An Explanation of the Allowance for Loan and Lease Losses Calculation

By Abhik Agrawal

E-Mail: abhikagrawal@gmail.com

Contents

Abstract

Allowance for Loan and Lease Losses (ALLL) is very important for Safety and Soundness of Banking Operations and thus is one of the high priorities of regulatory scrutiny. This paper highlights the importance of ALLL and the regulatory guidelines driving the ALLL calculations. The paper in detail describes about the two important codifications, FAS 5 and FAS 114, which form the guidelines for banks on their ALLL reserve estimates. Further the paper highlights and describes the major methods under FAS 5 and FAS 114 to calculate the ALLL allowance. Dummy data is used to empirically explain the methods using examples. In the end the paper highlights new regulatory guidelines for such losses and how the new guidelines will cover for the shortcomings of existing rules.

Key Words

ALLL, Provisions, Net Charge Offs, FAS 114, FAS 5

Paper Type

Methodology/Conceptual

Introduction to ALLL

ALLL is the allowance for estimate of the credit losses in a bank's balance sheet. It is the assets that a bank most likely will be unable to collect from the date of evaluation. It is represented as the contra assets in a bank's balance sheet. This is the net charge offs that the bank will realize. The reserve being a contra asset will reduce the book value of the assets by related amount. The allowance has a large impact on the banks capital and earning, also it has significance for the safety and soundness of a banks operation.

Background

Most of the banks did not provide reserves for bad debts until the Internal Revenue Service (IRS) , the revenue act of 1921 allowed to add these reserves to be deducted on a bank's tax return. More clear-cut guidelines for the amount to be deducted were established in 1965, under the IRS Ruling 65-92. Through this banks are allowed to make tax-deductible additions to its reserve for loan loss until the reserve totaled 2.4 percent of eligible outstanding loans. Further in 1969, the OCC issued regulations requiring a provision for possible loan losses to be included in operating expenses. Under the 1969 regulation, a bank's loan loss reserve balance consisted of three distinct elements – Valuation Portion, Contingency Portion and Deferred Tax Portion. The reports of condition and income for December 31, 1976 clearly defined the reporting of the three portions as:

- Valuation portion - the valuation portion of the bank's reserve was required to be reported as a deduction from total loans.
- Contingency portion - the contingency portion was to be included in the equity capital section of the balance sheet.
- Deferred tax portion - The deferred tax portion was to be included with other liabilities

As per 1976 guidelines all banks with more than $25 million total assets were required to provide, through charges to income, the amount considered necessary by management to bring the valuation portion of the reserve to an adequate level to absorb expected loan losses based on its knowledge of the bank's loan portfolio. Since 1976, the OCC's guidance to banks and examiners on the determination of an adequate level for the allowance for loan and lease losses has been updated several times. Also, the Banking Circular 201 on the allowance, first issued in May 1985, was substantially expanded and refined many times since then.

Importance of Allowance

Since introduction of allowance, it has been a topic of high regulators scrutiny. To ensure the financial institution's Soundness and safety it is very important for the regulator to ensure that the institution has sufficient amount of capital in allowance reserve. The level of loan loss allowance must be sufficient to absorb estimated credit losses ('estimated credit losses' means an estimate of the amount of loans currently outstanding, that probably the financial institute will not be able to collect) within the portfolio. The higher the estimated risk of uncollectable assets in the

portfolio, the larger the ALLL reserve should be. The allowance reserve is of much importance to bank management and directors as the loan losses have direct impact on the earnings and capital of the institution.

Thus ALLL is a very important component for CCAR and capital planning process. Adhering to the supervisory rules and Generally Accepted Accounting Principles, instead of simply expensing the actual realized credit loss on the portfolio, BHCs and banks reserve in advance against future probable credit losses on their loan portfolio. Accounting for loan and lease losses contains mainly three components:

Net charge-offs (NCOs): NCOs are the actual losses for the current period net of any recoveries (that is, net of any payments received on loans previously viewed as uncollectible).

Allowance for loan and lease losses (ALLL): The reserve held by the firm against "estimated credit losses", that is, losses that have not yet occurred but are "likely to be realized" in the future. The ALLL is recorded as a contra-asset on the firm's balance sheet.

Provision expense for loan and lease losses: This is the provision in the current accounting period to set aside additional reserves against future loan losses.

