APPENDIX D: EFFECTIVE REPORTING FOR DATA-DRIVEN DECISION MAKING

INTRODUCTION

Effective data reporting as required under Section I.D.9 of this Circular is necessary to support strong credit program management and oversight. Effective reporting also provides parties at all levels of the organization with accurate, timely information on program performance, early warning of issues that may arise, and analytics to drive decision making. Agencies should coordinate reporting parameters with OMB to make sure the unique needs of each program are addressed. This includes the parameters for the quarterly summary reports of program performance that agencies are required to provide to senior level officials and OMB per Section III.B.2.a of this Circular.

The nature of a program's reporting will depend on its specific policy goals, key risks and cost drivers, operational structure, and other program-specific factors. However, there are common objectives that reporting structures must meet. This appendix provides an overview of key objectives and considerations for effective data reporting, descriptions of common types of reports, and some examples of program reports.

KEY OBJECTIVES AND CONSIDERATIONS FOR EFFECTIVE REPORTING

Reporting systems should convey necessary information to the appropriate people in a timely fashion to make sure that decision makers and parties at all levels of the organization understand program performance, and other information needed to proactively manage the program. Reporting should facilitate the flow of information and discussion across the organization, and the escalation of emerging issues to the appropriate level, including senior officials within the program agency or other Federal stakeholders. While reporting should be tailored to programs' particular circumstances, it should provide concise, standardized reporting of key information, trends, and findings, including material areas of divergence between projected and actual performance. Reporting systems should also have sufficient flexibility and adapt as necessary to new developments and emerging issues.

While effective program reporting will vary across agencies and programs, it should cover all aspects of program performance. Key objectives of effective reporting include but are not limited to:

- **Targeted Reporting.** Reports should be tailored for the audience by including data that is relevant to the authorities and responsibilities of that audience. Reports for program staff should generally be more frequent and detailed than reports to senior leadership or other Federal stakeholders.

- **Findings and Proposed Actions.** Strong reporting clearly conveys the main message of the data—whether program performance is in accordance with expectations and where there are emerging issues. Graphics, tables, and trend analysis that compare performance over time and against expectations and other information can provide critical context for understanding program performance. Where appropriate, the reporting may also include brief explanations of significant findings that offer insight into actions that could be taken to respond to improve program performance.

- **Policy Goals.** Reporting should cover performance indicators, typically outcome-based metrics that track the program's progress toward achieving policy goals. For example, in a loan guarantee program that seeks to address a market failure due to lack of private market experience, the performance indicator reporting may include tracking borrower graduation to fully-private financing.

- **Portfolio Performance Risks.** Agencies should identify programmatic and financial risks, and report information the agency needs to manage risks. This may include reporting on portfolio concentrations in geographic or technology areas, market risks that can affect credit performance, or other external factors that can affect the program such as market shifts. Reporting may include scoring or rating systems for agencies to segment and evaluate program performance. For example, an agency may develop a credit scoring approach for portfolio loan programs to identify portfolio segments at higher risk of default to target loss mitigation actions, or segments where a lower degree of subsidy may be sufficient to achieve policy goals. Similarly, for an infrastructure loan program a risk rating system can be used to evaluate the overall riskiness of a portfolio across diverse transactions, and individual deals in the context of the program's established policy goals and risk thresholds.

- **Administrative Risks.** Reporting should cover administrative risks specific to the program, including operational risks. This may include trend reporting on costs of origination, servicing, and managing the portfolio, or reporting on any operational interruptions. It may also include the status of key contracts (such as servicing or collection) to make sure that they do not expire.

- **Special Reporting.** Where a certain function, loan, or loan type that merits greater management attention is not covered by existing reports, a program may need to develop new reports to make sure program staff and leadership are appropriately informed.

