This conclusion is supported by FASB ASC 860-20-25-6, which indicates that a separate liability rather than a beneficial interest (i.e. interest only strip) should be recognized when the underlying payment source of the cash flows resulting from a credit loss claim by an FHLBank on an MPF loan is not derived from the underlying MPF loans. The cash flow payment source in the event of a credit loss claim by an FHLBank on an MPF loan is either from the general assets of the PFI or in the case of performance based CE fees, the FHLBank withholding payment of the performance based CE fees to the PFI. In the latter case the PFI is effectively paying the FHLBank from its general assets – that is, if the PFI were paid its performance based CE fees by the FHLBank, it would need to immediately send back that cash payment to the FHLBank. The FHLBank's withholding of the performance based CE fees is done as an operational convenience. FAS ASC 860-20-25-6 provides – "In determining whether credit risk is a separate liability or part of a beneficial interest that has been obtained by the transferor, the transferor should focus on the source of cash flows in the event of a claim by the transferee. If the transferee can only look to cash flows from the underlying financial assets, the transferor has obtained a portion of the credit risk only through the interest it obtained and a separate obligation shall not be recognized. Credit losses from the underlying assets would affect the measurement of the interest that the transferor obtained. In contrast, if the transferor could be obligated for more than the cash flows provided by the interest it obtained and, therefore, could be required to reimburse the transferee for credit-related losses on the underlying assets, the transferor shall record a separate liability. It is not appropriate for the transferor to defer any portion of a resulting gain or loss (or to eliminate gain on sale accounting, as it is sometimes described in practice)." Thus, Wilary Winn believes the transfer of the loan to FHLBank should be accounted for as a sale because the PFI has sold a 100% interest in the loan and entered into a separate transaction to provide credit enhancement. We note that the transfer of an entire financial asset with limited recourse can be accounted for as a sale under FAS ASC 860-20-55-24A. We further believe the credit enhancement transaction should be accounted for as a guarantee. See ***page 29*** for more details.

The financial accounting and reporting which follows is designed to correspond to the operational flow of originating loans. The discussion begins with the accounting for the interest rate lock commitment to the applicant; then addresses the accounting for the commitments giving the PFI the right to sell loans to FHLBank; next discusses accounting for the mortgage servicing right; and concludes with a description of the accounting practices relating to the credit enhancement.

Interest Rate Lock Commitments

Interest Rate Lock Commitments ("IRLCs") are agreements under which a PFI agrees to extend credit to a borrower under certain specified terms and conditions in which the interest rate and the maximum amount of the loan are set prior to funding. Under the agreement, the PFI commits to lend funds to a potential borrower (subject to the PFI's approval of the loan) on a fixed or adjustable rate basis, regardless of whether interest rates change in the market, or on a floating rate basis. The types of mortgage loan IRLCs are:

- Lock ins for fixed-rate loans. The borrower can lock in the current market rate for a fixed-rate loan.
- Floating rate loan commitments. The interest rate is allowed to "float" with market interest rates until a future date when the rate is set.

Interest rate lock commitments on mortgage loans that will be held for resale are derivatives and must be accounted for at fair value on the balance sheet.[3,4] However, commitments to originate mortgage loans to be held for investment and other types of loans are generally not derivatives.

INITIAL VALUATION OF IRLCS

The fair value of IRLCs is conceptually related to the fair value that can be generated when the underlying loan is sold in the secondary market. The value of the loan to the originating institution is based on many components, including:

- The loan amount
- The interest rate
- The price at which the loan can be sold
- Discount points and fees to be collected from the borrower
- Direct fees and costs associated with the origination of the loan (processing, underwriting, commissions, closing, etc.)
- The value of the servicing to be retained or the servicing released premium to be received[5]
- CE Fees receivable
- CE Recourse Obligation liability

Fair value is defined by FASB ASC Topic 820 which provides a framework for measuring fair value and expands required disclosures related to fair value measurements. FASB ASC Topic 820 defines fair value as an exit price that would be received to sell an asset or paid to transfer a liability in orderly transactions between market participants at the measurement date.[6] The statement goes on to provide that a fair value measurement assumes that the transaction to sell the asset or transfer the liability occurs in the principal market for the asset or liability, or, in the absence of a principal market, the most advantageous market for the asset or liability.[7] The most advantageous market is the market in which the reporting entity would receive the highest selling price for an asset, or pay the lowest price to transfer the liability. The determination of the principal market is a key step in applying FASB ASC Topic 820 because if there is a principal market, the fair value should be based on the price in that market, even if the price in a different market is potentially more advantageous at the measurement date.[8] As a practical matter, we believe that most institutions lock in with an investor at the time they offer the lock to the mortgage applicant and that the secondary market price used to value the IRLC should be based on the prices available from this same investor as this would represent the principal market. Thus, if a PFI locks a loan in with FHLBank at the time it locks the loan in with its customer, or if the PFI sells most of its production to FHLBank, then it should use FHLBank pricing to value the IRLC.

FASB ASC paragraph 820-10-50-2 also establishes a fair value hierarchy for reporting purposes. The hierarchy ranks the quality and reliability of the information used to determine fair values with Level 1 being the most certain and Level 3 being the least certain. The levels are:

- Level 1 – Quoted market prices for identical assets or liabilities in active markets
- Level 2 – Observable market-based inputs other than Level 1 quoted prices or unobservable inputs that are corroborated by market data
- Level 3 – Unobservable inputs that are not corroborated by observable market data; valuation assumptions that are based on management's best estimates of market participants' assumptions

We believe lock in price from the investor represents

[3] FAS ASC paragraphs 815-10-15-71
[4] See also SEC Staff Accounting Bulletin No. 105 - Application of Accounting Principles to Loan Commitments
[5] See SEC Staff Accounting Bulletin No. 109 - Update to SAB 105
[6] FASB ASC paragraph 820-10-35-3
[7] FASB ASC paragraph 820-10-35-5
[8] FASB ASC paragraph 820-10-35-6

a Level 2 input because the value of the derivative is based on an observable price in the marketplace. We note that the servicing value is an element of the IRLC value and that it contains both level 2 and level 3 inputs. When estimating the fair value of the IRLC, PFIs should consider predicted "pull-through" rates. A pull-through rate is the probability that an IRLC will ultimately result in an originated loan.

Following is an example of how to value the IRLC based on the following assumptions:

- Loan amount: $100,000
- Price to borrower or lock-in price: 100
- Lock-in interest rate: 3.875%
- Market interest rate at inception: 3.500%
- Sales price: 101.50 at inception – servicing retained and locked in with an investor
- Value of the servicing: 1.00%
- Value of the CE Fee receivable: 0.35%
- Value of the CE Recourse Obligation liability: 0.00%
- Projected origination costs: $1,000 or 1.00%
- The originating institution thus has an expected gain of $1,850 or 1.85% (101.50 {sales price} + 1.00 {value of servicing} + 0.35% {value of CE Fee receivable} - 100.0 {price to borrower} - 1.00 {projected origination costs})

The table below shows the change in the value of the IRLC as market interest rates and estimated pull through percentages change over time. The differences are highlighted in blue.

As the example shows, the value of the IRLC changes as market interest rates change and as the anticipated pull-through rate changes based on updates in the status of the loan. Essentially, there are four components to consider when determining the subsequent changes in fair value:

1. The projected sale price of the loan based on changes in market interest rates

Change in Value of the IRLC	Inception	Rates up 50 bp	Loan at Processing	Rates down 100 bp	Loan Approved	Loan at Close
Loan amount	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
Lock in interest rate	3.875%	3.875%	3.875%	3.875%	3.875%	3.875%
Market interest rate	3.500%	4.000%	4.000%	3.000%	3.000%	3.000%
Market value without servicing	101.50%	99.50%	99.50%	103.50%	103.50%	103.50%
Servicing value	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Origination costs to be incurred	-1.00%	-1.00%	-0.50%	-0.50%	0.00%	0.00%
CE Fee receivable	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
CE Obligation liability	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Price to borrower	-100.00%	-100.00%	-100.00%	-100.00%	-100.00%	-100.00%
Value as a percent of the loan amount	1.85%	-0.15%	0.35%	4.35%	4.85%	4.85%
Dollar value	$ 1,850.00	$ (150.00)	$ 350.00	$ 4,350.00	$ 4,850.00	$ 4,850.00
Pull through percentage	30.00%	45.00%	60.00%	60.00%	80.00%	100.00%
Derivative value	$ 555.00	$ (67.50)	$ 210.00	$ 2,610.00	$ 3,880.00	$ 4,850.00
Value recorded	$ 555.00	$ (622.50)	$ 277.50	$ 2,400.00	$ 1,270.00	$ 970.00

2. The projected pull-through rate - the probability that an IRLC will ultimately result in an originated loan

3. The decay in the value of the applicant's option due to the passage of time

4. The remaining origination costs to be incurred based on management's estimate of market costs (Level 3 input)

Additional Valuation Considerations for IRLCs

The example on the previous page is highly simplified. Changes in interest rates can affect the value of the servicing asset, the CE Fees Receivable, the CE Recourse Obligation liability, as well as the value of the loan. In addition, pullthrough assumptions in the marketplace can be complex. Factors that may be considered in arriving at appropriate pull-through rates include the origination channel, current mortgage interest rates in the market versus the interest rate incorporated in the IRLC, the purpose of the mortgage (purchase versus refinancing), the stage of completion of the underlying application and underwriting process, and the time remaining until the IRLC expires. We believe these pullthrough estimates are Level 3 inputs.

To account for the time decay in the option, one should calculate the market price based on the number of days remaining in the IRLC at the end of the reporting period. For example, if PFI locks in a rate with a borrower for 60 days on January 1 and is calculating the change in the value of the IRLC at January 31, the market rate should be based on a 30 day lock and not a 60 day lock. This is necessary to properly account for the marketplace risk adjustment. (In general, commitments with shorter lock lengths have higher prices than longer lock lengths because the buyer is subject to changes in market interest rates {volatility} for a shorter time period.) If the PFI needs to extend a commitment, then it should use the new commitment price in its determination of sales price.

The sales price in our example is simplified. PFIs should include the effect of loan level price adjustments in their determination of sales price.

We further note that institutions should consider the risk of nonperformance on their IRLC liabilities based on the institution's own credit risk.[9]

ACCOUNTING FOR IRLCS

Changes in the fair value of an IRLC must be measured and reported in financial statements and regulatory reports. The carrying value of the IRLC, based on its fair value, should be accounted for as an adjustment to the basis of the loan when the loan is funded. The amount is not amortized under FAS ASC paragraph 948-310-25-3 (Financial Services - Mortgage Banking). Therefore the value of the IRLC at closing directly affects the gain (loss) realized upon the sale of the loan.

FAS ASC 948-310-25-3 also requires that the direct loan origination costs for a loan held for resale be deferred. However, the value of the IRLC in our example is increasing as origination costs are incurred because we are considering only costs to be incurred in the future. **Therefore, we recommend that PFIs expense origination costs for IRLCs as incurred.** Otherwise, the PFI would be double counting the effect of having incurred the origination cost - once as a deferral and a second time in the increased value of the IRLC.