Here, the ALLL represents the existing stock of reserves. The realization of NCOs reduces the ALLL over time, while provision expenses incurred by the firm increase the ALLL.

Thus, these three measures are related by following equation:

ALLL (at time t) = ALLL (at time t-1) + Provision for loan and lease losses (at time t) – net charge offs (at time t)

Projected net income under a scenario includes provisions into ALLL. Provisions are determined to keep the ALLL at an appropriate level at the end of each quarter as per the projected loan losses in that quarter. This calculation could lead either to a drawdown of the ALLL (an ALLL release, increasing net income) or the need to build the ALLL (an additional provision, decreasing net income) during the quarter. Total provisions into the ALLL are calculated as projected loan losses for the quarter plus or minus the amount needed for the ALLL to be at an appropriate level at the end of the quarter.

Regulatory Perspective and Accounting Guidance

Calculation of the allowance for ALLL is based on two regulatory codifications – ASC 310 and ASC 450. Understanding on these two gives fair details on the ALLL allocation for any bank's book. Details on the two codifications are discussed in subsequent sections.

I.ASC 310 (FAS 114)

ASC 310 applies to individual impaired loans (including TDRs) in a bank's book and a specific allowance is created for the same after calculation of the estimated credit loss on these impairment Loans.

It applies to all the loans except:

- Large groups of smaller-balance homogeneous loans that are collectively evaluated for impairment (such as credit card, residential mortgage, and consumer instalment loans) and which have not been restructured as troubled debt. However, FAS 114 does specifically require that its provisions be applied to any "smaller balance homogeneous loan" that has undergone a troubled debt restructuring.

- Loans that are recorded at fair value or at the lower of cost or fair value (e.g., loans held for sale).

- Leases.

- Debt securities. Debt securities must be accounted for in accordance with Statement of Financial Accounting Standards No. 115, "Accounting for Certain Investments in Debt and Equity Securities.

Irrespective of the fact that the loan falls under the ASC 310 or not the bank has to apply adequate allowance for all loans and leases.

An Impaired Loan under ASC 310 (FAS 114) is a loan for which the bank does not expect to collect the contractual payments, in the form of principle and interest. For practical purposes if a loan shows as a non-accrual loan on the report of conditions and income is considered as an impaired loan.

Though the guidance further specifies that an insignificant delay or shortfall in payment does not categories a loan as impaired. It will be considered as impaired if the bank is not expecting or unable to collect the contractual dues in future.

Loans for which ASC 310 is applied, the bank must include "time value of money" technique for measurement of impairment. This can be accomplished by discounting the future cash flows of a loan by a rate equivalent to the effective interest rate applied on the loan. However, as practical expedients, ASC 310 also permits the use of two alternative methods for measuring impairment i.e Observable Market Price of the loan and Fair Market Value of the loan

Overall there are three ways for calculation of impairment under ASC 310:

- Present Value of Future Cash Flow

- Observable Market Price of the Loan

- Fair market value of the loan, if loan is collateral dependent.

These methods will be further discussed in details in coming section/s.

After applying any of the above methods if the value of the impaired loan is less than the recorded balance (discussed later) than the difference should be provided for allowance, unless the same is previously provided.

II.ASC 450(FAS 5)

The ASC 450-20 (FAS 5) applies to that portion of the loans portfolio which is non-impaired and contains the loans which are substandard or higher category.

In accordance with guidance, under ASC 450, to measure the estimated credit loss and hence the allowance for loans and leases, the loans are grouped or segmented in homogeneous pools and are evaluated collectively as a group not individually. The evaluation is on both Quantitative and Qualitative criteria. Quantitative measure could be a historical loss rate, and qualitative measures, include environmental adjustments like change in economic and business conditions etc.

As ASC 450 applies to a homogeneous group or segment it provides us the general reserve (not specific like ASC 310) for ALLL calculations.

Three major tasks/steps in calculation of ASC 450 general reserves component for ALLL:

1. Identifying and segmenting the loans on the basis of their homogeneous characteristic/s.

2. Calculating appropriate historical loss rates

3. Determining appropriate qualitative or environmental adjustments

In the next section we will go through the calculation of allowance under ASC 450 in detail.

