Session 5
July 12, 1:45-2:45pm

Working with Private Partners

MIT GCFP
GOLUB CENTER FOR FINANCE AND POLICY

Assessing comparative advantage for credit extension functions

- Critical decisions: Which functions to perform in-house? When to use a private partner?
  - These choices have first-order impact on administrative costs, loan performance, borrower satisfaction, goal attainment, etc.
  - Apply principle of comparative advantage: who is best positioned to perform the task most efficiently and effectively?

MIT GCFP
GOLUB CENTER FOR FINANCE AND POLICY

Assessing comparative advantage for credit extension functions

- Marketing
- Origination
- Servicing
- Funding
  - *Always* more expensive for private partners
    - Historical reason agency borrowing centralized in Treasury was to gain from liquidity advantage
    - Adding a layer of intermediation adds risks Investors demand compensation for those risks (e.g., performance risk on FHA mortgages)
- Screening and monitoring
- Risk bearing
- Resolving defaults

MIT GCFP GOLUB CENTER FOR FINANCE AND POLICY

Assessing comparative advantage for credit extension functions

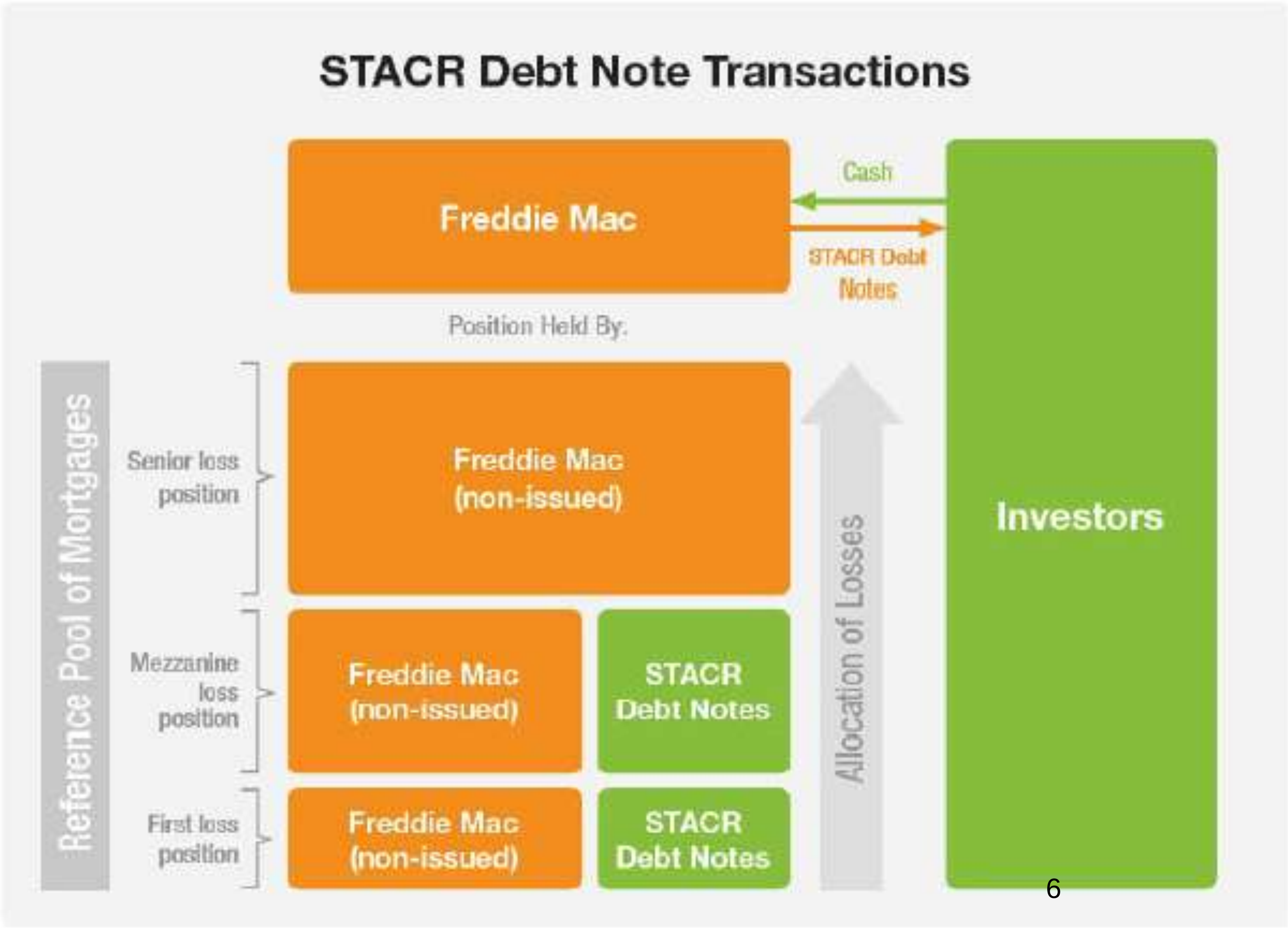
- Marketing
- Origination
- Servicing
- Funding
- Screening and monitoring
  - Can benefit from greater flexibility and profit incentives in the private sector
  - But these mechanisms will only work if program structure and rules allow them to
    - E.g., failure of guaranteed student loans to assign meaningful responsibility
- Risk bearing
- Resolving defaults

