



Ginnie Mae Operations and Staffing Analysis

September 26, 2016

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1 Executive Summary

1.1 Study Overview

KPMG's study shows that Ginnie Mae's staffing is much lower than its corresponding industry counterparts. When comparing Ginnie Mae business processes to industry benchmarks, Ginnie Mae is understaffed by 582 full time equivalent resources including both government staff and contractors. This represents understaffing that is both too low for the current business complexity, recent growth, evolving trends, and any anticipated future growth.

Understaffing results in an inadequate ability to execute effectively multiple business processes that would directly assist in the execution of its mission. This includes an impaired ability for Ginnie Mae to monitor its Issuers for sources of risk that could impair investor confidence in the Ginnie Mae Mortgage-Backed Security (MBS), to resolve Issuer failures effectively and with minimal cost and disruption, and to support the government mortgage finance system by allowing a competitive market to flourish.

1.2 Why KPMG Performed This Study

KPMG was engaged to identify opportunities to better align Ginnie Mae resource structure and staff allocation to meet market demands. In this review, KPMG examined:

- Staffing levels of all business operations including both government staff and contractor support
- Level of workforce oversight provided by Ginnie Mae managers
- Ability of Ginnie Mae to attract and retain candidates under the General Schedule pay scale

As a result of this study, KPMG identified the following conclusions:

- Ginnie Mae's total workforce is much less than industry benchmarks
- Contractors are executing core competencies and should have additional Ginnie Mae oversight
- Ginnie Mae has an inability to hire and retain sufficiently skilled staff under the GS pay scale in important and hard to fill business areas
- Reliance on the funding and appropriated hiring process adversely impacts the ability to meet market needs

1.3 Study Finding Highlights

1.3.1 Guaranty Overextension

Ginnie Mae's model depends on minimizing the activation and the losses to the guaranty of the full faith and credit of the Federal Government. The model only works if Ginnie Mae's Risk, Operations, Monitoring, and Securities processes are fully operational.

Since the financial crisis, Ginnie Mae's overall portfolio of over \$1.7T in guarantees has moved from the fourth largest in the secondary market to the second largest, and Ginnie Mae's \$800B growth in UPB outstanding in the last six years is equal to the sum total of Ginnie Mae's growth in the first 39 years of its existence.

With key risk mitigation processes in modelling, risk management, and Issuer oversight not being fully staffed, the exposure of Ginnie Mae's guarantee has outpaced resources.

1.3.2 Retention and Recruitment

Ginnie Mae's staff operates in a competitive pay environment where institutional knowledge and expertise is sought after in the secondary mortgage market. In key process areas, Ginnie Mae sees large turnover and directly competes with both private sector employers and government institutions not restricted by the GS pay scale.

Key oversight and mission areas such as Issuer Monitoring, Enterprise Risk, Finance, Securities Operations, and Capital Markets comprise 82% of overall turnover. This translates to over half of Ginnie Mae's turnover from the periods from Federal Fiscal Year 2010 through the date of this study in 2016.

1.3.3 Reduced Investor Confidence

Less investor confidence in underlying collateral could result in lack of participation in Ginnie Mae's MBS programs. Investors must feel that Ginnie Mae properly monitors Issuers to reduce risk of improper prepayments and provide a consistent rate-of return. Ginnie Mae's inability to staff its oversight functions increases the risk to the investment quality of the Ginnie Mae MBS. Ginnie Mae fills this gap by leveraging contractors. Study results show almost 87% of the workforce executing the critical risk management process of monitoring counterparty oversight are contractors. Contractor monitoring ability is limited by contract scope and management oversight is strained—span of control ratios are high at a 1:23 (managers: FTEs managed) level.

1.3.4 Reduced Support for Issuers

The Ginnie Mae model's ability to support the housing finance system is only as successful as its lenders and their interest to be Ginnie Mae issuers. Ginnie Mae has to assure its systems and procedures use the latest technology and reflect the current lending environment. If Ginnie Mae does not stay current, the irrelevancy of the program will drive issuers out of the program. A limited Ginnie Mae issuer base will lead to higher costs to the consumer and higher losses when an issuer fails and the Ginnie Mae guarantee is called upon.

1.3.5 Contractors are Performing Core Competencies

The Ginnie Mae model has relied on heavy contractor support since inception. However, the business has evolved into a more complex and dynamic high growth environment than the original model. This demands a more hands-on internal business process implementation and oversight. Currently, over 530 full time equivalent contractors execute business operations identified as Ginnie Mae core competencies. For these business operations, 84% of the

workforce are contractors. Study results identify 503 contractor positions that could be insourced based on core competency determination for more effective internal controls.

1.3.6 Inability to Adapt to Future Market Demands

Given resource constraints, Ginnie Mae has only limited capabilities to adapt to changing market conditions and risk monitoring procedures. Compared to other industry's research and development functions, Ginnie Mae's program update capabilities are staffed at less than the 25th percentile. '

1.4 Proposed Strategies for Consideration

The following strategies are proposed for Ginnie Mae's consideration after considering the results of this study:

- Implement pay parity with the private sector to retain experienced staff and attract candidates with the required skillsets—especially in accounting, enterprise risk management, securities operations, Issuer monitoring, and capital markets functions. This gives Ginnie Mae the ability to hire and retain qualified resources
- Increase overall full time equivalent headcount, including both Ginnie Mae staff and contractor staff, from approximately 852 FTEs to approximately 1,434 FTEs to support services, address gap in staffing capabilities and keep pace with market and workload demands
- Increase the ratio of government managers and staff to adequately oversee contractors and mitigate Ginnie Mae's contracting risk
- Insource Ginnie Mae processes that directly support critical, core competency functions
- Monitor staffing, headcount, turnover, and time-to-fill metrics to support on-going improvement in staffing strategies
- Facilitate better understanding of the staffing needs of Ginnie Mae to HUD, OMB, and Congress

2 Document Purpose and Overview

During the execution of the Ginnie Mae Business Process Reengineering (BPR) project, there are several work products, discussion documents and deliverables submitted by KPMG to assist Ginnie Mae with understanding the impact of changing market conditions on business operations and defining a business case for a new organization structure. The deliverables include the following:

- Business Operations Inventory
 - Ginnie Mae operations and processes
 - Workload drivers
 - Constituent needs, critical-to-quality metrics, and key performance indicators
 - Overall Workforce Profile
- Operations and Staffing Analysis Study
 - FTE counts for Ginnie Mae business processes
 - Contractor and Government staffing support for process execution
 - Premium pay requirements
- Re-Organization Design Blueprint Options
 - Macro organization structure options
 - Micro organization structure options
 - Implementation timeline considerations

The *Ginnie Mae Operations and Staffing Analysis* document is designed to provide a complete overview of the Ginnie Mae program. The opening sections discuss how Ginnie Mae operates, the factors that affect the workload of Ginnie Mae Operations, and then analyzes Ginnie Mae's staffing within this environment.

- **Section 3, Ginnie Mae Purpose and Mission:** This section provides a high-level overview of Ginnie Mae's operations and the environment in which Ginnie Mae exists.
- **Section 4, Ginnie Mae Operations:** Provides a description of Ginnie Mae's business operations by detailing this business processes that Ginnie Mae must execute in order to perform its mission.
- **Section 5, Workload Drivers:** This section establishes the items and factors that could affect the level of effort required to execute the business processes discussed in Section 4.
- **Section 6, Ginnie Mae Manpower Compared to Industry Benchmarks:** This section contains data used in support of the analysis of full time equivalent (FTE) counts for Ginnie Mae business processes. It includes documentation on how staffing counts of existing Ginnie Mae processes were collected, how comparisons against benchmarks were performed, and the summary total of those comparisons.
- **Section 7, Ginnie Mae Staff Turnover Analysis:** This section contains data examining employee departures from Ginnie Mae from May of 2010 through May of 2016.
- **Section 8 Core Competency and Insourcing/Outsourcing Analyses:** This section documents how core competencies were defined by Ginnie Mae and applies the core

competency definitions to determining an approach to contracting or insourcing the execution of business processes.

- **Section 9, Span of Control Data:** This section documents the relationship between the total number of individuals performing a process and the number of Government managers providing oversight to this process.

3 Ginnie Mae Purpose and Mission

3.1 Purpose

Ginnie Mae is a government-owned corporation with the mission to support housing in America by linking global capital markets to the nation's housing markets. Ginnie Mae utilizes a single securitization process for residential mortgages insured by other government agencies including the Federal Housing Administration (FHA), the Department of Veterans Affairs (VA), the United States Department of Agriculture (USDA) Rural Development (RD), and the Department of Housing and Urban Development (HUD) Office of Public and Indian Housing (HUD-PIH). Ginnie Mae guarantees investors the timely payment of principal and interest of Mortgage-Backed Securities (MBS) backed by these loans. To continue to bring liquidity to the housing finance market, Ginnie Mae executes a dual role of approving and monitoring Issuers and running a securitization platform and a common security for the MBS program. In fulfilling its dual role, Ginnie Mae has developed processes to provide securities to the housing market and to provide support to Issuers creating securities for the global market. Additionally, Ginnie Mae is responsible for executing a number of processes responsible for monitoring Issuers for default risks to ensure investors in the MBS program receive timely payments on principal and interest on MBS.

3.2 Mission

Ginnie Mae's Mission is to link the United States housing market to the global capital markets, thus providing low-cost financing for federal housing programs.

4 Ginnie Mae Operations

Ginnie Mae's business operations are the functions conducted on a routine basis that help ensure their on-going viability of Ginnie Mae as an organization. This section provides an overview of Ginnie Mae's operations and provides details on the core processes that define Ginnie Mae's business model, identifies key Ginnie Mae customers and suppliers as stakeholders, and indicates the inter-relationships between these elements as part of Ginnie Mae's operational model

4.1 Data Collection Methodology

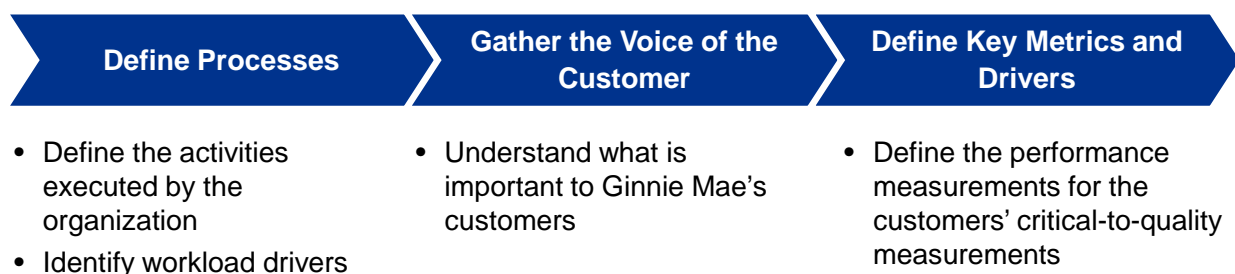
At least one working session was held with each of the eight Ginnie Mae departments¹ to identify and confirm the business processes being performed within each department. These working sessions identified the responsible party executing those processes and the customers receiving the output. Follow-up sessions were scheduled, as needed, to collect additional information and to validate all the information collected. A total of 21 separate working sessions were ultimately conducted.

The data collection methodology includes three steps as summarized in Exhibit 1 below:

- 1) Define processes
- 2) Gather voice of the customer
- 3) Define key metrics and drivers.

Defining processes is the first step in developing the metrics that are used by Ginnie Mae in an evaluation of quality (efficiency and effectiveness). Collecting the process information also allows for identification of customer requirements and workload drivers. Workload drivers are discussed in *Section 5, Workload Drivers* and Critical-to-Quality metrics in *the Ginnie Mae Business Operations Inventory*.

Exhibit 1 – Methodology for Developing Process-based Quality Metrics



¹ A complete list of the departments of Ginnie Mae is contained at http://www.ginniemae.gov/inside_gnma/departments/Pages/president_executive_vice_president.aspx. Note that the Office of Communications & Congressional Relations was discontinued.

The data collection template used to gather Ginnie Mae's business processes during the 21 separate working sessions can be found in Exhibit 2 below.

Exhibit 2 – Operations Data Collection Template

Hierarchy ID	Name	Supplier	Input	Process	Output	Customer
Sequential identification number for each unique process and office	Title of business process	Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
[OFFICE NAME] -1	Business Process 1					
[OFFICE NAME] -1.1	Sub-process 1	Supplier for Business Process 1, Sub-process 1	Input for Business Process 1, Sub-process 1	Process for Business Process 1, Sub-process 1	Output for Business Process 1, Sub-process 1	Customer for Business Process 1, Sub-process 1
[OFFICE NAME] -1.2	Sub-process 2	Supplier for Business Process 1, Sub-process 2	Input for Business Process 1, Sub-process 2	Process for Business Process 1, Sub-process 2	Output for Business Process 1, Sub-process 2	Customer for Business Process 1, Sub-process 2
OFFICE NAME] -1.3	Sub-process 3	Supplier for Business Process 1, Sub-process 3	Input for Business Process 1, Sub-process 3	Process for Business Process 1, Sub-process 3	Output for Business Process 1, Sub-process 3	Customer for Business Process 1, Sub-process 3

The Operations Data Collection Guide includes the following elements:

- **Hierarchy ID:** Sequential identification number for each unique process and office
- **Name:** Title of business process
- **Supplier:** Provider of the input
- **Input:** Transactions, resources, information or other requirements fed into the process
- **Process:** Top-level process description

- **Output:** Products, services or transactions yielded from the process
- **Customer:** Beneficiaries of the process outputs

4.2 Ginnie Mae Operations Overview

Based on the data collection methodology discussed in *Section 4.1, Data Collection Methodology*, 36 total processes were documented. These processes have been categorized into either core or enabling processes. A core process is a key activity or cluster of activities that must be performed in a manner that ensures a firm has continued viability because it adds primary value to its products or services. An enabling process includes operations that all organizations must complete, such as Human Resources or Information Technology Support, which may not directly contribute to Ginnie Mae's unique business activities.

There were nine core processes identified:

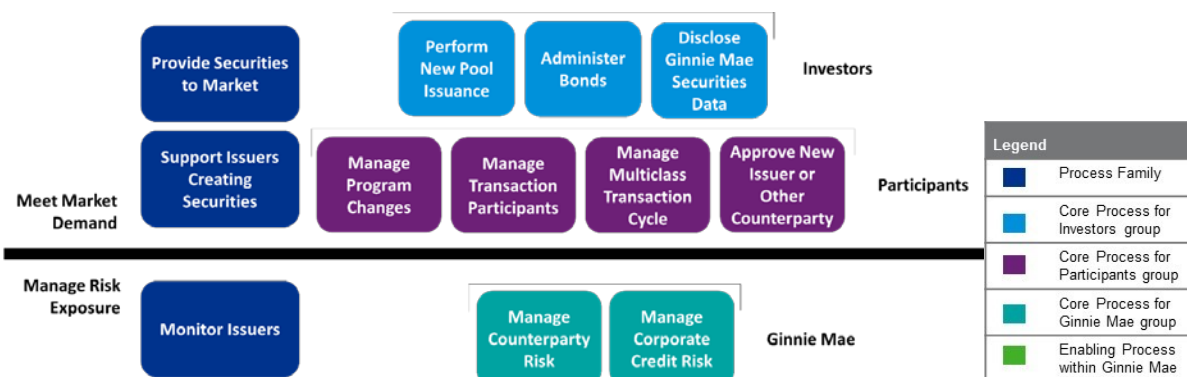
- **Perform New Pool Issuance:** The process by which MBS' are created and subsequently securitized.
- **Administer Bonds:** The process by which payments and fees are collected and disbursed for Ginnie Mae MBS.
- **Disclose Ginnie Mae Securities Data:** The process by which data about the securities and the underlying loans of Ginnie Mae MBS are provided to the markets and public.
- **Manage Program Changes:** The process by which Ginnie Mae receives, evaluates, and responds to Issuer requests regarding pool management and ongoing participation in the Ginnie Mae MBS Program.
- **Manage Transaction Participants:** The process by which Ginnie Mae approves, monitors, and evaluates participating entities in the Multiclass transaction program.
- **Manage Multiclass Transaction Cycle:** The process by which Ginnie Mae opens, structures, and monitors transactions for participating entities in the Multiclass transaction program.
- **Approve New Issuers or Other Counterparty:** The process by which Ginnie Mae reviews and evaluates incoming applications to become a Ginnie Mae Issuer or Document Custodian.
- **Manage Counterparty Risk:** The process by which Ginnie Mae monitors participants in its programs for adherence to regulatory standards.
- **Manage Corporate Credit Risk:** The process by which Ginnie Mae identifies high-risk Issuers within their portfolio in order to limit their potential future exposure to risk.

Each of these processes can be organized around one of the major customer and stakeholder groups:

- **Investors:** Provides the demand for Ginnie Mae securities and requires information on securities and underlying collateral.
- **Participants:** Provides the supply of Ginnie Mae securities and requires support from Ginnie Mae in being admitted into the program and managing their portfolio after admittance.
- **Ginnie Mae:** Provides oversight of the securitization process and implements risk management to protect fiduciary responsibilities.

Exhibit 3 below, visually depicts the nine core processes grouped by customer. In simplified terms, Ginnie Mae's dual mission is to meet market demand and manage risk exposure. From the market demand perspective, Ginnie Mae does two things. It provides securities to the market for the investor community and supports Issuers creating securities for the participant community. As market demand is fulfilled, Ginnie Mae must simultaneously manage risk exposure by monitoring Issuers through counterparty compliance and corporate credit risk determinations.

Exhibit 3 – Visual Depiction of Ginnie Mae's Dual Mission, Core Processes, and Customer Groups

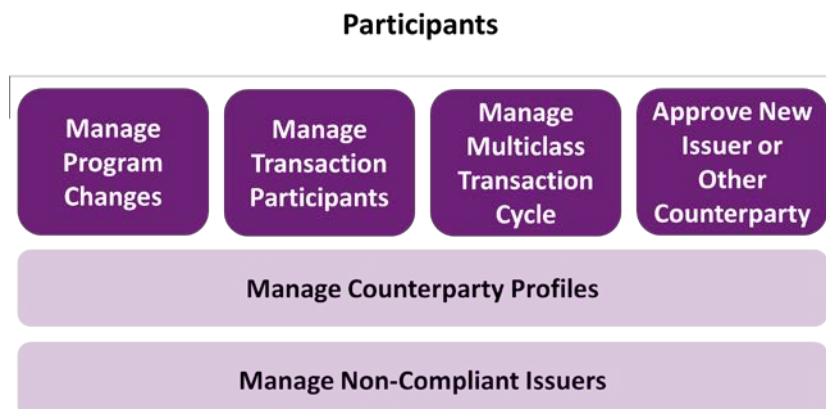


Section 4.3, *Core Process Descriptions by Customer Group*, provides additional information on each core process using the customer-stakeholder group as an organizing mechanism. Section 4.4, *Enterprise Enabling Processes*, provides a summary of the remaining enterprise-wide enabling processes that support mission execution. Finally, Appendix A, SIPOC Diagrams, contains a complete description of all operational processes at a high level. The description includes the suppliers, inputs, outputs and customers of each process. As a mechanism to reference core and enabling processes consistently throughout this document, the legend in Exhibit 5 highlights the color schemes associated with process families, core processes by customer group, and enabling processes.

4.3 Core Processes Supporting Participants

This section provides a high-level description of Ginnie Mae core operating processes by customer-stakeholder group. A description of each process is provided. Exhibit 4, *Core Processes Supporting Participants*, shows the four core and two enabling processes that Ginnie Mae executes in relationship with MBS participants. Following the exhibit, a description of each process is provided.

Exhibit 4 – Core Processes Supporting Participants



- **Manage Program Changes** – As part of maintaining the MBS program, Ginnie Mae provides support to its customers by responding to various inquiries. These requests include transferring pools to other Issuers and adjusting an Issuer’s Commitment Authority Cap. Fulfilling these requests accurately and timely is critical to help enable the continued participation of Issuers in the Ginnie Mae program.
- **Manage Transaction Participants** – Ginnie Mae monitors both on-boarded and anticipated sponsors, co-sponsors, trust counsels, co-trust counsels, accountants, and REMIC trustees within the Multiclass Transaction program. Participating entities are routinely reviewed to ensure compliance with Ginnie Mae activity standards. Without this approval and monitoring process, Ginnie Mae would be unable to drive business within the Multiclass Transaction space, and potentially hinder the liquidity being brought into the market.
- **Manage Multiclass Transaction Cycle** – Before entities in the Multiclass program can sell securities, Ginnie Mae must open, structure, and monitor the transactions for each participating entity. Managing this process at Ginnie Mae ensures that Multiclass transactions are completed in an accurate and timely fashion, and that investors are paid properly.
- **Approve New Issuers or Other Counterparty** – Only Issuers approved to participate in the Ginnie Mae MBS program can issue MBS. This process involves a timely and thorough review of each incoming application.
- **Manage Counterparty Profiles** – After an Issuer has been accepted into the Ginnie Mae MBS Program, Ginnie Mae has a separate process that walks the Issuer through the setup and documentation that the Issuer will need prior to selling their first Ginnie Mae security. This process also involves notifying Issuers who Ginnie Mae considers not meeting MBS Program requirements.
- **Manage Non-Compliant Issuers** – Issuers who do not adhere to Ginnie Mae’s activity standards are at risk of being terminated from the Ginnie Mae Program. The execution of this process involves the procedure of terminating a non-compliant Issuer.

For more information on these processes, including a full breakdown of suppliers, inputs, processes, outputs, and customers, please refer to Appendix A.

4.4 Core Processes Supporting Investors

Exhibit 5, *Core Processes Supporting Investors*, shows the three core processes that Ginnie Mae executes in relationship with MBS investors. Following the exhibit, a description of each process is provided.

Exhibit 5 – Core Processes Supporting Investors



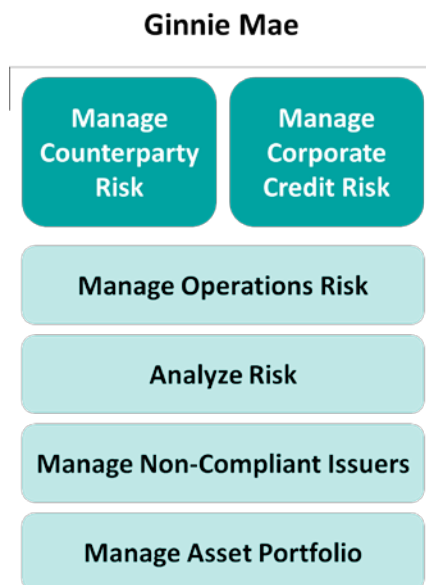
- **Perform New Pool Issuance** – Ginnie Mae pools together loans to be sold as MBS on the market by Issuers. Once the securities are guaranteed, approved Issuers can buy and sell this new pool. Issuing new pools that can be traded ensures a steady flow of liquidity into the American market.
- **Administer Bonds** –Ginnie Mae facilitates the movement of funds from the servicers of loans to the secondary mortgage market via the Pool Processing Agent. Additionally, as part of this process, Ginnie Mae collects appropriate fees that maintain the monthly remittance process.
- **Disclose Ginnie Mae Securities Data** – Ginnie Mae discloses securities transaction data to the public, which is paramount to current and potential investors as it furnishes them with the insights on whether or not to buy and trade securities. Accurate securities data is unique to Ginnie Mae’s business model as it depicts the health of Ginnie Mae securities for investors.

For more information on these processes, including a full breakdown of suppliers, inputs, processes, outputs, and customers, please refer to Appendix A.

4.5 Core Processes Supporting Ginnie Mae

Exhibit 6, *Core Processes Supporting Ginnie Mae*, shows the two core processes and four enabling processes which support Ginnie Mae as a stakeholder. Following the exhibit, a description of each process is provided.