The following page includes an accounting example for our $100,000 loan from inception to loan closing or funding.

Institutions should report each fixed, adjustable,

[9] FASB ASC 820-10-55-56

	Description		Journal Entries Debit	Journal Entries Credit	Income Statement	IRLC	Cash	Warehouse
JE 1	Derivative Asset	A	$ 555			$ 555		
	Origination income			$ 555	$ (555)			
Record initial value								
JE 2	Origination expenses	B	$ 500		$ 500			
	Cash			$ 500			$ (500)	
Record origination costs								
JE 3	Derivative asset	C	$ 4,295			$ 4,295		
	Gain on IRLC			$ 4,295	$ (4,295)			
Record change in value								
JE 4	Origination expenses	D	$ 500		$ 500			
	Cash			$ 500			$ (500)	
Record origination costs								
JE 5	Warehouse loan	E	$ 104,850					$ 104,850
	IRLC			$ 4,850		$ (4,850)		
	Cash			$ 100,000			$ (100,000)	
Record loan funding								
	Totals		$ 110,700	$ 110,700	$ (3,850)	$ -	$ (101,000)	$ 104,850

A - Record value at inception
B - Record processing costs of $500
C - Record changes in fair value of IRLC
D - Record commission expense of $500
E - Record loan funding at 100.0 or par

and floating rate IRLC as an other asset or as an other liability based on whether the IRLC has a positive (asset) or negative (liability) value, with the offset recorded as non-interest income or non-interest expense.

In addition, IRLCs with positive values may not be offset against the IRLCs with negative values when presenting assets and liabilities on the statement of financial condition.[10]

The servicing asset, CE Fees receivable and CE Recourse Obligation liability are not recorded as separate assets and liabilities until the loan is sold, and thus affect the sale gain or loss. We believe the value of the IRLC is Level 3 as it contains material Level 3 inputs.

[10] FASB ASC paragraph 815-10-45-2

Interest Rate Lock Commitments	FFIEC RC-L	NCUA
Notional amount of "Over-the-counter written options"	12.d.(1) Column A	Page 11 3. H.
Derivatives with a positive fair value held for purposes other than trading (asset)	15.b.(1) Column A	Other Assets 24. d.
Derivatives with a negative fair value held for purposes other than trading (liability)	15.b.(2) Column A	Liabilities 7.

REGULATORY IMPLICATIONS

Information regarding IRLCs must be included in the PFI's required regulatory reports (Call Report or 5300). The table on the previous page indicates where the information is to be reported. The NCUA also requires to credit unions to report additional information regarding the use of derivatives on Appendix D of the 5300. See ***Appendix D*** of this guide for details.

The total loan amount of loans for which the PFI has issued commitments, including floating rate commitments are to be reported as over-the-counter written options. The derivative assets and liabilities are to be reported as indicated.

A simplified example of the valuation and accounting for IRLCs is attached as ***Appendix A***.

Mortgage Loan Sales Commitments

The MPF Program includes two kinds of mortgage loan sales commitments (Delivery Commitments): the agreement to deliver loans meeting specified parameters on a mandatory basis and commitments to deliver loans on a "best efforts" basis. The mandatory commitments provide that the loan must be delivered or the commitment be "paired off." Conversely, the best efforts commitments provide that the loan be delivered if and when it closes. The mortgage loan sales commitments are also known as forward loan sales commitments.

In addition, the program also includes Master Commitments, which set the overall parameters (level of CE Fees and CE Recourse Obligations) of the contractual relationship between the PFI and the FHLBank. The discussion that follows does not apply to the Master Commitments themselves, only to the mortgage loan sales commitments issued under their terms.

The mandatory sales commitments are considered to be derivatives under FASB ASC Topic 815 Derivatives and Hedging because they meet **all** of the following criteria they:

- Have a specified underlying (the contractually specified price for the loans)
- Have a notional amount (the committed loan principal amount)
- Require little or no initial net investment
- Require or permit net settlement as the PFI is obligated under the contract to either deliver mortgage loans or pay a pair-off fee (based on then-current market prices) on any shortfall on the delivery of the committed loan principal amount

Because the mandatory sales commitments are derivatives, they must be accounted for and reported at their fair value. We believe the fair value determination should be based on the gain or loss that would occur if the institution were to pair-off the transaction with the FHLBank at the measurement date.

Conversely, the best efforts commitments are not considered to be derivatives because they do not require a pair-off. As a result, they cannot be marked to fair value as a derivative to offset the changes in the IRLCs. However, FASB ASC paragraph 825-10-15-4(b) (Financial Instruments - Overall), provides that a PFI can elect to account for and report at fair value a firm commitment that would not otherwise be recognized at inception and that involves only financial instruments. The statement goes on to say "(An example is a forward purchase contract that is not convertible to cash. That commitment involves only financial instruments – a loan and cash – and would not otherwise be recognized because it is not a derivative instrument.)". Wilary Winn believes

a PFI can thus elect to account for its best efforts commitments at fair value.

We further note that institutions should consider the risk of nonperformance on their forward commitment liabilities based on the institution's own credit risk.[11]

ACCOUNTING FOR MORTGAGE LOAN SALES COMMITMENTS

The mandatory delivery commitments are to be accounted for at their fair value on the balance sheet. PFIs should report each forward loans sales commitment as an other asset or as an other liability based on whether it has a positive (asset) or negative (liability) value, with the offset recorded as non-interest income or non-interest expense.

The accounting treatment is similar for the "best efforts" commitments that a PFI elects to account for at fair value.

At the bottom of the page is a continuation of our previous example from funding to sale. We can see that the income of $4,850 related to the value of the IRLC is offset by $1,000 of origination costs that were expensed (see page 15) and by the $2,000 decrease in the value of the forward commitment derivative shown below. (This is caused by a net ½ percent fall in market interest rates at a 4 to 1 tradeoff between interest rate and discount points.) Thus, the institution earned its targeted margin of $1,850 or 1.85 percent.

A simplified example of the valuation and accounting for forward contracts is attached as *Appendix B*.

REGULATORY REPORTING

Information regarding forward contracts must be included in the PFI's required regulatory reports (Call Report or 5300). Following is a table that indicates where the information is to be reported. The entire gross notional amount of the forward

Forward Loan Sales Commitments	FFIEC RC-L Item	NCUA
Notional amount of "Forward contracts"	12.b Column A	Appendix D
Derivatives with a positive fair value held for purposes other than trading (asset)	15.b.(1) Column A	Other Assets 24. d.
Derivatives with a negative fair value held for purposes other than trading (liability)	15.b.(2) Column A	Liabilities 7.
Derivative loan commitments and forward loan sales	14 Column A	Page 11 3. H.

[11] FASB ASC paragraphs 820-10-35-17 and 820-10-35-18

	Description	Journal Entries Debit	Journal Entries Credit	Income Statement	Cash	MSR	Derivative	Warehouse
JE 1	Hedging loss	$ 2,000		$ 2,000				
Record loss on forward	Derivative liability		$ 2,000				$ (2,000)	
JE 2	Cash	$ 101,500			$ 101,500			
	Mortgage servicing right	1,000				$ 1,000		
	CE Fee receivable	$ 350						
	CE Obligation liability	$ -						
	Derivative liability	$ 2,000					$ 2,000	
Record loan sale	Warehouse loan		$ 104,850					$ 104,850
	Totals	$ 106,850	$ 106,850	$ 2,000	$ 101,500	$ 1,000	$ -	$ (104,850)

loans sales commitments, mandatory and best efforts, must be included in the PFI's call report as "forward contracts" including those hedging IRLCs and those covering the closed loan inventory. The derivative assets and liabilities are to be reported as indicated. Finally, the total of IRLCs and forward contracts are to be reported as shown below.

Two other requirements should be noted:

1. PFIs may offset derivatives with negative fair values (liabilities) against those with positive fair values (assets) **only** if the criteria for "netting" under generally accepted accounting principles (GAAP) have been satisfied, which is essentially the right of legal offset.
2. In addition, PFIs may not offset the fair value of forward loan sales commitments against the fair value of the IRLCs.

The NCUA also requires to credit unions to report additional information regarding the use of derivatives on Appendix D of the 5300. See *Appendix D* of this guide for details.

BEST EFFORTS COMMITMENTS

In the case where a PFI has elected to account for its best efforts commitment at fair value, it must also report the following.

Best Efforts Sales Commitments	FFIEC RC-L Item	NCUA
Commitments with a positive fair value held for purposes other than trading (asset)	**Other Assets 10**	**Other Assets 24. d.**
Commitments with a negative fair value held for purposes other than trading (liability)	**Other Liabilities 9**	**Liabilities 7.**

The required reporting under RC-L for best efforts commitments reported at fair value is subject to a dollar limitation generally equal to 25 percent of the bank's total equity capital. Amounts below the equity threshold need not be reported. If the asset exceeds the equity threshold, then it must be reported on RC-L and potentially RC-Q 6 Column A and RC-Q Memoranda 1c Column A. The reporting for RC-Q Memoranda is subject to another threshold. The asset must exceed $100,000 and 25 percent of the total amount reported on RC-Q 6. If the liability exceeds the equity threshold, it must be reported on RC-L and potentially RC-Q 13 Column A and RC-Q Memoranda 2 c Column A. The RC-Q Memoranda threshold for other liabilities is $100,000 and 25 percent of the total amount reported on RC-Q 13.

Mortgage Loans Held For Sale

A PFI must account for its inventory of closed loans awaiting purchase by FHLBank at the lower of cost or fair value, unless the PFI elects to account for the loans at fair value, which Wilary Winn recommends. The election of fair value accounting ensures that the PFI benefits from the economic hedge provided by the forward sales commitments. A PFI could also elect to account for closed loans held for sale under hedge accounting FAS-ASC 815-25. However, we do not recommend this because of the additional complexity involved.

FAIR VALUE

Wilary Winn recommends that PFIs elect to value the closed loans awaiting purchase at their fair value in accordance with FASB ASC paragraph 825-10-15-4(b). We believe the fair value of the committed loans is the price at which it could be sold to FHLBank on the measurement date, referred to as the "exit price" and the price is a Level 2 input. Similarly, we believe the fair value of the forward sales commitments should be based on the gain or loss that would occur if the PFI were to pair-off the transaction with FHLBank at the measurement date. We further believe this is a Level 2 input. Changes in the fair value of the loans should be offset by the changes in the fair value

of the forward sales commitments and thus, there should be no overall gain or loss from changes in market interest rates on committed loans.

Similarly, we believe the appropriate uncommitted loan prices are Level 2 inputs as well. There could be an overall gain or loss depending on the economic effectiveness of the forward sales contracts as a hedge, since both the loans and the forward sales commitments are marked to market separately.

FASB ASC paragraph 820-10-50 requires the following disclosures:

- The fair value measurements at the reporting date;

- The level in the fair value hierarchy – Level 1, 2 or 3. We believe loans held for sale and forward loan sales commitments are level 2 and that IRLCs are level 3.