The Major differences between these two codes are:

ASC 450 (FAS 5)	ASC 310 (FAS 114)
General Reserve	Specific Reserve
Homogeneous Pool	Individual Loan
Non-impaired loans (sub-standard and higher)	Impaired Loan

Quantitative calculation of Allowance

Allowances for ALLL calculation is driven by two major regulatory rules discussed above, i.e. ASC 310 and ASC450.

Calculation for ASC 310 Categories

The impairment amount calculated using various methods for loans in ASC 310 category is to be subtracted from the record value.

Record value = Outstanding Principle + Accrued Interest + deferred Fees + Unamortized Premium and Discount

Three methods to calculate the impairment amount under ASC 310

1. Present Value of the expected future cash flows:

   This method is used mostly for the loans where the repayment is still expected from the borrower. It is used for most TDRs. The bank has to assess the expected future cash flows of the impaired loan and discount the same with the effective current rate of the loan(in case of TDR, original rate should be considered for discounting).
   The bank has to be very realistic and reasonable for the assessment of the future cash flows of such impaired loans and the approach or assumptions should be well documented, considering also the events like ballooning and earlier payments.

   For Example consider the below loan details:

Loan Amount	Current Oustanding	Remaining payment months	Loan rate
10,000,000.00	6,000,000.00	20	6%

   On the basis of the above details the monthly payment and present value would be:

Month	Monthly Payment	PV	Month	Monthly Payment	PV
1	285999	284572	11	285999	270694
2	285999	283153	12	285999	269343
3	285999	281741	13	285999	268000
4	285999	280336	14	285999	266663
5	285999	278937	15	285999	265333
6	285999	277546	16	285999	264010
7	285999	276162	17	285999	262693
8	285999	274785	18	285999	261383
9	285999	273414	19	285999	260079
10	285999	272050	20	285999	258782
Total PV	5506969				

Recorded Investment = $6,000,000(considering no other adjustment like deferred fee etc.)

PV of future cash flows = $5,429,678

Reserve amount = $570,321

Thus the reserve amount i.e. $570,321 is the ALLL allocation under ASC 310 for the given impaired loan.

2. Fair Market Value of the Collateral:

Per regulatory for all collateral based loans this method can be used.

A loan can be considered as a collateral based loan, only if, all the repayment of the loan is generated either by the operations of the collateral or by selling the collateral, there should not be any other reliable source for repayment of the loan. So repayment of the loan should come solely from the operations of collateral.

The impairment amount using the Fair Market Value of the Collateral method depends whether the repayment is to come by selling the collateral or by operating the collateral. This depends on the discretion of the bank as to what bank thinks is the best method to recover the recorded value.

Consider following loan for illustration:

Loan Amount	Current Oustanding	Accrued Interest	Total Recorded Investment
10000000	6000000	90000	6090000

Collateral Details for the above collateral based loan

Collateral value	Adjustments	Selling cost	Other Liens	Fair value
7000000	1000000	1000000	0	5000000

* Adjustments are dependent on the appraisal report, depending on age of the property, location of the property etc.

Thus the total recoded value exceeds the Fair value by $1090000 and total reserve in this case is $1090000. So the ALLL allocation in this case is $1090000.

3. Market Value of the loan: This method is most uncommon. Bank needs to assess the market value of the loan, which is possible only with the tradable part.

Calculation for ASC 450 Categories

As mentioned above for calculation under ASC 450 a bank should follow following three steps:

1. Identifying and segmenting the loans on the basis of their homogeneous characteristic/s
   Segmentation on the basis of similar risk characteristic is the most important and crucial step for calculating estimated loss under ASC 450. The risk characteristics could be – Loan type, Risk Grade,

geographic locations, collateral protection etc. The basic idea behind segmentation of the portfolio on certain risk characteristics is to group those loans which have similar kind of Historical Loss Rate.

2. Calculating appropriate historical loss rates

The next step is to calculate the historical loss rate. Regulators do not prescribe any particular method for historical loss calculation. The bank can rationally choose a method to calculate Historical Loss Rate on its own portfolio. The method used should be well documented and supported by the reasoning.

Methods used by banks ranges from simple averages of the historical loss to Loss migration analysis to more complex methods like PD/LGD modelling. In this paper we have discussed Loss Migration Analysis and PD/LGD.