Exhibit 6 – Core Processes Supporting Ginnie Mae



- **Manage Counterparty Risk** – As part of managing Ginnie Mae’s exposure to risk, participants in the Ginnie Mae MBS program are strictly monitored so that Issuers who exceed Ginnie Mae’s risk threshold or are near defaulting are identified in advance. This action mitigates Investors potential loss position, and helps ensure Issuers pay back Investors, which in turn lowers the housing market’s risk exposure and protects taxpayer dollars.
- **Manager Corporate Credit Risk** – The modelling and analysis performed in this process identifies Issuers who are at greater risk of defaulting. Identifying these risky Issuers early provides Ginnie Mae the opportunity to review and take preventative action. Executing this process properly helps ensure taxpayer dollars are protected from reckless Issuers.
- **Manage Operations Risk** – The execution of this enabling process helps ensure Ginnie Mae prepares, reports, and develops Ginnie Mae’s risk strategy. This process is an overall risk management process examining all facets of risk, not just Issuer or Counterparty risk but market conditions, customers, and
- **Analyze Risk** – This execution of this enabling process develops and manages Ginnie Mae’s forecast, and analytics risk. In this process, Ginnie Mae evaluates and applies the analytics and forecasts to determine if they are appropriate and functional in supporting Ginnie Mae’s risk needs.
- **Manage Non-Compliant Issuers** – Ginnie Mae routinely monitors Issuers to ensure they are meeting Ginnie Mae activity standards and notifies Issuers who are in violation of those standards. This process also determines potential corrective actions Ginnie Mae will take regarding non-compliant portfolios, including facilitating portfolio transfers to Issuers in good standing, arranging for sales of portfolios, or seizing a portfolio in some cases.
- **Manage Asset Portfolio** – In this process area, Ginnie Mae evaluates, manages, and disposes of properties in its portfolio-owned properties. This process is executed only for those loan portfolios that have been seized by Ginnie Mae because of the *Manage Non-*

Compliant Issuer process, and does not cover portfolios that have been disposed of using the other methods available in the Management of Non-Compliant Issuers.

The enabling processes of “Manage Operations Risk”, “Analyze Risk”, “Manage Non-Compliant Issuers”, and “Manage Asset Portfolio” serve to support the risk management strategy of Ginnie Mae and support the management of Ginnie Mae’s portfolio in the event Ginnie Mae was called on to default and seize a non-compliant Issuer’s portfolio. For more information on these processes, including a full breakdown of suppliers, inputs, processes, outputs, and customers, please refer to Appendix A.

4.6 Enterprise Enabling Processes

In addition to the six previously mentioned enabling process, an additional 26 processes serve to support Ginnie Mae’s operations and viability as a business. These enabling processes can be thought of as supporting all the core processes in the day-to-day needs of providing the staff, technology, accounting, and other ongoing functions required by any other business. The 26 processes can be grouped into seven categories:

- **Manage Accounting and Finance:** This enabling process group oversees financial management activities including budgeting, forecasting, and internal controls.
- **Manage Contracts and Programs:** This enabling process group oversees Ginnie Mae’s contract policies and vendor relations programs.
- **Manage and Transform IT Processes:** This enabling process group serves to meet the IT needs of Ginnie Mae. This includes a significant, long-term effort to modernize Ginnie Mae’s IT systems in terms of improving the technology, data, and workflow requirements of Ginnie Mae.
- **Manage Continuity of Operations:** This enabling process helps ensure the ability of Ginnie Mae functions in the case of a disruptive event.
- **Manage Products:** This enabling process group covers the development, policy creation, and management of Ginnie Mae products and services.
- **Manage Enterprise-wide Initiatives:** This enabling process group manages the special projects of Ginnie Mae as they arise on an ad-hoc basis.
- **Manage Human Resources:** This enabling process group supports providing staff and managing the career development of Ginnie Mae employees.

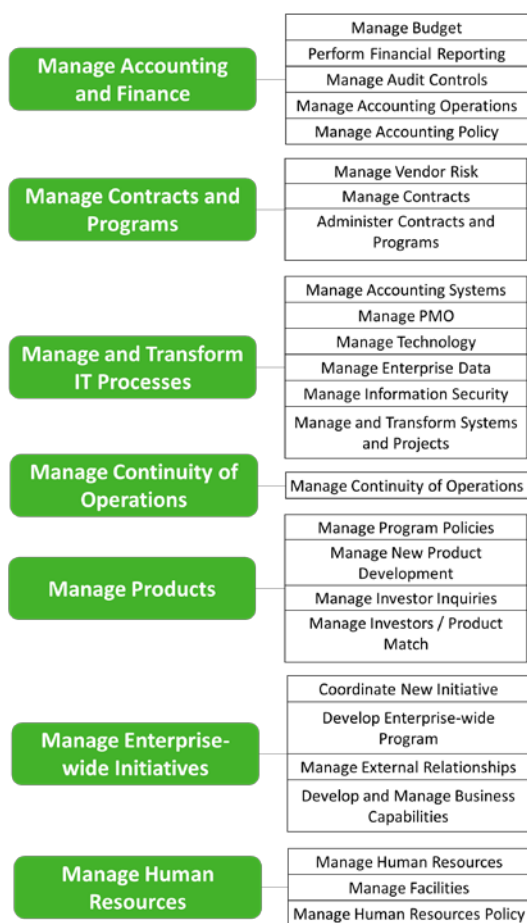
These six categories are part of the American Productivity and Quality Center (APQC) Process Classification Framework (PCF). PCF is a taxonomy of business processes that allows organizations to objectively track and compare their performance internally and externally with organizations from any industry. APQC’s PCF was developed in the early 1990s by APQC and a group of members from a number of industries and countries throughout the world. Originally envisioned as a tool to aid in performance improvement projects, the framework evolved into the broad taxonomy that it is today.

It is designed as a framework and global standard to be customized for use in any organization. Thus, the PCF does not list all processes within a specific organization, and not every process listed in the framework exists in all organizations. The PCF is also used as the basis for APQC’s

Open Standards Benchmarking, where organizations can benchmark their performance against that of other organizations.

The APQC PCF standardizes the names of more common back office Ginnie Mae enabling processes so benchmarking way possible against companies in a peer group. Appendix D, *APQC Process Classification Framework References*, provides a summary of the methodology used to map Ginnie Mae enabling processes to the APQC standard. Exhibit 7, *Enabling Processes Supporting Enterprise Operations*, shows how each of the remaining 26 enabling processes have been grouped into six major enabling process categories.

Exhibit 7 – Enabling Processes Supporting Enterprise Operations



4.7 External Ginnie Mae Customers/Stakeholders

Ginnie Mae services are provided to several different organizations or customers. Each of the customers/stakeholders identified below represent an institution external to Ginnie Mae who either consume or receive the critical outputs that Ginnie Mae produces. As a result, managing interfaces, relations, and business practices with these institutions is important to preserve the successful operation and productivity of Ginnie Mae as an entity. Exhibit 8 below identifies Ginnie Mae's external customers/stakeholders. For a mapping of the outputs that each customer/stakeholder relies on Ginnie Mae to provide, please refer to Appendix B, *Customer and Supplier Inventory*.

Exhibit 8 – External Ginnie Mae Customers/Stakeholders

Customer / Stakeholder	Role of Customer/Stakeholder
Auditors to Ginnie Mae	External and independent parties that review Ginnie Mae's financial statements, processes, and controls for compliance and require various financial and final reports as well as accounting and financial data
Capital Markets	The part of the financial system concerned with raising capital through stocks, bonds and other investments that act as a primary consumer of Ginnie Mae securities
Congress and associated Committees	Legislative arm of the United States government, comprised of the House and the Senate that requires Ginnie Mae information for the purpose of oversight, budget forecasting, allocation and approval, as well as educational and briefing materials on the state of the housing and secondary mortgage market
Ginnie Mae Contractor	Ginnie Mae vendor or recipient of awarded funds to fulfill awarded contracts who require technical guidance and contracting information to be provided by Ginnie Mae
Ginnie Mae MBSSA Contractor	Non-Ginnie Mae staff who provide administrative services
Government Accountability Office (GAO)	Investigative arm of Congress tasked with examining Ginnie Mae's business operations and organizational matters relating to the receipt and payment of public funds
HUD	Government agency overseeing home mortgage lending practices requiring budgeting, educational, and position papers on Ginnie Mae's operations
HUD-OIG	Promotes economy, efficiency, and effectiveness in HUD programs and operations, and prevents and detects fraud, abuse, and mismanagement by serving as an internal audit staff function. Relies on Ginnie Mae for data as part of its oversight mission and works with Ginnie Mae on investigations of non-compliant Ginnie Mae participants
Investors	Individuals and institutions that have invested in or hold Ginnie Mae securities and rely on Ginnie Mae for pool and securities data as well as prospectuses and other financial information and reports
Issuer	Participants in the Ginnie Mae MBS program who rely on Ginnie Mae's execution of their requests for loan management, commitment authority and policy guidance

Customer / Stakeholder	Role of Customer/Stakeholder
Master Sub-Servicer	Provides loan servicing operations on Ginnie Mae's defaulted Issuer portfolio and relies on Ginnie Mae's loan reporting data and policy guidance
Mortgage Bankers Association (MBA)	MBA relies on Ginnie Mae for policy and financial information regarding the secondary mortgage market
New York Stock Exchange (NYSE)/Global Investor Community	Individuals or institutions that buy and sell securities on the NYSE that requires data reporting from Ginnie Mae on securities and the underlying collateral
Office of Management and Budget (OMB)	Office within the Executive Office of the President of the United States. Main functions are to provide management and oversight and to produce the President's budget, and requires budgeting and funds allocations information from Ginnie Mae
Pool Processing Agent (PPA)	Broker/Dealer or financial institution that pools Ginnie Mae loans into mortgage-backed securities and requires policy guidance and loan data from Ginnie Mae and its stakeholders
Security Holders	Institutional and individual owners who have purchased Ginnie Mae securities and rely on Ginnie Mae for financial data
U.S. Department of the Treasury	Manages Federal finances by collecting taxes, managing currency and government accounts and as well as public debt, supports Ginnie Mae's cash management and reporting for the Ginnie Mae-owned portfolio

4.8 External Ginnie Mae Suppliers

Ginnie Mae relies on multiple external parties to support its processes. Each of the suppliers identified below represents an institution external to Ginnie Mae that provides inputs necessary for the execution of one or more Ginnie Mae processes. Exhibit 9 below identifies Ginnie Mae's external suppliers. It is important to note that Ginnie Mae also creates a number of items, such as documentation, internal analyses, data points, and change actions, to supply needs for its own processes. All suppliers and inputs are documented more fully in Appendix B, *Customer and Supplier Inventory*.

Exhibit 9 – External Ginnie Mae Suppliers

Supplier	Role of Supplier
Congress	Provides the legislative and regulatory authority for Ginnie Mae to operate
Financial Accounting Standards Board (FASB)	Designated private sector organization that establishes financial accounting and reporting standards provides financial standards for Ginnie Mae's accounting operations
GAO	Investigative arm of Congress tasked with examining matters relating to the receipt and payment of public funds.
Ginnie Mae Mortgage Backed Securities Administration (MBSA)	Non-Ginnie Mae staff who provide loan data and reporting services
Insuring Agencies (FHA, VA, USDA)	Affordable housing insurers that provide the mortgage insurance for the loans eligible for Ginnie Mae securities
Issuer	Provides complete securities packages and monthly reporting data
Master Sub-Servicer	Provides servicing data on the Ginnie Mae-owned portfolio
OIG	Responsible for providing policy and modeling guidance
OMB	Provides regulatory guidance and requirements
Real Estate Mortgage Investment Conduit (REMIC) Trustee/Platinum Sponsor	Entity that holds a fixed pool of mortgages and issues multiple classes of interests in itself to investors
Securitized Transaction Financial Advisor (STFA)	Opens, structures, and monitors the transactions for each participating entity and provides data and information regarding specific transactions to Ginnie Mae
U.S. Department of the Treasury	Provides fixed assets and cash to Ginnie Mae as part of the Ginnie Mae portfolio

5 Workload Drivers

Ginnie Mae's workload drivers are the inputs that directly influence the level of effort required to execute the processes described in Section 4, *Ginnie Mae Operations*. This section provides a description of how workload drivers were identified, inventoried, and prioritized.

5.1 Data Collection Methodology

As part of the operations working sessions, the workload drivers for Ginnie Mae processes were compiled. Workload drivers are the inputs that directly influence the work required to complete a process, or how much that process is executed. The methodology used to capture these workload drivers was qualitative using a standardized script of questions. The standard questions included the following:

- How much time does the process require to be completed?
 - Does the time required to complete an output change throughout the year?
 - Why or why not?
- Does the workload required to produce the output ever fluctuate?
 - Why or why not?
- Do you measure workload drivers?
 - If yes, do you have historical workload driver data or trend data?

By gathering the data in response to these questions, the factors that drive the amount of work for any given process were identified.

5.2 Major Workload Drivers

Three workload drivers were identified that affected more processes than any other workload driver. These three workload drivers are:

- **Potential Future Exposure (PFE):** The maximum expected credit exposure over a specified period of time calculated at some level of confidence.
- **Number of Complex Issuers in Ginnie Mae Program:** The quantity and nature of the Issuers, Document Custodians, Multiclass Transaction Participants. For example, non-depository Issuers have different structures than traditional depository Issuers, and are thus more difficult to monitor and evaluate.
- **Number of Multiclass Transactions and Ginnie Mae securities issued:** The quantity of transactions that participants in Ginnie Mae's programs execute.

Any change in the value of these directly affect daily operations of Ginnie Mae as they touch most processes. A long-term shift in any of these workload drivers would require an adaptation on Ginnie Mae's part, in order to bring liquidity into the American market effectively.

These core workload drivers are all tied to Ginnie Mae MBS program participants. In order to keep Ginnie Mae's Potential Future Exposure within acceptable limits, Ginnie Mae must rigorously review and monitor participants. If the processes, which drive this continuous

monitoring, do not function, then the safety of Ginnie Mae's asset portfolio is at a greater risk. Further, the number of participants, and thereby the transactions they conduct, directly drive the workload of ten of Ginnie Mae's process areas across business units.

Exhibit 10, *Processes Affected by the Most Common Workload Drivers*, summarizes a list of the workload drivers identified across Ginnie Mae organized by process. The three major workload drivers described above are identified as the cross-functional workload drivers' column:

Exhibit 10 – Processes Affected by the Most Common Workload Drivers

Workload Driver	Processes Affected	Cross-Functional Workload Driver Affecting Multiple Process Areas (Yes/No)
Number of Complex Participants in Ginnie Mae Program	<ul style="list-style-type: none"> • Manage Counterparty Risk • Manage Counterparty Profiles • Manage Non-Compliant Issuers • Manage Operations Risk • Manage Program Changes • Manage Transaction Participants • Manage Transaction Participants • Manage Vendor Risk • Manage Program Changes 	Yes
Number of Multiclass Transactions and Ginnie Mae securities issued	<ul style="list-style-type: none"> • Manage Multiclass Transaction Cycle • Manage Program Changes • Perform New Pool Issuance 	Yes
Potential Future Exposure (PFE)	<ul style="list-style-type: none"> • Manage Operations Risk • Manage Vendor Risk 	Yes
Number of Pool Transfers	Manage Program Changes	No
Changing Business Environment	Coordinate New Initiative	No
Size of Managed Asset Portfolio	Manage Asset Portfolio	No
Number of Touch Points with External Organizations	Manage External Relationships	No
IT Strategy	Manage PMO	No
New Accounting Policy	Perform Financial Reporting	No

Note that not all processes are associated with workload drivers, as some processes do not currently have workload drivers defined.

6 Ginnie Mae Manpower Compared To Industry Benchmarks

6.1 Purpose

The data collected in this analysis was designed to provide a way of comparing Ginnie Mae staff to comparable staffing in industry either through direct analogue industries such as other Government Sponsored Entities (GSEs), the Federal Deposit Insurance Corporation (FDIC) or to staffing data provided by the American Productivity Quality Center (APQC) for global government, insurance, and financial industries.

6.2 Methodology

6.2.1 Ginnie Mae Manpower at Time of Study

Ginnie Mae provided manpower counts from all offices. Representatives from each office responded to determine the total management and staff associated with each office. Once the overall management and staff counts were determined, the office representative allocated staff counts on an FTE basis to the processes associated with the office. FTEs were allocated at the top process level and by percentage at the subprocess level. Contractor staff was reported by Ginnie Mae after being urged to consult with contractors for estimated FTE counts. In some cases, FTE counts were updated after validating original counts with Ginnie Mae offices.

The results of Ginnie Mae's staffing are documented in *Section 2.3.1 Ginnie Mae Manpower at Time of the Study*.

6.2.2 Ginnie Mae Manpower Benchmarking Comparison

Ginnie Mae manpower levels were compared to industry benchmarks. Two types of benchmarking entities were identified and used as an industry comparison to Ginnie Mae's manpower levels: 1) APQC and 2) GSE / FDIC.

- **American Productivity Quality Center (APQC):** The APQC Process Classification Framework (PCF) is a taxonomy of business processes that allows organizations to objectively track and compare their performance internally and externally with organizations from any industry. APQC's PCF was developed in the early 1990s by APQC and a group of members from a number of industries and countries throughout the world. Originally envisioned as a tool to aid in performance improvement projects, the framework evolved into the broad taxonomy that it is today. Organizations can use the PCF's common terminology to name, organize, and map their processes. It is also helpful as a tool for explaining a business in terms of horizontal processes rather than vertical functions. It is designed as a framework and global standard to be customized for use in any organization. Thus, the PCF does not list all processes within a specific organization, and every process listed in the framework does not exist in all organizations. The PCF is also used as the basis for APQC's Open Standards Benchmarking, where organizations can benchmark their performance against that of other organizations. APQC tracks responses according to the processes as enumerated and defined in the PCF.

- **GSE / FDIC:** The APQC PCF does not collect benchmark information for the processes that were unique to the secondary mortgage market. For instance, a process to “Issuer New Securities” would not be one shared across many industries, but would be important to any creator or guarantor of securities in the secondary mortgage market. For these unique processes, a similar sized GSE was used and FTEs identified by the office and division level. Mappings of Ginnie Mae processes against these offices were performed, with both individuals familiar with the GSE’s operations and the Ginnie Mae offices consulted to validate the accuracy of these mappings. Similarly, data from the FDIC was used for the management of the Issuer Default Process using a direct analogue to the FDIC receivership activities.

Benchmarks were compared at the 50th percentile, as this is the industry “average” point. When one benchmark spanned across multiple processes, the processes were aggregated together prior to comparison. Similarly, when multiple benchmarks applied to one process, the benchmarks were aggregated together prior to comparison. This was designed to create the best “apples-to-apples” comparison of data. APQC and GSE benchmarks were validated with both the process area owners at Ginnie Mae and with individuals familiar with the GSE divisions and office areas

OMO processes were not considered as part of the overall comparison as it is expected that processes related to Human Resources Management will remain a shared service with HUD’s Office of Chief Human Capital Officer (OCHCO) or another shared service provider. Additionally, benchmarks for the process OCM-4 “New Product Service Ideas” were compared at the 25th percentile reflecting the SVP of Capital Markets belief that processes related to new product development should see less manpower than industry averages due to the constraints on Ginnie Mae’s product development which are set by statute.

The study normalizes benchmarks on a FTE per \$1B of revenue basis, using the Ginnie Mae reported Revenue of \$2.6B in revenue². The results of comparison of Ginnie Mae manpower to industry benchmarks is documented in *Section 2.3.2 Ginnie Mae Manpower Compared to Industry Benchmarks*. For processes that were not compared against APQC, the data was a comparison only of permanent institutional staff and did not include contractors as part of the benchmarking calculation as contractor FTE counts from the GSEs and FDIC was not made available. As such, the contractor head count in these processes sees no change, but a direct comparison of Ginnie Mae staff to GSE or FDIC staff is made and used as the basis of the total FTE benchmark calculation.

6.3 Data Set

6.3.1 Ginnie Mae Manpower at Time of the Study

The table below shows the result of the reported Ginnie Mae manpower as reported at the time of data collection in June 2016 rounded to the nearest tenth of an FTE. “Process Hierarchy ID#” is a tracking designation based on Ginnie Mae office to identify an individual Ginnie Mae process. A full listing of Ginnie Mae processes and the corresponding Hierarchy Process ID # is

² Ginnie Mae, “2015 Annual Report” page 21,
http://www.ginniemae.gov/about_us/what_we_do/Annual_Reports/annual_report15.pdf

contained in *Appendix A*. Staff aggregations across multiple processes are made in order to subsequently compare appropriate processes against their industry benchmarks.

Exhibit 11 – Ginnie Mae Manpower at Time of Study

Process Hierarchy ID #	Process Name	Process Family Designation	Gov't Mgmt.	Gov't Staff	Contractor	Total Staff
OCM-1	Manage Transaction Participants	Core	0.5	0.5	0.0	1.0
OCM-2	Manage Multiclass Transaction Cycle	Core	0.5	0.5	20.0	21.0
OER-2	Manage Corporate Credit Risk	Core	0.7	3.0	0.0	31.3
OER-3	Approve New Issuer or other counterparty		0.3	1.0	2.0	
OIPM-4	Manage Non-Compliant Issuers		0.8	3.4	20.0	
OER-1	Manage Operations Risk	Enabling	0.3	0.5	4.0	4.8
OER-5	Analyze Risk	Enabling	1.0	2.0	7.0	10.0
OIPM-2	Manage Program Changes	Core	1.7	6.7	14.0	30.9
OCM-3.2	Communicate Program Updates (Multiclass Participants Memorandums - MPMs)		0.3	0.3	2.5	
OCM-5	Manage Investor Inquiries	Core	1.0	0.0	4.5	
OIPM-3	Manage Counterparty Risk	Core	2.0	9.9	30.0	41.9

Process Hierarchy ID #	Process Name	Process Family Designation	Gov't Mgmt.	Gov't Staff	Contractor	Total Staff
OP&EVP-1	Coordinate New Initiative	Core	1.2	1.1	0.5	15.0
OP&EVP-2	Developing Enterprise Wide Program Policies		0.3	0.7	0.0	
OP&EVP-3	Manage External Relationships		1.3	2.5	3.5	
OP&EVP-4	Develop and Manage Business Capabilities		1.3	2.8	0.0	
OSO-1	Perform New Pool Issuance	Core	0.5	1.0	24.0	25.5
OSO-2	Administer Bonds	Core	0.9	1.0	26.0	27.9
OSO-3	Disclose Ginnie Mae Security Data	Core	0.1	1.0	28.0	29.1
OEDTS-2.2	Manage IT Operations	Enabling	0.2	5.4	20.4	221.3
OEDTS-3.3	Implement Data Architecture and Solutions		0.9	3.2	45.9	
OCFO-5	Manage Accounting Systems		0.3	6.0	22.0	
OSO-5	Manage and Transform Systems and Projects		2.0	5.0	110.0	
OEDTS-1	Manage PMO	Enabling	0.0	2.0	3.0	12.5
OEDTS-2.1	Manage IT Governance		0.8	2.7	4.1	

Process Hierarchy ID #	Process Name	Process Family Designation	Gov't Mgmt.	Gov't Staff	Contractor	Total Staff
OCM-3.1	Develop New and Updated Program Policies	Enabling	0.3	0.3	2.5	23.4
OIPM-1	Manage Counterparty Profiles		1.7	8.7	10.0	
OMO-1.3	Develop and Counsel Employees	Enabling	0.1	0.2	0.0	0.3
OCFO-3	Establish Audit Controls Over Financial Management and Reporting	Enabling	1.0	2.0	6.0	9.0
	Operate Controls and Monitor Compliance With Financial Internal Controls					
	Report On Financial Internal Controls Compliance					
	Perform Audit Liaison Support					
OMO-1.1	Plan Employee Resourcing Requirements Per Business Unit/Organization	Enabling	0.1	0.0	0.0	2.2
OMO-1.9	Provide Administration Support		0.1	0.4	0.0	
OMO-3	Managing Human Resources Policy Implementation		0.1	1.5	0.0	
OCFO-6	Manage Policies	Enabling	1.0	0.0	0.0	1.0

Process Hierarchy ID #	Process Name	Process Family Designation	Gov't Mgmt.	Gov't Staff	Contractor	Total Staff
OMO-2	Manage Facilities	Enabling	0.2	0.6	0.0	0.7
OCFO-2	Perform Financial Reporting	Enabling	0.8	0.5	14.0	15.3
	Evaluate and Manage Financial Performance					
OIPM-5	Manage Asset Portfolio	Enabling	0.8	1.3	250.0	252.1
OCFO-4	Manage Accounting Operations	Enabling	2.0	6.0	11.0	19.0
OCFO-1	Perform Planning/Budgeting /Forecasting/ Formulation	Enabling	1.0	3.0	4.0	8.0
	Execute Budget					
	Perform Revenue/Cost Accounting and Control					
OMO-1.2	Recruit, Source and Select Employees	Enabling	0.3	0.6	0.0	0.9
OMO-1.5	Onboard, Redeploy and Retire Employees	Enabling	0.1	0.3	0.0	0.4
OMO-1.4	Reward and Retain Employees	Enabling	0.0	0.0	0.0	0.0