COMMON TYPES OF REPORTS

A reporting system will generally be made up of a variety of types of reports. The following are common types of reports:

- **High-level Dashboards.** Such a dashboard should use quantitative and qualitative information to summarize performance in meeting policy goals and address key risks. The dashboard should generally be no more than a few pages and should be tailored for the program's characteristics. Key statistics should include relevant information on program activity, current performance trends, and forward-looking indicators of risk. In addition, it should include a high-level qualitative discussion noting areas that merit increased management focus. For example, a program that provides a small number of large loans might have a dashboard that provides metrics on the performance of the existing loans, a list of loans that are at heightened risk of financial distress, a summary of the status of current applications, and metrics on external factors such as particular market trends that may affect the portfolio's health. Section III.B.2.a of this Circular requires programs to provide high-level summary performance data to agency leadership and OMB, in a dashboard or similar form. The dashboard should be distributed at least quarterly, but more frequent reporting may be required.

- **More Detailed Dashboards.** Program staff will likely need more frequent and detailed reporting to effectively manage their areas of responsibility. The frequency, content and nature of these reports will depend on the particular program and the responsibilities of the report's recipient, though reports should be automated and generated using the same data that feeds into high-level dashboards. For example, a servicing manager might have a weekly report with payment processing, loan status, or other statistics that affect the servicing operations, whereas a budget analyst may receive quarterly aggregated information necessary to better project future costs.

- **Pipeline Reports.** Programs originating new loans may wish to develop reports providing key information on open applications, including characteristics, quantity and timing. For example, a credit program that provides small business financing may have a daily report tracking current year originations against available appropriations authority and against historical averages. An infrastructure program may have a pipeline report that tracks the requested loan amount, project type, application status, and other characteristics for each application, against program policy targets.

- **Watch Lists.** Programs may maintain a watch list that provides key information on loans, loan types, sectors, or other areas that may require greater management focus due to programmatic or financial risk, and summarize changes in internal risk ratings or credit scores. For example, a program that provides a small number of large loan guarantees might maintain a list of specific loans that may require agency action to mitigate risk, along with information on the loan, the issue that suggests greater focus is warranted, and a description of what steps the program is taking to mitigate the risk.

- **Program Operations Reports.** Programs may develop reports on their operations that could include metrics on customer service, employee productivity, and administrative spending. In addition, programs that are being established or are facing significant operational changes may wish to report on the progress towards the implementation plan milestones and risks. For example, a program that provides many small loans and is focused on customer service might have a monthly dashboard for program management that provides information on call center performance (such as a breakdown of call time, dropped calls, reasons that individuals call, and accuracy of information provided), community outreach (such as number of people attending sessions providing loan introduction, or communications that result in successful applications), and overall applicant satisfaction (such as customer service scores, or complaint resolution metrics).

EXAMPLES OF REPORTS

Although reports will vary based on program characteristics, each report should be designed for a clear purpose. In designing specific reports, agencies should be guided by the answers to the following questions.

- Who is the target audience, and why do they need this report?

- What information does the target audience need to effectively identify issues, provide input, or take action?

- How can the information be best conveyed? How detailed should the information be? Should the information be presented quantitatively and/or qualitatively? Are historical trends needed?

- When should the relevant information be reported to the target audience so that they can take appropriate action?

- How often does the target audience need the report?

The Attachment to this Appendix includes three example reports for a hypothetical loan infrastructure program: a high-level dashboard; a pipeline report; and a watch list. Each report is targeted towards senior leadership and other high-level decision makers. The program has been operating since fiscal year 2006 and mainly provides financing for new construction and renovation projects. A central policy objective of the program is to support economic development through financing projects in underserved communities such as high-poverty or rural areas, where borrowers have difficulty obtaining financing on reasonable terms. Awards are made through a competitive process.

Example High-Level Dashboard - Q2

Within tolerance=🟢 Warning=🔺 Immediate attention needed=❌
ΔQ = Change from prior quarter YOY = Year over year (% = YOY ratio, $= nominal change)

Highlights

- Loan to ABC Inc. for $XXXm is expected to default in the next month absent mitigation actions. Staff is currently in workout negotiations with the borrower and relevant counterparties (see more).
- Staff Turnover: The program has experienced high turnover in the underwriting and monitoring functions, and is operating with several vacancies in critical areas. Program is activity recruiting senior finance talent.
- High poverty areas policy target: Program continues to fall short of its high poverty investment target due to a lack of qualified borrower applications. Staff are investigating the possibility of providing technical assistance to high poverty area borrowers.

