A] x [B]
State	Cohort	Purpose	Counts in a Bucket			Same Buckets [B]	144101				
VA	2012	Purchase	190	237,109	0.08%	1.1%	0.001%				
VA	2012	Refinance	142	237,109	0.06%	3.7%	0.002%				
VA	2012	Modification	1399	237,109	0.59%	1.2%	0.007%				
	o				O		O				
	o				0		o				
	Total – All Buckets				100%		34.2%				

Table 13 - Default Relative Tier Calculation (Controlled Peer Group Avg.)

The Controlled Metric Value is calculated using the Issuer's Metric Value and the Controlled Peer Group Average Controlled Peer Group Average.

- The Controlled Peer Group Average represents a Peer Group average that is adjusted for each Issuer's unique distribution of loans across the buckets.
- The Controlled Metric Value is the ratio of the Issuer's actual % of Loans in Foreclosure Ratio to its Controlled Peer Group Average of Loans in Foreclosure ([C]/[D]).

Issuer Name	Loans	Number of Buckets	Issuer's % of Loans in Foreclosure [C]	Peer Group Average % of Loans in Foreclosure	Controlled Peer Group Average % of Loans in Foreclosure [D]	Controlled Metric Value [C] /[D]	Issuer's Loans included in Calculation	Issuer's Buckets included in Calculation
IssuerX	341,782	1,018	4.13%	1.78%	1.69%	244.38%	100%	100%
IssuerA	179,134	1,036	1.05%	1.78%	1.86%	56.45%	100%	100%
IssuerB	237,109	1,063	2.14%	1.78%	1.77%	120.90%	100%	100%

Table 14 - Default Relative Tier Calculation (Controlled Metric Value)

Tier calculation for default metrics utilizes the Controlled Metric Value.

- First, sort the issuers from the worst Controlled Metric Value and the best Controlled Metric Value and divide it into four quartiles.
- Finally, if any Issuer has the same Controlled Metric Value as an Issuer in a higher tier, then that issuer is moved to the higher tier. This does not apply in this example.

Issuer Number	Issuer Name	% of Loans in Foreclosure Metric Value	Controlled Peer Group Average	Controlled Metric Value	Tier	IOPP Displayed Tier
5555	IssuerE	4.18%	1.52%	275.96%	4	4
1234	IssuerX	4.13%	1.69%	244.86%	4	4
6666	IssuerF	3.26%	1.59%	204.80%	4	4
7777	IssuerG	3.23%	1.72%	187.76%	3	3
2222	IssuerB	2.14%	1.77%	121.06%	3	3
4444	IssuerD	1.77%	1.78%	99.03%	3	3
1212	IssuerK	1.55%	1.80%	86.09%	2	2
8888	IssuerH	1.16%	1.94%	60.08%	2	2
1111	IssuerA	1.05%	1.86%	56.60%	2	2
1010	IssuerJ	0.60%	1.93%	31.15%	1	1
9999	Issuerl	0.32%	1.89%	17.87%	1	1

Issuer Number	Issuer Name	% of Loans in Foreclosure Metric Value	Controlled Peer Group Average	Controlled Metric Value	Tier	IOPP Displayed Tier
3333	IssuerC	0.35%	1.94%	17.07%	1	1

Table 15 - Default Relative Tier Calculation (Controlled Metric Values Ranking)

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4.2 Absolute Tier Scoring Methodology

Absolute Tier scores are calculated based on benchmarks defined by Ginnie Mae. Absolute Tier scores for a given Issuer are independent of all other Issuers.

4.2.1 Absolute Tiers

Metric	Tier 1-2 Cutoff	Tier 2-3 Cutoff	Tier 3-4 Cutoff		
Failure to Report	Binary: If > 0 observations in 6 months, Tier 4, else Tier 1				
RPB Corrections	Binary: If > 0 observation in 3 months, Tier 4, else Tier 1				
RFS Exceptions	0.0133	0.0302	0.0782		
HRA Exceptions	0.180004696	0.190002348	0.2		
% of Pools not Certified	1.00%	7.50%	15.00%		
Compliance Review Metric	2	3	4		
Insurance Matching	99.85%	99.50%	99.00%		
Minimum Net Servicing Fee	Binary: If Net Servicing Fee < 25 bps, Tier 4, else Tier 1				
Failure to Purchase Participations when Mandatory Event Occurs	Binary: If > 0 observation in 12 months, Tier 4, else Tier 1				
Commitment Authority Shortage/Surplus	Binary: If < 20% of 4-month commitment authority usage remaining, Tier 4, else Tier 1				
Number of DKs	0.0225	0.04515	0.0903		

Metric	Tier 1-2 Cutoff	Tier 2-3 Cutoff	Tier 3-4 Cutoff		
Early Pool Terminations	0.02005	0.0251	0.0868		
Manual Deletions	Binary: If > 0 observation in 3 months, Tier 4, else Tier 1				
60 to 90+ Day Roll Rate	30	36	43		
DQP Ratio	8	15	30		
Early Payment Default (EPD)	0.3	0.5	0.9		
DQ Time	1.6	2.7	3.7		
% of Loans in Foreclosure	0.14	0.28	0.87		
Workout Effectiveness	80%	70%	60%		
Single Family Prepayment Rate	Mean	Mean * 1.5	Mean * 2		
Early Buyouts	.2987	.34	.37718		
New Issuance Data Quality	1.09191	1.61191	2.13191		
Insufficient Commitment Authority	1	2	3		
Late Pool Re-certification	7.3863	8.3863	9.3863		

Table 16 - Absolute Tier Thresholds

4.2.2 Absolute Tiers Classification Example

This example uses the Number of DKs to illustrate how Absolute Tiers are designed to metrics.

Metric	Formula	Applicable Programs	Tier 1/2Cutoff	Tier 2/3Cutoff	Tier 3/4Cutoff
Number of D	Number of DKs in Past 12 Months / Number of Pools Issued in Past 12 Months	SF, MF, HMBS	0.0225	0.04515	0.0903

Note: all values in this example are hypothetical

The absolute tier is designated to Issuers based on their Number of DK's would be the following:

Issuer Number	Issuer Name	Number of DK's	Absolute Tier
5555	IssuerE	0.0346	2
1234	IssuerX	0.0198	1
6666	IssuerF	0.0000	1
7777	IssuerG	0.1584	4
2222	IssuerB	0.0789	3
4444	IssuerD	0.0988	4

Table 18 - Absolute Tiers Classification Example (2)

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