Process Hierarchy ID #	Process Name	Process Family Designation	Gov't Mgmt.	Gov't Staff	Contractor	Total Staff
OCM-4	Formulate New Product/ Service Ideas and Requirements	Enabling	0.5	0.5	0.0	1.0
	Gather New Product/ Service Ideas and Requirements					
	Analyze New Product/ Service Ideas and Requirements					
	Evaluate New Product/ Service Ideas and Requirements					
OMO-1.6	Manage Employee Information and Analytics	Enabling	0.1	0.3	0.0	1.0
OMO-1.7	Manage Employee Communication		0.1	0.2	0.0	
OMO-1.8	Manage Labor/Employee Relations and Reasonable Accommodations		0.3	0.1	0.0	
OER-6	Manage Continuity of Operations	Enabling	0.3	0.5	2.5	3.3
OMO-1.10	Procurement of Goods And Services via Micro-purchase	Enabling	0.1	0.4	0.0	18.8
OMO-4	Manage Contracts		1.4	2.0	0.0	
OSO-4	Administer Contracts and Programs		1.5	4.0	5.0	
OER-4	Manage Vendor Risk		0.3	0.0	4.0	
OEDTS-2.3	Manage System Access	Enabling	0.1	0.9	2.7	14.7
OEDTS-4	Manage Information Security		1.0	1.0	9.0	

Process Hierarchy ID #	Process Name	Process Family Designation	Gov't Mgmt.	Gov't Staff	Contractor	Total Staff
OEDTS-3.1	Manage Data Management Competency Center	Enabling	0.1	0.4	2.6	6.0
OEDTS-3.2	Manage Data Governance		0.1	0.4	2.6	
OCM-6	Manage Investors/Product Match	Enabling	1.0	0.0	1.5	2.5
TOTAL			35.0	98.0	718.8	851.7

6.3.2 Ginnie Mae Manpower Compared to Industry Benchmarks

Exhibit 12 – Ginnie Mae Manpower Compared to Industry Benchmarks

Process Hierarchy ID#	Ginnie Mae Manpower	Benchmark Source	Benchmark Description (Either Office/Division Name for GSE sources or APQC Framework Description)	Benchmark (Adjusted for Ginnie Mae Revenue)	Difference in Manpower
OCM-1	1.0	GSE	Multifamily Capital Markets	8.2	7.2
OCM-2	21.0	GSE	Business Management, Financial Engineering, T Deal Management	36.8	15.8
OER-2	31.3	GSE / FDIC	Credit Management, MF Credit Risk Management, Counterparty Credit Risk Management Unit, Resolutions and Receivership	63.7	32.4
OER-3					
OIPM-4					
OER-1	4.8	GSE	Model Audit, Market Risk Management, Risk and Controls, Operational Risk Management	84.7	79.9

Process Hierarchy ID#	Ginnie Mae Manpower	Benchmark Source	Benchmark Description (Either Office/Division Name for GSE sources or APQC Framework Description)	Benchmark (Adjusted for Ginnie Mae Revenue)	Difference in Manpower
OER`-5	10.0	GSE	Models and Analytics, Model Operations, Collateral Modeling Default and Costing Models, Housing Analysis and Research, Modeling and Methods Dept.	52.7	42.7
OIPM-2	30.9	GSE	NSAMT, Servicing Relationship Management Exec, SF Portfolio Mgmt Exec Department, SF Bus Exec Department, SF Bus Exec Initiative Department, Operations Customer Mgmt Exec, Customer Contact Center, Customer and Operational Services	104.0	73.1
OCM-3.2					
OCM-5					
OIPM-3	41.9	GSE	Compliance Exec Department, Compliance Department	47.2	5.4
OP&EVP-1	15.0	GSE	Office of the CEO, Govt & Industry Rel Group, Corporate Comm & Marketing	31.6	16.6
OP&EVP-2					
OP&EVP-3					
OP&EVP-4					
OSO-1	25.5	GSE	Price Reporting & Analytics	62.4	36.9
OSO-2	27.9	GSE	Servicing Capital Markets	36.7	8.8
OSO-3	29.1	GSE	External Reporting	48.0	18.9
OEDTS-2.2	221.3	APQC	Number of IT FTEs for the process group "develop and maintain information technology solutions" per \$1 billion revenue	46.3	-53.8
OEDTS-3.3					
OCFO-5					
OSO-5		APQC	Number of IT FTEs for the process group "manage the business of information technology" per \$1 billion revenue	22.0	
		APQC	Number of IT FTEs for the process group "deliver and support information technology services" per \$1 billion revenue	60.2	
		APQC	Number of IT FTEs for the process group "deploy information technology solutions" per \$1 billion revenue	39.0	
OEDTS-1	12.5	APQC	Number of FTEs that perform IT planning and management per \$1 billion revenue	75.2	62.7
OEDTS-2.1					

Process Hierarchy ID#	Ginnie Mae Manpower	Benchmark Source	Benchmark Description (Either Office/Division Name for GSE sources or APQC Framework Description)	Benchmark (Adjusted for Ginnie Mae Revenue)	Difference in Manpower
OCM-3.1	23.4	APQC	Number of FTEs that perform the process group "develop customer care/customer service strategy" per \$1 billion revenue	14.9	-8.4
OIPM-1					
OMO-1.3	0.3	APQC	Number of FTEs that perform the process group "develop and counsel employees" per \$1 billion revenue	0.3	0.0
OCFO-3	9.0	APQC	Number of FTEs that perform the process "establish internal controls, policies, and procedures" per \$1 billion revenue	3.6	24.8
		APQC	Number of FTEs that perform the process "operate controls and monitor compliance with internal controls policies and procedures" per \$1 billion revenue	10.7	
		APQC	Number of FTEs that perform the process "report on internal controls compliance" per \$1 billion revenue	2.2	
		APQC	Number of FTEs that perform the process group "manage internal controls" per \$1 billion revenue	17.3	
OMO-1.1	2.2	APQC	Number of FTEs that perform HR administration activities per \$1 billion revenue	7.0	4.8
OMO-1.9					
OMO-3					
OCFO-6	1.0	APQC	Number of FTEs that perform the process "manage financial policies and procedures" per \$1 billion revenue	4.7	3.7
OMO-2	0.7	APQC	Number of FTEs that perform the process "perform capital planning and project approval" per \$1 billion revenue	2.8	2.1
OCFO-2	15.3	APQC	Number of FTEs who perform the process "perform financial reporting" per \$1 billion revenue	8.0	2.6
		APQC	Number of FTEs that perform the process "evaluate and manage financial performance" per \$1 billion revenue	9.8	
OIPM-5	252.1	GSE	GV Compliance Division	267.2	15.1
OCFO-4	19.0	APQC	Number of FTEs that perform the process "perform general accounting" per \$1 billion revenue	22.0	3.0

Process Hierarchy ID#	Ginnie Mae Manpower	Benchmark Source	Benchmark Description (Either Office/Division Name for GSE sources or APQC Framework Description)	Benchmark (Adjusted for Ginnie Mae Revenue)	Difference in Manpower	
OCFO-1	8.0	APQC	Number of FTEs that perform the process "perform planning/budgeting/forecasting" per \$1 billion revenue	6.7	9.8	
			Number of FTEs that perform the processes "perform cost accounting and control" and "perform cost management" per \$1 billion revenue	11.1		
OMO-1.2	0.9	APQC	Number of FTEs that perform the process group "recruit, source, and select employees" per \$1 billion revenue	0.9	0.0	
OMO-1.5	0.4	APQC	Number of FTEs that perform the process group "redeploy and retire employees" per \$1 billion revenue	4.9	4.5	
OMO-1.4	0.0	APQC	Number of FTEs that perform the process group "reward and retain employees" per \$1 billion revenue	0.0	0.0	
OCM-4	1.0	APQC	Number of FTEs that perform the process "generate new product/service ideas" as a percentage of total function "develop and manage products and services" FTEs	0.1	47.7	
		APQC	Number of FTEs in the product development function per \$1 billion revenue	48.6		
OMO-1.6	1.0	APQC	Number of FTEs that perform the HR function per \$1 billion revenue	1.0	0.0	
OMO-1.7						
OMO-1.8						
OER-6	3.3	APQC	Number of IT FTEs for the process group "manage business resiliency" per \$1 billion revenue	8.8	5.5	
OMO-1.10	18.8	APQC	Number of FTEs that perform the process "select suppliers and develop/maintain contracts" per \$1 billion revenue	39.3	31.3	
OMO-4						
OSO-4		APQC	Number of FTEs that perform the process "appraise and develop suppliers" per \$1 billion revenue	10.8		
OER-4						
OEDTS-2.3	14.7	APQC	Number of IT FTEs for the process group "develop and implement security, privacy, and data protection controls" per \$1 billion revenue	76.7	62.0	
OEDTS-4						

Process Hierarchy ID#	Ginnie Mae Manpower	Benchmark Source	Benchmark Description (Either Office/Division Name for GSE sources or APQC Framework Description)	Benchmark (Adjusted for Ginnie Mae Revenue)	Difference in Manpower
OEDTS-3.1	6.0	APQC	Number of IT FTEs for the process group "manage enterprise information" per \$1 billion revenue	23.8	23.0
OEDTS-3.2		APQC	Number of IT FTEs for the process "develop information and content management strategies" per \$1 billion revenue	1.0	
		APQC	Number of IT FTEs for the process "perform enterprise data and content management" per \$1 billion revenue	4.1	
OCM-6	2.5	APQC	Number of FTEs for overall governance and management of the function "develop and manage products and services" per \$1 billion revenue	6.9	4.4
TOTAL	851.7			1434.2	582.4

6.4 Summary Findings

In aggregating the data from Sections 2.3.1 and Section 2.3.2, a few highlights were identified:

- Ginnie Mae is understaffed when compared to industry benchmarks at the 50th percentile:** In examining the data in Section 2.3.2, it is apparent that Ginnie Mae is almost 582 FTEs staffed lower than the industry comparable benchmark at the 50th percentile. This understaffing is not the result of strong deviation in any particular area. In fact, most process areas were below the 50th percentile benchmark, with only a few showing more staff than comparable industry areas. The table below shows a summary of staff changes by process area:

Exhibit 13 – Ginnie Mae Manpower Benchmark Comparison Aggregated by Process Area

Process Area	Gov't Mgmt.	Gov't Staff	Contractor	Total Staff	Benchmark (Adjusted for Ginnie Mae Revenue)	Difference in Manpower
Risk Management and Issuer Monitoring	8.9	28.1	334.0	371.0	619.7	248.7
IT Development And Operations	5.3	27.0	222.3	254.5	348.4	93.9
Provide Securities / Data to Market	1.5	3.0	78.0	82.5	147.1	64.6
Product Management	1.5	0.5	1.5	3.5	55.6	52.1
Accounting and Finance	5.8	11.5	35.0	52.3	96.1	43.8
Contract Management	3.4	6.4	9.0	18.8	50.1	31.3
Enterprise-Wide Initiatives	4.0	7.0	4.0	15.0	31.6	16.6
Issuer Support and Management	2.9	10.0	32.5	45.4	59.9	14.5
Human Resources	1.5	4.0	0.0	5.5	16.9	11.4
Continuity of Operations	0.3	0.5	2.5	3.3	8.8	5.5
Grand Total	35.0	98.0	718.8	851.7	1434.2	582.4

- **Ginnie Mae is heavily reliant on Contractor Support:** It was generally known that Ginnie Mae relies upon contractors for performing its functions, but the degree of contractor reliance is interesting to note. Total contract support is 84% overall but also 68% in the core competencies.

7 Ginnie Mae Staff Turnover Analysis

7.1 Purpose

The data collected in this analysis was analyzed to identify Ginnie Mae's turnover rates for non-retirement reasons. Employee turnover was to be classified as either to other governmental organizations on the General Schedule (GS) Pay Scale, or to government organizations or private sector organizations that would not be on the GS-Pay Scale and to be analyzed by office.

7.2 Methodology

Ginnie Mae's Office of Management Operations provided a list of employee departures for the periods of May 8, 2010 through May 31, 2016. This information is in redacted form in Section 2.3 to remove employee names. Transfer to the Securities and Exchange Commission (SEC), Federal Housing Finance Agency (FHFA), Consumer Financial Protection Bureau (CFPB), or the Federal Deposit Insurance Corporation (FDIC), were categorized as Government Non-GS Pay Scale entities. Turnover to all other organizations was categorized as "GS Pay Scale Government" turnover. Turnover to the private sector was identified as "Private Sector." A retirement or resignation with no indication of other employment was identified as "Retirement".

Ginnie Mae has defined certain offices as "Hard to Fill." These offices are the Offices of Enterprise Risk, Issuer and Portfolio Management, Capital Markets, Accounting and Finance, and Securities Operations.

7.3 Data Set

7.3.1 Ginnie Mae Employee Departures May 8, 2010 to May 31, 2016

Exhibit 14 – Ginnie Mae Employee Departures

Federal Fiscal Year	Office of Departure	Date of Departure	Reason	Classification
2010	OCFO	5/8/2010	Resigned	Retirement
2010	OIPM	5/31/2010	Retired	Retirement
2010	OIPM	7/3/2010	Retired	Retirement
2010	OER	7/31/2010	Transfer to SEC	Government Non-GS Pay Scale
2011	OEDTS	10/1/2010	Resigned/Private Sector	Private Sector
2011	OIPM	10/19/2010	Accepted position in other HUD ORG	GS Pay Scale Government
2011	OMO	12/31/2010	Retired	Retirement
2011	OCFO	3/12/2011	Transfer to DOT	GS Pay Scale Government
2011	OIPM	6/18/2011	Transfer to CFPB	Government Non-GS Pay Scale
2012	OER	11/18/2011	Transfer to FDIC	Government Non-GS Pay Scale
2012	OMO	12/31/2011	Retired	Retirement

Federal Fiscal Year	Office of Departure	Date of Departure	Reason	Classification
2012	OCFO	12/31/2011	Retired	Retirement
2012	OEDTS	3/2/2012	Retired	Retirement
2012	OCFO	3/29/2012	Resigned/Private Sector	Private Sector
2012	OER	9/8/2012	Transfer to OMB	GS Pay Scale Government
2013	OIPM	11/30/2012	Resigned	Retirement
2013	Front Office	12/31/2012	Retired	Retirement
2013	OCFO	1/3/2013	Retired	Retirement
2013	OMO	5/4/2013	Other/Confidential	Other
2013	Front Office	6/1/2013	Retired	Retirement
2013	Front Office/CIR	8/16/2013	Resigned/Private Sector	Private Sector
2013	Front Office/CIR	8/24/2013	Reassigned to HUD/Housing	GS Pay Scale Government
2013	OCM	8/24/2013	Transfer to Legislative Branch	GS Pay Scale Government
2013	OIPM	8/24/2013	Transfer to Dept of Agriculture	GS Pay Scale Government
2014	OIPM	10/25/2013	Resigned (United Security Financial)	Private Sector
2014	OCFO	11/2/2013	Transfer to NIH	GS Pay Scale Government
2014	OCFO	12/14/2013	Transfer to FHFA	Government Non-GS Pay Scale
2014	OEDTS	12/15/2013	Retired	Retirement
2014	OCFO	12/17/2013	Resigned	Retirement
2014	OCM	2/21/2014	Resigned/Private sector	Private Sector
2014	OIPM	3/7/2014	Transfer to FHFA	Government Non-GS Pay Scale
2014	OCFO	4/5/2014	Transfer to FHFA	Government Non-GS Pay Scale
2014	OCM	4/5/2014	Retired	Retirement
2014	OMO	5/31/2014	Retired	Retirement
2014	OMO	5/31/2014	Retired	Retirement
2014	OER	6/13/2014	Transfer to FDIC	Government Non-GS Pay Scale
2014	OER	7/25/2014	Transfer to SEC	Government Non-GS Pay Scale
2014	OER	8/9/2014	Transfer to DOJ	GS Pay Scale Government
2014	OIPM	9/5/2014	Transfer to OPM	GS Pay Scale Government
2014	OIPM	9/5/2014	Accepted position in HUD/Housing	GS Pay Scale Government
2014	OIPM	9/5/2014	Accepted position in HUD/Housing	GS Pay Scale Government
2014	OCFO	9/19/2014	Reassignment to HUD/OCFO	GS Pay Scale Government
2014	OMO	9/26/2014	Resigned/Private Sector	Private Sector
2015	OER	10/17/2014	Resigned/Private Sector	Private Sector
2015	OIPM	11/17/2014	Transfer to DHS	GS Pay Scale Government
2015	OIPM	12/13/2014	Transfer to FHFA	Government Non-GS Pay Scale

Federal Fiscal Year	Office of Departure	Date of Departure	Reason	Classification
2015	OER	2/7/2015	Transfer to FHFA	Government Non-GS Pay Scale
2015	OIPM	2/7/2015	Accepted position in HUD/Housing	GS Pay Scale Government
2015	OCFO	4/6/2015	Terminated	Other
2015	OCM	5/1/2015	Resigned	Retirement
2015	OMO	6/11/2015	Resigned	Retirement
2015	OCFO	7/25/2015	Transfer to HHS	GS Pay Scale Government
2015	OSO	8/3/2015	Retired	Retirement
2015	OSO	9/4/2015	Transfer to FHFA	Government Non-GS Pay Scale
2015	OSO	9/22/2014	Transfer to FHFA	Government Non-GS Pay Scale
2016	OER	11/14/15	Transfer to DOT	GS Pay Scale Government
2016	OCFO	12/5/15	Transfer to DOD	GS Pay Scale Government
2016	OCFO	12/5/15	Transfer to DOJ	GS Pay Scale Government
2016	OSO	12/5/15	Other/Confidential	Other
2016	OCM	2/15/16	Resigned	Government Non-GS Pay Scale
2016	OP&EVP	2/29/16	Retired	Retirement
2016	OER	4/2/16	Transfer to TSP	GS Pay Scale Government
2016	OMO	4/2/16	Transfer to FHFA	Government Non-GS Pay Scale
2016	OIPM	4/2/16	Transfer to FHFA	Government Non-GS Pay Scale
2016	OSO	4/30/16	Retired	Retirement
2016	OSO	5/31/16	Retired	Retirement
2016	OER	5/31/16	Resigned	Retirement

7.3.2 Ginnie Mae Employee Non-Retirement Departures Aggregated by Nature of Departure

The table below shows the number of non-retirement departures aggregated by the categorization of the employees' departure.

Exhibit 15 – Percentage of Departures to Non-GS Pay Scales

Ginnie Mae Non-Retirement Departures 2010-2016			
Post-Ginnie Mae Employment	# of Employees	%	
<i>To a Non-GS Pay Scale Government Organization</i>	15	37%	54%
<i>To Private Sector</i>	7	17%	
To GS Government Organization	19	46%	
TOTAL	41	100%	

7.3.3 Ginnie Mae Employee Non-GS Pay Scale Turnover by Office

Exhibit 16 – Number of Departures to Non-GS Pay Scale by Office

Non-GS Pay Scale Departures by Office	
Ginnie Mae Office	# of Employees
OER	6
OIPM	5
OCFO	3
OCM	2
OSO	2
OMO	2
OEDTS	1
OP&EVP	0
Front Office	1
TOTAL	22

7.3.4 Total Turnover of Ginnie Mae

Exhibit 17 – Turnover by Office and Reason

Total Turnover by Office						
Office	Government Non-GS Pay Scale	Private Sector	GS Pay Scale Government	Other	Retirement	Total
OIPM	4	1	7	0	3	15
OCFO	1	2	6	1	4	14
OER	6	0	4	0	1	11
OMO	1	1	0	0	5	7
OSO	2	0	0	1	3	6

Total Turnover by Office						
Office	Government Non-GS Pay Scale	Private Sector	GS Pay Scale Government	Other	Retirement	Total
OCM	1	1	1	0	2	5
OEDTS	0	1	0	0	2	3
Front Office/CIR	0	1	1	0	0	2
Front Office	0	0	0	0	2	2
OMO	0	0	0	1	0	1
OP&EVP	0	0	0	0	1	1
TOTAL	15	7	19	3	23	67

7.4 Summary Findings

In aggregating the data from Sections 3.3.1 through 3.3.4, a few highlights were identified:

- **A majority of Ginnie Mae’s Non-Retirement Turnover shows Ginnie Mae in competition with non-GS Pay Scale Organizations for Talent:** Ginnie Mae saw 54% of its non-retirement turnover to non-GS Pay Scale organizations. While 17% of the turnover was to private sector organizations, over one-third of its turnover was to other government organizations with non-GS Pay Scale arrangements.
- **“Hard to Fill Areas” saw turnover of over 55%:** From Ginnie Mae’s Offices of Enterprise Risk, Issuer and Portfolio Management, Capital Markets, Accounting and Finance, and Securities Operations, there were 51 departures. The current total manpower for these areas shows 92.83 FTEs, representing a 55% turnover rate from May 2010 through May 2016.
- **“Hard to Fill Areas” drove non-GS Pay Scale Turnover:** Of the 22 departures for non-GS Pay Scale areas, 82% came from “Hard to Fill” offices.

8 Core Competency and Insourcing/Outsourcing Analyses

8.1 Purpose

The data collected in this area was analyzed for the purposes of supporting decisions on insourcing versus outsourcing based on the nature of the business process area. Ginnie Mae leadership has noted a distinct need to insource “core competency” related processes. The purpose of this analysis was to define core competencies with specific criteria and then apply those designations to support insourcing and outsourcing decisions.

8.2 Methodology

8.2.1 Core Competency Determinations

Core competencies were defined as any process that met one of the following criteria:

- Is the process a critical function, defined³ as necessary being able to effectively perform and maintain control of its mission and operations?
- Is the process critical to Ginnie Mae competitive position?
- Is the process critical to Ginnie Mae’s methods of evaluating risk?
- Does the process require day-to-day decision making by manager?

Senior Vice Presidents and their designees responded to surveys on each criteria and an overall determination on the relevance of process as a core competency.

8.2.2 Insourcing/Outsourcing Manpower Determination

Based on the process level benchmarks established in 6.3.2 *Ginnie Mae Manpower Compared to Industry Benchmarks* processes were determined as either candidates for insourcing, reflecting a 100% allocation of government staff, or a candidate for outsourcing with a 1:12 span of control between the government management and contractor support. If multiple process areas were affected by a single benchmark, the benchmarked was allocated to the existing processes as a percentage of the current level of effort.

8.3 Data Set

8.3.1 Core Competency Determinations by Top Level Process and Subprocesses

Exhibit 18 below contains the full set of responses provided in response to the Core Competency Determination survey.