MIT GCFP
GOLUB CENTER FOR FINANCE AND POLICY

Assessing comparative advantage for credit extension functions

- Marketing
- Origination
- Servicing
- Funding
- Screening and monitoring
- Risk bearing
  - Putting private partners in a first loss or risk-sharing position creates incentives for diligence in screening and monitoring
  - Government has advantage at absorbing and spreading catastrophic or tail risks
    - Can be expensive to compensate private sector to bear tail risk
    - But advantage in risk transfer is to have market measure of price of the risk
      - Example of Freddie Mac STACR securities
- Resolving defaults

Credit risk transfer to private sector on many new Freddie Mac 30-year mortgages



MIT CFP
GOLUB CENTER FOR FINANCE AND POLICY

Assessing comparative advantage for components of credit extension

- Marketing
- Origination
- Servicing
- Funding
- Screening and monitoring
- Risk bearing
- Resolving defaults
  - Can benefit from greater flexibility and incentive structures with private partners
  - Critical to maintain competition in market for services to avoid rent capture
  - But can make it harder to maintain control, e.g., over workouts and borrower interactions

Implications for guaranteed lending

- Puts most or all credit functions in private hands
- When is guaranteed lending more or less efficient?
  - Can be better when monitoring and screening is important, and when lenders have skin-in-the-game and latitude to act
  - Can be more costly for gov't and borrowers when fees are set by regulation rather than by market forces
  - Can be more costly when guarantee benefits are captured by lenders, e.g., when market structure is insufficiently competitive
  - Guaranteed lenders generally have a funding cost disadvantage; efficiencies have to be large enough to outweigh costs
    - Reason to provide securitization platforms as with mortgages, SBA, HECMs

Guaranteed lending in practice

- Some examples:
  - HECM Reverse Mortgage program
    - Little lender latitude, no risk bearing, little competition, rents to lenders
    - (Lucas, 2015)
  - Now-discontinued Guaranteed Student Loan program
    - No latitude, very little risk bearing, competition for rents did not lower costs for students, rents to lenders and schools
    - (Lucas and Moore, 2010)
  - Small Business Administration's 7a program
    - Value added from private screening and monitoring, good use of risk-sharing, but limited competition and rents to lenders
    - (de Andrade and Lucas, 2013)

MIT GCFP
GOLUB CENTER FOR FINANCE AND POLICY

Anticipating and Accounting for Credit Losses

EXAMPLE									
Loss progression	Total Loans Outstanding	Beginning Loss Reserve	Delinquent Loans 30-120 Days	Delinquent Loans 120 + Days	Provision for Losses	Gross Charge-offs	Recoveries	Ending Loss Reserve	Modifications and Restructures
Dollar Value	$100,000,000	$2,000,000	$5,000,000	$750,000	$600,000	$500,000	$200,000	$2,300,000	$1,250,000
Percentage to Total Loans		2.00%	5.00%	0.75%	0.60%	0.50%	0.20%	2.30%	1.25%