  FAS-ASC-850-10-1C provides "the objective of the disclosure requirements in this Subtopic is to provide users of financial statements with information about assets and liabilities measured at fair value in the statement of financial position or disclosed in the notes to financial statements:
  a. The valuation techniques and inputs that a reporting entity uses to arrive at its measures of fair value, including judgments and assumptions that the entity makes
  b. The uncertainty in the fair value measurements as of the reporting date
  c. How changes in fair value measurements affect an entity's performance and cash flows."

  FAS-ASC-10-1D continues "when complying with the disclosure requirements of this Subtopic, a reporting entity shall consider all of the following:
  a. The level of detail necessary to satisfy the disclosure requirements
  b. How much emphasis to place on each of the various requirements
  c. How much aggregation or disaggregation to undertake
  d. Whether users of financial statements need additional information to evaluate the quantitative information disclosed."

FAS-ASC- 850-10-2c requires for fair value measurements categorized within Level 3 of the fair value hierarchy, a reconciliation from the opening balances to the closing balances, disclosing separately changes during the period attributable to the following:

1. Total gains or losses for the period recognized in earnings and the line item(s) in the statement of income (or activities) in which those gains or losses are recognized;
2. Total gains or losses for the period recognized in other comprehensive income, and the line item(s) in other comprehensive income in which those gains or losses are recognized;
3. Purchases, sales, issues, and settlements (each of those types of changes disclosed separately), and;
4. The amounts of any transfers into or out of Level 3 of the fair value hierarchy, the reasons for those transfers, and the reporting entity's policy for determining when transfers between levels are deemed to have occurred (see paragraph 820-10-50-2C). Transfers into Level 3 shall be disclosed and discussed separately from transfers out of Level 3.

FAS-ASC-10-2d requires for recurring fair value measurements categorized within Level 3 of the fair value hierarchy, the amount of the total gains or losses for the period in (c)(1)

included in earnings that is attributable to the change in unrealized gains or losses relating to those assets and liabilities held at the end of the reporting period, and the line item(s) in the statement of income in which those unrealized gains or losses are recognized.

FAS-ASC-10-2f requires for recurring and nonrecurring fair value measurements categorized within Level 3 of the fair value hierarchy, a description of the valuation processes used by the reporting entity (including, for example, how an entity decides its valuation policies and procedures and analyzes changes in fair value measurements from period to period).

FAS-ASC-50-2G requires for recurring fair value measurements categorized within Level 3 of the fair value hierarchy, a narrative description of the sensitivity of the fair value measurement to changes in unobservable inputs if a change in those inputs to a different amount might result in a significantly higher or lower fair value measurement. If there are interrelationships between those inputs and other unobservable inputs used in the fair value measurement, a reporting entity shall also provide a description of those interrelationships and of how they might magnify or mitigate the effect of changes in the unobservable inputs on the fair value measurement. To comply with that disclosure requirement, the narrative description of the sensitivity to changes in unobservable inputs shall include, at a minimum, the unobservable inputs disclosed when complying with paragraph FAS-ASC 820-10-50-2(bbb).

LOWER COST OF FAIR VALUE

If an institution does not elect "fair value" or "hedge" accounting, the closed loans awaiting purchase (warehouse loans) are accounted for at the lower of cost or fair value.[12]

FASB ASC paragraph 948-310-35 provides that the fair value for loans subject to investor purchase commitments (committed loans) and loans held on a speculative basis (uncommitted loans) are to be determined separately as follows:

Committed loans – Mortgage loans covered by investor commitments shall be based on the fair values of the loans.

Uncommitted loans – Fair value for uncommitted loans shall be based on the market in which the mortgage banking enterprise normally operates. That determination would include consideration of the following:

- Market prices and yields sought by the mortgage banking enterprise's normal market outlets (FHLBank)
- Quoted Government National Mortgage Association (GNMA) security prices or other public market quotations for long-term mortgage loan rates
- Federal Home Loan Mortgage Corporation (FHLMC) and Federal National Mortgage Association (FNMA) current delivery prices (Wilary Winn believes this should include FHLBank prices as well.)

We believe the forward sales commitments used to hedge the closed loan inventory and allocated to loans at the loan level (resulting in "committed loans") can be used to determine the loans' fair value. The fair value for uncommitted loans is calculated as described earlier.

The accounting then varies if market interest rates have increased or decreased since the loan was

[12] FASB ASC 948-310-35-1

closed and whether or not the loan is committed or uncommitted. Following are the four possible scenarios when accounting for the loans at the lower of cost or fair value.

COMMITTED LOAN – MARKET RATES INCREASE

If market rates have increased, the fair value of the mandatory forward loan sales commitment has increased and should be recorded. The loan has decreased in value by a similar amount and the PFI should record a corresponding loss on the value of the loan. The result is no overall gain or loss to the PFI.

COMMITTED LOAN – MARKET RATES DECREASE

If market rates have decreased, the fair value of the mandatory forward loan sales commitment has decreased and the economic value of the loan has increased. However, the loan cannot be "written up" above cost, resulting in an overall loss.

UNCOMMITTED LOAN – MARKET RATES INCREASE

If market rates increase, the fair value of the mandatory forward sales contracts has increased and the value of the loan has decreased. The fair value of the loan and the contract are based on market prices. The result is an overall gain or loss depending on the economic effectiveness of the forward sales contract as a hedge.

UNCOMMITTED LOAN – MARKET RATES DECREASE

If market rates have decreased the fair value of the mandatory forward loan sales commitment has decreased and the economic value of the loan has increased. However, the loan cannot be "written up" above cost, resulting in an overall loss.

THIS ASYMMETRICAL RESULT IS THE REASON WILARY WINN RECOMMENDS THAT PFIs ACCOUNT FOR THEIR MORTGAGE LOANS HELD FOR SALE AT FAIR VALUE.

REGULATORY IMPLICATIONS

If a PFI is accounting for its closed loan inventory at the lower of cost or fair value, then the forward loan sales commitments used to hedge them for economic purposes are treated as "non-hedging" derivatives for regulatory purposes.

The following disclosures are required if a PFI elects to account for its closed loan inventory at fair value:

FFIEC

The total gains and losses must be reported on RI-5i and RI Memoranda 13a and 13b.

The outstanding principal balance of the loans held for sale reported at fair value must be reported on RC-C Part I line 1 c (2) (a).

MORTGAGE BANKING ACTIVITIES

Banks with that engage in significant mortgage banking activities - defined as more than $10 million of loan originations for resale, or sales per quarter, or loans held for sale inventory at quarter-end for two consecutive quarters must complete *Schedule RC-P - 1-4 Family Residential Mortgage Banking Activities in Domestic Offices*. The schedule requires the following reporting:

- Retail originations during the quarter of 1-4 family residential loans for sale are reported on 1.
- Wholesale originations and purchases during the quarter of 1-4 family residential loans for sale are reported on 2.
- 1-4 family residential mortgage loans sold during the quarter are reported on 3.
- 1-4 family residential mortgage loans held for sale at quarter-end are reported on 4.
- Noninterest income for the quarter from loan sales and servicing of 1-4 family residential mortgage loans is reported on 5.

MSRs are a modified interest-only strip. The expected life of the loan is calculated based on its expected prepayment rate and is a key valuation variable. The servicing fee is paid monthly based on the outstanding principal balance of the loan and is another significant determinant of value.

- Repurchases and indemnifications of 1-4 family residential mortgage loans during the quarter are reported on 6.

In our previous simplified gain on sale example, the mortgage servicing rights were recorded at their estimated initial fair value. The subsequent accounting and reporting requirements for mortgage servicing rights are relatively complex and are described in the following sections.

Mortgage Servicing Rights

VALUE OF RETAINED MORTGAGE SERVICING RIGHTS ("MSRs")

An MSR is the right to service a loan on behalf of an investor and collect a servicing fee. Loan servicing consists of collecting and processing loan payments during the life of a loan. Servicing activities also include billing the borrower; collecting payments of principal, interest, taxes and insurance; disbursing property taxes and insurance premiums; accounting for these activities at the loan and investor level; and forwarding funds to an investor in the secondary market.

MSRs are a modified interest-only strip. The expected life of the loan is calculated based on its expected prepayment rate and is a key valuation variable. The servicing fee is paid monthly based on the outstanding principal balance of the loan and is another significant determinant of value. Other important components are: the expected ancillary income (late fees, credit life insurance commissions, etc.), the current and future servicing costs, the current and expected delinquency rate and related incremental servicing costs, as well as whether the servicing is non-recourse, recourse or has a limited form of credit risk exposure. The final key element in valuing the MSR is the interest rate used to discount the future cash flows to present value.

Servicing fees vary by type of investor. Fees are 25 basis points for conventional loans, 44 basis points for MPF government loans and between 19 and 56.5 basis points for MPF Government MBS loans sold under the MPF Program. Servicing fees are earned monthly based on the outstanding principal balance. Ancillary income includes late fees, insurance income and other fees earned from soliciting the portfolio. The amount of ancillary income generated varies significantly based on a PFI's ability to cross-sell its servicing customers. Servicing costs are best expressed in dollars per loan as they are more closely related to units versus loan size. Valuations based on servicing costs expressed in basis points imply that the cost to service a $300,000 loan is three times that of a $100,000 loan, which is decidedly untrue.

The method a PFI selects to remit the cash due to FHLBank on the loans it is servicing for FHLBank

affects the value of the servicing asset. The choices include actual/actual, scheduled/scheduled, or actual/actual single remittance. The method selected affects the frequency and timing with which the cash is remitted and the value of future float earnings.

The interest rate used to discount the future cash flows is also a significant determiner of value. Valuations should be based on marketplace assumptions regarding discount rates.

ACCOUNTING FOR MSRs

The proper accounting and reporting for mortgage servicing assets is set forth in FASB ASC 860-50. FAS ASC paragraph 860-50-25-1 - Transfers and Servicing - Servicing Assets and Liabilities provides that an entity shall recognize a servicing asset or servicing liability each time it undertakes an obligation to service a financial asset by entering into a servicing contract in any of the following situations:

a. A servicer's transfer of any of the following, if that meets the requirements for sale accounting - an entire financial asset, a group of entire financial assets, or a participating interest in an entire financial asset, in which circumstance the transferor shall recognize a servicing asset or a servicing liability only related to the participating interest sold.
b. An acquisition or assumption of a servicing obligation that does not relate to financial assets of the servicer or its consolidated affiliates.

The institution as loan servicer receives the benefits of the servicing, including the contractually specified servicing fees, a portion of the interest from the financial assets, late charges, and ancillary income, and incurs the costs of servicing the assets. The benefits of servicing are expected to exceed "adequate compensation". If they do not, an institution has a servicing liability. Servicing assets and liabilities must be reported separately. FAS ASC 860-50-30-2 states that, "adequate compensation is determined by the marketplace." Entities shall consider the nature of the assets being serviced as a factor in determining the fair value of a servicing asset or servicing liability. The types of assets being serviced affect the amount required to adequately compensate the servicer.[13]

Wilary Winn believes that the fair value of servicing is based in Level 2 inputs. According to FAS ASC paragraph 820-10-35-48 "Level 2" inputs include the following:

a. Quoted prices for similar assets or liabilities in active markets
b. Quoted prices for identical assets or liabilities in markets that are not active
c. Inputs other than quoted prices that are observable for the asset or liability (for example interest rates and yield curves observable at commonly quoted intervals, volatilities, prepayment speeds, loss severities, credit risks and default rates)
d. Market-corroborated inputs

We believe that the inputs used to value servicing rights are either observable (prepayment speeds, servicing costs, forward curves, default rates, and loss severities) or can be corroborated (discount rates).