³ Federal Register Vol. 76, No. 176, Page 56236. September 12, 2011

Exhibit 18 – Core Competency Determinations

Process	Process Name	Core Competency?	Is this process a critical function?	Is this process critical to Ginnie Mae's competitive position?	Is this process critical to Ginnie Mae's methods of evaluating risk?	Does it require day-to-day decision making by managers?
OCFO-1	Manage Budget	Yes				
OCFO-1.1	1.1 Perform Planning/Budgeting/Forecasting/Formulation	Yes	Yes	Yes	Yes	Yes
OCFO-1.2	1.2 Execute Budget	Yes	Yes	Yes	Yes	Yes
OCFO-1.3	1.3 Perform Revenue/Cost Accounting and Control	No	Yes	Yes	Yes	Yes
OCFO-2	Perform Financial Reporting	No				
OCFO-2.1	2.1 Prepare Financial Statements within Accounting Operations	No	Yes	Yes	Yes	Yes
OCFO-2.2	2.2 Prepare Fund Financial Statements Based On Regulations	No	Yes	Yes	Yes	Yes
OCFO-2.3	2.3 Prepare Governmental/Enterprise Financial Statements	No	Yes	Yes	Yes	Yes
OCFO-2.4	2.4 Evaluate and Manage Financial Performance	Yes	Yes	Yes	Yes	Yes
OCFO-2.5	2.5 Produce Annual and Regulatory Reports	Yes	Yes	Yes	Yes	Yes
OCFO-3	Manage Audit Controls	Yes				
OCFO-3.1	3.1 Establish Audit Controls Over Financial Management and Reporting	Yes	Yes	Yes	Yes	Yes
OCFO-3.2	3.2 Operate Controls and Monitor Compliance With Financial Internal Controls	Yes	Yes	Yes	Yes	Yes
OCFO-3.3	3.3 Report On Financial Internal Controls Compliance	Yes	Yes	Yes	Yes	Yes
OCFO-3.4	3.4 Perform Audit Liaison Support	Yes	Yes	No	No	No
OCFO-4	Perform Accounting Operations	Yes				
OCFO-4.1	4.1 Process Receipts and Disbursements	Yes	Yes	Yes	Yes	Yes
OCFO-4.2	4.2 Prepare Accounting Journal Entries	No	Yes	Yes	Yes	Yes
OCFO-4.3	4.3 Load/Record Accounting Journal Entries	Yes	Yes	Yes	Yes	Yes
OCFO-4.4	4.4 Produce Trial Balance	No	Yes	Yes	Yes	No
OCFO-5	Manage Accounting Systems	No				
OCFO-5.1	5.1 Collect, Store, and Retrieve Financial Data	No	Yes	Yes	Yes	Yes
OCFO-5.2	5.2 Update / Enhance Accounting Systems	No	Yes	Yes	Yes	Yes

Process	Process Name	Core Competency?	Is this process a critical function?	Is this process critical to Ginnie Mae's competitive position?	Is this process critical to Ginnie Mae's methods of evaluating risk?	Does it require day-to-day decision making by managers?
OCFO-5.3	5.3 Report Financial Data	No	Yes	Yes	Yes	Yes
OCFO-6	Manage Accounting Policy	Yes				
OCFO-6.1	6.1 Manage Accounting Policies	Yes	Yes	Yes	Yes	Yes
OCFO-6.2	6.2 Perform Transaction Support	Yes	Yes	Yes	Yes	Yes
OCFO-6.3	6.3 Monitor New Guidance	Yes	Yes	Yes	Yes	Yes
OCFO-6.4	6.4 Review Financial Statements	Yes	Yes	Yes	Yes	Yes
OCM-1	Manage Transaction Participants	Yes				
OCM-1.1	1.1 Approve Transaction Participants	Yes	Yes	Yes	Yes	Yes
OCM-1.2	1.2 Recertify Transaction Participants	Yes	Yes	Yes	Yes	Yes
OCM-1.3	1.3 Remove Transaction Participants	Yes	Yes	Yes	Yes	Yes
OCM-2	Manage Multiclass Transaction Cycle	Yes				
OCM-2.1	2.1 Open Shelves	Yes	No	No	No	No
OCM-2.2	2.2 Generate Transaction Initiation Letter (TIL)	Yes	No	No	No	No
OCM-2.3	2.3 Generate the Offering Circular Supplement (OCS)	Yes	Yes	Yes	Yes	Yes
OCM-2.4	2.4 Generate Sponsor Agreement	Yes	Yes	Yes	Yes	Yes
OCM-2.5	2.5 Generate Closing Documents (Guaranty Agreement)	Yes	Yes	Yes	Yes	Yes
OCM-2.6	2.6 Receive Payment	Yes	Yes	No	No	No
OCM-2.7	2.7 Execute Post-Closing	Yes	Yes	No	No	No
OCM-3	Manage Program Policies	Yes				
OCM-3.1	3.1 Develop new and updated program policies	Yes	Yes	Yes	Yes	Yes
OCM-3.2	3.2 Communicate program updates (Multiclass Participants Memorandums- MPMs)	No	Yes	No	No	No
OCM-4	Manage New Product	Yes				
OCM-4.1	4.1 Gather New Product/Service Ideas and Requirements	Yes	Yes	Yes	Yes	Yes
OCM-4.2	4.2 Analyze New Product/Service Ideas and Requirements	Yes	Yes	Yes	Yes	Yes
OCM-4.3	4.3 Evaluate New Product/Service Ideas and Requirements	Yes	Yes	Yes	Yes	Yes
OCM-4.4	4.4 Formulate New Product/Service Concepts	Yes	Yes	Yes	Yes	Yes

Process	Process Name	Core Competency?	Is this process a critical function?	Is this process critical to Ginnie Mae's competitive position?	Is this process critical to Ginnie Mae's methods of evaluating risk?	Does it require day-to-day decision making by managers?
OCM-5	Manage Investor Inquiries	Yes				
OCM-5.1	5.1 Respond to Investor Inquiry	No	Yes	Yes	No	No
OCM-5.2	5.2 Identify Potential Improvements to Existing Disclosure Products and Services	Yes	Yes	Yes	Yes	Yes
OCM-5.3	5.3 Surveillance Analysis	Yes	Yes	No	No	No
OCM-6	Manage Investors/Product Match	Yes				
OCM-6.1	6.1 Gather New Product/Service Ideas and Requirements	Yes	Yes	Yes	Yes	Yes
OCM-6.2	6.2 Analyze New Product/Service Ideas and Requirements	Yes	Yes	Yes	Yes	Yes
OCM-6.3	6.3 Evaluate New Product/Service Ideas and Requirements	Yes	Yes	Yes	Yes	Yes
OEDTS-1	Manage PMO	No				
OEDTS-1.1	1.1 Manage Business Strategy Alignment	Yes	Yes	Yes	Yes	Yes
OEDTS-1.2	1.2 Manage Enterprise Governance	Yes	Yes	Yes	Yes	Yes
OEDTS-1.3	1.3 Manage Methodology and Process Standardization	No	Yes	Yes	Yes	Yes
OEDTS-1.4	1.4 Manage Collaboration and Knowledge Management	No	Yes	Yes	Yes	Yes
OEDTS-1.5	1.5 Manage Project Management Training/Resource Management	No	Yes	Yes	Yes	Yes
OEDTS-1.6	1.6 Manage Project Visibility and Coordination	No	Yes	Yes	Yes	Yes
OEDTS-2	Manage Technology	Yes				
OEDTS-2.1	2.1 Manage IT Governance	Yes	Yes	Yes	Yes	Yes
OEDTS-2.2	2.2 Manage IT Operations	No	Yes	Yes	Yes	Yes
OEDTS-2.3	2.3 Manage System Access	Yes	Yes	Yes	Yes	Yes
OEDTS-3	Manage Enterprise Data	Yes				
OEDTS-3.1	3.1 Manage Data Management Competency Center (DMCC)	Yes	Yes	Yes	Yes	Yes
OEDTS-3.2	3.2 Manage Data Governance	Yes	Yes	Yes	Yes	Yes
OEDTS-3.3	3.3 Manage Project Data	No	Yes	Yes	Yes	Yes
OEDTS-4	Manage Information Security	Yes				
OEDTS-4.1	4.1 Govern Information Security	Yes	Yes	Yes	Yes	Yes

Process	Process Name	Core Competency?	Is this process a critical function?	Is this process critical to Ginnie Mae's competitive position?	Is this process critical to Ginnie Mae's methods of evaluating risk?	Does it require day-to-day decision making by managers?
OEDTS-4.2	4.2 Assess IT Risk	No	Yes	Yes	Yes	Yes
OEDTS-4.3	4.3 Manage Review Compliance	Yes	Yes	Yes	Yes	Yes
OEDTS-4.4	4.4 Provide Authorization Decision	Yes	Yes	Yes	Yes	Yes
OER-1	Manage Operations Risk	Yes				
OER-1.1	1.1 Determine Risk Tolerance for Organization	Yes	Yes	No	Yes	Yes
OER-1.2	1.2 Develop, Implement, and Maintain Enterprise Risk Framework, Policies and Procedures	Yes	Yes	No	Yes	No
OER-1.3	1.3 Identify and Implement Enterprise Risk Management Tools	Yes	Yes	No	Yes	No
OER-1.4	1.4 Coordinate The Sharing of Risk Knowledge Across The Organization	Yes	Yes	No	Yes	Yes
OER-1.5	1.5 Perform Internal Risk Assessments	Yes	Yes	No	Yes	No
OER-1.6	1.6 Prepare and Report Enterprise Risk to Executive Management and Board	Yes	Yes	No	Yes	Yes
OER-2	Manage Corporate Credit Risk	Yes				
OER-2.1	2.1 Perform Probability of Default Modeling	Yes	Yes	No	Yes	Yes
OER-2.2	2.2 Manage Watch List	Yes	Yes	No	Yes	Yes
OER-2.3	2.3 Perform Credit Reviews	No	Yes	No	Yes	Yes
OER-2.4	2.4 Perform Default Analysis	Yes	Yes	No	Yes	Yes
OER-2.5	2.5 Perform Other Supplemental Modeling	Yes	No	No	No	No
OER-3	Approve New Issuer or Counterparty	No				
OER-3.1	3.1 Submit New Issuer Application	No	Yes	Yes	No	No
OER-3.2	3.2 Review New Issuer Application	No	Yes	Yes	Yes	Yes
OER-3.3	3.3 Approve/Reject New Issuer Application	Yes	Yes	Yes	Yes	Yes
OER-3.4	3.4 Notify Issuer of Application Status	No	Yes	No	No	No
OER-3.5	3.5 Notify OIPM for Issuer On-Boarding	No	Yes	No	Yes	No
OER-4	Manage Vendor Risk	Yes				
OER-4.1	4.1 Identify Inherent Risks	Yes	Yes	No	Yes	No
OER-4.2	4.2 Evaluate Effectiveness of Vendor to Manage Inherent Risks	Yes	Yes	Yes	Yes	No
OER-4.3	4.3 Monitor Vendor Risk Management Activities	Yes	Yes	Yes	Yes	Yes

Process	Process Name	Core Competency?	Is this process a critical function?	Is this process critical to Ginnie Mae's competitive position?	Is this process critical to Ginnie Mae's methods of evaluating risk?	Does it require day-to-day decision making by managers?
OER-4.4	4.4 Off-Board Vendors	Yes	Yes	Yes	Yes	No
OER-5	Manage and Develop, Model, Forecast and Analytics Risk	No				
OER-5.1	5.1 Establish Enterprise Model Risk Management Framework	Yes	Yes	Yes	Yes	No
OER-5.2	5.2 Manage the Modeling Process for Financial Reporting	Yes	Yes	Yes	Yes	Yes
OER-5.3	5.3 Manage the Modeling Process for Budget Forecast	Yes	Yes	Yes	Yes	Yes
OER-5.4	5.4 Provide Ongoing Analytical Support For Business Decisioning	No	Yes	Yes	Yes	Yes
OER-5.5	5.5 Perform Issuer and Loan Research for Risk Management	No	Yes	Yes	Yes	No
OER-5.6	5.6 Perform Economic, Market Research and Policy Analysis	No	No	Yes	Yes	No
OER-5.7	5.7 Manage Model Governance and Process Control For Audit and Regulatory Requirements	Yes	Yes	Yes	Yes	Yes
OER-5.8	5.8 Prepare Risk Reporting for Management and Committees	No	No	Yes	Yes	No
OER-6	Manage Continuity of Operations	Yes				
OER-6.1	6.1 Identify Essential Functions	Yes	Yes	No	Yes	No
OER-6.2	6.2 Analyze Business Impact	Yes	Yes	No	Yes	No
OER-6.3	6.3 Perform Risk Assessment	Yes	Yes	No	Yes	No
OER-6.4	6.4 Perform Emergency Re-Assessment (ERG)	Yes	Yes	No	Yes	No
OER-6.5	6.5 Manage Continuous Improvement (Updating frameworks, charters, etc.)	Yes	Yes	No	Yes	No
OER-6.6	6.6 Perform Training and Awareness	Yes	Yes	No	Yes	No
OIPM-1	Manage Counterparty Profiles	Yes				
OIPM-1.1	1.1 Onboard/Terminate Issuer	Yes	Yes	No	No	No
OIPM-1.2	1.2 Engage Issuer	No	No	No	Yes	No
OIPM-1.3	1.3 Receive Counterparty Requests	No	Yes	No	No	No
OIPM-1.4	1.4 Process Counterparty Requests	Yes	Yes	Yes	No	Yes
OIPM-2	Manage Program Changes	Yes				

Process	Process Name	Core Competency?	Is this process a critical function?	Is this process critical to Ginnie Mae's competitive position?	Is this process critical to Ginnie Mae's methods of evaluating risk?	Does it require day-to-day decision making by managers?
OIPM-2.1	2.1 Receive Request	No	No	No	No	No
OIPM-2.2	2.2 Review Request For Potential Sources of Risk	Yes	Yes	Yes	Yes	Yes
OIPM-2.3	2.3 Justify Decision	Yes	Yes	No	Yes	Yes
OIPM-2.4	2.4 Make Final Decision	Yes	Yes	Yes	Yes	Yes
OIPM-2.5	2.5 Manage Program Changes	Yes	Yes	Yes	Yes	Yes
OIPM-2.6	2.6 Communicate Program Changes	No	Yes	Yes	Yes	Yes
OIPM-3	Manage Counterparty Risk	Yes				
OIPM-3.1	3.1 Review Counterparties, Issuers, and Document Custodians	Yes	Yes	Yes	Yes	Yes
OIPM-3.2	3.2 Perform Enforcement Activities for Counterparties	Yes	Yes	Yes	Yes	Yes
OIPM-4	Manage Non-Compliant Issuers	Yes				
OIPM-4.1	4.1 Make Issuer Default Recommendations	Yes	Yes	Yes	Yes	No
OIPM-4.2	4.2 Determine Issuer Default Type	Yes	No	No	Yes	No
OIPM-4.3	4.3 Conduct Default Activities	Yes	Yes	Yes	Yes	No
OIPM-4.4	4.4 Perform Post-Issuer Default Activities	Yes	Yes	No	No	Yes
OIPM-5	Manage Asset Portfolio	Yes				
OIPM-5.1	5.1 Review Asset Compliance & Performance	Yes	Yes	No	Yes	Yes
OIPM-5.2	5.2 Review Asset Sales	Yes	No	No	No	Yes
OMO-1	Manage Human Resources	Yes				
OMO-1.1	1.1 Plan Employee Resourcing Requirements Per Business Unit/Organization	Yes	Yes	Yes	Yes	Yes
OMO-1.1	1.10 Procurement of Goods And Services via Micro-purchase	No	Yes	Yes	Yes	Yes
OMO-1.2	1.2 Recruit, Source and Select Employees (Hiring and Staffing)	No	Yes	Yes	Yes	Yes
OMO-1.3	1.3 Develop and Counsel Employees (training)	Yes	Yes	Yes	Yes	Yes
OMO-1.4	1.4 Reward and Retain Employees	Yes	Yes	Yes	Yes	Yes
OMO-1.5	1.5 Onboard, Redeploy and Retire Employees	Yes	Yes	Yes	Yes	Yes
OMO-1.6	1.6 Manage Employee Information and Analytics	Yes	Yes	Yes	Yes	Yes
OMO-1.7	1.7 Manage Employee Communication	No	Yes	Yes	Yes	Yes

Process	Process Name	Core Competency?	Is this process a critical function?	Is this process critical to Ginnie Mae's competitive position?	Is this process critical to Ginnie Mae's methods of evaluating risk?	Does it require day-to-day decision making by managers?
OMO-1.8	1.8 Manage Labor/Employee Relations and Reasonable Accommodations	Yes	Yes	Yes	Yes	Yes
OMO-1.9	1.9 Provide Administration Support	Yes	Yes	Yes	Yes	Yes
OMO-2	Manage Facilities					
OMO-2.1	2.1 Plan and Acquire Assets	Yes	Yes	Yes	Yes	Yes
OMO-2.2	2.2 Manage Facilities Operations	Yes	Yes	Yes	Yes	Yes
OMO-3	Manage HR Policy					
OMO-3.1	3.1 Implement and Communicate HUD HR Policies	Yes	Yes	Yes	Yes	Yes
OMO-3.2	3.2 Provide Data and Information to HUD OCHICO HR Policy Data Gathering Sessions	Yes	Yes	Yes	Yes	Yes
OMO-4	Manage Contracts					
OMO-4.1	4.1 Create and Submit Procurement Requests to HUD-OCPO	Yes	Yes	Yes	Yes	Yes
OMO-4.2	4.2 Create and Submit Procurement Requests to GSA	Yes	Yes	Yes	Yes	Yes
OMO-4.3	4.3 Develop Contract Budget for OCFO	Yes	Yes	Yes	Yes	Yes
OMO-4.4	4.4 Create and Submit Strategic Acquisition Plan for Procurement Committee	Yes	Yes	Yes	Yes	Yes
OMO-4.5	4.5 Close-out Contract Process	Yes	Yes	Yes	Yes	Yes
OMO-4.6	4.6 Ongoing Monitoring, Oversight, and Reporting of Ginnie Mae Contracts	Yes	Yes	Yes	Yes	Yes
OMO-4.7	4.7 Provide P&P Support and Feedback to HUD-OCPO	Yes	Yes	Yes	Yes	Yes
OMO-4.8	4.8 Communicating new P&P Implementation plans from HUD-OCPO	Yes	Yes	Yes	Yes	Yes
OP&EVP-1	Coordinate New Initiative	Yes				
OP&EVP-1.1	1.1 Define the Business Concept and Long-Term Vision	Yes	Yes	Yes	No	Yes
OP&EVP-1.2	1.2 Develop Business Strategy	Yes	Yes	Yes	Yes	Yes
OP&EVP-1.3	1.3 Execute and Measure Strategic Initiatives	Yes	Yes	Yes	No	Yes
OP&EVP-2	Develop Enterprise-Wide Program	Yes				
OP&EVP-2.1	2.1 Develop and Approve Business Policy Document	Yes	Yes	Yes	Yes	Yes

Process	Process Name	Core Competency?	Is this process a critical function?	Is this process critical to Ginnie Mae's competitive position?	Is this process critical to Ginnie Mae's methods of evaluating risk?	Does it require day-to-day decision making by managers?
OP&EVP-2.2	2.2 Develop and Implement Federal Policy Document	Yes	Yes	Yes	Yes	Yes
OP&EVP-3	Manage External Relationships	Yes				
OP&EVP-3.1	3.1 Manage government and industry relationships	Yes	Yes	Yes	Yes	Yes
OP&EVP-3.2	3.2 Manage legal and ethical issues (i.e. Contracts-related)	Yes	Yes	Yes	Yes	Yes
OP&EVP-3.3	3.3 Manage public relations program	Yes	Yes	Yes	Yes	Yes
OP&EVP-4	Develop and Manage Business Capabilities	Yes				
OP&EVP-4.1	4.1 Manage business processes	Yes	Yes	Yes	Yes	Yes
OP&EVP-4.2	4.2 Manage enterprise quality	Yes	Yes	Yes	Yes	Yes
OP&EVP-4.3	4.3 Manage change	Yes	Yes	Yes	Yes	Yes
OP&EVP-4.4	4.4 Develop and manage enterprise-wide knowledge management (KM) capability	Yes	Yes	No	No	Yes
OP&EVP-4.5	4.5 Measure and benchmark	Yes	Yes	Yes	Yes	Yes
OSO-1	Perform New Pool Issuance	Yes				
OSO-1.1	1.1 Prepare For Issuance	No	Yes	Yes	No	No
OSO-1.2	1.2 Validate and Issue New Pools	Yes	Yes	Yes	Yes	No
OSO-1.3	1.3 Manage Pool Transfers and Participant Mergers	Yes	Yes	Yes	Yes	No
OSO-1.4	1.4 Manage Exceptions	Yes	Yes	Yes	Yes	Yes
OSO-1.5	1.5 Deliver and Finalize Pools	Yes	Yes	Yes	No	No
OSO-1.6	1.6 Disseminate New Pool Disclosure Data	No	Yes	Yes	No	No
OSO-1.7	1.7 Manage Operations and Maintenance	No	Yes	Yes	Yes	No
OSO-2	Administer Bonds	Yes				
OSO-2.1	2.1 Maintain Monthly Bond Administration Requirements	Yes	Yes	Yes	Yes	No
OSO-2.2	2.2 Administer Bond Payments and Collect Fees	Yes	Yes	Yes	Yes	No
OSO-2.3	2.3 Manage Prepayment Penalties and Unclaimed Funds and Send Letters of Credit	Yes	Yes	Yes	Yes	No
OSO-2.4	2.4 Manage Platinum and REMIC Securities	Yes	Yes	Yes	No	No
OSO-2.5	2.5 Report Income Taxes	No	Yes	No	No	No
OSO-2.6	2.6 Collect Unclaimed Funds	No	Yes	Yes	No	No
OSO-2.7	2.7 Manage Operations and Maintenance	No	Yes	Yes	Yes	Yes

Process	Process Name	Core Competency?	Is this process a critical function?	Is this process critical to Ginnie Mae's competitive position?	Is this process critical to Ginnie Mae's methods of evaluating risk?	Does it require day-to-day decision making by managers?
OSO-3	Disclose Ginnie Mae Security Data	No				
OSO-3.1	3.1 Distribute to NYSE	No	Yes	Yes	No	No
OSO-3.2	3.2 Post to Website	No	Yes	Yes	No	No
OSO-3.3	3.3 Manage Exceptions	Yes	Yes	Yes	No	No
OSO-4	Administer Contracts and Programs	Yes				
OSO-4.1	4.1 Provide Contractor Oversight and Support	Yes	Yes	Yes	Yes	Yes
OSO-4.2	4.2 Budgeting for Contracting	Yes	Yes	Yes	Yes	Yes
OSO-4.3	4.3 Provide Documentation and Data Collection to Support Budgeting	Yes	Yes	Yes	Yes	Yes
OSO-4.4	4.4 Customer Adoption	Yes	Yes	Yes	Yes	Yes
OSO-4.5	4.5 Website Content and Technical Management	No	Yes	Yes	No	No
OSO-5	Manage and Transform Systems and Projects	No				
OSO-5.1	5.1 Create and Maintain IT Services and Solutions (Project Management)	Yes	Yes	Yes	Yes	Yes
OSO-5.2	5.2 Independent Validation and Verification (IV&V) Software Testing and Validation	No	Yes	Yes	Yes	Yes
OSO-5.3	5.3 Deploy IT Solutions	No	Yes	Yes	Yes	Yes

8.3.2 Insourcing/Outsourcing Allocation of Staff Based on Core Competency Determinations

Exhibit 19 shows a potential allocation of government and contractor staff by processes based on core competencies determinations and the methodology described in Section 8.2.2.

