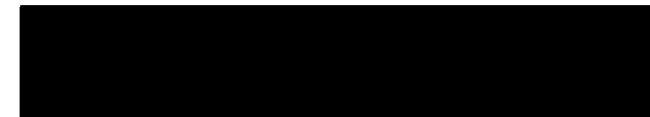


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# Performance of Main Jumbo Issuers

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# Agenda

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- **Summary of Main Jumbo players and collateral characteristics**
- **Performance by vintage broken out by FRM/ARM based on:**
  - **30-59 days delinquency**
  - **60+ delinquency as % of Original balance**
  - **90+ delinquency as % of Original balance (inc. Foreclosure and REO)**
- **Summary & Recommendations**



## Main Jumbo Issuers in 2004 and 2005

2005	Amount in \$Bn	2004	Amount in \$Bn
1 Wells Fargo	36.2	1 Wells Fargo.	25.0
2 Goldman Sachs	16.9	2 Bank of America	17.3
3 JP Morgan	15.8	3 WaMu	14.2
4 Bank of America	15.2	4 Goldman Sachs	10.4
5 Countrywide	12.9	5 Countrywide	9.8
6 Bear Stearns	10.4	6 Merrill Lynch	9.5
7 Merrill Lynch	7.1	7 Sequoia	8.9
8 Washington Mutual	6.6	8 CitiMortgage	6.0
9 Thornburg	5.5	9 JP Morgan	5.6
10 RFC	5.2	10 UBS	5.0



## Ideal Scenario...

- **Just go by the servicer rating adjustments...**

*Figure 1: CE Adjustments based on the SQ Rating of the Primary Servicer*

Servicer's SQ Rating or equivalent	CE Adjustments
SQ1	-6%
SQ1-	-4%
SQ2+	-2%
SQ2	0%
SQ2-	2%
SQ3+	4%
SQ3	6%
SQ3-	8%
SQ4+, SQ4, SQ4-	12-20%
SQ5	Case specific



# Collateral Characteristics

	FRM					
	<u>WELLS</u>	<u>BOA</u>	<u>CHASE</u>	<u>WAMU</u>	<u>CW</u>	<u>RFC</u>
1 Observed Avg FICO	740-750	745-750	730-740	-	735-745	725-735
2 Observed Avg LTV/CLTV	68/71	67/72	68/?	-	73/74	70/74
3 Origination chanel: R/W (%)	?	65/35	45/55	-	30/70	0/100
4 Underwriting Engine (DU,LP, Proprietary)	ECS	Capstone	ZIPPY	-	CLUES	Proprietary
5 Appraisal Requirements	\$1.5M	\$1.25M	\$1M	-	\$1M	\$1M
6 Avg concentration in CA	40%-50%	40%-50%	30%-40%	-	40%-50%	30%-40%
7 Avg IO %	30%	0%	0%	-	20%	25%
8 Avg Investor Properties	0%	0%	0%-1%	-	0%-1%	0%
9 Servicer Rating	SQ1	SQ1	SQ1	Private (SQ2)	SQ1	SQ1
	ARM					
	<u>WELLS</u>	<u>BOA</u>	<u>CHASE</u>	<u>WAMU</u>	<u>CW</u>	<u>RFC</u>
1 Observed Avg FICO	740-750	745-750	740-750	735-745	720-730	730-740
2 Observed Avg LTV/CLTV	69/73	72/75	70/?	67/68	71/78	72/78
3 Origination chanel: R/W (%)	?	65/35	45/55	?	30/70	0%/100%
4 Underwriting Engine (DU,LP, Proprietary)	ECS	Capstone	ZIPPY	Proprietary	CLUES	Proprietary
5 Appraisal Requirements	\$1.5M	\$1.25M	\$1M	**	\$1M	\$1M
6 Avg concentration in CA	40%-50%	40%-50%	30%-40%	60%-70%	40%-50%	30%-40%
7 Avg IO %	30%	70%	75%	95%	90%	80%
8 Avg Investor Properties	4%	0%-1%	0%-1%	0%-1%	0%-1%	0%
9 Servicer Rating	SQ1	SQ1	SQ1	Private (SQ2)	SQ1	SQ1
Current Postion relative to M3 output	97%	99%	100%	100%	100%	100%
Target position relative to M3 output	97%	99%	100%	100%	100%	100%