The servicing asset is to be initially reported at its fair value. Following is an example of how to record the servicing asset at fair value assuming that the estimated fair value of the MSR is one percent on a $100,000 loan.

Journal Entries			
JE 1	Servicing Asset	$ 1,000	
	Gain on Sale		$ 1,000
Record MSR			

[13] FAS ASC 860-50-30-7

The servicing is to be subsequently measured using one of the following two methods:

1. Amortization method: Amortize the servicing asset in proportion to and over the period of estimated net servicing income (level yield method) and assess servicing assets for impairment based on fair value at each reporting date.

2. Fair value measurement method: Measure the servicing asset at fair value at each reporting date and report changes in fair value of servicing assets in earnings in the period in which the changes occur.

For more details, see FASB ASC paragraph 860-50-35-1.

While the fair value method is the preferred method, Wilary Winn recommends that PFIs that do not financially hedge their portfolios remain on the amortization method in order to minimize earnings volatility. We note that different elections can be made for different classes of servicing and that a PFI may make an irrevocable decision to subsequently measure a class of servicing assets at fair value at the beginning of any fiscal year.[14]

A simplified monthly income statement for the $100,000 loan the month after it is sold is at the right. The servicing fee is 25 basis points, the ancillary income is $25.00 per year, the value of the float is estimated to be $2.08 (average escrow balance of $825 at .75 percent interest), and the servicing costs are $65 per loan. The servicing asset is being amortized on the level yield methodology. FASB ASC paragraph 860-50-50- 2 sets forth increased required disclosures for servicing assets and liabilities.

While the fair value method is the preferred method, Wilary Winn recommends that PFIs that do not financially hedge their portfolios remain on the amortization method in order to minimize earnings volatility.

Income Statement			
Servicing income	$	20.83	100,000*.0025 /12
Amortization expense	$	(15.17)	
Ancillary income	$	2.08	25.00/12
Value of escrows	$	0.52	825*.0075 /12
Servicing costs	$	(5.42)	-65/12
Profit	$	2.84	

Regardless of the method selected institutions must disclose:

1. Management's basis for determining the classes of servicing assets and liabilities.

2. A description of the risks inherent in the servicing assets and liabilities, and if applicable, the instruments used to mitigate the income statement effect of changes in fair value of the servicing assets and liabilities.

3. The amount of contractually specified servicing fees, late fees, and ancillary fees earned for each period for which results are presented, including a description of where each item is reported in the statement of income.

[14] FAS ASC 860-50-35-3d

4. Quantitative and qualitative information about the assumptions used to estimate fair value (for example, discount rates, anticipated credit losses, and prepayment speeds).

AMORTIZATION METHOD

FASB ASC paragraph 860-50-35-9 requires that MSRs be stratified and reported by one or more predominant risk characteristics which include "interest rate, type of loan, loan size, date of origination, term and geographic location." PFIs should be deliberate in their selection of stratification bands, as a gain in one band cannot be used to offset an impairment loss in another. Moreover, making changes to the bands once they are established is strongly discouraged.

Impairment is best measured at the loan level and is reported at the predominant risk characteristic stratum. There is a difference between temporary impairment, which is accounted for through an allowance, and "other than temporary" or permanent impairment, which requires a direct write off. We note that the temporary impairment reserve can be reduced to a floor of zero if market interest rates subsequently increase and the value of the MSRs thus increases as well.

The disclosures required when PFIs elect the amortization method are as follows:

1. For each class of servicing assets and liabilities, the activity in the balance of the servicing assets and the activity in the balance of the servicing liabilities (including a description of where changes in the carrying amount are reported in the statement of income for each period for which results of operations are presented) including, but not limited to, the following:

    a. The beginning and ending balances
    b. Additions (through purchases of servicing assets, assumptions of servicing obligations, and servicing obligations that result from transfers of financial assets)
    c. Disposals
    d. Amortization
    e. Application of valuation allowance to adjust carrying value of servicing assets
    f. Other-than-temporary impairments
    g. Other changes that affect the balance and a description of those changes

2. For each class of servicing assets and liabilities, the fair value of recognized servicing assets and liabilities at the beginning and end of the period.

3. The risk characteristics of the underlying financial assets used to stratify recognized servicing assets for purposes of measuring impairment in accordance with FASB ASC paragraph 860-50-35-9. An example of risk characteristics for MSRs is attached as ***Appendix C***.

4. The activity by class in any valuation allowance for impairment of servicing assets – including beginning and ending balances, aggregate additions charged and recoveries credited to operations, and aggregate write-downs charged against the allowance – for each period for which results of operations are presented.

FAIR VALUE MEASUREMENT METHOD

Alternatively, PFIs may elect to subsequently measure the servicing asset using the fair value method. Using this method, an institution measures the servicing asset at fair value at each reporting date and reports the changes in the fair value of servicing assets in earnings in the period in which the changes occur.
The disclosures required when institutions elect the fair value method are as follows:

1. For each class of servicing assets and liabilities, the activity in the balance of the servicing

We believe that a servicing asset should have been recorded for loans originated under the MPF 100 product. We believe the servicing asset arose in accordance FAS ASC paragraph 860-50-25-1 b which provides that a servicing asset should be recorded in connection with:

"An acquisition or assumption of an obligation to service a financial asset that does not relate to financial assets of the servicer or its consolidated affiliates"

assets and the activity in the balance of the servicing liabilities (including a description of where changes in the fair value are reported in the statement of income for each period for which results of operations are presented) including, but not limited to, the following:

a. The beginning and ending balances
b. Additions (through purchases of servicing assets, assumptions of servicing obligations, and servicing obligations that result from transfers of financial assets)
c. Disposals
d. Changes in fair value during the period resulting from:
    i. Changes in valuation inputs or assumptions used in the valuation model
    ii. Other changes in fair value and a description of those changes

2. Other changes that affect the balance and a description of those changes

MPF® 100 SERVICING

Prior to the issuance of Statement of FAS #156, there was diversity of practice as to whether or not a servicing asset should be recorded when originating loans under the MPF 100 product. We believe that a servicing asset should have been recorded for loans originated under this product.

We believe the servicing asset arose in accordance with FAS ASC paragraph 860-50-25-1 b, which provides that a servicing asset should be recorded in connection with:

"An acquisition or assumption of an obligation to service a financial asset that does not relate to financial assets of the servicer or its consolidated affiliates."

The resulting servicing asset is then to be subsequently measured and reported under the fair value or amortization method.

FASB WAS NOT EXPLICIT WITH REGARD TO RECORDING THE SERVICING ASSET UNDER THE MPF 100 PROGRAM. AS A RESULT, WE STRONGLY ENCOURAGE READERS TO CONSULT WITH THEIR INDEPENDENT ACCOUNTANTS AND PRIMARY REGULATORS BEFORE ADOPTING THIS ACCOUNTING.

LOAN SERVICING REGULATORY IMPLICATIONS

The banking agencies expect institutions involved in the mortgage-servicing operations to use market-based assumptions that are reasonable and supportable in estimating the fair value of

Valuation Models should be based on realistic estimates of adequate compensation, future revenues, prepayment speeds, market servicing costs, mortgage default rates, and discount rates. Fair values should be based upon market prices and market-based valuation assumptions.

servicing assets.[15] PFIs should compare their estimates of fair value to bulk, flow and daily servicing released prices to ensure that the PFI's valuation assumptions are reasonable and consistent with those used in the marketplace. The Interagency Advisory on Mortgage Banking also indicates that PFIs should ensure that the following items are addressed.

VALUATION AND MODELING PROCESSES

The advisory requires comprehensive documentation standards for all aspects of mortgage banking, including mortgage-servicing assets. PFIs should substantiate and validate the initial carrying amounts assigned to mortgage servicing rights and the underlying valuation assumptions. The validation process should compare actual to predicted performance.

Valuation Models should be based on realistic estimates of adequate compensation, future revenues, prepayment speeds, market servicing costs, mortgage default rates, and discount rates. Fair values should be based upon market prices and market-based valuation assumptions.

The agencies encourage institutions to obtain periodic third-party valuations by qualified market professionals to support the fair values of their mortgage servicing rights and to update internal models.

[15] *The Interagency Advisory on Mortgage Banking Activities - February 2003,* Examination Concerns paragraph 1

Institutions should compare the actual gross monthly cash flows to modeled cash flows in order to better understand the economic value of their servicing rights.

Changes in valuation assumptions should be reviewed and approved by management and, where appropriate, by the board of directors. Institutions should ensure that financial models used throughout the company for mortgage servicing including valuation, hedging, and pricing be compared and that differences between the values obtained be identified, supported and reconciled.

There are two more modeling recommendations for PFIs remaining on the amortization method. PFIs should ensure that:

1. Amortization of the cost basis is based on the estimated remaining net servicing income period as adjusted for prepayments; and

2. Impairment is recognized timely.

There are also requirements for mortgage banking hedging activities, management information systems and internal audit.

In addition, there are four FFIEC Call Report reporting requirements associated with MSRs arising under the MPF closed loan products:

1. The outstanding principal balance of the loans

delivered under the MPF Original, MPF 125, MPF 35, MPF Plus, and MPF 100 products is to be reported on Schedule RC-S, item 11A and RC-S, Memoranda, item 2a.

2. The outstanding principal balance of the loans delivered under the MPF Government, MPF Government MBS and MPF Xtra programs is to be reported on Schedule RC-S Memoranda, item 2b.

3. The book value of the retained servicing is reported in RC-M, Memoranda, item 2a.

4. The estimated fair value of the retained servicing is reported in RC-M, Memoranda, item 2a(1).

For regulatory capital purposes, MSRs are limited to 10 percent of Common Equity Tier One. Amounts in excess of the 10 percent threshold do not count toward Common Equity Tier One and the eligible portion is risk weighted at 250 percent. The amount of MSRs deducted from Common Equity Tier One reduces total risk weighted assets. MSRs are also included in the 15 percent limitation test, so while they could be less than 10 percent of Common Equity Tier One, they could be subject to deduction as a component of the 15 percent test items, which also include eligible deferred tax credits and significant investments in unconsolidated financial institutions.

The requirements for the NCUA 5300 are as follows:

- The servicing fees are included in Non-Interest Income – page 5 line 13.
- Loan servicing expenses are included in Non-Interest Expense – page 5 line 27.
- The total amount of first mortgage loans sold into the secondary market year-to-date is reported on Schedule A – line 18.
- The amount of real estate loans sold but serviced by the credit union (dollar amount of loan servicing) is reported on Schedule A – line 20.
- The MSR book value is reported on Schedule A – line 21.