Exhibit 19 – Insourcing/Outsourcing Allocation

Process Hierarchy ID #	Process Name	Benchmark Allocation	Core Competency	Govt FTEs	Contractor FTEs
OCM-1	Manage Transaction Participants	8.2	Yes	8.2	0.0
OCM-2	Manage Multiclass Transaction Cycle	36.8	Yes	36.8	0.0
OER-2	Manage Corporate Credit Risk	7.5	Yes	7.5	0.0

Process Hierarchy ID #	Process Name	Benchmark Allocation	Core Competency	Govt FTEs	Contractor FTEs
OER-3	Approve New Issuer or other counterparty	6.8	No	1.3	5.5
OIPM-4	Manage Non-Compliant Issuers	49.4	Yes	49.4	0.0
OER-1	Manage Operations Risk	84.7	Yes	84.7	0.0
OER-5	Analyze Risk	52.7	No	9.8	43.0
OIPM-2	Manage Program Changes	75.4	Yes	75.4	0.0
OCM-3.2	Communicate Program Updates (Multiclass Participants Memorandums - MPMs)	10.1	Yes	10.1	0.0
OCM-5	Manage Investor Inquiries	18.5	Yes	18.5	0.0
OIPM-3	Manage Counterparty Risk	47.2	Yes	47.2	0.0
OP&EVP-1	Coordinate New Initiative	5.8	Yes	1.2	0.0
OP&EVP-2	Developing Enterprise Wide Program Policies	2.0	Yes	0.4	0.0
OP&EVP-3	Manage External Relationships	15.3	Yes	3.2	0.0
OP&EVP-4	Develop and Manage Business Capabilities	8.6	Yes	1.8	0.0
OSO-1	Perform New Pool Issuance	62.4	Yes	62.4	0.0
OSO-2	Administer Bonds	36.7	Yes	36.7	0.0
OSO-3	Disclose Ginnie Mae Security Data	48.0	No	8.9	39.1
OEDTS-2.2	Manage IT Operations	19.7	Yes	19.7	0.0
OEDTS-3.3	Implement Data Architecture and Solutions	37.9	Yes	37.9	0.0
OCFO-5	Manage Accounting Systems	21.4	No	4.0	17.4

Process Hierarchy ID #	Process Name	Benchmark Allocation	Core Competency	Govt FTEs	Contractor FTEs
OSO-5	Manage and Transform Systems and Projects	88.6	No	16.4	72.2
OEDTS-1	Manage PMO	30.0	No	5.6	24.5
OEDTS-2.1	Manage IT Governance	45.2	Yes	45.2	0.0
OCM-3.1	Develop New and Updated Program Policies	1.9	Yes	1.9	0.0
OIPM-1	Manage Counterparty Profiles	13.0	Yes	13.0	0.0
OMO-1.3	Develop and Counsel Employees	0.3	Yes	0.3	0.0
OCFO-3	Establish Audit Controls Over Financial Management and Reporting	33.8	Yes	33.8	0.0
	Operate Controls and Monitor Compliance With Financial Internal Controls				
	Report On Financial Internal Controls Compliance				
	Perform Audit Liaison Support				
OMO-1.1	Plan Employee Resourcing Requirements Per Business Unit/Organization	0.4	Yes	0.4	0.0
OMO-1.9	Provide Administration Support	1.8	Yes	1.8	0.0
OMO-3	Managing Human Resources Policy Implementation	4.8	Yes	4.8	0.0
OCFO-6	Manage Policies	4.7	Yes	4.7	0.0
OMO-2	Manage Facilities	2.8	Yes	2.8	0.0

Process Hierarchy ID #	Process Name	Benchmark Allocation	Core Competency	Govt FTEs	Contractor FTEs
OCFO-2	Perform Financial Reporting	17.9	No	3.3	14.5
	Evaluate and Manage Financial Performance				
OIPM-5	Manage Asset Portfolio	267.2	Yes	267.2	0.0
OCFO-4	Manage Accounting Operations	22.0	Yes	22.0	0.0
OCFO-1	Perform Planning/Budgeting/Forecasting/Formulation	17.8	Yes	17.8	0.0
	Execute Budget				
	Perform Revenue/Cost Accounting and Control				
OMO-1.2	Recruit, Source and Select Employees	0.9	Yes	0.9	0.0
OMO-1.5	Onboard, Redeploy and Retire Employees	4.9	Yes	4.9	0.0
OMO-1.4	Reward and Retain Employees	0.0	Yes	0.0	0.0
OCM-4	Formulate New Product/ Service Ideas and Requirements	48.7	Yes	48.7	0.0
	Gather New Product/ Service Ideas and Requirements				
	Analyze New Product/ Service Ideas and Requirements				
	Evaluate New Product/ Service Ideas and Requirements				
OMO-1.6	Manage Employee Information and Analytics	0.4	Yes	0.4	0.0

Process Hierarchy ID #	Process Name	Benchmark Allocation	Core Competency	Govt FTEs	Contractor FTEs
OMO-1.7	Manage Employee Communication	0.2	Yes	0.2	0.0
OMO-1.8	Manage Labor/Employee Relations and Reasonable Accommodations	0.3	Yes	0.3	0.0
OER-6	Manage Continuity of Operations	8.8	Yes	8.8	0.0
OMO-1.10	Procurement of Goods And Services via Micro-purchase	1.5	Yes	1.5	0.0
OMO-4	Manage Contracts	9.1	Yes	9.1	0.0
OSO-4	Administer Contracts and Programs	28.0	Yes	28.0	0.0
OER-4	Manage Vendor Risk	11.5	Yes	11.5	0.0
OEDTS-2.3	Manage System Access	19.2	Yes	19.2	0.0
OEDTS-4	Manage Information Security	57.4	Yes	57.4	0.0
OEDTS-3.1	Manage Data Management Competency Center	14.5	Yes	14.5	0.0
OEDTS-3.2	Manage Data Governance	14.5	Yes	14.5	0.0
OCM-6	Manage Investors/Product Match	6.9	Yes	6.9	0.0
TOTAL		1,434.2		1,218.0	216.2

8.4 Summary Findings

In combining the data shown in Sections 4.3.1 and 4.3.2 with the benchmarking data from Section 2.3.2, Ginnie Mae's staffing model if they were to staff at industry benchmarks would show a distinctly different composition of staffing as shown in Exhibit 20 below:

Exhibit 20 – Adjustment in Ginnie Mae and Contractor Staff to Benchmarks

Manpower Support	Manpower at Time of Study (rounded to nearest FTE)	Benchmarked Manpower Allocated by Core Competency	FTE Adjustment
Ginnie Mae (Government) FTEs	133	1,218	+1,085
Contractor FTEs	719	216	-503
TOTAL	852	1,434	+582

- **Ginnie Mae should increase its headcount primarily in Ginnie Mae staff, and examine decreased contractor support:** At the time of this study, Ginnie Mae has over 700 contractors. If Ginnie Mae were to staff at the industry benchmarks, increasing its overall manpower to more than 1,400 FTEs, it could still decrease contractor support to approximately 216 FTEs if all core processes were insourced.
- **Contractor currently provide 64% of the FTE effort for Ginnie Mae’s core competencies:** Applying the core competency designations to the existing manpower of Ginnie Mae’s processes noted in Section 2.3.1, contractors provide over 530 FTEs of the 785 FTEs used to support core competency processes.
- **Based on Ginnie Mae’s designations of core competencies, insourcing is recommended across Ginnie Mae:** Of the 40 major process areas identified in Section 4.3.2, 35 are identified as core competencies and should be examined for insourcing opportunities.

9 Span of Control Data

9.1 Purpose

In examining span of control, the primary objective of the analysis is to determine the ratio of employees performing a task to the number of managers with direct oversight of the task. This analysis looked to document the span of control in each of Ginnie Mae's process areas, assess the relative need for close management oversight based on the difficulty, complexity, or variation in the process, and compare the existing span of control to benchmarks.

9.2 Methodology

There is no one standard for span of control either in industry or in the Federal Government. It is generally agreed that span of control varies based on the nature of the process being managed. The 1993 National Performance Review performed under the leadership of then Vice President Gore identified an existing span of control for the Federal Government at a ratio of 1:7 employees, and recommended a target ratio of 1 manager to 15 employees⁴ for the federal government as a whole. The Office of Personnel Management (OPM) defined a "narrow span of control" as 1 to 5.5 employees⁵. Specifically, the Department of Housing and Urban Development identified a goal of one manager to 12 employees⁶ to be implemented by federal fiscal year 1999.

The Australian Government is one of the few governmental resources that have advocated specific spans of control. In 2013, the National Commission of Audit for Australia recommended the following spans of control based on the nature of the work performed:

"Best practice spans of control target ranges are set out below for different public sector functions:

- 5-8 staff for policy and research functions;
- 8-10 staff for service delivery functions;
- 7-9 staff for regulation and compliance functions; and
- 6-12 staff for specialist functions"⁷

In combining these sources and recommendations, this study examined Ginnie Mae's assessment of the complexity of a task to identify an appropriate span of control. As a benchmark, the following spans of control were identified as targets:

- One manager to 8 full time equivalents for the most difficult and complex processes
- One manager to 12 full time equivalents for processes of average difficult and complexity
- One manager to 16 full time equivalents for the most routine processes with minimal complexity

⁴ <http://govinfo.library.unt.edu/npr/library/nprprt/annrpt/vp-rpt96/appendix/position.html>, Appendix H

⁵ Digest of Significant Classification Decisions & Opinions, No. 22, March 1999, Page 6

⁶ <http://govinfo.library.unt.edu/npr/library/nprprt/annrpt/vp-rpt96/appendix/position.html>, Table H-3

⁷ <http://ncoa.gov.au/report/appendix-vol-3/2-2-improve-org-structures.html>,

To determine the complexity of each task, each office was surveyed and asked to evaluate their processes in a number of different dimensions using Likert scale responses—a response that requires a numerical value between one and five. The responses used to determine complexity, difficulty, and need to strict oversight were the following questions:

- 1) How Frequently Are There Unexpected Events within This Process? (1=Never, 5=Every Time)
- 2) How Frequently Is There a Potential For Risk? (1=Never, 5=Every Time)
- 3) How Involved Are Team Leaders/Managers In Day-to-Day Decision Making and Quality Control? (1=Not at all involved, 5=Extremely Involved)
- 4) In Carrying Out The Process, How Frequently Does A Manager Need To Be Involved? (1=Never, 5=Every Time)
- 5) How Difficult Would You Rate This Process? (1=Very Difficult, 5=Very Easy)
- 6) How Difficult Is It To Train Staff To Execute This Process Autonomously? (1=Very Difficult, 5=Very Easy)
- 7) How Difficult Is It To Monitor Work To Ensure Quality? (1=Very Difficult, 5=Very Easy)

A full listing of the survey of workforce complexity and the Likert scale response definitions is contained in *Appendix B*.

Each of the dimension was examined to determine whether it argued for a narrower, or decreased span of control due to high complexity or risk, or a broader, increased span of control due to its routing nature and minimal requirements for management oversight. The table below shows how each equation was evaluated based on its numerical response and its impact on span of control:

Exhibit 21 – Impact of Workforce Complexity Survey on Span of Control

Workforce Survey Question / Impact on Span of Control (SOC)	How Frequently Is There A Potential For Risk?	How Involved Are Team Leaders/Managers In Day to Day Decision Making and Quality Control?	In Carrying Out The Process, How Frequently Does A Manager Need To Be Involved?	How Difficult Would You Rate This Process?	How Difficult Is It To Train Staff To Execute This Process Autonomously?	How Difficult Is It To Monitor Work To Ensure Quality?
Narrow SOC Ratio	>4	>4	>4	<=1.5	<=1.5	<=1.5
Consider Decrease SOC Ratio	>3 to 4	>3 to 4	>3 to 4	>1.5 to 2.5	>1.5 to 2.5	>1.5 to 2.5
Appropriate SOC	>2.5 to 3	>2.5 to 3	>2.5 to 3	>2.5 to 3.5	>2.5 to 3.5	>2.5 to 3.5
Consider Increase SOC	>1.5 to 2.5	>1.5 to 2.5	>1.5 to 2.5	>3.5 to 4.5	>3.5 to 4.5	>3.5 to 4.5
Increase SOC	<1.5	<1.5	<1.5	>4.5	>4.5	>4.5

9.3 Data Set

9.3.1 Complexity Survey Results and Existing Spans of Control for Each Ginnie Mae Process

Please note that in creating the average for the process in each area, processes on the difficult scale were subtracted from the maximum of 5 so that a value of “5” would always indicate a more narrow/increased span of control and a value of 1 would always indicate a broader of control. The “Existing Ratio of Gov. Management FTE to Total FTE” was calculated by taking sum of the government staff FTE count and the contractor FTE count then dividing by the government manager FTE count to determine the existing Span of Control ratio.

Exhibit 21 – Complexity Survey Results

Hierarchy Process ID #	Process Name	Heat map Node Designation	How Frequently Are There Unexpected Events Within This Process?		How Frequently Is There a Potential For Risk?		How Involved Are Team Leaders / Managers In Day to Day Decision Making and Quality Control?		In Carrying Out The Process, How Frequently Does A Manager Need To Be Involved?		How Difficult Would You Rate This Process?		How Difficult Is It To Train Staff To Execute This Process Autonomously?		How Difficult Is It To Monitor Work To Ensure Quality?		Average For Process Using Numerical Scale (U)	Existing Ratio of Gov. Management FTE to Total FTE
OCFO-1	Manage Budget	Accounting / Finance	3	3 Sometimes	3	3 Sometimes	5	Extremely Involved	4	Every Time	1	Very Difficult	2	Neutral	2	Difficult	4.29	1:7
OCFO-2	Perform Financial Reporting	Accounting / Finance	3	7 Almost Every Time	4	4 Almost Every Time	5	Extremely Involved	5	Every Time	2	Neutral	2	Neutral	2	Difficult	4.14	1:19.3
OCFO-3	Manage Audit Controls	Accounting / Finance	3	5 Sometimes	4	8 Every Time	5	Extremely Involved	4	Almost Every Time	1	Very Difficult	2	Difficult	2	Difficult	4.43	1:8
OCFO-4	Perform Accounting Operations	Accounting / Finance	3	9 Almost Every Time	3	7 Almost Every Time	4	Extremely Involved	4	Every Time	2	Difficult	2	Difficult	1	Very Difficult	4.29	1:8.5
OCFO-5	Manage Accounting Systems	Contracts	3	3 Sometimes	3	3 Sometimes	4	Extremely Involved	3	Almost Every Time	2	Neutral	2	Difficult	3	Easy	4.00	1:112
OCFO-6	Manage Accounting Policy	Accounting / Finance	3	1 Sometimes	3	0 Sometimes	5	Extremely Involved	3	Almost Every Time	5	Very Easy	1	Difficult	3	Neutral	3.57	1:0
OCM-1	Manage Transaction Participants	Manage Transaction Participants	4	3 Almost Every Time	4	3 Almost Every Time	4	Very Involved	4	Almost Every Time	1	Difficult	1	Difficult	3	Neutral	4.43	1:1

Hierarchy Process ID #	Process Name	Heat map Node Designation	How Frequently Are There Unexpected Events Within This Process?		How Frequently Is There a Potential For Risk?		How Involved Are Team Leaders / Managers In Day to Day Decision Making and Quality Control?		In Carrying Out The Process, How Frequently Does A Manager Need To Be Involved?		How Difficult Would You Rate This Process?		How Difficult Is It To Train Staff To Execute This Process Autonomously?		How Difficult Is It To Monitor Work To Ensure Quality?		Average For Process Using Numerical Scale (U)	Existing Ratio of Gov. Management FTE to Total FTE
OCM-2	Manage Multiclass Transaction Cycle	Manage Multiclass Transaction Cycle	5 . 0	Every time	5 . 0	Every Time	5 . 0	Extremely Involved	5 . 0	Every Time	1 . 1	Very Difficult	1 . 0	Very Difficult	1 . 1	Very Difficult	5.00	1:41
OCM-3	Manage Program Policies	Products	3 . 0	Sometimes	4 . 0	Almost Every Time	2 . 0	Slightly Involved	5 . 0	Almost Every Time	2 . 5	Neutral	1 . 0	Very Difficult	2 . 5	Neutral	3.86	1:11
OCM-4	Manage New Product	Products	5 . 0	Every time	5 . 0	Every Time	3 . 0	Moderately Involved	5 . 0	Almost Every Time	1 . 0	Very Difficult	1 . 0	Very Difficult	1 . 0	Very Difficult	4.71	1:1
OCM-5	Manage Investor Inquiries	Products	3 . 7	Almost Every Time	4 . 6	Every Time	5 . 0	Extremely Involved	4 . 3	Almost Every Time	1 . 6	Difficult	1 . 7	Difficult	2 . 1	Difficult	4.43	1:4.5
OCM-6	Manage Investors/Product Match	Products	3 . 2	Sometimes	3 . 0	Sometimes	4 . 0	Very Involved	3 . 8	Almost Every Time	1 . 2	Very Difficult	1 . 2	Very Difficult	2 . 0	Difficult	4.14	1:1.5
OEDTS-1	Manage PMO	IT	3 . 0	Sometimes	2 . 1	Almost Never	3 . 2	Moderately Involved	3 . 0	Sometimes	2 . 4	Difficult	2 . 4	Difficult	2 . 2	Difficult	3.43	0:5
OEDTS-2	Manage Technology	IT	3 . 0	Sometimes	2 . 2	Almost Never	4 . 0	Very Involved	3 . 8	Almost Every Time	3 . 0	Neutral	2 . 2	Difficult	1 . 4	Very Difficult	3.57	1:33.4
OEDTS-3	Manage Enterprise Data	IT	4 . 7	Every time	3 . 4	Sometimes	5 . 0	Extremely Involved	3 . 0	Sometimes	2 . 1	Difficult	1 . 2	Very Difficult	2 . 0	Difficult	4.29	1:55
OEDTS-4	Manage Information Security	IT	3 . 8	Almost Every Time	4 . 0	Almost Every Time	1 . 3	Not At All Involved	3 . 3	Almost Every Time	1 . 9	Difficult	1 . 2	Very Difficult	1 . 5	Difficult	3.86	1:10
OER-1	Manage Operations Risk	Manage Operations Risk	3 . 0	Sometimes	3 . 0	Sometimes	5 . 0	Extremely Involved	4 . 0	Almost Every Time	2 . 0	Difficult	2 . 0	Difficult	3 . 0	Neutral	3.71	1:12
OER-2	Manage Corporate Credit Risk	Manage Corporate Credit Risk	3 . 8	Almost Every Time	1 . 4	N e v e r	5 . 0	Extremely Involved	5 . 0	Every Time	1 . 4	Very Difficult	1 . 0	Very Difficult	2 . 0	Difficult	4.14	1:4.5
OER-3	Approve New Issuer or Counterparty	Approve New Issuer or Counterparty	3 . 9	Almost Every Time	2 . 1	Almost Never	3 . 0	Moderately Involved	5 . 0	Every Time	3 . 0	Neutral	3 . 0	Neutral	1 . 2	Very Difficult	3.57	1:9
OER-4	Manage Vendor Risk	Contracts	3 . 0	Sometimes	3 . 0	Sometimes	5 . 0	Extremely Involved	4 . 0	Almost Every Time	2 . 0	Difficult	2 . 0	Difficult	3 . 0	Neutral	3.71	1:12

Hierarchy Process ID #	Process Name	Heat map Node Designation	How Frequently Are There Unexpected Events Within This Process?		How Frequently Is There a Potential For Risk?		How Involved Are Team Leaders / Managers In Day to Day Decision Making and Quality Control?		In Carrying Out The Process, How Frequently Does A Manager Need To Be Involved?		How Difficult Would You Rate This Process?		How Difficult Is It To Train Staff To Execute This Process Autonomously?		How Difficult Is It To Monitor Work To Ensure Quality?		Average For Process Using Numerical Scale (U)	Existing Ratio of Gov. Management FTE to Total FTE
OER-5	Manage and Develop, Model, Forecast and Analytics Risk	Manage Model Risk	2 . 8	Sometimes	2 . 3	Almost Never	3 . 4	Moderately Involved	5 . 0	Every Time	2 . 1	Difficult	2 . 7	Neutral	2 . 4	Difficult	3.57	1:13
OER-6	Manage Continuity of Operations	COOP					0 . 0		0 . 0								N/A	1:8.5
OIPM-1	Manage Counterparty Profiles	Manage Counterparty Profiles	3 . 7	Almost Every Time	4 . 0	Almost Every Time	4 . 0	Very Involved	3 . 6	Almost Every Time	2 . 0	Difficult	2 . 1	Difficult	3 . 0	Neutral	4.00	1:11.1
OIPM-2	Manage Program Changes	Manage Program Changes	3 . 3	Sometimes	2 . 8	Sometimes	4 . 3	Very Involved	3 . 4	Sometimes	2 . 4	Difficult	2 . 7	Neutral	2 . 5	Neutral	3.71	1:12.3
OIPM-3	Manage Counterparty Risk	Manage Counterparty Risk	5 . 0	Every time	5 . 0	Every Time	5 . 0	Extremely Involved	5 . 0	Every Time	1 . 0	Very Difficult	1 . 6	Difficult	1 . 4	Very Difficult	4.86	1:27.9
OIPM-4	Manage Non-Compliant Issuers	Manage Non-Compliant Issuers	5 . 0	Every time	5 . 0	Every Time	2 . 4	Slightly Involved	5 . 0	Every Time	1 . 9	Difficult	2 . 0	Difficult	3 . 0	Neutral	4.00	1:20.4
OIPM-5	Manage Asset Portfolio	Manage Asset Portfolio	5 . 0	Every time	5 . 0	Every Time	2 . 0	Slightly Involved	4 . 0	Almost Every Time	1 . 0	Very Difficult	2 . 0	Difficult	3 . 0	Neutral	4.00	1:314.1
OMO-1	Manage Human Resources	HR	3 . 5	Almost Every Time	3 . 1	Sometimes	3 . 7	Very Involved	4 . 5	Every Time	2 . 7	Neutral	2 . 5	Neutral	2 . 7	Neutral	3.14	1:2.1
OMO-2	Manage Facilities	HR					3 . 5	Very Involved	4 . 0	Almost Every Time			3 . 0	Neutral	3 . 0	Neutral	N/A	1:3.7
OMO-3	Manage HR Policy	HR					3 . 0	Moderately Involved	3 . 0	Sometimes			3 . 0	Neutral	3 . 0	Neutral	N/A	1:29
OMO-4	Manage Contracts	Contracts	4 . 0	Almost Every Time	3 . 4	Sometimes	4 . 0	Very Involved	3 . 0	Sometimes	2 . 4	Difficult	2 . 3	Difficult	2 . 3	Difficult	3.86	1:1.4
OP&EVP-1	Coordinate New Initiative	Initiatives	4 . 0	Almost Every Time	3 . 5	Almost Every Time	4 . 0	Very Involved	2 . 5	Sometimes	1 . 7	Difficult	1 . 5	Difficult	2 . 0	Difficult	3.86	1:1.3

Hierarchy Process ID #	Process Name	Heat map Node Designation	How Frequently Are There Unexpected Events Within This Process?		How Frequently Is There a Potential For Risk?		How Involved Are Team Leaders / Managers In Day to Day Decision Making and Quality Control?		In Carrying Out The Process, How Frequently Does A Manager Need To Be Involved?		How Difficult Would You Rate This Process?		How Difficult Is It To Train Staff To Execute This Process Autonomously?		How Difficult Is It To Monitor Work To Ensure Quality?		Average For Process Using Numerical Scale (U)	Existing Ratio of Gov. Management FTE to Total FTE
OP&EVP-2	Develop Enterprise-Wide Program	Initiatives	2 . 0	Almost Never	2 . 0	Almost Never	3 . 0	Moderately Involved	3 . 0	Sometimes	3 . 0	Neutral	3 . 0	Neutral	4 . 0	Easy	2.86	1:2.2
OP&EVP-3	Manage External Relationships	Initiatives	3 . 4	Sometimes	3 . 0	Sometimes	3 . 9	Very Involved	2 . 9	Sometimes	2 . 0	Difficult	2 . 0	Difficult	4 . 0	Easy	3.43	1:4.8
OP&EVP-4	Develop and Manage Business Capabilities	Initiatives	2 . 7	Sometimes	3 . 5	Almost Every Time	3 . 8	Very Involved	3 . 0	Sometimes	1 . 4	Very Difficult	2 . 3	Difficult	4 . 0	Easy	3.57	1:2.2
OSO-1	Perform New Pool Issuance	Perform New Pool Issuance	3 . 0	Sometimes	2 . 2	Almost Never	2 . 2	Slightly Involved	2 . 5	Sometimes	2 . 8	Neutral	2 . 0	Difficult	2 . 0	Difficult	2.86	1:57
OSO-2	Administer Bonds	Administer Bonds	2 . 9	Sometimes	2 . 2	Almost Never	1 . 4	Not At All	2 . 3	Almost Never	2 . 1	Difficult	2 . 7	Neutral	2 . 0	Difficult	2.71	1:38.3
OSO-3	Disclose Ginnie Mae Security Data	Disclose Ginnie Mae Security Data	2 . 0	Almost Never	2 . 0	Almost Never	2 . 0	Slightly Involved	2 . 2	Almost Never	3 . 4	Neutral	2 . 0	Difficult	3 . 0	Neutral	2.57	1:290
OSO-4	Administer Contracts and Programs	Contracts	2 . 9	Sometimes	2 . 5	Sometimes	4 . 0	Very Involved	3 . 2	Sometimes	2 . 0	Difficult	2 . 0	Difficult	1 . 8	Difficult	3.57	1:6
OSO-5	Manage and Transform Systems and Projects	IT	4 . 0	Almost Every Time	3 . 0	Sometimes	4 . 0	Very Involved	3 . 3	Sometimes	1 . 0	Very Difficult	2 . 0	Difficult	2 . 0	Difficult	4.00	1:97.5

9.3.2 Aggregate Span of Control Recommendations by Heat Map Area

Exhibit 22 – Aggregate Span of Control Recommendations by Heat Map Area

Heat Map Node Name	Recommendation
Accounting/Finance	Narrow SOC Ratio
Contracts	Consider Narrowing SOC Ratio
COOP	Appropriate SOC
HR	Consider Narrowing SOC Ratio
Initiatives	Consider Narrowing SOC Ratio
IT	Consider Narrowing SOC Ratio
Products	Narrow SOC Ratio
Manage Asset Portfolio	Narrow SOC Ratio
Manage Corporate Credit Risk	Narrow SOC Ratio
Manage Counterparty Risk	Narrow SOC Ratio
Manage Model Risk	Consider Narrowing SOC Ratio
Manage Non-Compliant Issuers	Consider Narrowing SOC Ratio
Manage Operations Risk	Consider Narrowing SOC Ratio
Administer Bonds	Appropriate SOC
Disclose Ginnie Mae Securities Data	Appropriate SOC
Perform New Pool Issuance	Consider Narrowing SOC Ratio
Approve New Issuer or Other Counterparty	Consider Narrowing SOC Ratio
Manage Multiclass Transaction Cycle	Narrow SOC Ratio
Manage Non-Compliance Issuer	Consider Narrowing SOC Ratio
Manage Program Changes	Consider Narrowing SOC Ratio
Manage Transaction Participants	Narrow SOC Ratio
Manager Counterparty Profiles	Consider Narrowing SOC Ratio

9.4 Summary Findings

In examining the span of control areas, the following findings are highlighted:

- Given the large contractor presence, Ginnie Mae has an extremely high span of control:** Overall, Ginnie Mae has a span of control of 23:1. However, much of Ginnie Mae's work is highly technical and not routine, so the overall level of management does not match the technical demands of the work.
- There are areas of significant mismatch between the span of control and complexity of the task:** For instance, the "Manage Multiclass Transaction Cycle" is rated as some of the most difficult, complex, and detail oriented work, but has a span of control of 41 FTEs for each government manager. The "Manage Counterparty Risk" process is also frequently rated as complex and difficult with requirement for detail, but the ratio here is almost 28 FTEs for each government manager.