Financial / Policy

Status of Loans

		Today	ΔQ	YOY	Target
🔺	Obligated	$[x]M	[x]%	[x]%	$[x]M
🟢	Disbursed	$[x]M	[x]%	[x]%	
🟢	Outstanding	$[x]M	[x]%	[x]%	> $[x]M

Obligations by Project Type / Phase

		Today	ΔQ	YOY	Target
	By Project Type				
🟢	New construction	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M
🟢	Renovation	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M
🟢	Other	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M
	By Project Phase				
🟢	Planning	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	
🟢	Construction	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	
🟢	Grace period	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	
🟢	Repayment	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	

Obligations by project type and phase shows amount of total obligations (all cohorts) represented by each of the three project types as well as by each project phase. This allows decision makers to easily see the types of investments supported by the program and progress towards project completion. ΔQ and YOY show if the program is converging to policy targets over time.

Credit Risk

		Today	ΔQ	YOY	Target
	Expected Losses / Gains (Nominal)				
🟢	Expected loss (gain): lifetime	$[x]M	[x]%	[x]%	$[x]M
🟢	Expected loss (gain): 2 year	$[x]M	[x]%	[x]%	$[x]M
	Delinquencies				
🟢	30-59 days	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	
🟢	60-89 days	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	
🟢	90-119 days	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	
🟢	120+ days	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	
	Write-offs				
🟢	Total write-offs	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	

The credit risk table shows various financial risk metrics. Table shows forecasts for expected losses (or gains), the amount and severity of delinquencies, and write-offs as well as the changes from the previous quarter and year over year. Significant changes in any of these metrics may warrant additional attention.

Policy Metrics

		Today	ΔQ	YOY	Target
	Underserved Communities				
🟢	Rural community	$[x]M	[x]%	[x]%	[x]%
❌	High poverty area	[x]M	[x]%	[x]%	[x]%
🟢	Medium poverty area	[x]M	[x]%	[x]%	[x]%

One of the policy goals of this example program is to fund projects in underserved communities where borrowers have difficulty obtaining financing on reasonable terms. This table shows program performance relative to policy targets, and prior year performance.
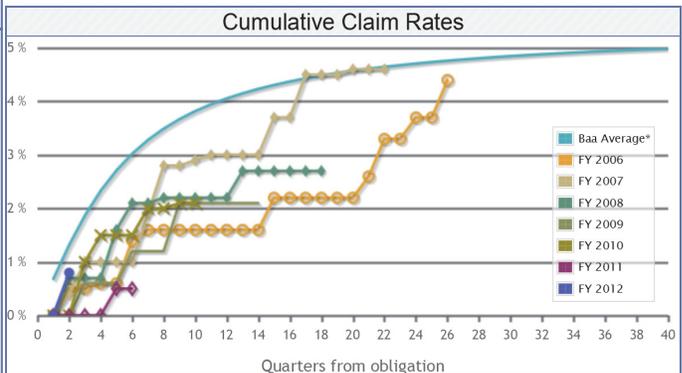
Obligations by Risk Rating

		Today	ΔQ	YOY	Target
🟢	Risk Rating 1	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M
🟢	Risk Rating 2	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M
🟢	Risk Rating 3	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M
🟢	Risk Rating 4	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M
🟢	Risk Rating 5	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M	[x]% / $[x]M

This table shows the total obligated amounts by borrower risk rating relative to pre-established risk thresholds. Decision makers can quickly see the program's relative risk and how those amounts are changing over time. Significant changes or departure from target thresholds (due to downgraded risk ratings for example) would indicate a problem warrant additional attention.

Cumulative Claim Rates

Legend: Baa Average*, FY 2006, FY 2007, FY 2008, FY 2009, FY 2010, FY 2011, FY 2012

X-axis: Quarters from obligation (0 to 40); Y-axis: 0% to 5%

Cumulative claim rates shown by cohort. The program target risk average is low investment grade (Baa/BBB), so an industry average Baa default curve is included for comparison. This chart allows decision makers to see program claim rates relative to targets. Data indicates that claim rates are lower than target, and would warrant additional attention and/or update of the program's risk rating method.