3. Determining appropriate qualitative or environmental adjustments

As per 2006 policy statement, following criteria for Qualitative adjustments are suggested:

- Changes in lending policies and procedures, including underwriting standards
- Changes in economic and business conditions
- Changes in the nature and volume of the portfolio
- Changes in the experience, ability, and depth of lending management
- Changes in the volume and severity of past due loans, nonaccrual loans, and adversely classified loans
- Changes in the quality of the loan review system
- Changes in collateral values
- Existence of, and changes in any concentrations of credit
- Changes in competition and legal or regulatory requirements

Q-factors being qualitative are difficult to calculate. For regulatory review purposes the calculation of Q-factors should be properly documented.

Loss Migration Analysis (to calculate ALLL allocation for ASC 450):

Loss migration Analysis can be broken down into four steps

1. Segment the portfolio on similar risk characteristics
2. Calculate the loss rate
3. Repeat the calculation for appropriate look-back period, which could be 3-5 years
4. Assign weights to Loss Rates

Example of Loss Migration Analysis:

Step 1 - Below grid shows the step 1 in Loss Migration Analysis i.e. segmentation of the portfolio. The portfolio is segmented on the loan type and risk rating. It contains the charged off balance for respective segment and respective ratings for a particular time period.

Loan Segment	Balance	Risk Rating				
		Pass-1	Pass-2	Watch	Substandared	Doubtful
Commercial and Industrial Loans	28,350,000	15,350,000	-	5,150,000	7,850,000	-
Commercial Real Estate	25,101,218	9,551,218	4,551,218	-	10,998,782	-
Home Loans	23,210,000	15,010,000	4,200,000	2,200,000	700,000	-
Credit Cards	27,014,568	-	21,764,568	1,250,000	4,000,000	-
Agr Loans	17,150,000	-	5,150,000	10,800,000	1,200,000	-

Step 2 - In the second step of Loss Migration Analysis we calculate the Net Loss Rate for all categories we created. For the ease of calculation we take one segment i.e. credit card to illustrate the process of loss rate calculation. In the illustration we calculated the loss rate for 4Q-2014 and we are considering the 12-months period for the calculation. The grid below shows the details, borrower wise, for the charge off amount for FY-2014 across the risk categories. We have calculated the charge off amount for the whole year for each category and divided it by the beginning balance for each category to reach at the Loss rate for each category. An important point to note here is the ratings will be as per the beginning of the time period, i.e. 12/31/2013

Credit Card Portfolio as on 12/31/2014						
Borrower	Charge off date	Charge off Amount	Pass-1	Pass-2	Watch	Substandared	Doubtful
1	1/22/2014	225,121.40				225,121	
2	2/1/2014	180,097.12			180,097		
3	3/15/2014	270,145.68			270,146		
4	3/20/2014	54,029.14				54,029	
5	4/5/2014	108,058.27			108,058		
6	5/25/2014	135,072.84		135,073		135,073	
7	6/18/2014	225,121.40			225,121		
8	7/30/2014	77,184.48				77,184	
9	10/1/2014	67,536.42			67,536		
10	12/14/2014	51,951.09				51,951	
	Total Charge off	1,394,318	0	135,073	850,959	543,359	-
	Begining Balance	27,014,568	2,251,214.00	9,004,856.01	10,805,827.21	4,952,670.81	
	Loss Rate	5.16%	0.00%	1.50%	7.88%	10.97%	

The above grid represents the calculation for one single quarter, for calculation of the subsequent quarters we need to reconsider the risk rating for that particular quarter and accordingly migrate the balance from one rating grade to another.

Step 3 - The look back period suggested by regulators is 3-5 years. If we repeat the above process for 12 quarters we will have loss rates for each quarter.

Step 4 - Now we have to assign a weight to every quarter. The assignment of weight is subjective and up to the bank's discretion and thus it should be supported by proper documentation. The weight should be assigned as per the relevance; in our illustration below we assign higher weights to recent years and lower weights to prior years (as recent year might be more reflective of the current loss rates than prior years). We calculate the weighted averages for each category to get the loan loss rate for each category.

