Mortgage Servicing Rights

RSM McGladrey, Inc.

IN: FS Mortgage Servicing Rights

Annual FI Conference June 27, 2005
Mortgage Servicing Rights

Background
Accounting
Valuation
Reporting and Impairment Testing
Required Repurchases and Fraud Issues
Regulatory Requirements
Auditing
FHLBank Mortgage Programs
Mortgage Servicing Rights

- Servicing rights arise when loans are sold into the secondary market.
- The secondary market buyers are the Government sponsored enterprises (GSEs) – Fannie Mae, Freddie Mac and the FHLBanks.
Mortgage Servicing Rights

• Servicing is inherent in all financial assets; it becomes a distinct asset or liability only when contractually separated from the underlying assets by sale or securitization of the assets with servicing retained, or separate purchase or assumption of the servicing. SFAS 140 paragraph 61.

• Servicing is recognized in accordance with SFAS 140 paragraph 63, as follows on next slide:
Recognition of Mortgage Servicing Rights

- Report servicing assets separately from servicing liabilities.
- Initially measure servicing assets at their allocated previous carrying amount, based on relative fair value.
- Initially measure servicing liabilities at fair value.
- Account for servicing fees that exceed the contractually specified amount as an interest only strip.
- Amortize in proportion and over the time period of estimated net servicing income.
Example Transaction

- Company A originates a $150,000 loan at 6.00% and sells it servicing retained to one of the GSEs at a pass-through rate of 5.75%. Sale is at par and the contractually specified servicing rate is .25%.

- Estimated fair values are as follows:
  - Cash proceeds - $150,000
  - Servicing asset - $1,200
Sample Journal Entries - Simplified

JE 1    Loans                  $150,000
         Cash                  $150,000
Record loan funding

JE 2    Cash                   $150,000
         Loans                 $150,000
Record loan sale

JE 3    Servicing Asset       $1,200
         Gain on Sale         $1,200
Record loan sale

Technically, the sale should be recorded at relative fair value as follows:
## Allocation of Relative Fair Value

<table>
<thead>
<tr>
<th>Allocation</th>
<th>Value</th>
<th>Fair Value</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans Sold</td>
<td>$150,000</td>
<td>99.2%</td>
<td>$148,810</td>
</tr>
<tr>
<td>Servicing Asset</td>
<td>1,200</td>
<td>0.8%</td>
<td>1,190</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$151,200</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>$150,000</strong></td>
</tr>
</tbody>
</table>

## Gain on Sale

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Proceeds</td>
<td>$150,000</td>
</tr>
<tr>
<td>Carrying Amount of Loans</td>
<td>$(148,810)</td>
</tr>
<tr>
<td>Gain on Sale</td>
<td>$1,190</td>
</tr>
</tbody>
</table>
Sample Journal Entries - Relative Fair Value

JE 1  Loans    $150,000
       Cash             $150,000
Record loan funding

JE 2  Cash                      $150,000
       Loans                $148,810
       Gain on Sale      $1,190
Record loan sale

JE 3  Servicing Asset       $1,190
       Loans             $1,190
Record loan sale
### Simplified Servicing Income Statement - Month 1 - Cash Basis

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount 1</th>
<th>Amount 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Servicing Income</td>
<td>$31.25</td>
<td>$150,000* .0025/12</td>
</tr>
<tr>
<td>Ancillary Income</td>
<td>1.04</td>
<td>$12.50/12</td>
</tr>
<tr>
<td>Value of Escrows</td>
<td>2.58</td>
<td>$1000* .0309/12</td>
</tr>
<tr>
<td>Servicing Costs</td>
<td>(4.17)</td>
<td>$50/12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$30.70</strong></td>
<td></td>
</tr>
</tbody>
</table>
Mortgage Servicing

• Value in accordance with the Implementation Guide
• Benefits are expected to exceed adequate compensation.
• Adequate compensation is determined by the marketplace and is based on the contractually specified servicing fees and other benefits demanded in the marketplace to perform the servicing.
• The fair value arising from the benefits is ideally based on quoted market values. If quoted market values are unavailable, the value can be estimated using a discounted cash flow model.
Valuation

