Ginnie Mae's Issuer Risk Analytics and Risk Management Processes

GINNIE 2020

Ginnie Mae

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GINNIE MAE **Session Overview**

What we will cover today

- An overview of Ginnie Mae's analytical approaches and risk management processes
- Case study – a tale of two Issuers
- Deeper dive into two of Ginnie Mae's analytical tools
- Preview of coming counterparty policy development

Paradigm Shift

Over the past 10 years, Ginnie Mae has developed a series of risk tools and capabilities to evaluate and manage counterparty and portfolio risk. Furthermore, Ginnie Mae continues to evolve its risk framework to address risks that arise outside of the compliance with Ginnie Mae's financial and operational requirements. Ginnie Mae is committed to being more transparent about our risk framework and the tools we utilize to assess Issuer risk. Some basic tenets of our risk philosophy include:

- The size of our portfolio and the variety of Issuer profiles leads us to adopt a risk management framework unique to the companies in our program;
- We attempt to avoid a one size fits all approach which can create unintended limitations on program participation and can cause unnecessary restrictions on all Issuers; and
- We prefer targeted efforts of working with Issuers to improve their risk profile.

GINNIE MAE **All Issuers Subject to Oversight**

Issuer Assessment Tools and Techniques – All Issuers

Performance Focused

- Issuer Risk Grades (“IRG”) and Potential Future Exposure (“PFE”) – to be discussed later
- Issuer Operational Performance Profile (“IOPP”) – Self serve “scorecard” available to Issuers to compare performance against peers as well as established benchmarks over a range of operational performance metrics.

Compliance Focused

- Threshold monitoring – insurance matching, Net Worth and Liquidity (quarterly and audited), delinquencies
- Fidelity and Errors and Omissions Insurance requirements
- Compliance Reviews – On-site review of compliance with Ginnie Mae Guide

Issuer Assessment Tools and Techniques – Elevated Focus

Size or Complexity Driven

- Targeted on-site reviews
- Monthly or quarterly Spotlight Issuer calls
- Issuer Liquidity Meetings

Performance Driven

- Issuer Watchlist
- Enhanced monitoring plans
- Commitment authority reviews (quasi Issuer Risk Committee)
- Notice of Violations and resolution
- Imposition of unilateral requirements (MBS Guide 3-8)
- Special situation management (Pre default)

Issuer Watchlist

Similar to other takers of counterparty or credit risk, Ginnie Mae maintains a watchlist that highlights where additional oversight of an Issuer is warranted. How does an Issuer get on the watchlist?

- Rated in the lower range of Issuer Risk Grades;
- Breaches of compliance thresholds or high levels of findings on most recent Compliance Review;
- Discretionary inclusion (e.g. regulatory action, outsized PFE)

Watchlist Management Overview

- Ginnie Mae actively works with watchlist Issuers to resolve identified challenges;
- Factored into decisions surrounding levels of Commitment Authority, Transfers of Issuer Responsibility and Acknowledgement Agreements;
- Issuers cannot remain on the Watchlist in their current state for an indefinite period. Measured progress against prescribed target goals must be achieved.

GINNIE MAE **Case Study**

Two Similar Issuer Profiles?

	Issuer 1	Issuer 2
UPB	$1,000,000,000	$1,000,000,000
Required Net Worth[1]	$6,000,000	$6,000,000
Required Liquidity[2]	$1,000,000	$1,000,000

- Should Ginnie Mae focus on compliance with net worth and liquidity as a means to manage Issuer default risk?
- Should these compliance metrics drive commitment authority and TIR decisions?

[1]($2.5MM+35bps of UPB)
[2]10bps of UPB

How about now? Do they look the same?

	Issuer 1	Issuer 2
B/S		
Assets		
Cash	$2,000,000	$3,000,000
MSRs	$11,000,000	$10,000,000
Loans Held for Sale	$10,000,000	$10,000,000
	$23,000,000	$23,000,000
Liabilities		
Warehouse Payable	$9,500,000	$8,500,000[1]
MSR Financing (65% Adv. Rate)	$7,150,000	0
	$16,650,000	$8,500,000
Equity	$6,350,000	$14,500,000
In compliance with Net Worth?	Yes (105.8%)	Yes (241.7%)
In compliance with liquidity?	Yes (200%)	Yes (300%)

[1]$1mm in excess investment in WH that can be turned into cash assuming 95% advance rate

GINNIE MAE **Case Study**

How about now? Do they look the same?