	1Q-2015	4Q-2014	3Q-2014	2Q-2014	1Q-2014	4Q-2013	3Q-2013	2Q-2013	1Q-2013	4Q-2012	3Q-2012	2Q-2012	Weight Average Loan Loss Rate
Pass-1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Weight	15.0%	15.0%	15.0%	15.0%	7.5%	7.5%	7.5%	7.5%	2.5%	2.5%	2.5%	2.5%	0%
Pass-2	0.9%	1.5%	1.7%	1.8%	2.1%	2.5%	2.7%	2.9%	3.1%	3.5%	3.7%	4.1%	
Weight	15.0%	15.0%	15.0%	15.0%	7.5%	7.5%	7.5%	7.5%	2.5%	2.5%	2.5%	2.5%	2%
Watch	6.2%	7.9%	8.0%	8.4%	8.7%	9.1%	9.4%	10.5%	10.9%	11.6%	12.9%	13.5%	
Weight	15.0%	15.0%	15.0%	15.0%	7.5%	7.5%	7.5%	7.5%	2.5%	2.5%	2.5%	2.5%	9%
Substandared	10.1%	11.0%	11.1%	11.5%	11.9%	12.7%	13.6%	14.2%	15.3%	15.8%	16.8%	17.2%	
Weight	15.0%	15.0%	15.0%	15.0%	7.5%	7.5%	7.5%	7.5%	2.5%	2.5%	2.5%	2.5%	12%
Doubtful	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Weight	15.0%	15.0%	15.0%	15.0%	7.5%	7.5%	7.5%	7.5%	2.5%	2.5%	2.5%	2.5%	0%

The above four steps shows the calculation of the Loss Rates using Loss Migration Analysis.

Now to arrive at the ALLL allocation for ASC 450 using the Loan Migration analysis, we need to assign Q-factors to each category and calculate the ALLL allocation.

We will take the current outstanding balance for each category and multiply it by the adjusted Loss Rate Percentage (Loss rate as calculated above plus the Q – Factors)

Total ALLL allocation for the current quarter under ASC 450 as illustrated in below grid:

	Balance	Loss Rate	Q Fact	ALLL Allocation
Pass-1				
Commercial and Industrial Loans	15,350,000	0.40%	0.20%	92,100
Commercial Real Estate	9,551,218	0.26%	0.40%	63,038
Home Loans	15,010,000	0.33%	0.30%	94,563
Credit Cards	17,250,000	1.27%	0.50%	305,325
Agr Loans	8,500,000	0.56%	0.15%	60,350
Pass-2		0.00%	0.00%	
Commercial and Industrial Loans	5,240,000	1.20%	0.40%	83,840
Commercial Real Estate	4,551,218	1.70%	0.30%	91,024
Home Loans	4,200,000	2.40%	0.50%	121,800
Credit Cards	21,764,568	3.80%	0.20%	870,583
Agr Loans	5,150,000	1.90%	0.15%	105,575
Watch		0.00%	0.00%	
Commercial and Industrial Loans	5,150,000	5.40%	0.25%	290,975
Commercial Real Estate	4,950,000	6.30%	0.40%	331,650
Home Loans	2,200,000	7.20%	0.30%	165,000
Credit Cards	1,250,000	12.00%	0.50%	156,250
Agr Loans	10,800,000	8.30%	0.10%	907,200
Substandard		0.00%	0.00%	
Commercial and Industrial Loans	7,850,000	10.60%	0.30%	855,650
Commercial Real Estate	10,998,782	11.40%	0.20%	1,275,859
Home Loans	700,000	13.50%	0.50%	98,000
Credit Cards	4,000,000	19.00%	0.40%	776,000
Agr Loans	1,200,000	12.60%	0.25%	154,200
SUM	**155,665,786**			**6,898,982**

Expected loss Method (to calculate ALLL allocation for ASC 450):

Expected loss is the most commonly used method among larger institutes for loss estimates calculation. The method is generally applied to larger ticket size commercial loans.

Expected loss is the loss that can be incurred if a borrower of a financial Institute defaults. It is used to estimate frequency and severity of inherent probable loss events. The method is based on historical loss experience. Expected loss is calculated as:

EL(ALLL) = PD * LGD * EAD

Here,

Probability of Default (PD) is the estimate that the loan will default. This is calculated for each borrower. Credit history of the borrower is taken into consideration to calculate PD. The same is calculated for 12 month time frame.