Beginning Loss Reserve	The loss reserve is a non-cash deduction that reflects ratings on specific loans or actual experience on types of loans. Some lenders also add a general allocation on top of this to allow for unforeseen events. All lenders should have lending policies and rating systems for segmenting the level of risk on each loan as it is booked, and also as it is reviewed over time.
Delinquent Loans	If a payment is delinquent then the whole loan is delinquent -- not just the payment. At 120 days, loans cease accruing interest and are written down to their expected liquidation value.
Modifications and Restructures	Small business lending involves a high level of modification due to the volatility of business. Modifications are the norm. However, some lenders modify delinquent loans to avoid having them go 120 days delinquent and charging them off or writing them down. This has been a major source of misrepresentation over the years.
Charge-offs	This is the amount that management loses each year on the loans that have gone bad. It is a non-cash item that rarely shows up on the financials. It represents the amount of principal that is lost on a loan -- which on unsecured small business loans can often be in the 90-100% range.
Provision for Losses	This is a non-cash expense that management uses to cover Charge-offs and build the loss reserve. It is deducted on the Operating Statement and reduces profits. It should be significantly greater than the Charge-offs: 1.5x is a good rule of thumb. Lenders in trouble often understate the Provision.
Ending Loss Reserve	The ending loss reserve = Beginning Loss Reserve plus the Provision and the Recoveries minus the Charge-offs.

MIT GCFP
GOLUB CENTER FOR FINANCE AND POLICY

Examples of Different Kinds of Lenders

The Summary Expenses of Lending 2014	Large Bank	Small Bank	Credit Union	Finance Company	Online Lender	Credit Card Company	CDFI Non-profit Lender	State HFA
	(000's)							
Total Assets	$1,687,155,000	$6,760,879	$5,831,677	$47,880,000	$792,362	$159,103,000	$38,718	$5,306,000
Gross Income (Revenues) to Assets	5.00%	4.47%	3.40%	7.57%	19.95%	22.56%	31.90%	6.01%
Interest Expense to Assets	0.24%	0.28%	0.68%	2.27%	2.17%	1.07%	0.98%	2.85%
Operating Expense to Assets	2.91%	2.33%	2.08%	3.67%	10.16%	14.55%	23.52%	2.00%
Loss Expense to Assets	0.08%	0.27%	0.09%	0.21%	8.51%	1.28%	2.85%	0.05%
Total Expenses	3.23%	2.88%	2.85%	6.15%	20.84%	16.91%	27.35%	4.89%
Net Profit After Tax to Assets	**1.37%**	1.85%	**0.58%**	**1.42%**	**-2.36%**	**3.70%**	**7.50%**	**1.00%**
Total Equity	$185,262,000	$946,188	$490,222	$9,063,000	$310,605	$20,673,000	$15,885	$1,112,000
Ratio of Capital to Assets	10.98%	14.00%	8.41%	18.93%	39.20%	12.99%	41.03%	20.96%
Return on Equity/Subsidy	12.45%	13.22%	6.89%	7.51%	-6.02%	28.47%	18.28%	4.77%
Total Loans	$824,997,000	$5,074,883	$3,265,738	$19,148,000	$454,303	$70,104,000	$22,745	$3,379,000
Delinquency Rate	3.84%	1.14%	1.20%	0.16%	13.18%	1.87%	1.79%	0.34%
High Stock Price	$55.95	$69.99		$52.15	$27.98	$96.24		
Average Stock Price	$54.77	$37.45		$47.17	$23.71	$89.79		
Low Stock Price	$44.17	$30.59	NA	$41.86	$22.43	$78.41	NA	NA
Dividends per share	$0.35	$0.11		$0.15		$0.25		
Dividend payout (annual)	$1.35	$0.45		$0.55		$1.01		
EPS	$4.12	$1.52		$5.96	($0.60)	$5.56		
Note: due to the need to simplify, the NPAT is not intended to reconcile to Revenues minus Total Expenses					Went public in 2014: 700% TA growth in 3 yrs		(The revenue includes $7.1mm in grants)	

MIT GCFP
GOLUB CENTER FOR FINANCE AND POLICY

The Chief Focus and Related Strategies

The ROE Equation

A top priority in most businesses is the Return on Equity. It is a particular focus in the lending business where the margins are thin and the competition is intense, regulation is high and the margins are so small. Minor policy or product changes can have a major impact on the bottom line and the returns to shareholders.