Market / Operational
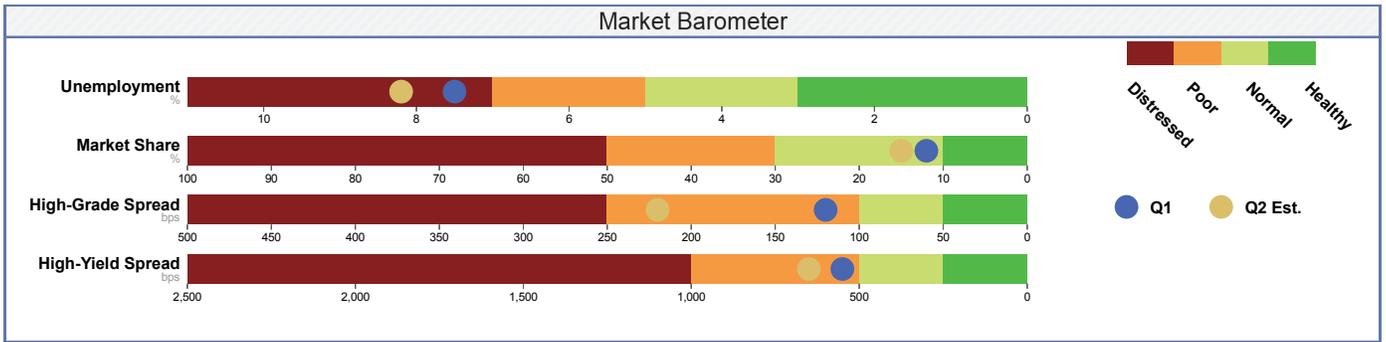
Provides an overview of key market indicators found to have an impact on program performance. Shaded areas indicate severity of each indicator relative to forecasted program performance. Data is provided for the completed first quarter and the partially complete second quarter.

Operational Risk: Self Assessed		Today	ΔQ	YOY
🟢	Underwriting	[1-5]	[1-5][+/-]	[1-5][+/-]
🔺	Loan Servicing	[1-5]	[1-5][+/-]	[1-5][+/-]
🟢	Risk Rating Accuracy	[1-5]	[1-5][+/-]	[1-5][+/-]
❌	Staff Levels	[1-5]	[1-5][+/-]	[1-5][+/-]
🟢	IT Infrastructure	[1-5]	[1-5][+/-]	[1-5][+/-]

Provides overview of key operational risk areas. Program has indicated a possible emerging issue with their loan servicing contract and indicated that immediate action is required to address critical vacancies resulting from recent turnover.
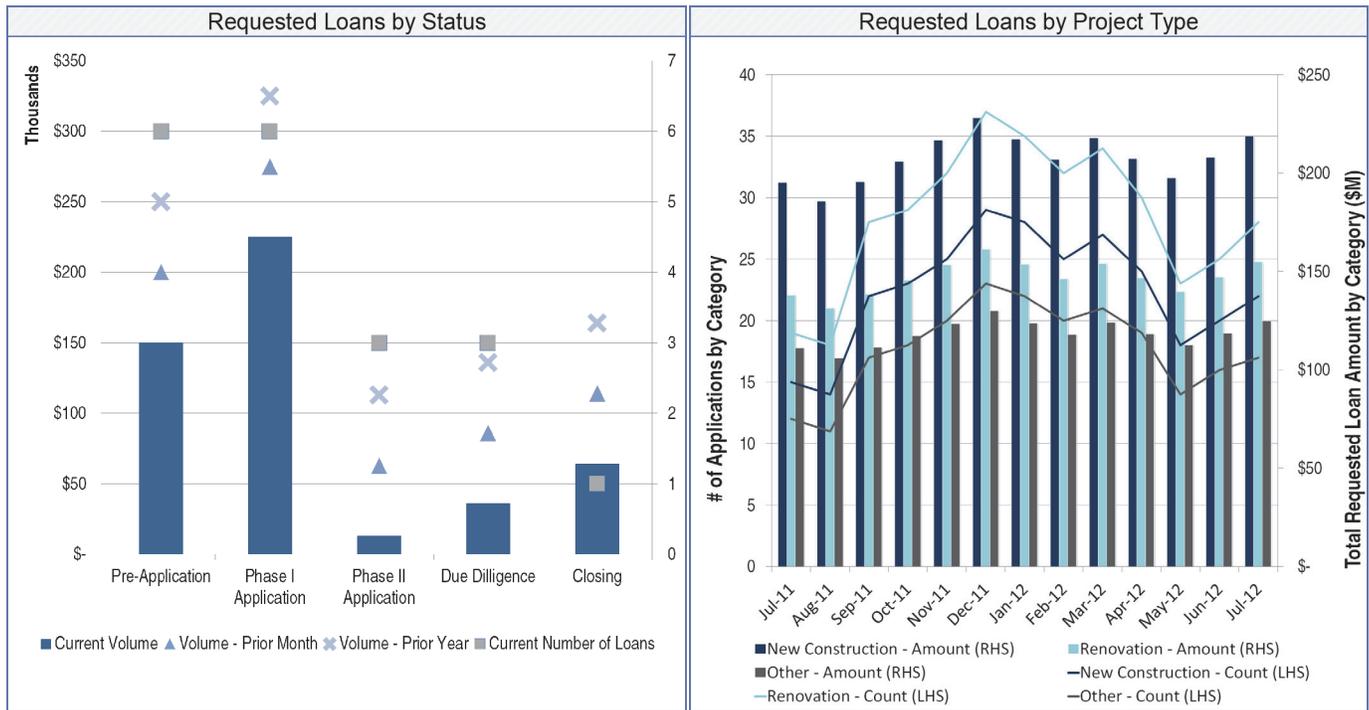
Definitions