# Jumbo Index Composition

Shelf	2001	2002	2003	2004	2005
ABNAMRO	4.7%	1.5%	2.0%	0.0%	0.0%
BoAFunding	0.0%	0.0%	0.9%	0.2%	2.2%
BOAMS	9.1%	6.4%	9.1%	8.4%	5.8%
BSARM	12.9%	7.0%	5.9%	3.4%	3.9%
Cendant	0.9%	0.9%	0.0%	0.0%	0.0%
ChaseMortgageFinanceTrust	2.6%	1.7%	2.3%	1.0%	2.0%
ChevyChaseFunding	0.0%	0.0%	1.6%	4.8%	3.6%
CHLMortgage	6.0%	9.3%	14.2%	12.4%	7.1%
CiticorpMtgSecInc	0.4%	0.7%	2.0%	2.1%	3.7%
CitigroupMtgLoanTrust	0.0%	0.0%	0.1%	1.0%	1.3%
CSFB	1.5%	6.6%	10.6%	0.8%	2.4%
CWMBS	6.8%	0.0%	0.0%	1.1%	0.0%
DeutscheMtgSec	0.0%	0.0%	0.0%	0.1%	0.0%
ETRADE	2.3%	0.0%	0.0%	0.0%	0.0%
FirstHorizonMtgPassThrough	2.5%	2.6%	2.2%	1.3%	1.8%
FirstRepublicMtgLoanTrust	0.6%	0.8%	0.0%	0.0%	0.0%
FNT	0.8%	0.0%	0.0%	0.0%	0.0%
GMACM	0.7%	1.8%	1.2%	2.7%	1.8%
GSRMtgLoanTrust	0.6%	5.6%	2.7%	4.2%	5.3%
IndyMacINDA	0.0%	0.0%	0.0%	0.0%	0.2%
JPMorganMtgLoanTrust	0.0%	0.0%	0.2%	1.5%	7.1%
MASTRARMTrust	0.3%	1.2%	0.1%	2.3%	0.0%
MASTRAssetSecTrust	0.8%	4.6%	1.7%	0.5%	0.3%
MLCC	1.0%	0.0%	6.7%	6.7%	3.8%
MLMI	0.0%	1.0%	2.4%	0.4%	1.3%
MRFCMtg	2.0%	0.5%	0.0%	0.0%	0.0%
MSDWCapital	0.4%	0.6%	0.2%	0.0%	0.0%
PHHMtgCapital	0.0%	0.0%	0.0%	0.0%	0.1%
PNCMtgSecCorp	1.0%	0.0%	0.0%	0.0%	0.0%
PrimeMtgTrust	0.0%	0.0%	0.6%	0.2%	0.4%
ProvidentFundingMtgLoanTrust	0.0%	0.0%	0.3%	0.3%	1.3%
RAST	0.0%	0.7%	0.0%	0.0%	0.0%
RFMSI	8.5%	3.4%	2.6%	1.3%	4.3%
SalomonMtgLoanTrust	0.7%	0.3%	0.0%	0.0%	0.0%
Sequoia	0.7%	5.0%	4.8%	8.1%	1.2%
Thornburg	1.4%	1.4%	3.1%	3.8%	5.6%
WAMU MSC	4.8%	3.3%	0.6%	0.0%	0.0%
WAMUMtg	11.2%	26.1%	12.5%	10.5%	4.7%
WellsFargo	14.4%	7.1%	9.4%	21.0%	28.6%
ZionsResidentialMtgLoanTrust	0.4%	0.0%	0.0%	0.0%	0.0%
<b>Grand Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