Credit Enhancement

THERE IS A DIVERSITY OF PRACTICE IN THE RECORDING OF THE CE RECOURSE OBLIGATION LIABILITY AND THE CE FEES TO BE RECEIVED. READERS ARE THEREFORE STRONGLY ENCOURAGED TO DISCUSS THE ACCOUNTING FOR THESE ITEMS WITH THEIR INDEPENDENT ACCOUNTANTS AND PRIMARY REGULATORS TO OBTAIN THEIR INPUT AND COMMENTS BEFORE MAKING ANY ACCOUNTING DECISIONS.

To account for the MPF Program credit enhancement a PFI must differentiate the accounting for the CE Recourse Obligation amount – the maximum loss amount it could incur versus the Contingent Liability Amount – the actual losses it could likely incur. The CE Recourse Obligation amount is accounted for as a guarantee. The accounting for the Contingent Liability Amount in turn depends on whether the PFI is subject to CECL. PFIs not yet subject to CECL must account for the Contingent Liability in accordance with FAS 450-20 – Accounting for Loss Contingencies. PFIs subject to CECL must account for the CE Recourse Obligation under FAS ASC 326-20.[16] The CE Recourse Obligation amount is within the scope of CECL because it is an off-balance sheet exposure not accounted for as insurance.[17]

Following is a discussion of the accounting for CE Recourse Obligation Liability – the guarantee followed by an analysis of the Contingent Liability or Recourse Liability Amount – the potential actual losses. Our example is based on the MPF® Original product. We follow with a brief description of the accounting for the other credit enhanced MPF products.

ACCOUNTING FOR THE GUARANTEE

MPF® ORIGINAL

Under the MPF Original product, the first layer of losses for each Master Commitment (following any PMI coverage) is paid by FHLBank up to the

[16] FAS ASC 460-10-30-5
[17] FAS ASC 326-20-10-15-2c

The recognition of the CE Fee income associated with the guarantee is subject to diversity in practice. In the first case, the CE Fee Receivable and CE Obligation Liability are each set to their respective fair values. In the second case, the CE Obligation Liability is set equal to the CE Fees receivable – the practical expedient.

amount of the FLA which accumulates monthly at the rate of 4 basis points per year against the unpaid principal balance of the loans in the Master Commitment. The PFI then provides a second loss CE Recourse Obligation for each Master Commitment. Loan losses beyond the first and second layers are absorbed by FHLBank. The member is paid a fixed CE Fee for providing the CE Recourse Obligation.

The required credit enhancement is determined by using a credit risk model's assessment of loan, borrower, and property attributes and is calculated for each loan originated under the master commitment. Loan level credit enhancements are accumulated at the pool level to determine maximum credit risk exposure.

The present value of the CE Recourse Obligation is determined by discounting the expected losses at an appropriate discount rate. The primary valuation factors are:

- The loan amount
- The CE Recourse Obligation percentage
- The expected life of the loan
- The expected default rate
- The expected severity of actual foreclosure losses
- The level of credit risk assumed
- The discount rate used to discount the cash flows
- The net amount in the FLA

The severity of the actual losses is dependent on the amount of equity the homeowner has in the loan at the time of the default and the amount of PMI in place, if any. The actual losses flowing through to the PFI are dependent on the percentage level of credit enhancement assumed and the amount of the FLA at the time of default.

The CE Recourse Obligation is a recourse liability that arises from the sale of the loans to FHLBank. The accounting guidance for the recourse liability can be found in FAS ASC 460-10 - Guarantees. FAS ASC 460-10-25-4 requires a guarantor to "recognize at the inception of the guarantee, a liability for that guarantee." Because the guarantee is issued as a part of a transaction with multiple elements (sale of the loan, recording of the servicing, incurring the liability) the guarantee liability at inception should be recorded at its estimated fair value and will affect the proceeds from the sale.[18] FAS ASC 460-10-30- 2b goes on to state that in estimating fair value, the "guarantor should consider what premium would be required by the guarantor to issue the same guarantee in a standalone arm's length transaction with an unrelated party as a practical expedient."

ACCOUNTING PRACTICES
EXAMPLE NUMBER ONE

In this interpretation of FAS ASC 460, the CE Recourse Obligation liability and the CE Fees Receivable are

[18] FAS ASC 460-10-30-2b

each initially recorded at their estimated fair value and both are part of the sale proceeds. The fair value of the CE Fees Receivable increases sales proceeds, while the fair value of the CE Recourse Obligation liability reduces sales proceeds.

The value of the CE Fees receivable for the MPF Original product under this accounting practice is based on the outstanding loan amount, the CE Fee percentage, the expected loan life (based on prepayments and defaults) and the rate used to discount the future payments.

Following is an example of how to record the sale of the loan, the servicing asset at fair value, and the CE Fees receivable and CE Recourse Obligation liability at their fair values (assuming that the value of the CE Recourse Obligation liability at the time of the sale is zero). The basis of the loan is $100,000, its face amount is $100,000 and it can be sold for a price of 101.50. The fair value of the MSR is $1,000 and the estimated fair value of the CE Fees receivable is 35 basis points or $350.

The journal entries to record the sale are as follows:

Journal Entries			
JE 1	Cash	$ 101,500	
	CE Fees Receivable	$350	
	CE Obligation		$0
	Loan Receivable		$100,000
	Gain on Sale		$1,850
Record loan sale			
JE 2	Servicing Asset	$ 1,000	
	Gain on Sale		$ 1,000
Record fair value of MSR			

Because the mortgage loans in the Master Commitment can be contractually prepaid and the Credit Enhancement fees receivable are a function of the principal amount outstanding on the mortgage loans, Wilary Winn believes the CE Fees Receivable should be subsequently measured and accounted for in accordance with the accounting for interest only strips.[19] The receivable is to be measured at its fair market value as an available-for-sale security under FAS ASC 860-20-55-33, with changes in fair value recorded to other comprehensive income.

We further note the CE Fees Receivable amortize as the cash is received.

We note that our Accounting Practices Example Number One is based our interpretation of guidance regarding accounting for the MPF® program that the FDIC released in its Supervisory Insights News Winter 2004 – Accounting News.

We further note that the analogized interest only strip referenced above in no way affects the fact that transfers of loans to the FHLBanks under the MPF Program are true sales for accounting purposes. See ***page 10***.

ACCOUNTING PRACTICES EXAMPLE NUMBER TWO

Under this accounting practice (the FAS 460-10 Practical Expedient), the fair value of the CE Recourse Obligation liability at inception is equal to the present value of the CE Fees expected to be received.

Following is an example of how to record the sale of the loan, the servicing asset at fair value, and the CE Fees receivable and CE Recourse Obligation liability at their fair values (assuming that the value of the CE Recourse Obligation liability at the time of the sale is equal to the value of the CE Fees receivable). The basis of the loan is $100,000, its face amount is $100,000 and it can be sold for a price of 101.50. The fair value of the MSR is $1,000 and the estimated fair value of the CE Fees receivable is 35 basis points or $350. The journal entries required to record the sale are as follows.

19 FAS ASC 860-20-35-2

Journal Entries			
JE 1	Cash	$101,500	
	CE Fees Receivable	$350	
	CE Recourse Obligation Liability		$350
	Loans Receivable		$100,000
	Gain on Sale		$1,500
Record Loan Sale			

PFIs can subsequently account for their release from risk has over the term of the guarantee using one of the following three methods:

1. Upon expiration or settlement of the CE Obligation;
2. By a systematic and rational amortization method; or
3. As the fair value of the guarantee changes.

We note that the fair value method cannot be used for the CE Recourse Obligation Liability unless it can be justified under GAAP. For example, if the guarantee is accounted for as a derivative.[20]

Wilary Winn recommends the CE Recourse Obligation Liability be amortized in proportion to and over the period of its estimated life. This method results in a "level yield" over the estimated life of the guarantee and the amortization amount would largely offset the fees received.

JE 2	Cash	$40	
	CE Fees Receivable		$36
	Other Income		$4
Record year one CE fees and amortize discount on receivable			

JE 3	CE Recourse Obligation Liability	$36	
	Other Expense	$4	
	Other Income		$40
Recognize fee income and amortize discount on liability			

20 FAS ASC 460-10-35-2

The reader can see that the reduction in the CE Fees receivable is reduced as cash is collected. However, because the amount recorded at inception is the present value of the CE Fees estimated to be collected, a portion of the cash received represents the value arising from discounting the receivable. The entry for the CE Recourse Obligation is similar in this respect.

We note that many organizations that believe Accounting Practices Example Number Two is the correct interpretation simply account for the CE Fees on a cash basis as received because this methodology closely matches the accounting required under the example.

ACCOUNTING FOR THE CONTINGENT LIABILITY (RECOURSE LIABILITY AMOUNT)

The accounting for the Recourse Liability Amount depends on whether the PFI is subject to CECL.

PFIS NOT SUBJECT TO CECL

The FDIC in its Supervisory Insights News Winter 2004 – Accounting News states that "we believe that at the inception of the guarantee, it would normally not be probable that an institution would be called on to make payments to FHLBank to cover loan losses in excess of the FLA and the amount to be recorded as a liability at inception is zero. However, for each Master Commitment, an institution should reevaluate this contingent obligation regularly in accordance with FASB Statement #5, Accounting for Contingencies (FAS ASC 450-20). If available information about the performance of these loans indicates that it is probable that the institution will have to reimburse FHLBank for losses in excess of the FLA, and the amount of the loss can be reasonably estimated, the institution must accrue the estimated loss. This loss would be charged to earnings and an offsetting liability would be recorded for the institution's obligation to FHLBank. As payments

are made to FHLBank, the liability would be reduced."

PFIS SUBJECT TO CECL

Wilary Winn believes PFIs that are subject to the CECL standard should calculate potential credit losses using the same methodologies and models used to assess credit risk on residential real estate loans held in portfolio. We believe the CECL calculation is ideally calculated at the loan level and that the pools used to determine losses should be at the master commitment level. This will ensure that a PFI considers the benefit of the funded First Loss Account and the FHLBank covering losses in excess of the Credit Enhancement Obligation Amount.

OTHER RECOURSE PRODUCTS

MPF® 125

Under the MPF 125 product, the first layer of losses for each Master Commitment (following any PMI coverage) is paid by FHLBank up to the amount of the FLA which is 100 basis points of the delivered amount. The PFI then provides a second loss credit enhancement CE Recourse Obligation for each Master Commitment. Loan losses beyond the first and second layers are absorbed by FHLBank. The PFI's minimum CE Recourse Obligation is 25 basis points based on the amount delivered. The member is paid a performance-based CE Fee for providing the CE Recourse Obligation.

The accounting for the MPF 125 product is similar to the MPF Original product. The differences are primarily related to the underlying economics of the product. The FLA is larger, the maximum potential CE Recourse Obligation is smaller, and the amount of CE Fees to be received is generally less due to the fact that the CE Fees are performance-based.

MPF® 100

Under the MPF 100 Product losses (following any PMI coverage) is paid by FHLBank up to the amount of the FLA which is 100 basis points of the delivered amount. The member then provides a second loss CE Recourse Obligation for each Master Commitment. Loan losses beyond the first and second layers are absorbed by FHLBank. The PFI's minimum CE Recourse Obligation is 20 basis points based on delivered amount. The PFI is paid a performance-based CE Fee for providing the CE Recourse Obligation which is guaranteed for at least two years.