	Issuer 1	Issuer 2
Portfolio Characteristics		
UPB	$1,000,000,000	$1,000,000,000
WASF / MSR Multiple	27.5 bps / 4x	33.3 bps / 3x
WA FICO	580	685
DQ90+	4.75% ($47.5mm)	2.25% ($22.5mm)
Selected Financial Ratios		
Secured Debt / Total Assets (w/WH)	72.4%	37%
Secured Debt / Total Assets (wo/WH)	55% (B equivalent)	0% (Aa/A equivalent)
MSR to Equity	173.2%	70%
Cash to DQ90+ UPB	4.21%	13.33%
Monthly sFee to DQ 90+ P&I[1]	96.5%	246.7%

[1]For illustration, monthly P&I is sized at 50bps of outstanding UPB

We don’t think the risk is the same

We have provided an overview of some of the numerous techniques, tools and processes in both the Office of Issuer and Portfolio Management (“OIPM”) and the Office of Enterprise Risk (“OER”) that are leveraged to better analyze our Issuer’s risk profile. In the spirit of increased transparency to our Issuers, today we will dive a little deeper into two of these tools:

- Issuer Risk Grade Model (“IRG”) / Rating Framework
- Potential Future Exposure (“PFE”)

Issuer Risk Grade Modeling / Rating Framework Rationale

Why do we rate our Issuers?

- To identify those Issuers that may require additional oversight and enhanced monitoring;
- To improve workflow for credit sensitive decisions coming from Ginnie Mae (e.g. Commitment Authority, TIR, Acknowledgement Agreements);
- To provide input for modeling of Ginnie Mae's required capital and liquidity to manage potential Issuer defaults; and
- To inform potential financial eligibility requirement changes to the Ginnie Mae MBS Guide.

Issuer Risk Grade Framework Mechanics

How do we rate our Issuers?

Step 1: Determine if the institution is **publicly rated or non-publicly rated**.

For **publicly rated** Institutions, the **Aggregate Rating** is calculated by selecting the lesser of the Institution's Moody's, S&P and Fitch LT Issuer rating (ignoring +/-).

Step 2: The Aggregate Rating flows down to become the **Standalone Risk Grade. Non-publicly Rated** institutions receive a synthetic **Standalone Risk Grade**.

- Mortgage Banks and Housing Finance Authorities – Ginnie Mae calculates a CAEL based rating from an internal model which assesses four factors: **C**apital Adequacy, **A**sset Quality, **E**arnings, and **L**iquidity
- Commercial Banks - Score derived from Moody's RiskCalc and CreditEdge synthetic rating data.

Step 3: Consider the **Parental Support Risk Grade** by taking Stand Alone Risk Grade of the Immediate Parent and assigning it a value of one notch below. For example, if an immediate parent of an Issuer is rated A , the **Parental Support Risk Grade** would be BBB.

Step 4: The greater of the Parental Support or Standalone Risk Grade is selected to obtain the **Final Assigned Risk Grade.**

Step 5: Optionally, the **Final Assigned Risk Grade** may be overridden (up or down) based on credit review recommendations from Ginnie Mae's Counterparty Risk Analysis Division.

GINNIE MAE **Risk Grade Equivalents**

Issuer Risk Grade Ratings and Equivalents

Rating Agency Ratings[1]	Ginnie Mae Equivalent Rating[2]	
AAA/Aaa	1	
AA/Aa	2	
A/A	3	
BBB/Baa	4	
BB/Ba	5	
B/B	6	
CCC/Caa	7	Watchlist
CC/Ca/C	8	Watchlist

[1]+/- are not considered

[2]Risk Grade 8 has been calibrated to previous Issuer defaults under the Ginnie Mae program

GINNIE MAE **Risk Grade Components**

Issuer Risk Grade Model Components

What does the CAEL based model evaluate for mortgage banks?