10 Notes

Information in this study was collected from May 2016 through July 2016 and reflects the state of Ginnie Mae at that time. This deliverable is not to be presented or interpreted in part but as a totality. Additionally, in providing these services:

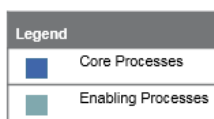
- KPMG is not undertaking a role or view that should be considered public policy advocacy or lobbying
- The advice, recommendations, work products, and deliverable provided as part of the BPR project are developed for HUD management and are not intended for use by any other party or for any other purpose, and may only be relied upon by HUD management.
- KPMG may provide observations to HUD management during this engagement. HUD management is solely responsible for evaluation such observations and then determining what changes or improvements, if any, HUD or Ginnie Mae should implement in light of HUD and Ginnie Mae's objectives in carrying out the project to which KPMG's services relate.

This report is the property of HUD and Ginnie Mae and any distribution by HUD and Ginnie Mae will reflect the management decisions made by HUD and Ginnie Mae.

Appendix A: Supplier, Input, Process, Output, and Customer (SIPOC) Diagrams

A.1 Process Overview

See below for exhibits which breakdown the Suppliers, Inputs, Process Steps, Outputs, and Customers for each Process that Ginnie Mae currently executes. The process groupings are broken out by whether the process is Core or Enabling.



A.2 Core SIPOC Diagrams

Manage Transaction Participants: Ginnie Mae monitors both on-boarded and anticipated sponsors, co-sponsors, trust counsels, co-trust counsels, accountants, and REMIC trustees within the Multiclass Transaction program. Participating entities are routinely reviewed to ensure compliance with Ginnie Mae activity standards. Without this approval and monitoring process, Ginnie Mae would be unable to drive business within the Multiclass Transaction space, and potentially hinder the liquidity being brought into the market:

Manage Transaction Participants

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
Issuer/Sponsor	Email/phone call to OCM from Issuers	Evaluate Issuer requests to become Multiclass Transaction Participants	Based on role that sponsor requests, send requirements for that role	Participant
OCM SVP	Filled out requirements package	Review Participant performance to determine if they are upholding program requirements	Reviewed requirements package	
Securities Specialist	Participant Recertification Package		Recertified participant or participant to be removed	Policy Research Director
Policy Research Director	Participant Issue or non-compliance	Remove the Participant from the Multiclass Transaction program, the evidence and reason for removal are documented as well	Participants removed from Multiclass Transaction program	

Manage Multiclass Transaction Cycle: Before entities in the Multiclass program can sell securities, Ginnie Mae must open, structure, and monitor the transactions for each participating entity. Managing this process at Ginnie Mae ensures that Multiclass transactions are completed in an accurate and timely fashion, and that investors are paid properly:

Manage Multiclass Transaction Cycle

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
Participant	Compliant transaction	Open Transaction Shelves	Structured transaction	
	Deal Shelf			Participant
STFA team	Checklist provided by STFA	Generate the Transaction Initiation Letter (TIL)		
	Participant Issue or non-compliance		Executed Guaranty Agreement Responsibilities	
Securities Specialist	STFA Transaction Package: -Term sheet -CUSIP numbers -OID Prices letter	Generate the Offering Circular Supplement (OCS)		Investor
Policy Research Director	Sponsor and Transaction Details	Generate the Sponsor Agreement	Reconciled Tax Receipts	
Trustee	Sponsor Agreement	Generate the Guaranty Agreement		Securities Specialist
	Ginnie Mae Guaranty		Transaction Closing Letter	
Sponsor's Accountant	Closing Letter	Reconcile payments		
	Final Data Statement (FDS)			Policy Research Director
Trust Counsel	CD of electronic copy of closing documents	Post-closing activities are executed	FDS posted to eAccess	

Manage Program Changes: As part of maintaining the MBS program, Ginnie Mae provides support to its customers by responding to various inquiries. These requests include transferring pools to other Issuers and adjusting an Issuer's Commitment Authority Cap. Fulfilling these requests accurately and timely is critical to help enable the continued participation of Issuers in the Ginnie Mae program:

Manage Program Changes

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
Participant	Loan Liquidation Request	Receive request	Potential sources of risk for request and Issuer	Account Executive
	Commitment Authority Request			Outside Agencies (DOJ, OIG)
Investors	Loan Pools Transfer Requests	Review request for potential sources of risk	Justification memo: -Buyout Request -Pool Transfer -Fee Refund	Mortgage Banking Analyst
	Fee Refund Requests			OIPM Directors
Outside Agencies (DOJ, OIG)	Issuer Requests: -LOU (Letter of Understanding) -CMP (Civil Monetary Penalty) -NOV (Notice of Violation) -RFI (Request for Information)	Justify decision	Pool Transfers	OIPM SVP
Account Executive		Make final decision		OER SVP
Mortgage Banking Analyst	Field Review Findings	Manage Program Changes	Policy guidance	Participant
	OER Risk Analytics			Investors
OER Counterparty Risk Analyst	Justification for approval or denial recommendation	Communicate Program Changes	Fee Refunds	

Manage Corporate Credit Risk: As part of managing Ginnie Mae’s exposure to risk, participants in the Ginnie Mae MBS program are strictly monitored so that Issuers who exceed Ginnie Mae’s risk threshold or are near defaulting are identified in advance. This action mitigates Investors potential loss position, and helps ensure Issuers pay back Investors, which in turn lowers the housing market’s risk exposure and protects tax payer dollars:

Manage Corporate Credit Risk

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
Issuer	Issuer performance and adherence to program requirements	Perform Probability of Default Modeling (PD)	Analysis of risky Issuers	Counterparty Risk Analyst
	Risky Issuers to be added to the Watch List	Add risky Issuers to Watch List	List of Issuers to Default	Counterparty Risk Officer
Counterparty Risk Analyst	Watch List updated with risky Issuers	Perform Credit Reviews		Issuer
	PD Modeling	Perform Default Analysis	Amount of funds subject to loss if risky Issuers default	OIG/GAO
	Issuer Financial Statements			
	Loss Given Default Modeling	Perform other supplemental Modeling	Issuer Commitment Authority cap	Technical Account Team

Approve New Issuer or other Counterparty: Only Issuers approved to participate in the Ginnie Mae MBS program can issue MBS. This process involves a timely and thorough review of each incoming application:

Approve New Issuer or other Counterparty

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
Issuer	Issuer application	Receive new Issuer application	Logged Issuer applications	MBSAA Contractor
Counterparty Risk Analyst		Review new Issuer application	Evaluated Issuer applications	
MBSAA Contractor	Logged Issuer applications	Approve/Reject new Issuer application	New Issuers to be on boarded	Counterparty Risk Officer
OIPM SVP				
Chief Risk Officer	Reviewed Issuer applications	Notify Issuer of application status	Amount of funds subject to loss if risky Issuers default	Issuer
Counterparty Risk Officer	New Issuers to be on boarded	Notify OIPM of Issuer to be on boarded	Issuer Commitment Authority cap	OIPM SVP

Perform New Pool Issuance: Ginnie Mae pools together loans to be sold as MBS on the market by Issuers. Once the securities are guaranteed, approved Issuers can buy and sell this new pool. Issuing new pools that can be traded ensures a steady flow of liquidity into the American market:

Perform New Pool Issuance



Administer Bonds: Ginnie Mae facilitates the movement of funds from the servicers of loans to the secondary mortgage market via the Pool Processing Agent. Additionally, as part of this process, Ginnie Mae collects appropriate fees that maintain the monthly remittance process:

Administer Bonds

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
	Investor Transfer Requests	Maintain Monthly Bond Administration Requirements	Updated RPB tables	
Issuer	Pool and Loan Data	Administer Bond Payments and Collect Fees	Transfer of funds	Investors
System Users	Borrower Inquiries	Manage Prepayment Penalties & Unclaimed Funds	Unclaimed funds accounted for	Platinum Trustee
REMIC Trustee	Unclaimed Checks provided by Borrowers	Manage Platinum and REMIC Securities	Pool Delivery Files to the Fed Reserve	REMIC Trustee
	REMIC & Platinum Security data	Report Income Taxes	Income Tax files to the IRS	
Platinum Sponsor	IPMS Securities Data	Collect Unclaimed Funds		IRS
	Certificate Inquiry	Manage Operations and Maintenance	Checks to Investor	
	Unclaimed Funds Checks from Issuers			

Manage Disclosure of Ginnie Mae Securities Data to Investors: Ginnie Mae discloses securities transaction data to the public, which is paramount to current and potential investors as it furnishes them with the insights on whether or not to buy and trade securities. Accurate securities data is unique to Ginnie Mae's business model as it depicts the health of Ginnie Mae securities for investors:

Manage Disclosure of Ginnie Mae Securities Data to Investors

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
Issuer	Updated PPA Files	Distribute Security data to the NYSE		
PPA Contractor	Updated MBSA files		Consolidated Disclosure Data	Investors
	Pool and Loan data for new Issuers	Post Security data disclosure to Ginnie Mae website	Updated Ginnie Mae website	NYSE
MBSAA Contractor	Consolidated Disclosure Data	Manage Exceptions		

Manage Counterparty Risk: As part of managing Ginnie Mae’s exposure to risk, participants in the Ginnie Mae MBS program are strictly monitored so that Issuers who exceed Ginnie Mae’s risk threshold or are near defaulting are identified in advance. This action mitigates Investors potential loss position, and helps ensure Issuers pay back Investors, which in turn lowers the housing market’s risk exposure and protects tax payer dollars:

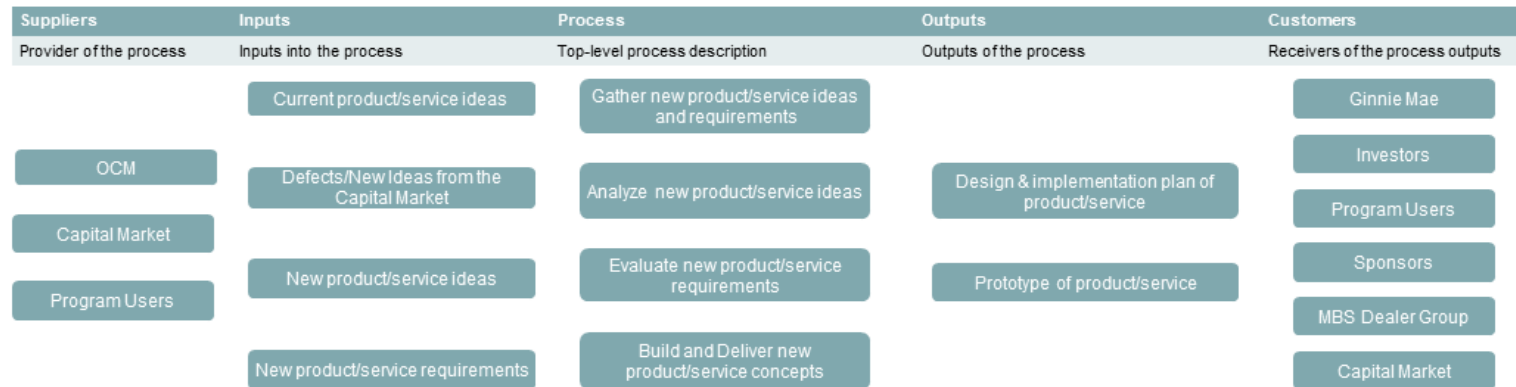
Manage Counterparty Risk

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
	List of Active Counterparties		Final Compliance Review Report	Issuer
Master Sub-Servicer	Counterparty Financials		Updated Review Protocol	Document Custodian
	Counterparty Performance Metrics	Review the relevant documentation for adherence to requirements	Financial Audit Review Findings	
Document Custodians	Document Custodian Applications		Record of Document Custody compliance or Remediation Plan	Ginnie Mae Management
Field Review Contractor	List of Document Custodians and Relevant Pools		New Document Custodians	OIG/GAO
	Issuer Score Cards	Evaluate outstanding instances of Issuer non-compliance	Reconciled Pools with Document Custodians	
OIPM Monitoring and Asset Management Division	Final Compliance Review Report		Updated Issuer Profile	OIPM Monitoring and Asset Management Division
	Missing Reports from Issuer		Termination Notice of Non-Compliance Reports from Issuer	Outside Agencies (SEC, DOJ)

A.3 Enabling SIPOC Diagrams

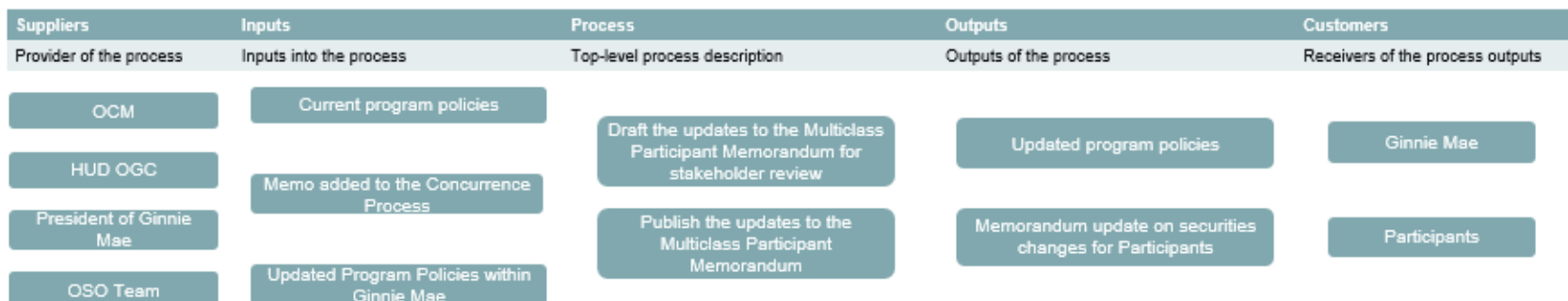
Manage New Product Development: The process by which new transaction types, and other Ginnie Mae products are developed:

Manage New Product Development



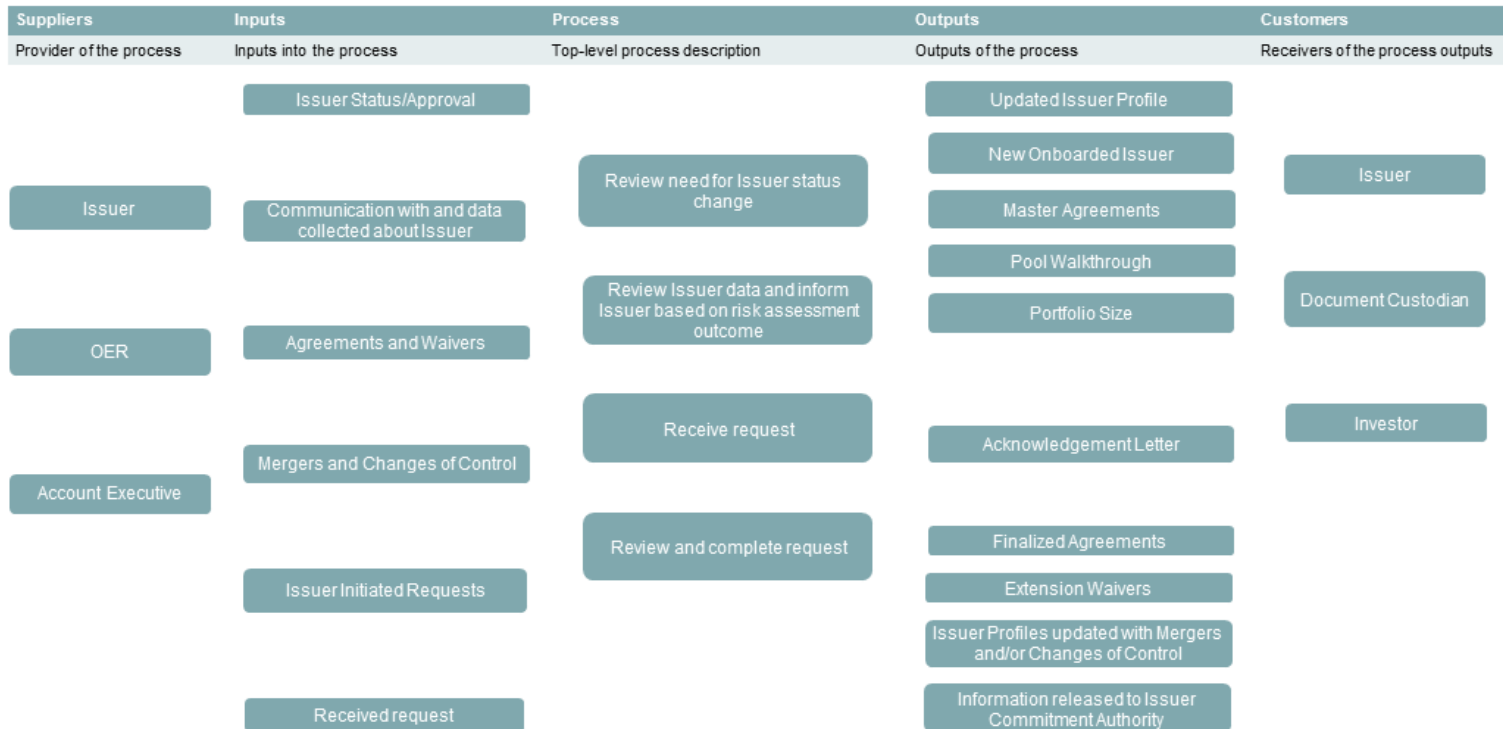
Manage Program Policies: The process by which policies for the Multiclass Transaction program are managed:

Manage Program Policies

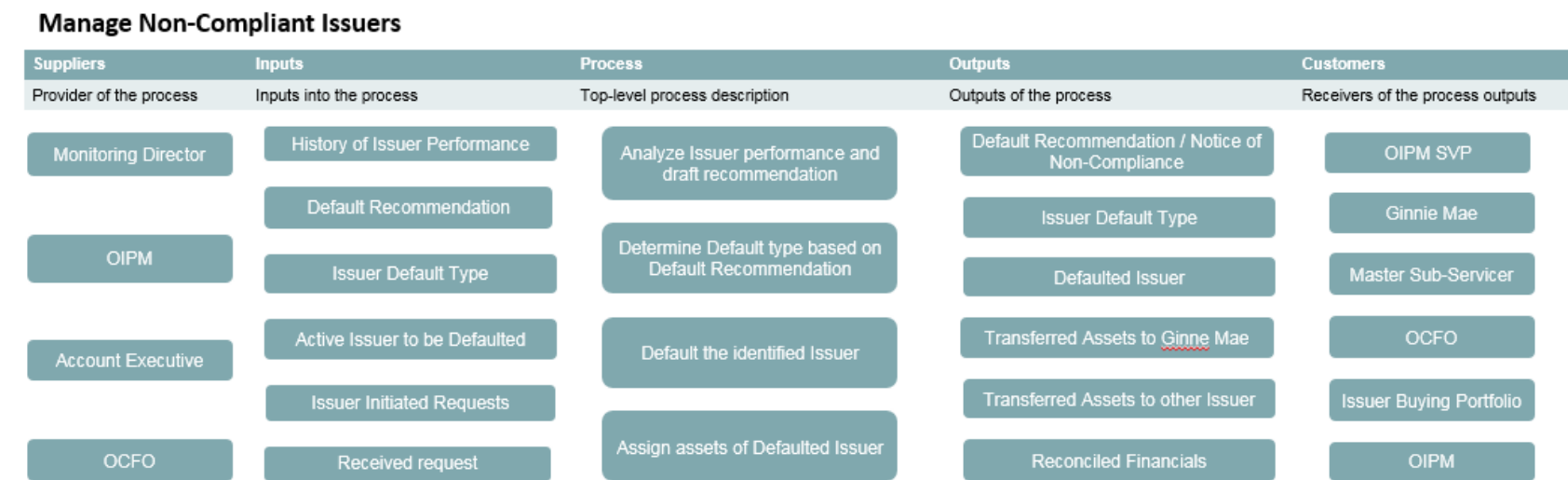


Manage Counterparty Profiles: The process by which participants in the Ginnie Mae program have their profiles updated:

Manage Counterparty Profiles



Manage Non-Compliant Issuers: The process by which Issuers in violation of Ginnie Mae program requirements are removed from the program:



Manage Asset Portfolio: The process by which Ginnie Mae manages assets that have been seized from defaulted Issuers:



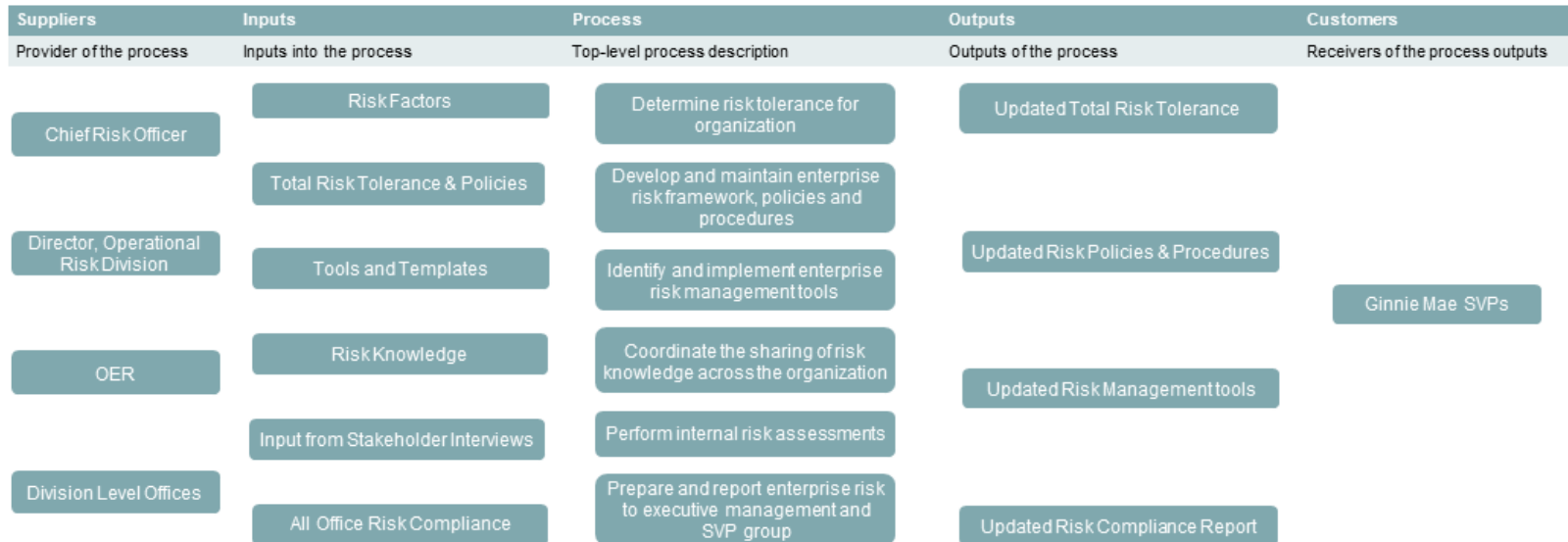
Analyze Model Risk: The process by which risk modelling and forecasting is developed and deployed across Ginnie Mae for consumption:

Analyze Model Risk

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
OIG	Corporate model policy related procedures	Establish Enterprise Model Risk Management Framework	Corporate Model Policy & Procedures	
MBSAA Contractor	Modeling and Evaluation Committee	Manage the Modeling Process for Financial Reporting		OIG
	Risk Model Documentation		Financial reporting	
Master Sub-Servicer	Loan Level Data	Manage the Modeling Process for Budget Forecast		OCFO
OER	Corporate Watch	Provide ongoing analytical support for Risk Management and business decision purposes	Analysis requirements for year-end disclosure purposes	
	Accounting Policy			HUD Budget Office
OIPM	Agency Endorsement File	Perform Issuer and Loan Research for Risk Management	Credit Subsidy Forecast	
GTR POC	RFS	Perform Economic, Market Research and Policy Analysis		OMB Budget Office
	Financial Data Schedule	Manage Model Governance and Process Control For Audit and Regulatory Requirements	Upload of Credit Subsidy Forecast onto CSC2 Calculator	
OMB	OMB's macro economic forecast			OIPM Senior Management
Outside Agencies (FHA, USDA, VA)	Balance forecast from outside Agencies	Prepare and report enterprise risk to executive management and SVP group	Presentations of Analysis	