Major valuation components

• Servicing fee percentage – varies by investor and type of loan
• Ancillary income
• Expected loan life – prepayment
• Discount rate
• Costs to service – market costs
• Delinquency rate and foreclosure losses – recourse versus non-recourse
## Valuation of Conforming Conventional

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Value</th>
<th>Change</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>1.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepayments increase 30%</td>
<td>1.05</td>
<td>-0.15</td>
<td>-12.5%</td>
</tr>
<tr>
<td>Servicing costs increase 30%</td>
<td>1.16</td>
<td>-0.04</td>
<td>-3.3%</td>
</tr>
<tr>
<td>Delinquencies increase 30%</td>
<td>1.19</td>
<td>-0.01</td>
<td>-0.8%</td>
</tr>
<tr>
<td>Discount rate increases 30%</td>
<td>1.11</td>
<td>-0.09</td>
<td>-7.5%</td>
</tr>
</tbody>
</table>
MSR Valuation and Negative Convexity
Reporting

Amortization Methodologies

- Level yield
- Sum of the years digits
- Straight line with actual write-offs
### Income and Amortization Entries

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$31.25</td>
</tr>
<tr>
<td>Servicing Income</td>
<td>$31.25</td>
</tr>
<tr>
<td>Servicing Fee Amortization</td>
<td>$27.78</td>
</tr>
<tr>
<td>Mortgage Servicing Asset</td>
<td>$27.78</td>
</tr>
</tbody>
</table>

SYD 8 year life - month 1
Simplified Servicing Income Statement - Month 1

Servicing Income     $ 31.25
Amortization Expense (27.78)
Ancillary Income      1.04
Value of Escrows      2.58
Servicing Costs      (4.17)

$ 2.92
Evaluate and measure impairment by:

- Stratifying servicing assets based on one or more predominant risk characteristics.
- Recognize impairment through a valuation allowance for an individual stratum.
- Adjust the valuation allowance based on fair value – however LOCOM.
Impairment Testing

Predominant Risk Characteristics:

- Interest Rate
- Type of Loan
- Loan Size
- Date of Origination
- Term
- Geographic Location
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”, which requires a direct write-off.
### Sample Bank - $265.0 MM Servicing Portfolio Valuation