The accounting for the MPF 100 product is similar to the MPF Original product. The differences are primarily related to the underlying economics of the product. The FLA is larger, the maximum potential CE Recourse Obligation is smaller, and the amount of CE Fees to be received is generally less due to the fact that the CE Fees are performance-based.

MPF® PLUS

Under the MPF Plus product, the CE Recourse Obligation for the pool of loans in a Master Commitment is set so as to achieve the equivalent of a "AA" credit rating. Under this product, the PFI procures an SMI policy that insures all or a portion (at the PFI's option) of the PFI's CE Recourse Obligation. The FLA is initially set to be equal to the deductible on the SMI policy. Losses on the pool of loans not covered by the FLA and the SMI coverage are paid by the PFI, up to the amount of the member's uninsured CE Recourse Obligation, if any, under the Master Commitment. The FHLBank absorbs all losses in excess of the SMI coverage and the member's uninsured CE Recourse Obligation.

Each month, the member is paid a CE Fee for providing a CE Recourse Obligation. The fee is split into fixed and performance fees. The fixed CE Fee is paid beginning with the month after delivery and is designed to cover the cost of the SMI policy. The performance-based CE Fees, which are adjusted for loan losses, accrue and are paid monthly, commencing with the 13th month following each

delivery of loans. We believe the accounting for the MPF Plus CE Recourse Obligation is the same as that for the MPF Original, MPF 125 and MPF 35 products.

MPF® 35

Under the MPF 35 product, the first layer of losses for each Master Commitment (following any PMI coverage) is paid by FHLBank up to the amount of the FLA which is a percentage of the delivered amount specified in each Master Commitment. The PFI then provides a second loss CE Recourse Obligation for each Master Commitment. Loan losses beyond the first and second layers are absorbed by FHLBank. The member is paid both a fixed and a performance-based CE Fee for providing the CE Recourse Obligation. The performance-based fee begins accruing in month 1 and is paid to the PFI commencing with the thirteenth month following the delivery of the mortgage loan. Additionally, the PFI may choose to retain the Credit Enhancement obligation or purchase an SMI policy that would reduce its exposure to losses.

The accounting for the MPF 35 product is similar to the MPF 125 products. The differences are primarily related to the underlying economics of the product. The FLA is variable, but most likely smaller, and the amount of CE Fees to be received is generally more due to the fact that the CE Fees are both fixed and performance-based.

CREDIT ENHANCEMENT REGULATORY IMPLICATIONS

The CE Fees receivable and CE Recourse Obligation are similar to, and therefore subject to, many of the standards contained in the December 1999 *Inter-Agency Guidance on Asset Securitization Activities*. The key assumptions used to value the asset and the liability include prepayment rates, default rates, loss severity percentages and discount rates. As with MSRs, the Guidance requires comprehensive documentation of the valuation process; that the valuation be based on reasonable and supportable assumptions; and that assumptions be compared to actual results.

In addition, there are rules regarding required capital for insured institutions that sell loans under the MPF Program. The specifics are set forth in the Financial Institution Letter 99-21 *Final Rule to Amend Regulatory Capital Treatment of Recourse Arrangements, Direct Credit Substitutes, Residual interests, Residual Interests in Asset Securitizations, and Asset-Backed and Mortgage Backed Securities.*

IN GENERAL, THE MPF ORIGINAL PRODUCT REQUIRES THE MOST RISK-BASED CAPITAL BECAUSE THE OTHER MPF PRODUCTS HAVE LARGER FLAs FROM INCEPTION. FOLLOWING IS A SUMMARY OF THE CURRENT REGULATORY REPORTING REQUIREMENTS BY TYPE OF FINANCIAL INSTITUTION.

BANKS

Under BASEL III, the rules related to regulatory reporting of the credit enhancement obligation changed. The credit enhancement obligation amount is treated as a securitization. The Banking Agencies believe that exposures that tranche credit risk meet the definition of a synthetic securitization and that the risk of such exposures would be appropriately captured under the securitization framework.

Under the securitization framework, a PFI can calculate the risk-weighted amount for a securitization exposure by applying either the Simplified Supervisory Formula Approach ("SSFA") or a Gross-up approach under the general risk-based capital rules. However, a PFI must apply the SSFA or the Gross-up approach consistently across all of its securitization exposures. The question that arises is whether a bank can switch from the SSFA to the Gross-up approach or vice versa from quarter to quarter so long as it uses only one approach for the quarter. The rules here are silent. Based on our conversations with the banking regulators, Wilary Winn believes that a PFI can switch from one approach to

the other and that a PFI did not make an irrevocable decision at March 31, 2015. However, we believe the changes should be made infrequently and for a sound reason. We believe that frequently switching between the two approaches will invite regulatory scrutiny.

We note that a PFI can also elect to assign a 1,250 percent risk weight to any securitization exposure at any time - which is essentially a dollar-for-dollar required capital treatment.

SSFA APPROACH

Under the SSFA approach, the risk weighting is determined using a relatively complex set of calculations.

The calculation begins with an analysis of the capital requirements that apply to all exposures underlying the securitization. Risk weights are assigned based on the subordination level of an exposure. The formula assigns relatively higher capital requirements to the more risky junior tranches in a securitization which are designed to absorb losses first, while the senior tranches benefit from the subordination provided by the junior tranches. For the MPF Program, the CE Obligation amount is treated as a subordinate tranche in a securitization. The baseline capital requirement for the CE Obligation is four percent for the loans sold and outstanding under the Master Commitment that are current, and 8 percent for loans that are past due. The four percent is based on a required capital level of 8 percent multiplied by the risk weight for current first lien single family residential mortgage loans of 50 percent. Similarly, the risk weighting for non-current (defined as the balance of loans in the master commitment that are 90 days or more past due, subject to bankruptcy, in the process of foreclosure, held as OREO, which have contractually deferred interest payments of 90 days or more, or are in default) first lien single family residential mortgage loans is 100 percent. The result of this analysis is an SSFA formula input KG. In effect, KG is the capital charge the PFI would incur if it held the loans on its balance sheet instead of selling them under the MPF Program.

The banking agencies wanted to further tune the model to account for delinquent loans by adjusting K_G. The percentage of the non-current (as defined above) loans to the total loans sold and outstanding results in an input W. K_G is adjusted by W, resulting in K_A according to the following formula:

$$K_A = (1-W) * K_G + (0.5 * W)$$

The next calculation is to determine the level of subordination or when the PFI will begin incurring losses and when it will cease incurring losses under the master commitment. The beginning is called the attachment point (input A) and the ending is called the detachment point (input D). For the MPF Program, input A is equal to the first loss account percentage, and input D is equal to the first loss account percentage plus the credit enhancement percentage.

Wilary Winn has a BASEL III risk weighting tool ("MPF SSFA Calculator") and a "Guide to reporting under BASEL III for FHLBank MPF Program participants" available on our website at *www.wilwinn.com* under Resources.

For readers who are interested in the details of the SSFA approach, a step-by-step description of the calculation follows.

Begin with the calculation of K_G.

K_G - is equal to the weighted-average risk weight of the underlying exposures - which in this case is 4 percent for current loans and 8 percent for loans which are 90+ days delinquent or in non-accrual.

Adjust K_G for delinquent loans to derive K_A according the following formula:

$K_A = (1-W)*K_G + (0.5*W)$

W = The proportion of the loans sold and outstanding that meet the following criteria:

i. ninety days or more past due;
ii. subject to a bankruptcy or insolvency proceeding;
iii. in the process of foreclosure
iv. held as real estate owned
v. has contractually deferred interest payments for 90 days or more
vi. is in default

Next, determine the attachment and detachment points for the loans sold and outstanding.

A is the attachment point and is equal to the MPF Program first loss account as a percentage of the loans sold and outstanding.

D is the detachment point and is equal to the first loss account percentage plus the credit enhancement amount as a percentage of the loans sold and outstanding.

Essentially A represents the point at which the PFI begins incurring losses and D represents the point at which the PFI would no longer be incurring losses. If the detachment point percentage D (first loss account percentage plus CE obligation percentage) is less than or equal to K_A, the risk weighting is 1,250 percent. This is because the resulting calculation will result in an increase to risk-weighted assets of less than 50 percent – the baseline capital requirement. In this circumstance, the regulation essentially requires dollar-for-dollar capital treatment.

If A (first loss account percentage) is greater than or equal to K_A, the risk weight is equal to K_{SSFA} times 1,250 percent, subject to a minimum supervisory floor of 20 percent of the CE Obligation amount.

The K_{SSFA} formula is determined as follows:

$$\frac{e^{\alpha^*\mu} - e^{\alpha^*\iota}}{\alpha(\mu - \iota)} \text{ where,}$$

i. $\alpha = \dfrac{1}{\rho^* K_A}$

ii. ρ = An indicator variable that is equal to 0.5
iii. $\mu = D - K_A$
iv. $\iota = \max(A - K_A, 0)$
v. e = 2.71828, the base of natural logarithms

The K_{SSFA} formula calculates the theoretical losses a PFI could incur over the life of the underlying loans based on its CE Obligation percentage and the balance in the FLA account. The formula essentially fully recognizes the benefit of the FLA up to the required baseline capital percentage of K_A. The calculation is then based on the losses that a PFI could incur by comparing the CE Obligation percentage to the balance in the FLA in excess of the baseline capital requirement.

If A is less than K_A and D is greater than K_A the applicable risk weight is a weighted average of 1,250 percent and K_{SSFA} times 1,250 percent.

The precise formula is as follows:

Risk weight = greater of:

$$\left\{\left[\frac{K_A - A}{D - A}\right] \times 1{,}250\%\right\} + \left\{\left[\frac{D - K_A}{D - A}\right] \times 1{,}250\% \times K_{SSFA}\right\}; \text{ and}$$

20 percent (Supervisory Floor)

This formula begins by comparing the balance in the FLA to the required baseline capital percentage of K_A. The first part of the formula requires dollar for dollar capital treatment for the shortfall in the FLA account compared to K_A based on the losses a PFI could incur given its CE Obligation and the FLA percentage.

$$\left\{\left[\frac{K_A - A}{D - A}\right] \times 1{,}250\%\right\}$$

The second part of the formula is a calculation of the losses a PFI could incur in excess of the required baseline capital requirement of K_A using the K_{SSFA} formula.