ROE	**=**	**LEVERAGE**	**X**	**PROFITABILITY**	**X**	**ASSET TURNOVER**
$\frac{\textbf{Net Profit}}{\textbf{Net Worth}}$	**=**	$\frac{\textbf{Total Assets}}{\textbf{Net Worth}}$	**X**	$\frac{\textbf{Net Profit}}{\textbf{Revenues}}$	**X**	$\frac{\textbf{Revenues}}{\textbf{Total Assets}}$

THE ROE All for-profits must focus first and foremost on the Return On Equity equation. Their investors require it.

THE THREE RATIOS There are three main ways to increase the Return on Equity: (i) increase leverage; (ii) increase profit margins; and (iii) increase the speed of asset turnover.

LEVERAGE Because regulated depositories are constrained by capital requirements, they can only go so far in increasing leverage.

PROFITABILITY Because lending is a highly competitive -- as well as largely regulated -- market, banks also have difficulty boosting profitability: when one bank innovates, cuts costs, or takes higher credit risk to boost near term ROE, the others tend to follow suit quickly.

ASSET TURNOVER Increasing the speed of asset turnover is the easiest option, and tends to have the highest impact. It was one of the drivers of the 2008 debt crisis. A good way to use this ratio is to turn it into a true Asset Turnover ratio: divide Total Assets by Revenues. The result can be used to estimate the number of years that the assets must stay on the balance sheet in order to generate an equal amount of revenue. The longer the stay, the lower the ROE; and the shorter the stay, the higher the ROE (all things being equal).

	ROE	LEVERAGE	PROFITABILITY	ASSET TURNOVER
Large Bank	12.45%	9.11	27.34%	2.57%
Small Bank	13.22%	7.15	41.40%	4.47%
Credit Union	6.89%	11.90	17.05%	3.40%
Finance Company	7.51%	5.28	18.78%	7.57%
Online Lender	-6.02%	2.55	-11.84%	19.95%
Credit Card Company	28.47%	7.70	16.40%	22.56%
Non-Profit	18.28%	2.44	23.50%	31.90%
State Housing Finance Agency	4.77%	4.77	16.61%	6.01%

MIT GCFP GOLUB CENTER FOR FINANCE AND POLICY

A Successful Agency Solution: The SBA's PARRiS System for Participating Lenders

"P" - Portfolio Performance	Degree of financial risk to SBA that a Lender presents considering overall portfolio performance indicators and attributes.
5 year cumulative net yield	cumulative net cash flow divided by the SBA guaranteed portion
12 month default rate	default amount over last 12 months divided by the average balance plus the default amount over 12 months
5 year default rate	default amount over the last 5 years divided by the average balance plus the default amount over 5 years
"A" - Asset Management	Quality of the origination, servicing and liquidation practices in the Lender's SBA operation. This component also includes an assessment of the effectiveness of the Lender's SBA program management and related risks.
Stressed Rate	Past due 31-59 days, deferred, plus delinquent (60 days or more) divided by balance
Early Problem Loan Rate	Balance for young loans that have been deferred, delinquent, purchased, or liquidated within 18 months of origination
High Risk Origination Rate	Approval amount for young loans (36 or <) that are high risk: SBPS credit score of 160 or less divided by Approval amount for young loans
"R" - Regulatory Compliance	Lender's compliance with SBA Loan Program Requirements.
Loans in default status over 3 years	Balance of loans in default status over 3 years divided by all loans in default
24 Month Repair/Denial Rate	Last 24 months in repair, denial or purchase divided by SBA purchase amount
1502 Reporting Rate	Number of reporting loans divided by total loans in lender's portfolio
"Ri" - Risk Management	Overall institution risk and a Lender's use of an effective governance model to identify, understand, and mitigate risk exposure in its 7(a) portfolio.
FDIC Total Risk Based Capital	FDIC benchmarks
Non-Performing Asset Ratio	Nonperforming assets plus loans 90 or more days past due to equity and reserves
Lender Purchase Rating	Lender rating based on forecasted purchases for the next 12 months
"S" - Special Items	Additional key metrics or items that are not included in the other components but may pose risk to SBA or present program integrity concerns
Average SBPS credit score	Average small business portfolio score (SBPS) weighted by loan balance
Recovery Rate over the last 5 years	Recovery rate (after SBA purchase) for defaulted loans charged off or paid in full over 5 years divided by cumulative default amount for loans charged off or paid in full over last 5 years
Public Corrective Action with Regulator, or no Prudential Regulator	The occurrence of a public corrective action or absence of a prudential regulator