- Expected Loss (Gain): The nominal average the program anticipates will be lost or gained in the time period (lifetime or 2 years).
- Risk Rating (1-5): Loans are categorized a risk rating from 1 (lowest) to 5 (highest) based on borrower characteristics, economic trends, delinquency, and loan officer assessment.
- High-Grade Spread: The difference between rates for government bonds and investment-grade bonds based on FINRA-Bloomberg Investment Grade U.S. Corporate Bond Index compared to 5-year Treasuries.
- High-Yield Spread: The difference between rates for government bonds and junk bonds based on FINRA-Bloomberg Active High Yield U.S. Corporate Bond Index compared to 5-year Treasuries.

Example Pipeline Report - Q2

$ in Thousands

									Pipeline Summary

Category	Application Date	Status	Requested Loan Amount	Total Project Cost	Preliminary Risk Rating	Project Policy Type	Original Est. Closing Date	Scheduled Closing Date
New Construction	mm/dd/yyyy	Pre-Application	$50,000	$125,000	N/A	xxxxxxx	mm/dd/yyyy	mm/dd/yyyy
New Construction	mm/dd/yyyy	Phase I Application	$75,000	$125,000	xxxx	xxxxxxx	mm/dd/yyyy	mm/dd/yyyy
New Construction	mm/dd/yyyy	Phase II Application	$12,000	$24,000	xxxx	xxxxxxx	mm/dd/yyyy	mm/dd/yyyy
New Construction	mm/dd/yyyy	Due Diligence	$18,000	$36,000	xxxx	xxxxxxx	mm/dd/yyyy	mm/dd/yyyy
New Construction	mm/dd/yyyy	Closing	$64,000	$128,000	xxxx	xxxxxxx	mm/dd/yyyy	mm/dd/yyyy
Renovation	mm/dd/yyyy	Pre-Application	$50,000	$100,000	N/A	xxxxxxx	mm/dd/yyyy	mm/dd/yyyy
Renovation	mm/dd/yyyy	Phase I Application	$75,000	$150,000	xxxx	xxxxxxx	mm/dd/yyyy	mm/dd/yyyy
Renovation	mm/dd/yyyy	Phase II Application	$900	$1,800	xxxx	xxxxxxx	mm/dd/yyyy	mm/dd/yyyy
Renovation	mm/dd/yyyy	Due Diligence	$18,000	$45,000	xxxx	xxxxxxx	mm/dd/yyyy	mm/dd/yyyy
Other	mm/dd/yyyy	Pre-Application	$50,000	$100,000	N/A	xxxxxxx	mm/dd/yyyy	mm/dd/yyyy
Other	mm/dd/yyyy	Phase I Application	$75,000	$100,000	xxxx	xxxxxxx	mm/dd/yyyy	mm/dd/yyyy

Pipeline provides basic information on each of the applications that have been received, including the amount requested, total project cost, the initial risk rating and application phase.