GROSS-UP APPROACH

Under the Gross-up approach a bank is required to calculate the credit equivalent amount which equals the amount of the loans sold and outstanding less the balance in the first loss account. The credit equivalent amount is then risk weighted at 50 percent for loans that are current and 100 percent for non-current loans (as defined earlier). The minimum risk weight is 20 percent of the CE Obligation amount. To complete the Call Report, PFIs need to sum their CE Obligation Amounts and report the total on RC-R, Part II, Risk-Weighted Assets Line 10 Column A. For CE Obligation Amounts that are to be reported by multiplying by 12.5, report the total of the CE Obligation Amounts in Column Q. For CE Obligation Amounts that are to be risk-weighted under the SSFA method, report the total of the CE Obligation Amounts in Column B and the total calculated risk-weighted assets (not the total CE Obligation Amount) in Column T. For CE Obligation Amounts that are risk-weighted under the Gross-up approach, report the total of the CE Obligation Amounts in Column B and report the total calculated risk-weighted assets (not the total CE Obligation Amount) in Column U. Bear in mind that a PFI cannot select to report certain CE Obligation Amounts under the SSFA method and others under the Gross-up approach. A PFI must select one method or the other. In addition, we note that the CE Recourse Obligation amount net of any recorded recourse liability is reported in Schedule RCS, item 12A. For a complete example, see ***Guide to Reporting Under BASEL III for FHLB MPF Program Participants*** on the Wilary Winn website.

COMMUNITY BANK LEVERAGE RATIO

The Community Bank Leverage Ratio ("CBLR") final rule was recently adopted by the federal banking agencies and became effective on January 1, 2020. The rule is optional and designed to simply the calculation of regulatory capital. It allows community banks to calculate a leverage ratio based on total assets. Qualifying banks would thus no longer have to calculate risk-weighted assets.

We note that the final rule was modified April 6, 2020, by two interim final rules under Section 4012 of the Coronavirus Aid, Relief and Economic Security Act. The modifications are included below.

QUALIFYING COMMUNITY BANKING ORGANIZATION

A qualifying community banking organization is defined as a depository institution or depository institution holding company that is not an advanced approaches banking organization and that meets the following criteria:

- CBLR greater than 9 percent (8% for quarters 2 through 4 of 2020 and 8.5% in 2021);
- Total consolidated assets of less than $10 billion;
- Total off-balance sheet exposures (excluding derivatives other than credit derivatives and unconditionally cancelable commitments) of 25 percent or less of total consolidated assets;
- Total trading assets and trading liabilities of 5 percent or less of total consolidated assets.

CALCULATION OF THE CBLR

The CBLR is calculated as the ratio of Tier 1 Equity to average total consolidated assets. The Federal Banking Agencies estimate that as of March 31, 2019, there were 5,221 insured depository institutions with less than $10 billion in total assets and that 85% would qualify to use the CBLR. Similarly, FHLBank Topeka estimates 85% of banks in its region would also qualify to use the CBLR.

We note that the three-year phase-in of the potential

adverse impacts from CECL on regulatory capital remain in effect under the CBLR framework. We further note that banks required to account under CECL in 2020 can elect to delay its effect on regulatory capital for two years before reverting to the phase-in, under an interim final rule adopted by the banking regulators on March 27, 2020.

OFF-BALANCE SHEET EXPOSURES

While most of the qualifying criteria are relatively straightforward, off-balance sheet exposures require further explanation. Under the proposal, total off-balance sheet exposures would be calculated as the sum of the notional amounts of certain off-balance sheet items as of the end of the most recent calendar quarter. Total off-balance sheet exposures would include:

- The unused portions of commitments (except for unconditionally cancellable commitments);
- Self-liquidating, trade-related contingent items that arise from the movement of goods;
- Transaction-related contingent items including performance bonds, bid bonds, warranties and performance standby letters of credit;
- Sold credit protection through
    1. Guaranties
    2. Credit derivatives
    3. Credit enhancing representations and warranties
- Securities lent and borrowed, calculated in accordance with reporting instructions to the Call Report;
- Financial Standby Letters of credit;
- Forward agreements that are not derivative contracts; and
- Off-balance sheet securitization exposures

Total off-balance sheet exposures would not include derivatives (such as foreign exchange swaps and interest rate swaps) but would include credit derivatives.

The off-balance sheet exposure limitation has a direct effect on FHLBank MPF participating financial institutions. PFIs opting into the CBLR would no longer have to calculate the risk-weighted assets arising from the CE Obligation amount in accordance with BASEL III. It simply reports the total net CE Obligation amount under Tier I leverage ratio calculation as an off-balance sheet securitization exposure. The total net CE Obligation amount, combined with other off-balance sheet exposures, cannot exceed 25 percent of total assets.

The table below shows a simplified example assuming the PFI has $7,000 of net CE Obligations and no other off-balance sheet exposures.

Current Tier 1 Leverage Ratio		**9.38%**
Qualifying Criteria for Using the CBLR Framework:		
Total Consolidated Assets < $10 billion		$ 450,000
Trading Assets and Trading Liabilities as a % of Total Consolidated Assets (5% limit)	0.00%	-
Off-Balance Sheet Exposures:		
Unused Portion of Conditionally Cancellable Commitments	$ -	
Securities Lent or Borrowed	-	
Other Off-Balance Sheet Exposures	$ 7,000	
Total Off-Balance Sheet Exposures as % of Total Consolidated Assets (25% limit)	1.56%	$ 7,000

CBLR LESS THAN REQUIRED MINIMUM

What happens if a community bank elects the CBLR and then falls below the required minimum, because of growth in total assets and/or declines in Tier One equity. If a community banks falls below the required minimum CBLR threshold, it could revert to use of the existing rules. If a community bank elects to remain in the CBLR framework, the rule provides a two-quarter grace period to restore the ratio. The final interim rules provide that during the grace period, the bank's capital ratio must not fall more than 100 basis points below the required CBLR threshold. In 2022 and thereafter, to remain in the CBLR framework during the grace period, a community bank would have to meet the requirements to be well-capitalized under the existing rules.

BEFORE ADOPTING THE RULE

Even at the minimum of 8 percent, the CBLR capital threshold is well in excess of the 5 percent considered to be well-capitalized under the risk-based capital rules. Wilary Winn therefore strongly encourage PFIs to evaluate how adopting the CBLR framework would affect the amount of capital required to be held in bank. If the amount of capital restricted under the CBLR is substantially greater than the amount required under the existing rules, and the PFI has plans or needs to deploy it, we recommend the PFI consider reporting under the existing regulations.

CREDIT UNIONS

The NCUA 5300 rules are as follows. The outstanding principal amount of the loans is reported on page 11 line 5 - Loans Transferred with Limited Recourse Qualifying for Sales Accounting. For the standard risk based net worth calculation, the amount reported on page 11 line 5 will flow to page 13 item 6. a. and will result in a capital charge of 6 percent.

If the actual credit enhancement obligation is less than 6 percent, "complex" credit unions could benefit by calculating the capital charge under section 702.107 - Alternative components for standard calculation. In this way, the capital charge is limited to actual credit enhancement obligation percentage.

We note that complex credit unions are defined as those having more than $500 million of total assets and a standard risk based net worth over 6 percent.

Wilary Winn further notes that on October 9, 2015, the NCUA issued a new rule for Risk-Based Capital for credit unions with more than $500 million in total assets. Under the new rule, which is effective on January 1, 2022, loans sold to the FHLBanks with limited recourse would be reported in total riskbased assets as follows – the balance of loans sold and outstanding (net of any valuation allowances) would be multiplied by a 20% credit conversion factor and then risk-weighted at 50%. In other words, 10% of the balance of the loans sold and outstanding would be included in total risk-weighted assets.

CONCLUSION

This handbook is designed to provide financial institution PFIs with assistance in complying with the accounting and regulatory implications resulting from delivering loans to the Federal Home Loan Banks under the Mortgage Partnership Finance Program.

THE ISSUES ADDRESSED IN THE HANDBOOK ARE RELATIVELY COMPLEX AND ARE BASED ON GENERAL EXAMPLES. READERS ARE STRONGLY ENCOURAGED TO REVIEW THE RECOMMENDATIONS SET FORTH IN THE HANDBOOK WITH THEIR INDEPENDENT ACCOUNTANTS AND PRIMARY REGULATORS TO OBTAIN THEIR INPUT AND COMMENTS BEFORE IMPLEMENTING THESE PROCEDURES, BECAUSE THE SPECIFIC FACTS AND CIRCUMSTANCES FOR A PARTICULAR INSTITUTION MAY LEAD TO DIFFERENT ACCOUNTING AND REGULATORY INTERPRETATIONS THAN THOSE DESCRIBED HEREIN.

About the Authors

ERIC J. NOKKEN

Mr. Nokken has over twenty years of experience in the financial services industry and has been with Wilary Winn since 2004.

Mr. Nokken leads Wilary Winn's mortgage banking activities line of business. Eric's team provides mortgage servicing rights valuations on portfolios that range in size from $4 million to over $4 billion for more than 250 clients across the country. Eric is an expert in the accounting and regulatory reporting related to mortgage banking activities, including interest rate lock commitment and forward loan sale commitment derivatives, as well as mortgage servicing rights.

Mr. Nokken's team also values commercial servicing rights, SBA servicing rights and gain on sale calculations related to SBA loan sales as well as auto, home equity and HELOC servicing related to loan sale participations.

Prior to joining Wilary Winn, Mr. Nokken served as Manager of Financial Planning and Analysis at GE Home Finance and its predecessor company. His work included developing financial models to budget the servicing operation's delinquencies, losses and required reserves, as well as forecasting interest income for the company's home-equity portfolio. He also valued the companies' servicing rights and residual assets quarterly.

Mr. Nokken has also served as an Assistant Lender in a community bank.

ANNELIESE RAMIN

Ms. Ramin has been with the firm since 2015. In her role as a Manager, Anneliese leads analysts performing valuations of residential mortgage servicing rights portfolios, commercial servicing rights, SBA servicing rights, gain on sale calculations related to SBA loan sales, and trust preferred CDOs (TruPS). She also works to build these business lines, ensure the work is properly staffed and mentor our team of financial analysts.

Anneliese also assists the firm with various fair value engagements including mergers and acquisitions and Current Expected Credit Loss (CECL) analyses. Anneliese received her Bachelor's Degree in Actuarial Science from the University of Wisconsin-Eau Claire.

About Wilary Winn

Founded in 2003, Wilary Winn, LLC and its sister company, Wilary Winn Risk Management LLC, provide independent, fee-based advice to more than 500 financial institutions located across the country. We provide the following services:

OUR CECL & ALM SERVICES INCLUDE:

Credit Risk:

- Current Expected Credit Loss (CECL)
- Capital Stress Testing
- Concentration Risk Management
- Real Return Analyses

Outsourced ALM Advisory:

- Interest Rate Risk Management
- Budgeting and Balance Sheet Optimization
- Liquidity Stress Testing

MERGERS & ACQUISITIONS

We provide independent, fee-based determinations of fair value for mergers and acquisitions.

Our Merger & Acquisition Services Include:

- Preliminary and Final Merger Valuation
- Accretion True-up
- Goodwill Impairment Testing
- ASC 310-30

VALUATION OF LOAN SERVICES

We provide comprehensive and cost-effective valuations of servicing arising from the sale of residential mortgage, SBA 7(a), auto, home equity and commercial loans.

Our Loan Servicing Offerings Include:

- Residential MSRs
- SBA 7(a) Loan Servicing
- Commercial Servicing

ADDITIONAL SERVICES

We provide services to support our CECL, ALM, Fair Value and Loan Servicing product offerings.