<table>
<thead>
<tr>
<th>Principal Balance</th>
<th>WAC</th>
<th>WAM</th>
<th>Service Fee</th>
<th>T&amp;I Total</th>
<th>Prepayment PSA</th>
<th>Age</th>
<th>Fair Value %</th>
<th>Fair Value $</th>
<th>Book Value $</th>
<th>Fair Value - Book Value</th>
<th>Bal. Sheet Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>30 &amp; 25 year</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>less than 5.125%</td>
<td>1,598,077</td>
<td>4.973%</td>
<td>351 0.25%</td>
<td>1,726</td>
<td>188</td>
<td>9</td>
<td>1.228%</td>
<td>19,617</td>
<td>17,922</td>
<td>1,694</td>
<td>-</td>
</tr>
<tr>
<td>5.125% - 7.125%</td>
<td>125,203,980</td>
<td>5.872%</td>
<td>348 0.25%</td>
<td>127,736</td>
<td>387</td>
<td>10</td>
<td>0.840%</td>
<td>1,051,192</td>
<td>1,088,805</td>
<td>(37,613)</td>
<td>(37,613)</td>
</tr>
<tr>
<td>greater than 7.125%</td>
<td>3,401,916</td>
<td>7.496%</td>
<td>309 0.25%</td>
<td>5,315</td>
<td>671</td>
<td>51</td>
<td>0.415%</td>
<td>14,131</td>
<td>18,876</td>
<td>(4,746)</td>
<td>(4,746)</td>
</tr>
<tr>
<td>Total 30 year</td>
<td>130,203,973</td>
<td>5.904%</td>
<td>347 0.25%</td>
<td>134,778</td>
<td>392</td>
<td>11</td>
<td>0.834%</td>
<td>1,084,939</td>
<td>1,125,603</td>
<td>(40,664)</td>
<td>(42,359)</td>
</tr>
<tr>
<td><strong>20 year</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>less than 5.00%</td>
<td>1,278,080</td>
<td>4.875%</td>
<td>233 0.25%</td>
<td>1,330</td>
<td>188</td>
<td>7</td>
<td>1.097%</td>
<td>14,023</td>
<td>12,530</td>
<td>1,494</td>
<td>-</td>
</tr>
<tr>
<td>5.00% - 6.50%</td>
<td>20,065,692</td>
<td>5.613%</td>
<td>230 0.25%</td>
<td>22,597</td>
<td>298</td>
<td>10</td>
<td>0.897%</td>
<td>179,893</td>
<td>177,235</td>
<td>2,658</td>
<td>-</td>
</tr>
<tr>
<td>greater than 6.50%</td>
<td>842,365</td>
<td>6.815%</td>
<td>207 0.25%</td>
<td>277</td>
<td>658</td>
<td>31</td>
<td>0.392%</td>
<td>3,298</td>
<td>4,689</td>
<td>(1,391)</td>
<td>(1,391)</td>
</tr>
<tr>
<td>Total 20 year</td>
<td>22,186,137</td>
<td>5.616%</td>
<td>229 0.25%</td>
<td>24,205</td>
<td>305</td>
<td>11</td>
<td>0.889%</td>
<td>197,214</td>
<td>194,454</td>
<td>2,760</td>
<td>(1,391)</td>
</tr>
<tr>
<td><strong>15 year</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>less than 4.50%</td>
<td>1,585,506</td>
<td>4.375%</td>
<td>173 0.25%</td>
<td>1,108</td>
<td>192</td>
<td>7</td>
<td>0.934%</td>
<td>14,801</td>
<td>13,610</td>
<td>1,191</td>
<td>-</td>
</tr>
<tr>
<td>4.50% - 6.50%</td>
<td>72,053,883</td>
<td>5.213%</td>
<td>168 0.25%</td>
<td>72,868</td>
<td>300</td>
<td>11</td>
<td>0.781%</td>
<td>562,441</td>
<td>576,566</td>
<td>(14,126)</td>
<td>(14,126)</td>
</tr>
<tr>
<td>greater than 6.50%</td>
<td>2,298,817</td>
<td>6.992%</td>
<td>116 0.25%</td>
<td>4,281</td>
<td>439</td>
<td>64</td>
<td>0.409%</td>
<td>9,403</td>
<td>11,800</td>
<td>(2,397)</td>
<td>(2,397)</td>
</tr>
<tr>
<td>Total 15 year</td>
<td>75,938,207</td>
<td>5.249%</td>
<td>166 0.25%</td>
<td>78,258</td>
<td>302</td>
<td>13</td>
<td>0.773%</td>
<td>586,645</td>
<td>601,976</td>
<td>(15,331)</td>
<td>(16,522)</td>
</tr>
<tr>
<td><strong>10 year &amp; Balloons</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>less than 4.125%</td>
<td>1,140,076</td>
<td>3.964%</td>
<td>77 0.25%</td>
<td>1,886</td>
<td>216</td>
<td>7</td>
<td>0.907%</td>
<td>10,345</td>
<td>9,537</td>
<td>807</td>
<td>-</td>
</tr>
<tr>
<td>4.125% - 6.125%</td>
<td>34,947,979</td>
<td>4.838%</td>
<td>86 0.25%</td>
<td>32,578</td>
<td>310</td>
<td>10</td>
<td>0.705%</td>
<td>246,414</td>
<td>253,897</td>
<td>(7,483)</td>
<td>(7,483)</td>
</tr>
<tr>
<td>greater than 6.125%</td>
<td>583,628</td>
<td>6.348%</td>
<td>66 0.25%</td>
<td>510</td>
<td>607</td>
<td>23</td>
<td>0.410%</td>
<td>2,393</td>
<td>2,739</td>
<td>(346)</td>
<td>(346)</td>
</tr>
<tr>
<td>Total 10 year &amp; bal.</td>
<td>36,671,684</td>
<td>4.835%</td>
<td>86 0.25%</td>
<td>34,974</td>
<td>312</td>
<td>10</td>
<td>0.707%</td>
<td>259,152</td>
<td>266,173</td>
<td>(7,021)</td>
<td>(7,828)</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>265,000,000</td>
<td>5.544%</td>
<td>249 0.25%</td>
<td>272,214</td>
<td>348</td>
<td>11</td>
<td>0.803%</td>
<td>2,127,950</td>
<td>2,188,206</td>
<td>(60,256)</td>
<td>(68,101)</td>
</tr>
</tbody>
</table>
FASB Servicing Rights Project