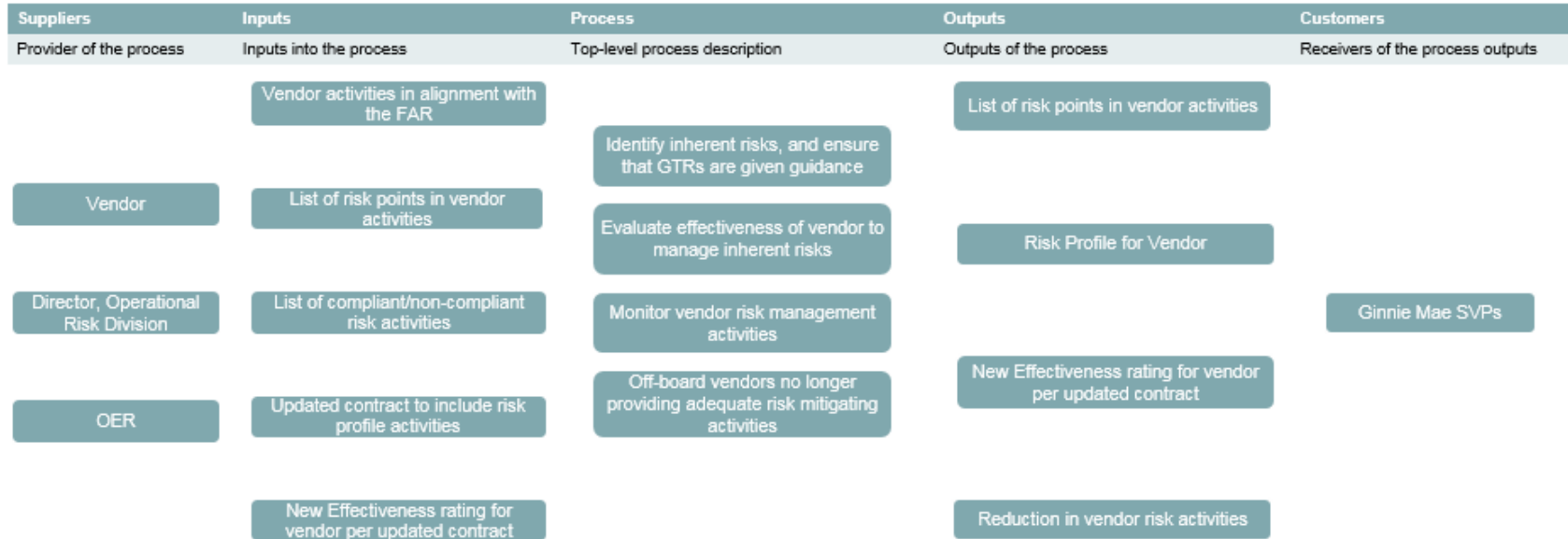
Manage Operations Risk: The execution of this enabling process helps ensure Ginnie Mae prepares, reports, and develops Ginnie Mae’s risk strategy:

Manage Operations Risk



Manage Vendor Risk: The process by which risks introduced by contractors are monitored, evaluated, and mitigated:

Manage Vendor Risk



Administer Contracts and Programs: The process by which vendor contracts are procured, monitored, and supported:

Administer Contracts and Programs

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
Program Administration Division	Budget Formulation Data	Provide Contractor Oversight and Support	Required HUD Contractual Management Documentation	PPA Contractor
	Policy and Training	Apportion dollars based on funds available to procure contractors for support work	Funds to Fulfill Awarded Contract	MBSAA Contractor
	Change request for website content	Provide Documentation and Data Collection to Support Budgeting	Adoption of new policies and applications	Ginnie Mae
	Vendor Proposals	Facilitate Customer adoption of new Policies Update Ginnie Mae website regarding current activities	Updated website	Public

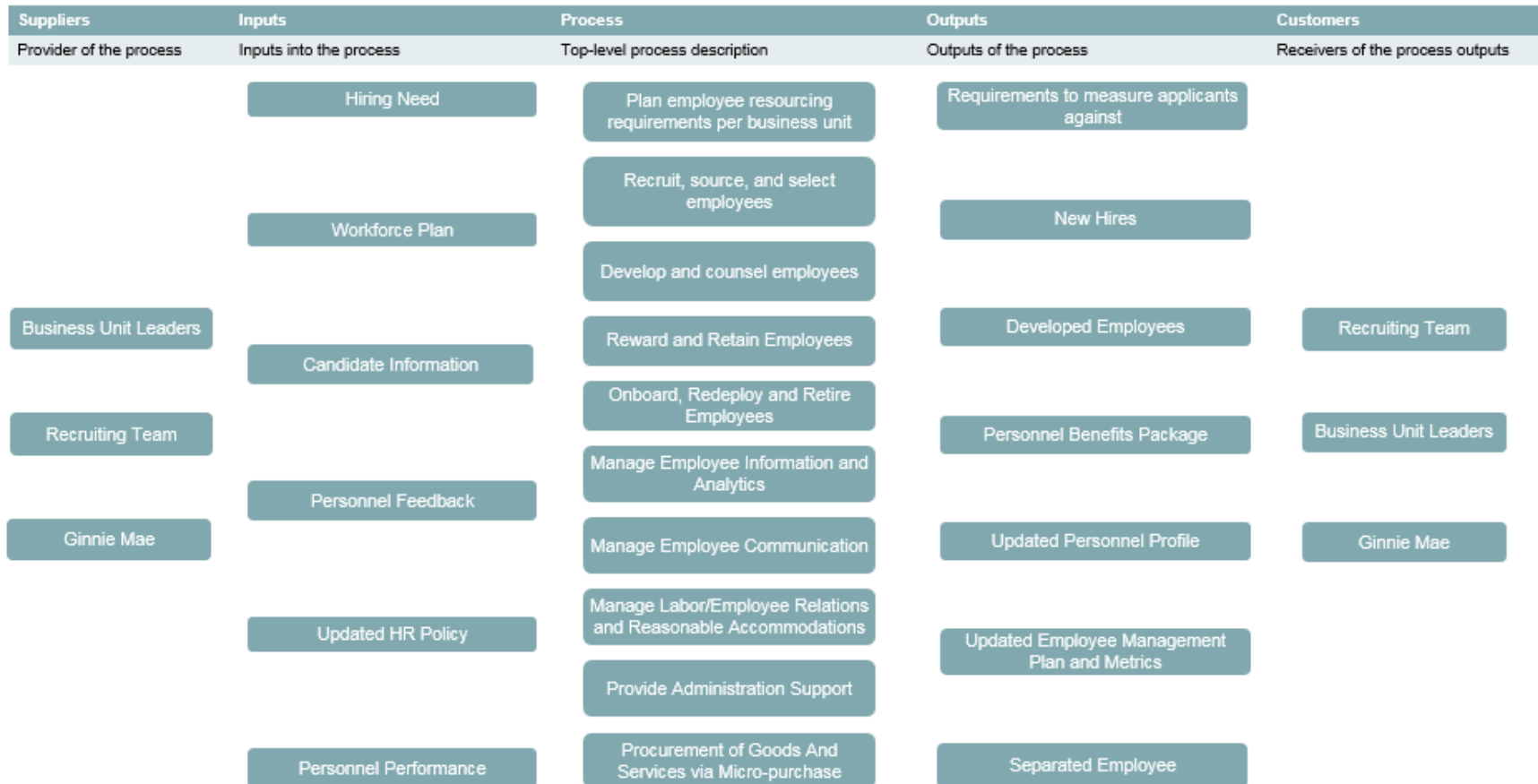
Manage and Transform Systems and Projects: The process by which OSO IT systems are developed and transformed to support evolving business needs around securities:

Manage and Transform Systems and Projects

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
Process and Product Development Division	Identified Enhancement	Create and Maintain IT Services and Solutions	Project Plan and Scope	OSO
	Application component to be developed or updated	Independent Validation and Verification	Approval/Disapproval slating toward Release	Ginnie Mae
	Release	Deploy IT Solutions	Delivered Support and IT Services	

Manage Human Resources: The process by which personnel are on-boarded, developed, and out-boarded:

Manage Human Resources



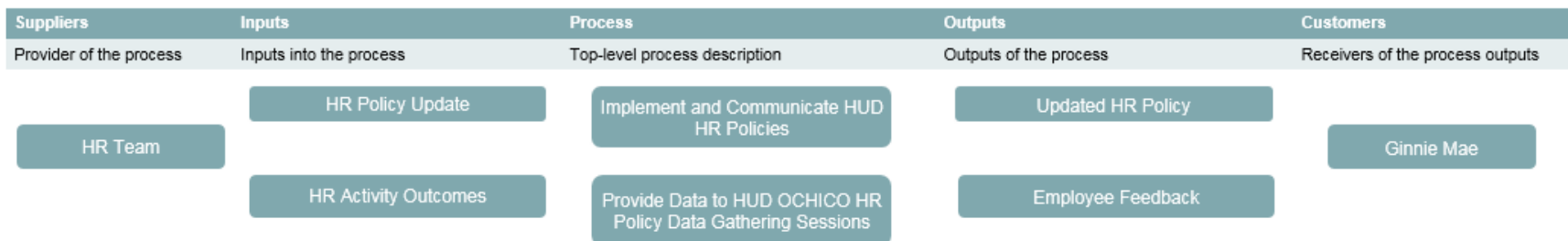
Manage Facilities: The process by which physical assets are procured and maintained:

Manage Facilities



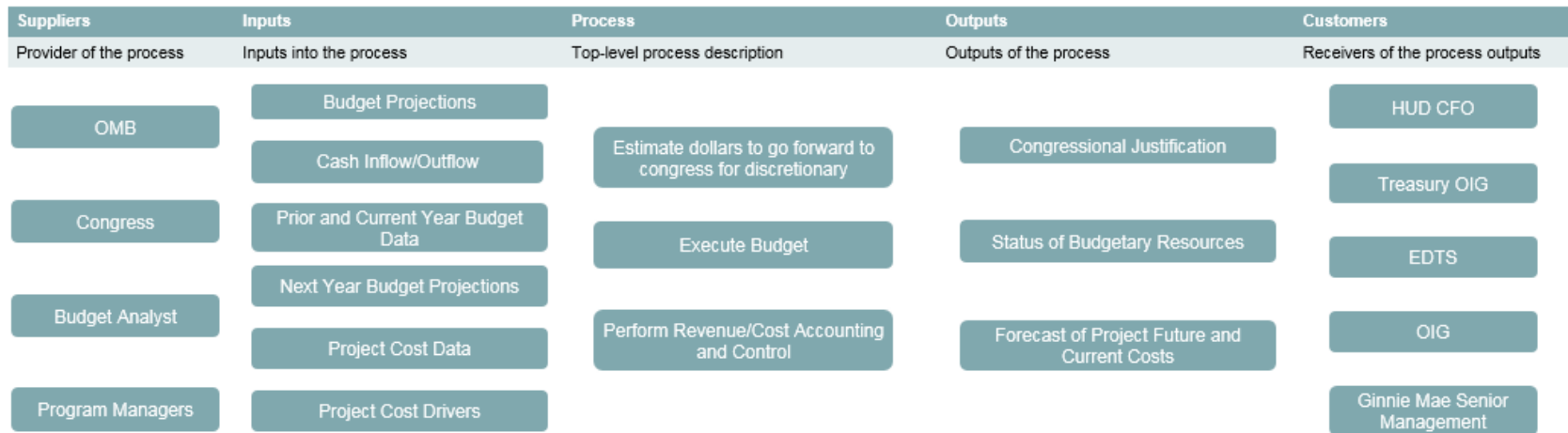
Manage Human Resources Policy: The process by which human resources policy is drafted and implemented:

Manage Human Resources Policy



Manage Budget: The process by which the enterprise budget is formulated based on past trends, current projects, and future projections:

Manage Budget



Perform Financial Reporting: The process by which financial activities are reported out in accordance with federal regulations:

Perform Financial Reporting

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
	All Transactions	Prepare financial statements within Accounting Operations	Accounting Financial Statements	OMB
Program Offices	Prior and Current Year Budget Data	Prepare Fund Financial Statements based on regulations	Fund Financial Statements	Treasury
Master Sub-Servicer			Federal Financial Statements	Investors
	Next Year Budget Projections	Prepare governmental/enterprise financial statements	Financial Analysis	OIG
CFO			SF 132	HUD
	Project Cost Data	Evaluate and Manage Financial Performance	SF 133	CFO
Program Managers			Annual Trial Balance Report	Ginnie Mae
	Project Cost Drivers	Produce annual and regulatory reports	Treasury Report on Receivables (TROR)	Ginnie Mae Communications Division
			Annual Report to Congress	

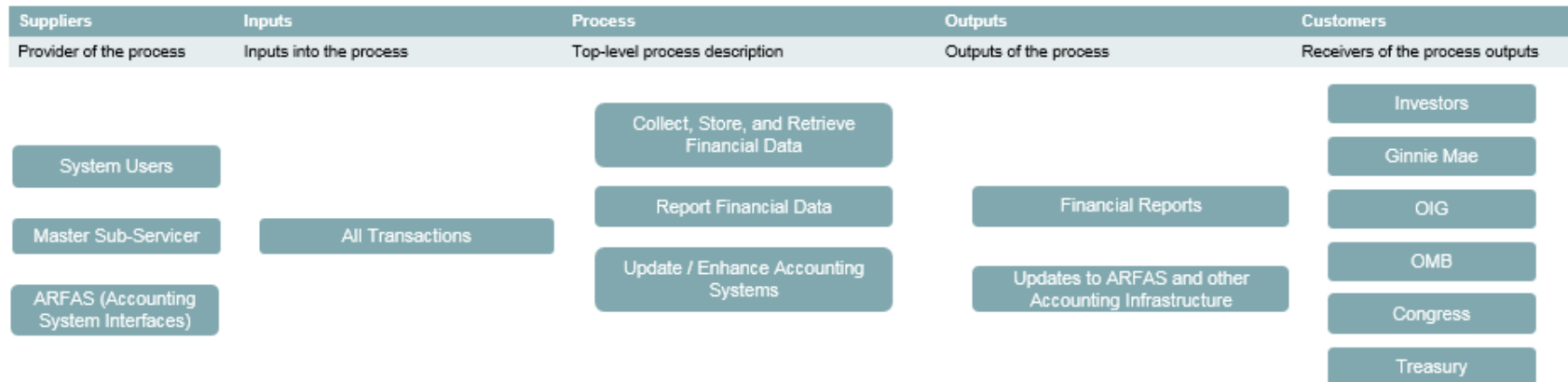
Manage Audit Controls: The process by which financial controls are designed, implemented, and monitored:

Manage Audit Controls

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
OMB	2 Year Disclaimer	Establish audit controls, policies, and procedures over financial management and reporting	A-123 Process	
OIG	Engagement Letter			OIG
GAAP	Control PBCs/Walkthroughs	Operate controls and monitor compliance with financial internal controls	Policies and Procedures	
FASB	Transaction Accounting Events	Report on financial internal controls compliance		HUD CFO
	Industry Guidance Rules			
GAO	A-123 Testing Protocol	Perform audit liaison support	Statement of Assurance	

Manage Accounting Systems: The process by which financial activity data is tracked and transmitted through IT systems:

Manage Accounting Systems



Manage Accounting Operations: The process by which financial activities are processed and accounted for:

Manage Accounting Operations

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
Program Offices	Fixed Assets	Processing of Receipts and Disbursements	Financial Data	Treasury
Master Sub-Servicer	Cash			Ginnie Mae
				Investors
Treasury	Journal Vouchers	Recording of Accounting Journal Entries	General Ledger Details	OIG
				Congress
Contractors	Transaction Accounting Events	Producing the Trial Balance	Trial Balance	OMB
				Financial Reporting Team
Ginnie Mae	Defaulted Issuer			HUD CFO

Manage Accounting Policy: The process by which accounting policies are drafted and published:

Manage Accounting Policy

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
FASB	Regulatory Guidance	Draft, update, review accounting policies		
FASAB			Updated or New Accounting Policies	OER Model Risk Division
ARFAS (Accounting System Interfaces)	Industry Practice	Research and interpret FASB, FASAB, and regulatory guidance, and formulate guidance for new transactions and new inquiries	Accounting Memos and guidance	OCFO Accounting Operations
OER Model Risk Division	New Transaction Type		Implementation of new or updated Accounting Policies	OCFO Financial Reporting
OCFO Accounting Operations	New Inquiry Type	Monitor new policies, and provide guidance for implementation		
OCFO Financial Reporting			Comments and edits to Financial Statements	OCFO Financial Reporting Leader
Business Unit Leaders	New FASB Pronouncement			
OCFO	Financial Statement Drafts	Review financial statements to assess compliance with FASB, FASAB, and regulatory / industry guidance		

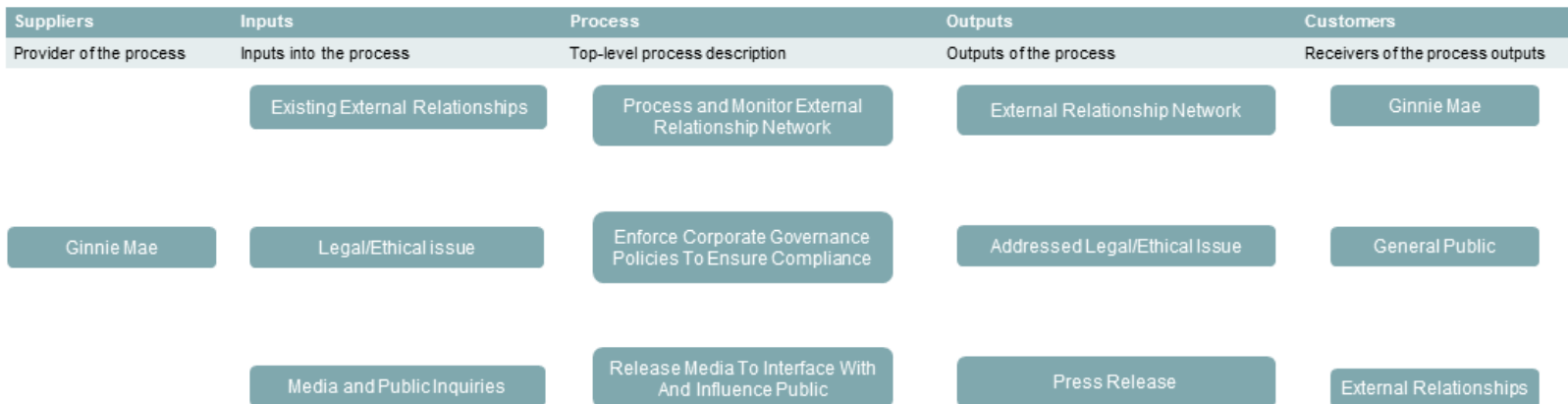
Coordinate New Initiative: The process by which new enterprise initiatives are developed and launched:

Coordinate New Initiative



Manage External Relationships: The process by which relationships with industry and the general public are managed and maintained:

Manage External Relationships



Manage PMO: The process by which IT projects are monitored and managed from inception to implementation:

Manage PMO

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
IRB	Business Cases	Provide leadership direction oversight for project prioritization, operational plan and alignment with strategic objectives	Reports/Dashboards/Risks/Issues Logs	
	Project Registration			
Program Offices	Initiation Artifacts	Provide leadership and direction to governance bodies to ensure oversight	Strategic Alignment of Initiatives	
	Project Tailoring Agreement			
Project Teams	Planning Artifacts	Provide strategic oversight for PPM methodology	End of Phase Artifacts	Ginnie Mae
	Organization Assets			
Stakeholders	Execution and Control Artifacts	Maintain lessons learned database and process improvement implementation	Phase Specific Artifacts and Guidance	HUD CIO
	Current PPM Processes			
Project Managers	Lessons Learned	Maintain best practice projects, tools and templates	Process Improvement Releases and Indexed Assets	
	Weekly Status Reports Input			
Executives	PM Information	Project monitoring and control of project status, risks and issues	Up To Date Process Asset Libraries	

Manage Technology: The process by which data integrity standards are enforced across the Ginnie Mae enterprise:

Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
PPA Contractor	New Requirements	Manage IT Governance	Reference Architecture and Enterprise Architecture	PPA Contractor
MBSAA Contractor	Operational Infrastructure	Manage IT Operations	Security and Compliance	MBSAA Contractor
Infrastructure Contractor	HUD Systems	Manage System Access	Technology Policy	Infrastructure Contractor
				Ginnie Mae

Manage Enterprise Data: The process by which data integrity standards are enforced:

Manage Technology

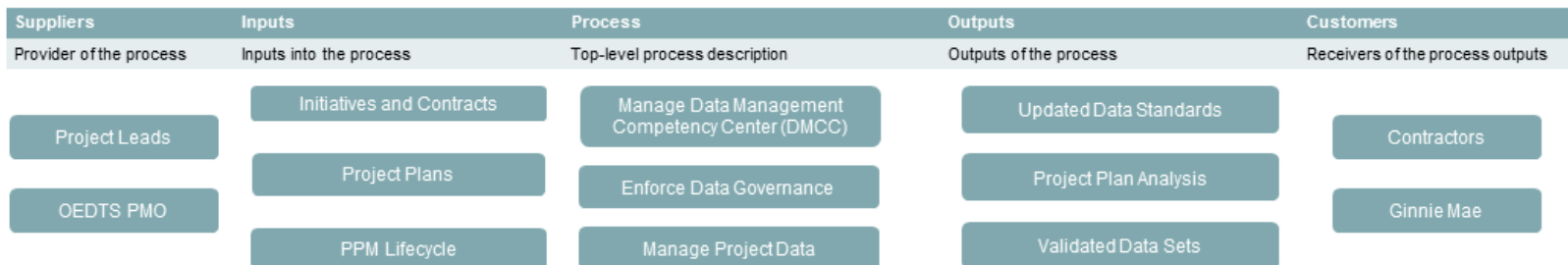
Suppliers	Inputs	Process	Outputs	Customers
Provider of the process	Inputs into the process	Top-level process description	Outputs of the process	Receivers of the process outputs
PPA Contractor	New Requirements	Manage IT Governance	Reference Architecture and Enterprise Architecture	PPA Contractor
MBSAA Contractor	Operational Infrastructure	Manage IT Operations	Security and Compliance	MBSAA Contractor
Infrastructure Contractor	HUD Systems	Manage System Access	Technology Policy	Infrastructure Contractor
				Ginnie Mae

Manage Information Security: The process by which information security standards are designed and enforced:

Manage Information Security



Manage Enterprise Data



A.4 List of Ginnie Mae Processes

The following is a list of all top level Ginnie Mae processes and their corresponding Process Hierarchy ID #:

Process Name	HEIRARCHY ID #
CORE PROCESSES	
Manage Transaction Participants	OCM-1
Manage Multiclass Transaction Cycle	OCM-2
Manage Corporate Credit Risk	OER-2
Approve New Issuer or Other Counterparty	OER-3
Manage Program Changes	OIPM-2
Manage Counterparty Risk	OIPM-3
Perform New Pool Issuance	OSO-1
Administer Bonds	OSO-2
Disclose Ginnie Mae Securities Data	OSO-3
ENABLING PROCESSES	
Manage Budget	OCFO-1
Perform Financial Reporting	OCFO-2
Manage Audit Controls	OCFO-3
Manage Accounting Operations	OCFO-4
Manage Accounting Systems	OCFO-5
Manage Accounting Policy	OCFO-6
Manage Program Policies	OCM-3
Manage New Product Development	OCM-4
Manage Investor Inquiries	OCM-5
Manage Investors / Product Match	OCM-6
Manage PMO	OEDTS-1
Manage Technology	OEDTS-2
Manage Enterprise Data	OEDTS-3
Manage Information Security	OEDTS-4
Manage Operations Risk	OER-1
Manage Vendor Risk	OER-4
Analyze Risk	OER-5
Manage Continuity of Operations	OER-6
Manage Counterparty Profiles	OIPM-1
Manage Non-Compliant Issuers	OIPM-4
Manage Asset Portfolio	OIPM-5
Manage Human Resources	OMO-1
Manage Facilities	OMO-2
Manage Human Resources Policy	OMO-3
Manage Contracts	OMO-4
Coordinate New Initiative	OP&EVP-1
Develop Enterprise-Wide Program	OP&EVP-2
Manage External Relationships	OP&EVP-3
Develop and Manage Business Capabilities	OP&EVP-4
Administer Contracts and Programs	OSO-4
Manage and Transform Systems and Projects	OSO-5

Appendix B: Customer and Supplier Inventories

See below for exhibits which breakdown the list of customers and/or stakeholders that receive Ginnie Mae outputs, and the list of suppliers that provide inputs for Ginnie Mae.