Our Additional Services Include:

- Fair Value Footnote
- ALM Model Validation
- Non-Maturity Sensitivity Analyses
- Mortgage Banking Derivatives (IRLCs)
- SBA 7(a) Gain on Sale
- Troubled Debt Restructurings (TDRs)
- Non-Agency MBS
- TruPS

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WILARY WINN LLC

12/31/2019

																Rate Sheet Price Adjustment			Interest Rate Lock-in Commitments							
Loan ID	Status	Program	Term	Rate	Estimated Close Date	Loan Amount	Discount Points in Dollars	Basis in Loan [1]	Lock Expiration Date	Days until Lock Expiration	Investor	Original Investor Price	Doc. & U/W Fees	Commissions	Other Rem. Orig. Costs	Acct. Net Gain on Sale (BPS)	Investor Price at 12/31/2019 based on actual lock days	SRP (n/a if already included in price)	Adjusted Investor Price at 12/31/2019 [2]	Investor Price at 12/31/2019 less Basis in Loan	Rem. Orig. Benefits	Rem. Orig. Costs	Value at 12/31/2019 before Pull-Through	Pull-Through Rate	Value at 12/31/2019 Adjusted for Pull-Through	Gain	Loss
Adams	Approved	Conventional	240	4.250%	01/10/20	176,928	-	100.00	01/11/20	11	FHLB	103.580	950.00	884.64	3,050.00	189.31	102.776	0.850	103.626	3.626	950.00	(3,934.64)	3,430.77	70%	2,401.54	2,401.54	-
Johnson	Processing	Conventional	360	3.875%	01/10/20	369,000	-	100.00	01/06/20	6	FHLB	102.934	950.00	1,845.00	2,600.00	198.68	102.478	1.000	103.478	3.478	950.00	(4,445.00)	9,338.82	80%	7,471.06	7,471.06	-
Smith	Closing	Conventional	360	3.875%	01/31/20	269,560	1,348	99.50	02/10/20	40	FHLB	102.697	950.00	1,347.80	2,125.00	226.11	102.181	0.950	103.131	3.631	950.00	(3,472.80)	7,264.92	95%	6,901.68	6,901.68	-
Turner	Processing	FHA	360	3.250%	01/10/20	243,675	-	100.00	01/23/20	23	FHLB	103.668	950.00	1,218.38	2,600.00	249.09	102.661	1.200	103.861	3.861	950.00	(3,818.38)	6,539.92	80%	5,231.93	5,231.93	-
Jones	Underwriting	Conventional	360	3.875%	01/10/20	305,610	-	100.00	01/27/20	27	FHLB	100.547	950.00	1,528.05	2,525.00	(46.84)	99.875	0.950	100.825	0.825	950.00	(4,053.05)	(581.77)	90%	(523.59)	-	523.59
Total						**1,364,773**	**1,348**	**99.90**				**102.567**	**4,750.00**	**6,823.87**	**12,900.00**	**156.91**					**4,750.00**	**(19,723.87)**	**25,992.66**		**21,482.61**	**22,006.21**	**523.59**

Number of Loans: 5

Weighted Average Rate: 3.812%

[1] Basis in Loan is calculated by taking Par minus Discount

[2] All prices are sample prices

	DR	CR
Derivative Asset	22,006.21	
Other Non-Interest Income		22,006.21

	DR	CR
Other Non-Interest Expense	523.59	
Derivative Liability		523.59

Loans Locked Not Settled - Mark to Market

WILARY WINN LLC

12/31/2019

Loan ID	Status	Program	Term	Rate	Estimated Close Date	Loan Amount	Discount Points in Dollars	Basis in Loan [1]	Lock Expiration Date	Days until Lock Expiration	Investor	Original Investor Price	Doc. & U/W Fees	Commissions	Other Rem. Orig. Costs	Acct. Net Gain on Sale (BPS)	Rate Sheet Price Adjustment: Investor Price at 12/31/2019 based on actual lock days	Rate Sheet Price Adjustment: SRP (n/a if already included in price)	Rate Sheet Price Adjustment: Adjusted Investor Price at 12/31/2019 [2]	Mandatory Forward Sales Commitments: Original Investor Price less 12/31/2019 Investor Price	Mandatory Forward Sales Commitments: Value at 12/31/2019 before Pull-Through	Mandatory Forward Sales Commitments: Pull-Through Rate	Mandatory Forward Sales Commitments: Value at 12/31/2019 Adjusted for Pull-Through	Gain	Loss
Adams	Approved	Conventional	240	4.250%	01/10/20	176,928	-	100.00	01/11/20	11	FHLB	103.580	950.00	884.64	3,050.00	189.31	102.776	0.850	103.626	(0.046)	(81.39)	70%	(56.97)	-	56.97
Johnson	Processing	Conventional	360	3.875%	01/10/20	369,000	-	100.00	01/06/20	6	FHLB	102.934	950.00	1,845.00	2,600.00	198.68	102.478	1.000	103.478	(0.544)	(2,007.36)	80%	(1,605.89)	-	1,605.89
Smith	Closing	Conventional	360	3.875%	01/31/20	269,560	1,348	99.50	02/10/20	40	FHLB	102.697	950.00	1,347.80	2,125.00	226.11	102.181	0.950	103.131	(0.434)	(1,169.89)	95%	(1,111.40)	-	1,111.40
Turner	Processing	FHA	360	3.250%	01/10/20	243,675	-	100.00	01/23/20	23	FHLB	103.668	950.00	1,218.38	2,600.00	249.09	102.661	1.200	103.861	(0.193)	(470.29)	80%	(376.23)	-	376.23
Jones	Underwriting	Conventional	360	3.875%	01/10/20	305,610	-	100.00	01/27/20	27	FHLB	100.547	950.00	1,528.05	2,525.00	(46.84)	99.875	0.950	100.825	(0.278)	(849.60)	90%	(764.64)	-	764.64
Total						**1,364,773**	**1,348**	**99.90**				**102.567**	**4,750.00**	**6,823.87**	**12,900.00**	**156.91**					**(4,578.53)**		**(3,915.13)**	**0.00**	**3,915.13**

Number of Loans: 5

Weighted Average Rate: 3.812%

[1] Basis in Loan is calculated by taking Par minus Discount

[2] All prices are sample prices

	DR	CR
Other Asset	-	
Other Non-Interest Income		-

	DR	CR
Other Non-Interest Expense	3,915.13	
Other Liability		3,915.13

WILARY WINN LLC

ABC Bank - $148.7 MM Servicing Portfolio Valuation as of December 31, 2019

												Mortgage Servicing Right					CE Fee Receivable	
		Principal Balance	# of Loans	WAC	WAM	Age	Average Life	Service Fee	T&I Total	Prepayment PSA	Servicing Multiple	Fair Value %	Fair Value $	Book Value $	Fair Value - Book Value	Bal. Sheet Impact	Fair Value %	Fair Value $
30 & 25 year	less than 4.250%	62,058,418	490	3.805%	317	42	6.48	0.250%	192,357	192	3.86	0.965%	598,905	511,392	87,513	-	0.301%	186,963
	4.250% - 6.250%	42,181,385	377	4.579%	318	42	4.64	0.250%	129,939	313	3.11	0.779%	328,460	346,769	(18,309)	(18,309)	0.243%	102,341
	greater than 6.250%	743,847	11	6.644%	198	162	4.24	0.250%	2,764	261	2.46	0.616%	4,580	1,484	3,096	-	0.231%	1,719
	Total 30 & 25 year	104,983,649	878	4.136%	317	43	5.73	0.250%	325,060	241	3.55	0.888%	931,944	859,645	72,300	(18,309)	0.277%	291,023
20 year	less than 4.000%	10,303,575	109	3.584%	200	40	5.46	0.250%	36,476	167	3.41	0.852%	87,836	65,076	22,761	-	0.279%	28,748
	4.000% - 6.000%	5,249,151	59	4.425%	197	43	3.96	0.250%	18,945	293	2.71	0.678%	35,572	38,839	(3,266)	(3,266)	0.222%	11,672
	greater than 6.000%	112,383	3	6.458%	92	148	2.55	0.250%	673	260	0.64	0.161%	181	106	74	-	0.163%	183
	Total 20 year	15,665,109	171	3.887%	198	42	4.94	0.250%	56,094	210	3.16	0.789%	123,589	104,021	19,568	(3,266)	0.259%	40,602
15 year	less than 3.500%	16,024,314	203	3.107%	127	53	3.84	0.250%	68,833	171	2.72	0.681%	109,096	75,332	33,764	-	0.221%	35,457
	3.500% - 5.500%	11,340,154	170	3.805%	133	47	3.41	0.250%	54,529	250	2.39	0.597%	67,720	70,155	(2,435)	(2,435)	0.201%	22,790
	greater than 5.500%	16,361	2	6.375%	30	150	1.14	0.250%	421	239	0.50	0.126%	21	(9)	30	-	0.087%	14
	Total 15 year	27,380,829	375	3.398%	130	50	3.66	0.250%	123,783	204	2.58	0.646%	176,836	145,477	31,359	(2,435)	0.213%	58,262
10 year	less than 3.125%	197,846	6	2.916%	50	70	1.72	0.250%	1,982	155	1.20	0.301%	595	199	396	-	0.119%	236
	3.125% - 5.125%	717,716	18	3.870%	95	25	2.72	0.250%	2,698	298	1.75	0.437%	3,134	2,477	657	-	0.172%	1,236
	greater than 5.125%	-	-	0.000%	0	0	0.00	0.000%	-	0	0.00	0.000%	-	-	-	-	0.000%	-
	Total 10 year	915,562	24	3.664%	86	34	2.50	0.250%	4,680	267	1.63	0.407%	3,729	2,676	1,053	-	0.161%	1,472
Grand Total		148,945,150	1,448	3.971%	268	44	5.24	0.250%	509,617	231	3.32	0.830%	1,236,098	1,111,819	124,279	(24,010)	0.263%	391,359

Existing Impairment Reserve	(8,763)
(Additional) / Excess Impairment	(15,247)

Credit Union Name:_____ Federal Charter/Certificate Number:_____

SCHEDULE D

DERIVATIVE TRANSACTIONS REPORT AS OF: _____

1. Total Derivative Transactions Outstanding:	Total Notional Amount	Acct	Net Fair Value Gain (Loss)	Acct	Weighted Average Years to Maturity	Acct
a. Interest Rate Swaps:						
i. Pay-fixed		1020		1020C		1020Y
ii. Receive-fixed		1021		1021C		1021Y
iii. Basis		1022		1022C		1022Y
b. Interest Rate Options:						
i. Caps Purchased		1023		1023C		1023Y
ii. Floors Purchased		1024		1024C		1024Y
c. Treasury Futures:						
i. 2 & 3 Year Notes		1025		1025C		1025Y
ii. 5 & 10 Year Notes		1026		1026C		1026Y
d. Other Derivatives:						
i. All Other Derivatives		1027		1027C		1027Y
Total Derivatives		**1030**		**1030C**		**1030Y**

The Interest Rate Lock Commitments (IRLC) and Forward Loan Sale Commitments (FLSC) should be reported in d. Other Derivatives: i. All Other Derivatives.

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