- Capital Adequacy, some sample metrics include:
  - Leverage ratio
  - MSR / Tangible Net Worth
- Asset Quality, some sample metrics include:
  - MSR / Total Assets
  - At Risk Assets (non MSR assets that have inherent interest rate or credit risk) / Total Assets
- Earnings, some sample metrics include:
  - Free cashflow / DQ Fixed Installment Control ("FIC")
  - Pre-tax Operating Margin
- Liquidity, some sample metrics include:
  - Liquid assets / DQ FIC
  - Liquid assets / Total liabilities
  - Secured debt / Total assets

Potential Future Exposure (“PFE”) Rationale

Why do we measure PFE?

- To size the potential exposure to Ginnie Mae should an Issuer default;
- To measure relative risk taking by the Issuer against their financial condition;
- To provide input for modeling of Ginnie Mae’s required capital and liquidity to manage potential macro Issuer defaults; and
- To inform potential financial eligibility requirements (10bps of liquidity), pooling requirements (25bps minimum sFee) and risk factors (portfolio concentrations) changes to our Guide.

Potential Future Exposure ("PFE") Explained

What is PFE?

- Ginnie Mae leverages a stochastic, Monte Carlo simulation model to forecast monthly cash in-flows and out-flows for each Issuer's portfolio over 10,000 potential paths for each loan;
- The net cashflow over the life of the portfolio is calculated under expected and stressed environments;
- PFE is not a fair value / MSR concept!

Potential Future Exposure (“PFE”) Components

What risk factors are included in the calculation of PFE?

- Issuer specific collateral data (e.g. UPB, FICO, Note rate, etc);
- Probability of borrower default;
- Probability of voluntary prepayment;
- Competing hazard / cure rate / amortization methodologies;
- Expense and recoveries;
- Issuer buyout behavior; and
- Net cashflow – Monthly / Annual / Life of portfolio ($ / Bps for comparability with peers)

Future Analytics, Coverage Model and Policy Initiatives

Analytics In the Pipeline

- Issuer Stress Testing – Ginnie Mae Performed
  - The stress testing framework (alpha version) forecasts an Issuer's financial performance over the next eight quarters under a base and an adverse scenario and provides the following outputs:
    - Balance Sheet, Income Statement and Cashflow Statement over the evaluation period;
    - Projected Issuer Risk Grade (Ginnie Mae's proprietary risk rating method) over the evaluation period;
    - Projected Issuer compliance with Ginnie Mae and Government Sponsored Enterprise ("GSEs") net worth, liquidity and capitalization requirements over the evaluation period;
    - Projected compliance with a series of common warehouse covenants; and
    - Projected risk of insolvency.
  - Planned Request For Information (beta version) to provide transparency and seek industry feedback
  - Future evolution may include Issuer prepared stress tests based on Ginnie Mae provided parameters

Future Analytics, Coverage Model and Policy Initiatives

Expansion of Counterparty Coverage Model – Ginnie Mae will increasingly focus on a broader set of non-Issuer counterparties that participate in the Ginnie Mae eco-system:

- Sub-servicers (highly concentrated)
- Custodians (in addition to operational oversight today)
- Sponsors / Trustees
- Secured Parties under AAs (ability to cure)
- Warehouse, Corporate or Asset Backed Debt lenders (e.g. customer concentrations, regulatory limits, etc.)
- Capital Partners (e.g. PEGS, Hedge Funds, REITS, KPs) invested in either Ginnie Mae Issuers or servicing strips

Future Analytics, Coverage Model and Policy Initiatives

Policy Initiatives

Short Term

- All Participants Memo ("APM") planned for July 2019. Highlights include:
  - Ratings requirements for largest Issuers;
  - Changes to eligible assets;
  - Introduction of a secured debt test;
  - Changes to eligible assets for compliance with liquidity requirements; and
  - Greater guidance on approval factors for TIR

Long Term

- Exposure limits
- Living wills / resolution planning
- Stress tests