B.1 Customer Inventory

Ginnie Mae provides the following outputs for the following customer and/or stakeholders:

Customer / Stakeholder	Role	Outputs
Auditors to Ginnie Mae	Parties external and independent to Ginnie Mae that review official financial statements and processes for compliance	<ul style="list-style-type: none"> Financial reports Final reports Accounting financials SF 132, SF 133, Annual Trial Balance Report, TROR, Report to Congress Fund financial statements
Capital Markets	The part of the financial system concerned with raising capital through stocks, bonds and other investments	<ul style="list-style-type: none"> Prototype of product and service
Congress and associate Committees	Legislative arm of the United States government, comprised of the House and the Senate that requires Ginnie Mae information for the purpose of budget forecasting and allocation, as well as educational and briefing materials on the state of the housing and secondary mortgage market	<ul style="list-style-type: none"> Business Operations Financial reports Final reports SF 132 and SF 133 Annual Trial Balance Report TROR Report to Congress
Contractor	Ginnie Mae vendor or recipient of awarded funds to fulfill awarded contracts	<ul style="list-style-type: none"> Awarded contract
Ginnie Mae MBSSA Contractor	Non-Ginnie Mae staff who provide administrative services	<ul style="list-style-type: none"> End of phase artifacts Phase specific artifacts and guidance Services to customer
External Auditors	Auditors independent of Ginnie Mae that review non-financial areas such as systems, information security, etc.	<ul style="list-style-type: none"> Registered projects Strategic alignments of initiatives POA&M/CAP A123 Report SSAE16 Reports
GAO	Investigative arm of Congress tasked with examining matters relating to the receipt and payment of public funds.	<ul style="list-style-type: none"> Business Operations Organization operations

Customer / Stakeholder	Role	Outputs
HUD	Government agency overseeing home mortgage lending practices requiring budgeting, educational, and position papers on Ginnie Mae's operations.	<ul style="list-style-type: none"> • Position papers • Contractor/vendor management • Collateral • Speeches, presentation, reports, educational materials • Final reports and Status of Budgetary Resources • Forecast of project future and current costs • Congressional justification • Federal financial statements • SF 132 and SF 133 • Annual Trial Balance Report • TROR • Report to Congress
HUD-OIG	Promotes economy, efficiency, and effectiveness in HUD programs and operations, and prevents and detects fraud, abuse, and mismanagement by serving as an internal audit staff function. Relies on Ginnie Mae for data as part of its oversight mission and works with Ginnie Mae on investigations of non-compliant Ginnie Mae participants.	<ul style="list-style-type: none"> • Corporate model policy • Modeling value committee and model risk documentation • Analysis requirements for year-end disclosure purposes • Final reports and status of budgetary resources • Forecast of project future and current costs • Congressional justification • A123 Process • Statement of Assurance • Policies and procedures • Trial balance report • Defaulted issuer • Accounting financials • SF 132 and SF 133 • Annual Trial Balance Report • TROR • Report to Congress • Federal and fund financial statements
Investors	Individuals and institutions that have invested in or hold Ginnie Mae securities	<ul style="list-style-type: none"> • Pool numbers and pool delivery file • Revised pool profile data • File to the Federal Reserve's Fedwire System • Prospectus • Updated RPB tables • Transfer of funds • Portfolio size • Continued participation in Ginnie Mae MBS Program • Updated status of issuer profile • Financial and final reports • Funding

Customer / Stakeholder	Role	Outputs
Issuer	Participants in the Ginnie Mae MBS program who rely on Ginnie Mae's execution of their requests for loan management, commitment authority and policy guidance	<ul style="list-style-type: none"> • New on-boarded issuer • Supporting documentation and master agreements • Pool walkthrough • Portfolio size • Participation in Ginnie Mae program • Acknowledgement letter • Finalized agreements • Extension waivers • Issuer profiles updated with mergers and/or changes of control • Information released to issuer • Commitment authority • Project plans and analysis
Master Sub-Servicer	Provides loan servicing operations on Ginnie Mae's defaulted Issuer portfolio and relies on Ginnie Mae's loan reporting data and policy guidance	<ul style="list-style-type: none"> • Defaulted Issuer/Transferred Assets
Mortgage Banks Association (MBA)	MBA relies on Ginnie Mae for policy and financial information regarding the secondary mortgage market	<ul style="list-style-type: none"> • External relationship network • White papers • Annual report and report to Congress • Social network presence • Position papers
NYSE/Global Investor Community	Individuals or institutions that buy and sell securities on the NYSE that requires data reporting from Ginnie Mae on securities and the underlying collateral	<ul style="list-style-type: none"> • Consolidated disclosure data • Data posted to website • Business Operations • Organization operations
Office of Management and Budget (OMB)	Office within the Executive Office of the President of the United States. Main function is to produce the President's budget, and requires budgeting and funds allocations information from Ginnie Mae	<ul style="list-style-type: none"> • Position papers • Contractor/vendor management • Collateral • Speeches, presentation, reports, educational materials • Financial and final reports • Federal and fund financial statements • SF 132 and SF 133 • Annual Trial Balance Report • TROR • Reports to Congress • Report of analysis • Credit subsidy forecast • Upload of credit subsidy forecast onto CSC2 Calculator

Customer / Stakeholder	Role	Outputs
Pool Processing Agent (PPA)	Broker/Dealer or financial institution that pools Ginnie Mae loans into mortgage-backed backed securities and requires policy guidance and loan data from Ginnie Mae and its stakeholders	<ul style="list-style-type: none"> • Recertified or removed participant • New transaction participant • Close date of transaction • Structured transaction • Transaction details for investors • Responsibilities to be executed before close • OCM, HUD OGS and legal advisor receive closing letter • FDS posted to e-Access
Security Holders	Institutional and individual owners who have purchased Ginnie Mae securities	<ul style="list-style-type: none"> • Prospectus • Ongoing system maintenance • Updated RPB tables • Transfer of funds
U.S. Department of Treasury	Manages Federal finances by collecting taxes, managing currency and government accounts and as well as public debt, supports Ginnie Mae's cash management and reporting for the Ginnie Mae-owned portfolio	<ul style="list-style-type: none"> • Financial and final reports • Forecast of project future and current costs • Congressional justification • Federal and fund financial statements • SF 132 and SF 133, • Annual Trial Balance Report • TROR • Report to Congress

B.2 Supplier Inventory

Ginnie Mae receives the following inputs from the following suppliers:

Supplier	Role	Inputs Provided
Congress	Provides the legislative and regulatory authority for Ginnie Mae to operate	<ul style="list-style-type: none"> Federal regulations Changes to system and regulations Budget projections Cash inflow/outflow
FASB	Designated private sector organization that establishes financial accounting and reporting standards provides financial standards for Ginnie Mae's accounting operations	<ul style="list-style-type: none"> Transaction accounting events Research Industry practice New FASB Pronouncement
GAO	Provides standards for Ginnie Mae's A-123 audits.	<ul style="list-style-type: none"> A123 testing protocol Test within planning memo
Ginnie Mae (Mortgage-Backed Securities Administration) MBSSA Contractor	Non-Ginnie Mae staff who provide loan data and reporting services	<ul style="list-style-type: none"> Business cases and project registration Corporate watch Loan level data All inputs for financial reporting OMB's macroeconomic forecast Scrubbed data from GinnieNet Accounting policy RFS Agency Endorsement File Corporate model policy related procedures Modeling and evaluation committee, documentation for 15 models
Insuring Agencies (FHA, VA, USDA)	Affordable housing insurers that provide mortgage insurance for the loans eligible for Ginnie Mae securities	<ul style="list-style-type: none"> Corporate watch Loan level data All inputs for financial reporting, OMB's macroeconomic forecast Loan level data Scrubbed data from GinnieNet Accounting policy RFS Agency Endorsement File OMB's macroeconomic forecast

Supplier	Role	Inputs Provided
Issuer	Issuer of pools of mortgage-backed securities	<ul style="list-style-type: none"> • Ginnie Mae CBA • Issuer Master Agreements and pool numbers • Commitment authority • Loan and pool documents • Approved pool transfer documentation and/or approved participant merger documentation • Issuer request to OIPM • New pool delivery file • Revised pool profile data • Ginnie Net pool and loan data • Investor transfer requests • Monthly reporting data • Collected fees • Borrower inquiries • Unclaimed checks provided by borrowers • OIPM securities data • Certificate inquiry • Unclaimed funds check • Updated BNYM and MBSA files • Consolidated disclosure data • Issuer status/approval • Agreements and waivers, mergers and changes of control • Asset performance history • List of must sell properties • Loans that meet criteria for sale
Master Sub-Servicer	Provides servicing data on the Ginnie Mae-owned portfolio	<ul style="list-style-type: none"> • Corporate watch • Loan level data • All inputs for financial reporting • OMB's macroeconomic forecast • Scrubbed data from GinnieNET • Accounting policy • RFS • Agency endorsement file

Supplier	Role	Inputs Provided
OIG	Responsible for providing policy and modeling guidance	<ul style="list-style-type: none"> • Corporate model policy related procedures • Modeling and evaluation committee • Documentation for 15 models • Disclaimer for 2 years • Engagement letter • PBCs • Walkthroughs • A123 testing protocol • Test within planning memo
OMB	Provides regulatory guidance and requirements	<ul style="list-style-type: none"> • Disclaimer for 2 years • Engagement letter • PBCs • Walkthroughs • A123 testing protocol • Test within planning memo • Project artifacts, best practices and FAC guidance • Budget projections, cash inflow/outflow • Loan level data • All inputs for financial reporting • OMB's macroeconomic forecast • Loan level data • Scrubbed data from GinnieNET • Accounting policy • RFS • Agency Endorsement File • OMB's macroeconomic forecast
Real Estate Mortgage Investment Conduit (REMIC) Trustee/Platinum Sponsor	Entity that holds a fixed pool of mortgages and issues multiple classes of interests in itself to investors	<ul style="list-style-type: none"> • Collateral
Securitized Transaction Financial Advisor (STFA)	Opens, structures and monitors the transactions for each participating entity	<ul style="list-style-type: none"> • Term sheet • CUSIP numbers • OID prices letter • Analytical disclosures • Closing letter • Final data statement • CD of electronic copy of closing • Documents sent to OCM and each participant

Supplier	Role	Inputs Provided
U.S. Department of the Treasury	Provides fixed assets and cash as part of the Ginnie Mae portfolio	<ul style="list-style-type: none"> • Fixed assets • Cash

Appendix C: Data Collection Mechanisms

C.1 Workforce Complexity Surveys

Each office was asked a series of questions regarding its processes at both the top level and sub process level. Offices were provided with a Likert scale method of responding. These questions and the corresponding scales used to document the data are provided below:

Ginnie Mae Process Complexity Survey
How difficult would you rate this process? 1 - Very Difficult 2- Difficult 3 - Neutral 4 - Easy 5 - Very Easy
How frequently are there unexpected events within the process? 1 - Never 2 - Almost Never 3 - Occasionally/Sometimes 4 - Almost Every Time 5 - Every Time
How frequently is there a potential for risk? 1 - Never 2 - Almost Never 3 - Occasionally/Sometimes 4 - Almost Every Time 5 - Every Time
How difficult is it for people carrying out the process to learn it? 1 - Very Difficult 2- Difficult 3 - Neutral 4 - Easy 5 - Very Easy
How difficult is it for managers to learn how to manage/oversee the process? 1 - Very Difficult 2- Difficult 3 - Neutral 4 - Easy 5 - Very Easy

Ginnie Mae Process Complexity Survey
<p>How difficult is it to train staff to execute this process autonomously?</p> <p>1 - Very Difficult 2 - Difficult 3 - Neutral 4 - Easy 5 - Very Easy</p>
<p>How important a role does mortgage industry knowledge as a requirement for an individual to successfully execute this process?</p> <p>1 - Not at all Important 2 - Slightly Important 3 - Somewhat Important 4 - Very Important 5 - Extremely Important</p>
<p>How satisfied are you with how work is delegated from management to staff?</p> <p>1 - Not at all Satisfied 2 - Slightly Satisfied 3 - Moderately Satisfied 4 - Very Satisfied 5 - Extremely Satisfied</p>
<p>How satisfied are you with how work is delegated from management/staff to contractors?</p> <p>1 - Not at all Satisfied 2 - Slightly Satisfied 3 - Moderately Satisfied 4 - Very Satisfied 5 - Extremely Satisfied</p>
<p>How involved are team leaders/managers in day-to-day decision making and quality control?</p> <p>1 - Not at all Involved 2 - Slightly Involved 3 - Moderately Involved 4 - Very Involved 5 - Extremely Involved</p>
<p>How satisfied are you with the level of access to and communications with contractors?</p> <p>1 - Not at all Satisfied 2 - Slightly Satisfied 3 - Moderately Satisfied 4 - Very Satisfied 5 - Extremely Satisfied</p>

Ginnie Mae Process Complexity Survey
<p>In carrying out the process, how frequently does a manager need to be involved?</p> <p>1 - Never 2 - Almost Never 3 - Occasionally/Sometimes 4 - Almost Every Time 5 - Every Time</p>
<p>How difficult is it to monitor work to ensure quality?</p> <p>1 - Very Difficult 2 - Difficult 3 - Neutral 4 - Easy 5 - Very Easy</p>
<p>How important is regular reporting to the success of this process?</p> <p>1 - Not at all Important 2 - Slightly Important 3 - Somewhat Important 4 - Very Important 5 - Extremely Important</p>
<p>Do you agree or disagree with the following statement: This process is inherently governmental?</p> <p>1 - Strongly disagree 2 - Disagree 3 - Neither Agree nor Disagree 4 - Agree 5 - Strongly Agree</p>
<p>Do you agree or disagree with the following statement: This process should be considered a core competency of Ginnie Mae?</p> <p>1 - Strongly disagree 2 - Disagree 3 - Neither Agree nor Disagree 4 - Agree 5 - Strongly Agree</p>

C.2 Workforce Manpower Survey

Quantitative data was collected on the number of full-time equivalents (FTE) and the level of effort required to execute each process. Information was collected in a matrix with the number of FTEs by Government Manager Level (all government staff with a managerial or executive role), Government Staff level (government staff executing a process without a significant staff oversight requirements) and contractor FTE (to reflect additional manpower and support as well as need for oversight by management).

An FTE was defined as a person working a 40 hour work week. FTE counts reflect Ginnie Mae's current staffing model, and do not include any positions that were vacant and awaiting to be filled, even if those positions have been funded. Additionally, the matrix captured the percentage of total time spent across each sub process

The exhibit below show a sample of how information was collected in each office:

Process	Government Management FTEs	Government Staff FTEs	Contractor FTEs
Top Level Process 1	##	##	##
Top Level Process 2	##	##	##
Top Level Process 3	##	##	##
TOTAL FTEs	##	##	##

Top Level Process 1 Breakdown	Government Management % of effort	Government Staff % of Effort	Contractor % of Effort
Subprocess 1.1	XX%	XX%	XX%
Subprocess 1.2	XX%	XX%	XX%
Subprocess 1.3	XX%	XX%	XX%

Top Level Process 1 Breakdown	Government Management % of effort	Government Staff % of Effort	Contractor % of Effort
Subprocess 1.4	XX%	XX%	XX%
Total	100%	100%	100%

Top Level Process 2 Breakdown	Government Management % of effort	Government Staff % of Effort	Contractor % of Effort
Subprocess 2.1	XX%	XX%	XX%
Subprocess 2.2	XX%	XX%	XX%
Subprocess 2.3	XX%	XX%	XX%
Subprocess 2.4	XX%	XX%	XX%
Subprocess 2.5	XX%	XX%	XX%
Total	100%	100%	100%

Top Level Process 3 Breakdown	Government Management % of effort	Government Staff % of Effort	Contractor % of Effort
Subprocess 3.1	XX%	XX%	XX%
Subprocess 3.2	XX%	XX%	XX%
Total	100%	100%	100%

Appendix D: APQC Process Classification Framework References

The American Productivity and Quality Center (APQC) Process Classification Framework (PCF) is a taxonomy of business processes that allows organizations to objectively track and compare their performance internally and externally with organizations from any industry.

APQC's PCF was developed in the early 1990s by APQC and a group of members from a number of industries and countries throughout the world. Originally envisioned as a tool to aid in performance improvement projects, the framework evolved into the broad taxonomy that it is today. Organizations can use the PCF's common terminology to name, organize, and map their processes. It is also helpful as a tool for explaining a business in terms of horizontal processes rather than vertical functions.

It is designed as a framework and global standard to be customized for use in any organization. Thus, the PCF does not list all processes within a specific organization, and every process listed in the framework does not exist in all organizations.

The PCF is also used as the basis for APQC's Open Standards Benchmarking, where organizations can benchmark their performance against that of other organizations. APQC tracks responses according to the processes as enumerated and defined in the PCF.

D.1 Process Mapping Methodology

The PCF was used to help standardize the names of the Ginnie Mae processes so they could be benchmarked against companies in their peer group. The results of the mapping are below.

Exhibit 23 – Process Alignment Methodology

Ginnie Mae Enabling Process Name	APQC Process Name
Manage Budget	<ul style="list-style-type: none">• Perform planning/budgeting/forecasting• Perform cost accounting and control
Perform Financial Reporting	<ul style="list-style-type: none">• Perform financial reporting• Evaluate and manage financial performance
Manage Audit Controls	<ul style="list-style-type: none">• Establish internal controls, policies, and procedures• Operate controls and monitor compliance with internal controls policies and procedures• Report on internal controls compliance• Manage internal controls
Manage Accounting Operations	<ul style="list-style-type: none">• Perform general accounting
Manage Accounting Systems	<ul style="list-style-type: none">• Develop and maintain IT solutions• Manage the business of IT• Deliver and support IT services• Deploy IT solutions
Manage Accounting Policy	<ul style="list-style-type: none">• Manage financial policies and procedures
Manage Program Policies	<ul style="list-style-type: none">• Develop customer care/customer service strategy• Customer service

Ginnie Mae Enabling Process Name	APQC Process Name
Manage New Product Development	<ul style="list-style-type: none"> • Product Development • Generate new product/service ideas
Manage Investor Inquiries	<ul style="list-style-type: none"> • Customer service
Manage Investors / Product Match	<ul style="list-style-type: none"> • Develop and manage products and services
Manage PMO	<ul style="list-style-type: none"> • IT planning and management
Manage Technology	<ul style="list-style-type: none"> • Develop and implement security, privacy, and data protection controls • IT planning and management • Develop and maintain IT solutions • Manage the business of IT • Deliver and support IT services • Deploy IT solutions
Manage Enterprise Data	<ul style="list-style-type: none"> • Manage enterprise information • Develop information and content management strategies • Perform enterprise data and content management
Manage Information Security	<ul style="list-style-type: none"> • Develop and implement security, privacy, and data protection controls
Manage Operations Risk	<ul style="list-style-type: none"> • Manage business resiliency
Manage Vendor Risk	<ul style="list-style-type: none"> • Appraise and develop suppliers
Manage and Develop, Model, Forecast, and Analytics Risk	<ul style="list-style-type: none"> • Manage business resiliency
Manage Continuity of Operations	<ul style="list-style-type: none"> • Manage business resiliency
Manage Counterparty Profiles	<ul style="list-style-type: none"> • Develop customer care/customer service strategy
Manage Non-Compliant Issuers	<ul style="list-style-type: none"> • Appraise and develop suppliers
Manage Asset Portfolio	<ul style="list-style-type: none"> • Perform fixed-asset accounting
Manage Human Resources	<ul style="list-style-type: none"> • Human Resources Administration • Recruit, source, and select employees • Reward and retain employees • Redeploy and retire employees • Develop and counsel employees • Select suppliers and develop/maintain contracts
Manage Facilities	<ul style="list-style-type: none"> • Perform capital planning and project approval
Manage Human Resources Policy	<ul style="list-style-type: none"> • Develop and Manage Human Capital
Manage Contracts	<ul style="list-style-type: none"> • Select suppliers and develop/maintain contracts
Coordinate New Initiative	<ul style="list-style-type: none"> • N/A
Develop Enterprise-Wide Program	<ul style="list-style-type: none"> • N/A
Manage External Relationships	<ul style="list-style-type: none"> • N/A
Develop and Manage Business Capabilities	<ul style="list-style-type: none"> • N/A
Administer Contracts and Programs	<ul style="list-style-type: none"> • Select suppliers and develop/maintain contracts
Manage and Transform Systems and Projects	<ul style="list-style-type: none"> • Develop and maintain IT solutions • Manage the business of IT • Deliver and support IT services • Deploy IT solutions

Appendix E: Acronyms and Abbreviations

The below exhibit is a list of abbreviations and acronyms:

Term	Meaning
APQC	American Productivity and Quality Center
ARFAS	Accounting System Interfaces
CBA	Congressional Budget Authority
CIO	Chief Information Officer
CMP	Civil Monetary Penalty
CSC2 Calculator	Credit Subsidy Calculator 2
CTQ	Critical-to-quality
CUSIP	Committee on Uniform Securities Identification Procedures
Document Custodian	A bank or trust department approved by Ginnie Mae to hold the underlying loan collateral for Ginnie Mae Issuers
DOJ	Department of Justice
FAR	Federal Acquisition Regulation
FASAB	Federal Accounting Standards Advisory Board
FASB	Financial Accounting Standards Board

Term	Meaning
FDS	Final Data Statement
FHA	Federal Housing Administration
FTE	Full Time Equivalent, defined by APQC as an employee working for 40 hours in a work week.
GAAP	Generally Accepted Accounting Principles
GAO	Government Accountability Office
Ginnie Mae	Government National Mortgage Association
GSA	General Services Administration
GTR	Government Technical Representative
HR	Human Resources
HUD	United States Department of Housing and Urban Development
HUDAR	HUD Acquisition Regulation
IPMS	Integrated Pool Management System
IRB	Institutional Review Board
IRS	Internal Revenue Services
Issuer	An entity approved by Ginnie Mae to create a Mortgage-Backed Security with the Ginnie Mae guaranty

Term	Meaning
IT	Information Technology
KPI	Key Performance Indicator
LOU	Letter of Understanding
MBS	Mortgage-Backed Security, a security whose cash flow is backed by an underlying group of mortgages
MBSAA	Mortgage-Backed Securities Administration Agent
MSS	Master Sub-Servicer
NOV	Notice of Violation
NYSE	New York Stock Exchange
OCFO	Ginnie Mae Office of the Chief Financial Officer
OCHICO	Ginnie Mae Office of the Chief Human Capital Officer
OCM	Ginnie Mae Office of Capital Markets
OCPO	Ginnie Mae Office of the Chief Procurement Officer
OCS	Offering Circular Supplement
OEDTS	Ginnie Mae Office of Enterprise Data and Technology Services
OER	Ginnie Mae Ginnie Mae Office of Enterprise Risk

Term	Meaning
OGC	Ginnie Mae Office of General Counsel
OID	Original Issue Document
OIG	HUD Office of the Inspector General
OIPM	Ginnie Mae Office of Issuer and Portfolio Management
OMB	Office of Management and Budget
OMO	Ginnie Mae Office of Management Operations
OP&EVP	Ginnie Mae Office of the President and Executive Vice President
OSO	Ginnie Mae Office of Security Operations
Participant	A Ginnie Mae Issuer or Document Custodian
PD	Probability of Default
PM	Project Manager
PMO	Project Management Office
POC	Point of Contact
PPA	Pool Processing Agent
PPM	Project Planning and Management
REMIC	Real Estate Mortgage Investment Conduits

Term	Meaning
RFP	Request for Proposal
RFS	Reporting and Feedback System
RPB	Remaining Principal Balances
RPN	Request Pool Numbers
SEC	Securities and Exchange Commission
SF	Standard Form
SIPOC	Suppliers, Inputs, Processes, Outputs, Customers
SLA	Service Level Agreement
SSAE16	Statement on Standards for Attestation Engagements 16
STFA	Securitized Transaction Financial Advisor
SVP	Senior Vice President
TIL	Transaction Initiation Letter
TROR	Treasury Report on Receivables
USDA	US Department of Agriculture
VA	Department of Veterans Affairs
VOB	Voice of the Business

Term	Meaning
VOC	Voice of the Customer
VP	Vice President