- Companies can choose fair value of LOCOM
- Changes in fair value flow through earnings
- Initially recognize at fair value versus relative fair value
- Expanded disclosure for LOCOM including roll forward, servicing fees earned, description of valuation techniques and sensitivity analysis
Investors may generally require sellers to repurchase loans if:

- Final loan documents were not delivered on time
- The loan is not investor “eligible”
- The mortgagor fails to make their first payment
- The loan becomes severely delinquent (60 days within 6 months or 90 days within a year)
- Material breaches in the representations and warranties were made
- Evidence of fraud is discovered pertaining to the origination or sale of the loan
Avoiding Fraud

Have your clients redouble their quality control efforts:

• Increase the percentage of loans reviewed prior to close.
• Order a higher percentage of review appraisals and cull approved appraiser lists.
• Use contract underwriters in order to transfer the repurchase risk.
• Cull approved broker and correspondent lists
• Use fraud detection technology
Identifying Potential Repurchases

- Review recent internal quality control reports.
- Obtain and review recent required repurchases.
- Obtain and review recent investor “report cards”.

Required Repurchases and Fraud
Mortgage Servicing Rights

Three primary considerations:

• GAAP
• Investor requirements
• Regulatory requirements
Investor Requirements

- Federal National Mortgage Association – FNMA – Fannie Mae
- Federal Home Loan Mortgage Corporation – FHLMC – Freddie Mac
- Government National Mortgage Association – GNMA – Ginnie Mae
- Private Investors – GMAC RFC, Countrywide, and others
Fannie Mae

Requirements are set forth in Seller/Servicer Contract and Seller/Servicer Guides and include:

• Specified net worth
• Evidence of insurance
• Review of specified servicing procedures
• Evidence of Fannie Mae stock ownership
• Certification regarding document custodian
Freddie Mac

Requirements are set forth in Seller/Servicer Contract and Seller/Servicer Guides and include:

- Required net worth
- Insurance
- Quality control
- Custodial accounts
- Certification regarding document custodian
Ginnie Mae Requirements

Requirements for non-supervised lenders are set forth in Ginnie Mae 5500.3 Rev. 1 and include:

• Auditor qualification requirements
• Audit scope and approach
• Matters requiring immediate attention
• Planning the audit
• Consideration of internal controls
• Quality control reviews
• Corrective action plans
• Fair housing and non-discrimination
Ginnie Mae MBS

There are additional requirements for issuers of GNMA MBS including:

- Report on internal controls
- Compliance with specific requirements
- Adjusted net worth calculation
- Insurance requirement
Private Investors

Investors may require audit report based on the Uniform Single Attestation Program (USAP) for Mortgage Bankers developed by the Mortgage Bankers Association of America.
Substantive Tests for Mortgage Servicing Rights

- Review the assumptions used in the valuation process for reasonableness and compare to actual results.
- Pay particular attention to the assumptions regarding prepayments.
- Evaluate the adequacy of the liability for recourse obligations.
- Determine the approval process required to change valuation assumptions.
- Review the sensitivity or interest rate shock analyses.
Inter-Agency Advisory Mortgage Banking - February 2003

- Need to comply with rules on interest rate risk
- Need to consider how mortgage banking affects strategic, business and asset / liability plans
- Establish asset / capital limits for mortgage banking
Recommended Policies and Procedures per the Advisory:

• Use of a quality control program to monitor underwriting and documentation practices
• Periodic reconciliation of cash receipts and payments applied to the servicing system
• Periodic reconciliation of the custodial accounts
• Periodic reconciliation of servicing fees received to the amount recorded in the GL
Inter-Agency Advisory - Mortgage Servicing Rights

- Requires comprehensive documentation of valuation process
- Valuation must be based on reasonable and supportable assumptions
- Compare assumptions to actual results
- Major changes to valuation assumptions must be approved
- Use appropriate amortization
- Recognize impairment timely
Federal Home Loan Banks

• Federal Home Loan Banks are Government-sponsored enterprises regulated by the Federal Housing Finance Board.