In addition:	**Loan Agent Rate**	**Franchise Concentration**	**Sold on Secondary Market**	**Industry Concentration**	**Acquired Loan Rate**	**Loans > $2mm over last 12 months**

MIT GCFP GOLUB CENTER FOR FINANCE AND POLICY

Non-profit Development Corporations, CDFIs

Production/Program Service	
	Risks: Attempting services beyond the organization's mission or capacity can lead to wasted resources and lessened cost effectiveness. Services that do not meet partner and funder expectations can lead to dissatisfaction and reduced participation and support.
Resource and Financial Management	
	Risks: Unrealistic funding projections, poor strategies and inability to evaluate cash flow requirements can lead to funding deficits. An organization may jeopardize its viability through inadequate accounting systems and procedures and insufficient staffing, reporting and oversight.
Organizational Management and Board Governance	
	Risks: Insufficient exercise of management and oversight responsibilities could create unnecessary liabilities for the corporation and its members. Inadequate volunteer participation and orientation, and a lack of cyclical staff evaluations and training can lead to ineffective board, committee and staff functioning and excessive turnover.
Management Staffing and Personnel	
	Risks: Inadequate human resource policies and management practices can cause reduced staff effectiveness, excessive turnover and an inability to meet goals.
Planning	
	Risks: Poorly defined plans and goals that do not provide clarity to board members and staff may lead to inconsistent services, limited impact, and wasted resources. A lack of cyclical planning can reduce consensus and jeopardize the organization's image, resources and effectiveness.
Technical Operating and Compliance Systems	
	Risks: A lack of written and approved operating policies and procedures for each major program service component may impede service delivery. Inadequate client management, service delivery and contract management systems can lead to non-conformance with contracts and loss of funding. Failure to identify legal and contract demands can lead to unexpected liabilities and a loss of credibility and funding.

MIT GCFP
GOLUB CENTER FOR FINANCE AND POLICY

Risk Indicators for a Small Non-depository Program Participant

(Broker, mortgage banker, asset-based lender)

I. SEGMENTATION OF A SMALL NON-DEPOSITORY LENDER							
Current Status							
Years	Years undewriting product line	< 3	-1	4 to 10	2	> 10	3
Revenues	Total revenues	< $1 mm	0	$1-5mm	1	> 5mm	2
Net Worth	Net Assets	< $200m	-1	$200m-2mm	2	> 2mm	3
Leverage	Total Liabilities to Net Assets	> 8	0	8 to 4	1	< 4	2
Efficiency	Operating Expenses to total Assets	> 10%	-1	10% to 6%	2	< 6%	3
Cost of Funds	Interest Expense to total Assets	> LIBOR + 3	-1	LIBOR +1-3	2	< LIBOR +1	3
Delinquencies	Defaulted loans to total loans	> 8%	-1	8%-4%	2	< 4%	3
Credit Losses	Credit losses to total loans	> 5%	0	5%-3%	1	< 3%	2
Recoveries	Recovery to defaulted principal	< 10%	0	10% to 20%	1	> 20%	2
Liquidity	Loan Repayments to New Loans Made	< 25%	-1	25%-66%	2	< 66%	3
	Total Loans o/s to Loan Repayments	> 4	0	4 To 2	1	< 2	2
Early Warnings							
Growth	Number of deals this year vs previous year	> 150%	-1	150-120%	2	< 120%	3
Deal Size	Largest deal to last year's average deal size	> 150%	0	150-120%	1	< 120%	2
Deal Flow	Number of deals Per Year	< 3	0	3 to 10	1	> 10	2
Staffing	Number of total deals to total staff	> 100	-1	100 to 50	2	< 50	3
Policy Changes	Urgent and/or repeated requests for changes in policy term	> 10%	-1	10 to 5%	2	< 5%	3
		of volume		of volume		of volume	
Claims Experience							
	Claims due to poor underwriting	>120% ofAverage	-2	80-120% of Avg	2	< 80% of Avg	8
	Claims due to fraud, carelessness	3	-5	2	5	0	15
Totals for Categorizing Non-Depository Small Lenders			**-16**		**32**		**64**
3 -5 Yr Trend (Comparative) ROE							
Asset Leverage	Total Assets over Net Assets						
Return on Sales	Net Income to Total Revenues						
Asset Turnover	Total Revenues divided by Total Assets						
ROE	Asset Leverage X ROS X Asset Turnover						