Requested Loans by Status

Current Volume | Volume - Prior Month | Volume - Prior Year | Current Number of Loans

Requested Loans by Project Type

New Construction - Amount (RHS) | Renovation - Amount (RHS) | Other - Amount (RHS) | New Construction - Count (LHS) | Renovation - Count (LHS) | Other - Count (LHS)

Provides current volumes and number of loans in each application phase, as well as comparisons to prior month and year volumes.

Illustrates relative demand for each project type (new construction, renovation, other) in number of applications and volume over time.

Example Watch List Report - Q2

$ in Thousands

Risk Rating	Description
1 (lowest)	[TBD - Program Specific]
2	[TBD - Program Specific]
3	[TBD - Program Specific]
4	[TBD - Program Specific]
5 (Highest)	[TBD - Program Specific]

Highlights

Overall portfolio risk continued to decline in Q2 and remains within risk thresholds, however several individual project risks highlighted below merit management focus. Current macro-economic environment has negatively impacted some of the older loans, and some newer loans some are also facing technology issues.

> Highlights provide context for the report overall and can be used to highlight critical developments within the projects on the watch list. This area could also be used to highlight and elaborate on the information provided in the Risk Summary / Mitigation Actions field of the watch list.

Summary

Watch List											
Project Name	Location	Year Funded / Cohort	Total Commitment	Total Amount Funded	Outstanding Balance	Risk Rating	Change in Risk Rating	% of Portfolio	Most Recent Payment Made	# Missed Payments	Risk Summary / Mitigation Actions
Project1	xxxxxxxxx	2012	$75,000	$50,000	$53,000	3	▲	5.89%	N/A	N/A	Fallen below multiple financial ratio benchmarks. Working with project management to discuss potential mitigation actions.
Project4	xxxxxxxxx	2008	$33,000	$33,000	$27,060	3	●	3.01%	5/15/11	0	Fallen below multiple financial ratio benchmarks. Working with project management to discuss resolution.
Project10	xxxxxxxxx	2009	$25,000	$25,000	$20,500	5	▲	2.28%	11/15/11	2	Consistent losses and no credible turnaround plan, poor economic environment. Reviewing recovery options.
Project3	xxxxxxxxx	2007	$25,000	$25,000	$20,500	4	●	2.28%	2/15/12	1	Appraisal shows value in excess of UPB.
Project5	xxxxxxxxx	2009	$17,000	$17,000	$13,940	2	▼	1.55%	5/15/12	0	Project revenue is tracking below plan, but recent improvement in financial condition.
Project9	xxxxxxxxx	2012	$15,000	$13,300	$10,906	2	●	1.21%	N/A	N/A	Construction delays continue.
Project6	xxxxxxxxx	2011	$15,000	$7,600	$6,232	2	●	0.69%	5/15/12	0	Project revenue is tracking below plan, management meeting scheduled for next month to review financials.
Project7	xxxxxxxxx	2010	$13,500	$12,000	$9,840	3	●	1.09%	5/15/12	0	Fallen below multiple financial ratio benchmarks. Working with project management to discuss resolution.

> Includes basic loan agreement terms for loans on the watch list including the face value of the award, the amount funded (disbursed), and the amount outstanding (total outstanding debt including capitalized interest, net of repayments). Decision makers can also see risk ratings, and how those ratings have changed since the prior report as well as a description of the issues with the loan and mitigating actions being considered or already taken.

Change in Portfolio Risk Over Time

Current Portfolio by Risk Rating

> Chart illustrates that shares of higher risk loans (2,3,4,5) have been declining steadily over time as a fraction of total outstanding commitments. Decision makers can see how risk shares are evolving over time with respect to policy targets (see Example High-Level Dashboard additional target information).

> Chart illustrates current commitment shares by risk rating (the last bar of the chart to the left represented in pie chart as a pie chart.) This view of the data allows easier comparison of current portfolio breakdown with policy targets found in the High-Level Dashboard.