• The FHLBanks are capitalized through the capital stock investments of their members, which include banks, credit unions, thrifts, and insurance companies.

• There are more than 8,000 member institutions and the FHLBanks had total assets of $935 billion at 12/31/04.

• The FHLBanks owned $114 billion of mortgage loans and $113 billion of mortgage backed securities at 12/31/04.
MPF Credit Enhancement Fee

- Paid to member for assuming credit risk on mortgage defaults
- Determined by the quality of the loans at the pool level and the MPF program selected
- Fee paid monthly over the life of the loans
Credit Enhancement Obligation

- Credit quality is determined at the loan level
- S & P’s LEVELS model assigns risk score
- Weighted average credit enhancement at the pool level defines maximum credit risk exposure
MPF Program

Loan Loss Absorption

- Home Owner’s Equity
- Primary Mortgage Insurance
- First Loss Account
- Credit Enhancement Obligation
- Home Loan Bank
MPF Program

Credit Enhancement Obligation Variables

• Cumulative Prepayment Rate (CPR)
• Cumulative Default Rate (CDR)
• Severity of Actual Losses
## Credit Enhancement Obligation

<table>
<thead>
<tr>
<th>PSA</th>
<th>0.00%</th>
<th>0.02%</th>
<th>0.04%</th>
<th>0.07%</th>
<th>0.15%</th>
<th>0.25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>0.51%</td>
<td>0.41%</td>
<td>0.32%</td>
<td>0.18%</td>
<td>-0.20%</td>
<td>-0.67%</td>
</tr>
<tr>
<td>200</td>
<td>0.48%</td>
<td>0.39%</td>
<td>0.30%</td>
<td>0.17%</td>
<td>-0.19%</td>
<td>-0.63%</td>
</tr>
<tr>
<td>250</td>
<td>0.41%</td>
<td>0.33%</td>
<td>0.26%</td>
<td>0.14%</td>
<td>-0.16%</td>
<td>-0.54%</td>
</tr>
<tr>
<td>300</td>
<td>0.37%</td>
<td>0.30%</td>
<td>0.23%</td>
<td>0.13%</td>
<td>-0.15%</td>
<td>-0.49%</td>
</tr>
<tr>
<td>500</td>
<td>0.26%</td>
<td>0.21%</td>
<td>0.17%</td>
<td>0.09%</td>
<td>-0.10%</td>
<td>-0.35%</td>
</tr>
<tr>
<td>700</td>
<td>0.21%</td>
<td>0.17%</td>
<td>0.13%</td>
<td>0.07%</td>
<td>-0.08%</td>
<td>-0.27%</td>
</tr>
</tbody>
</table>
Accounting Implications

• FAS 140 requires that the Credit Enhancement Fees Receivable be recorded as an asset at the time of sale at its fair value. The receivable is to be subsequently reported at its fair market value under FAS 115 – Accounting for Certain Investments in Debt and Equity Securities.

• The guarantee should be recorded as a Recourse Obligation Liability at the time of sale under FAS 140. Further guidance is provided by FASB Interpretation 45 Guarantor’s Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others (FIN 45).
Regulatory Issues

- The Credit Enhancement Fees Receivable and Guarantee Liability 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 liability include prepayment rates, default rates, loss severity factors and discount rates.

- Like 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.
Background on Wilary Winn LLC

- Wilary Winn provides independent, fee-based advice to financial intermediaries, including banks, credit unions, finance companies, and mortgage bankers.

- Our services include assessments and valuation of complex financial assets, including mortgage servicing rights, as well as the development and implementation of interest rate risk management programs.