Loss Given Default (LGD) is the fractional loss estimated to be suffered due to default. This is calculated net of recovery. So LGD=1-RR

Recovery Rate (RR) = Value of collateral/value of loan.

Exposure at Default (EAD) is the amount borrower owes to the bank at the time of default.

Consider the following example for basic calculation for ALLL considering PD/LGD as inputs

PD	0.3
LGD	0.4
EAD	165258
Beginning ALLL	19831
Provision Expense	1494
Net Charge Off	371
Ending ALLL	20954

Finally we need to aggregate the ASC 310 and ASC 450 at the end, but remember not to double count. The loans which are included in ASC 310 should be removed from ASC 450 calculation

ASC 310 allocation using Present Value of future cash flows	570,321
ASC 450 allocation using Loss Migration Analysis	6,898,982
Total ALLL allocation	**7,469,303**

ALLL is an important component for CCAR and capital planning process. Adhering to the supervisory rules and Generally Accepted Accounting Principles, instead of simply expensing the actual realized credit loss on the portfolio, BHCs and banks reserve in advance against future probable credit losses on their loan portfolio.

CCAR requires ALLL to be forecasted for nine quarters in order to calculate Pre-tax Income. ALLL is one of the cost components that is deducted from Pre-Provision Net Revenue (PPNR) to arrive at Pre-tax income. As per the regulatory requirement the projections should be under three scenarios, i.e. Baseline, Adverse and Severely Adverse.

Steps that should be followed for stress testing ALLL under CCAR

Step 1: Generate transition matrices based on actual borrower-transitions in history (segment as per the need)

Step 2: Derive relationship between each element of transition matrix and macroeconomic variables

Step 3: Use Fed-provided scenarios to estimate effect of stress on each element of the transition matrix for each future month / quarter

Step 4: Use the stressed matrices to generate stressed forecasts

New regulatory Proposal: CECL

Regulators have proposed Current Expected Credit Loss (CECL) as a new way of measuring for the allowances on credit loss. The regulators are supposed to give the final and detailed version of CECL very soon this year.

A quick comparison between the existing method and CECL

Existing Method

- The loss recognition is based on historical loss data
- Loss is recognized after it has incurred
- No forward looking mechanism
- Loss estimate is for likely default in next 12 months
- Multiple reference for allowance like - Loans and receivables (ASC 310-10 and ASC 450-20), Purchased credit impaired loans (ASC 310-30),Debt securities (ASC 320-10), Lease receivables (ASC 840) etc.

CECL

- The time horizon to determine the losses is for the life of loan
- Reasonable and supportable forward – looking forecast
- Simplified by using single model for most, instead of using multiple model
- Brings consistency in approach
- Simple treatments of PCI(Purchased Credit Impaired) and TDR(Troubled Debt Restructuring)
- Considers Macro-economic variables for forecasting credit loss

Concerns on implementation of CECL:

Though the final guidelines are not published by regulators, but the major concerns raised by Credit Unions are:

- Significant increase in allowance
- More complex modelling requirements
- Forecast for the life of loan will be more challenging
- Enough data not available
- Adverse impact on capital as the loss need to be recognized on Day 1.
- The ratio of Net worth to Capital Assets will be negatively impacted

Implementation of CECL will give more robust estimations for credit losses. Though more clarity on the positives and negatives will be visible once the final document is realized by regulators.

Conclusion

Proper allocation towards ALLL is very important for safe and smooth functioning of the banks. At the same time it is very important that the allocations are reasonable, as over allocation will hurt the bank's capital and thus earnings while the under allocation is not safe in adverse scenarios. Regulators require a repeatable methodology when determining the ALLL and the same should be documented properly. There should be proper documentation for the use of particular method and assumptions.

References

1) https://www.fdic.gov/
2) https://www.sageworksanalyst.com/alll-methodology.aspx
3) www.alll.com
4) Comptroller's Handbook 5 Allowance for Loan and Lease Losses As of May 17, 2012, Narrative - June 1996, Procedures - May 1998
5) Interagency Policy Statement on the Allowance for Loan and Lease Losses published from Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation , National Credit Union Administration, Office of Thrift Supervision
6) Allowance for Loan and Lease Losses - Comptroller's Handbook -Narrative - June 1996, Procedures May 1998