Agency Protocols and Procedures for Participating Lenders with Different Risk Ratings

II. LEVEL OF AGENCY MONITORING BASED ON LENDER RISK ASSESSMENT				
Protocols				
		< 16	**16 to 32**	**> 32**
Standard Review	Review of lending activity: volume	Qrtr	Annual	Annual
	Quality of lending performance	Qrtr	Annual	Annual
	Review Audit/Taxes of Lender	Annual	Two Years	Three Years
	Borrower credit scores and data	100%	100%	100%
	Credit Portfolio Management Review	100%	100%	100%
Credit Audit	Performed by Agency	Annual	Three Years	0
	Borrower Samples	10%	2%	0%
	Years for lender trend line analysis	5	3	3
Field Audit	Performed by Agency:	Annual	Three Years	Adverse Event
	Analysis of Transaction Documents	10%	5%	5%
	Due diligence on buyers, shipments, UCC filings	10%	5%	5%
Procedures				
Credit PF Mgmt	Segment lender's exposure by type and concentration of risk: type of borrowers, size, location, credit history, NAICs, country of destination, etc.			
	Capture trends in lending by portfolio segment			
	Forecast activity and level of risk to the portfolio by segment			
	Compare with activity of other lenders			
Field Audit	Review files, documents (Purchase Order, Invoice, Bill of Lading, Payment Instructions) for accuracy and completeness on designated sample			
	Perform due diligence on vendors, buyers, rshipments, receivables, UCC filings			
	Evaluate Lender's processes for origination, underwriting, billing, collections, maintaining records, litigation, management depth, finance experience, staff, turnover, governance, IT, reporting			
	Reconcile lending activity reports with audit and GL			
Credit Audit	Review lender's credit files on designated sample of borrowers: financial data, financial status, credit bureau, credit score, liabilities, pledged collateral, receivables aging, inventory levels, major cash flow items and changes in product line, destinations and/or patterns of shipping			
	Analyze lender's performance over the most recent 3-5 year period to include: product summary, evaluation of changes in product line, ROE analysis, cash flow analysis, evaluation of credit lines, collateral, capital, liquidity, asset quality and role and nature of equity holders.			

Graduated Remedies for Participating Lenders with Poor Ratings

III. EVALUATION TRIGGERS AND REMEDIES				
Adverse Events		**Agency Response**		
	Lender Rating			
20% Change	**In Lender financial status:**			
	Net Assets (line 3)			
	Efficiency (line 5)	Accelerate Credit Audit	Accelerate Standard Review	Accelerate Standard Review
	Cost of Funds (line 6)			
	Delinquency (line 7)			
	Liquidity (line 10)			
	Rate of Growth (line 11)			
	Staffing (line 14)			
	Policy Changes (line 15)			
Fail Credit Audit or Review	Negatives in Section 1 (above) or other items found during Review	Accelerate Field Audit	Accelerate Credit Audit	Accelerate Credit Audit
20% Change	Number of Lender Claims due to excessive Credit Risk (line 16)	Accelerate Field Audit	Accelerate Credit Audit	Accelerate Credit Audit
20% Change	Number of Lender Claims due to Fraud (line 17)	Cease New Lending Pending Field Audit	Cease New Lending Pending Field Audit	Cease New Lending Pending Field Audit
IV. GRADUATED REMEDIES IN THE EVENT OF UNSATISFACTORY REVIEWS/AUDITS				
Credit Limits	Reduce the size of the credit limits for the errant borrowers of the lender			
	Restrict the credit scores of participating exporters			
	Reduce the size of the credit limits for the lender			
	Limit the countries of destination			
Volume	Limit number of deals			
	Limit deal size			
Delegated Authority	Cease delegated authority			
Pricing	Charge lender higher fees for use of the program			
Terminate participation	For the earlier of 6 months or cure of problems with the program			

MIT GCFP
GOLUB CENTER FOR FINANCE AND POLICY