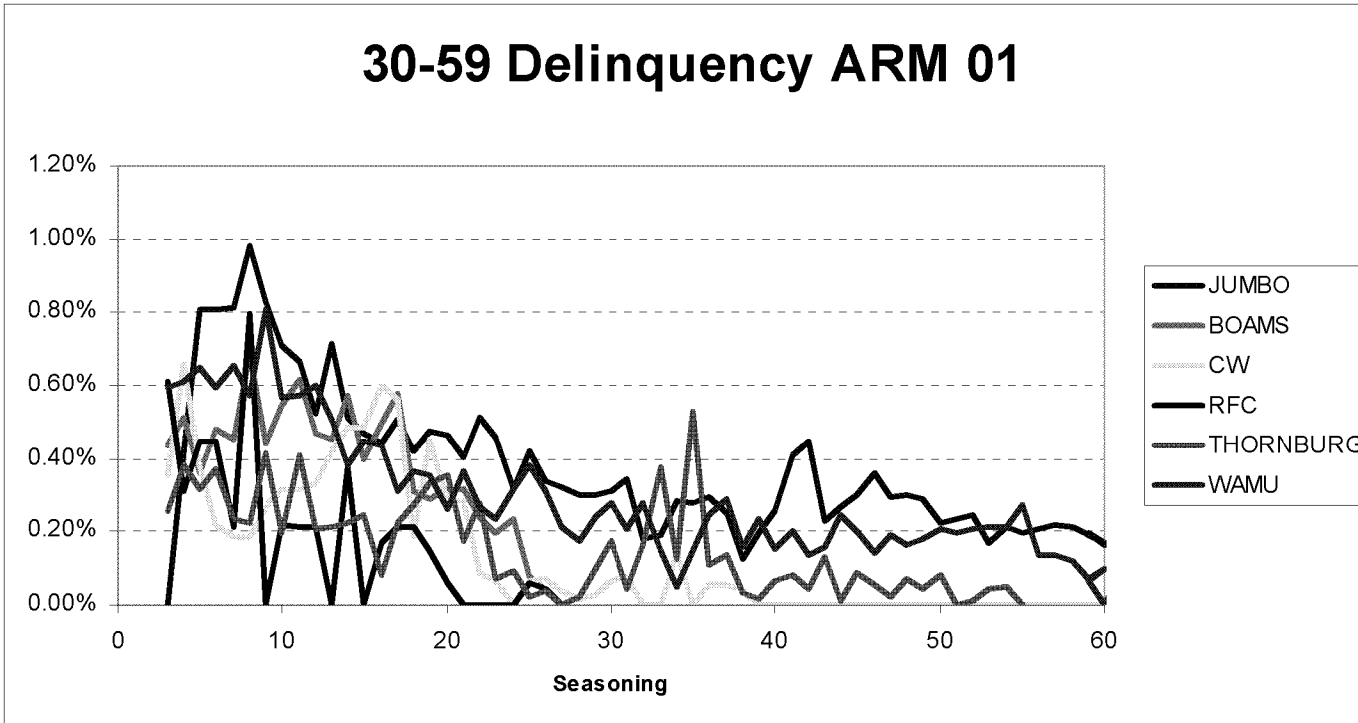


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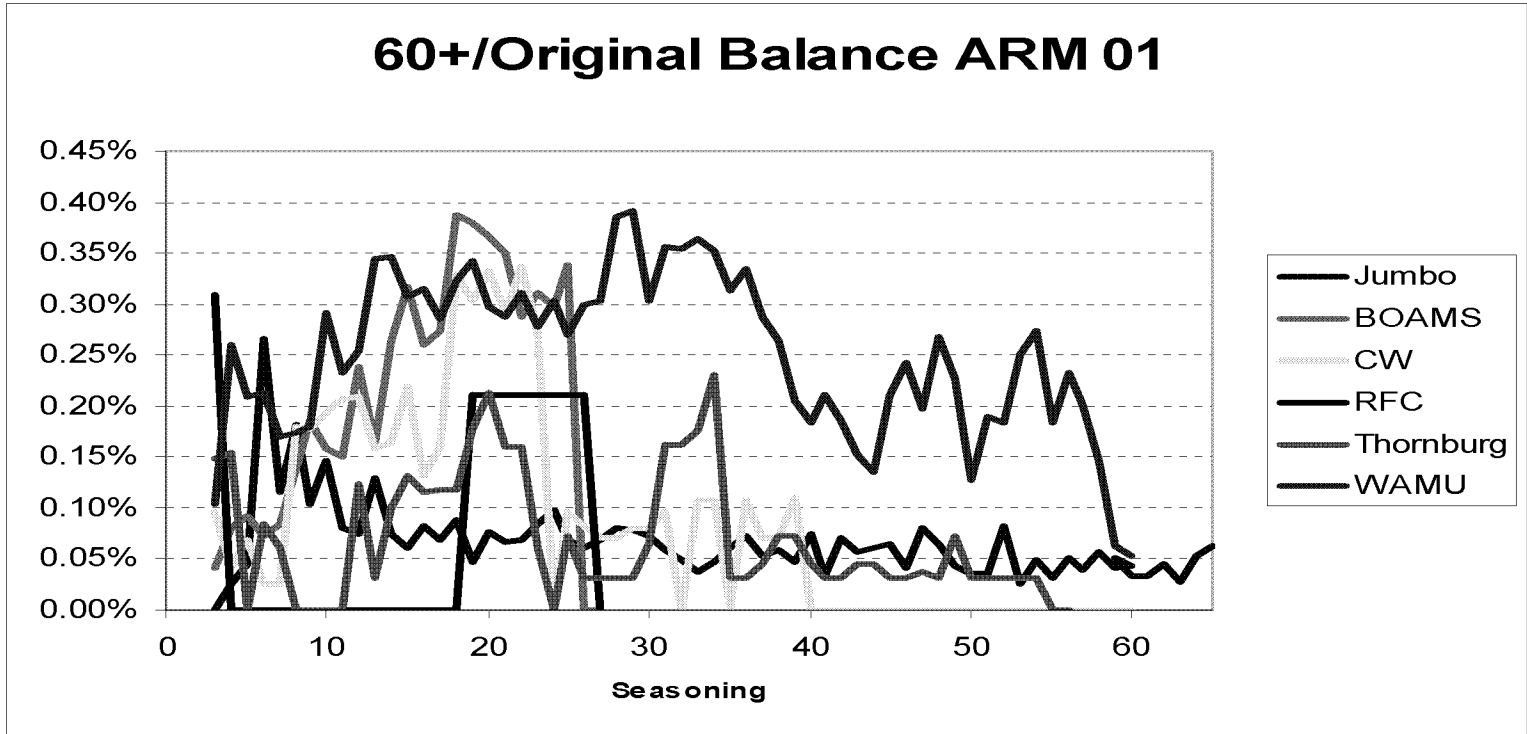
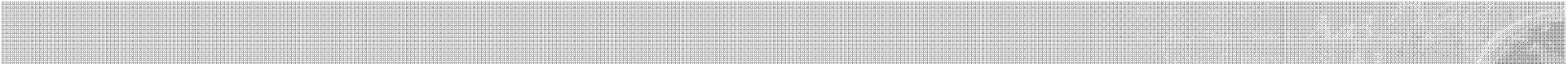
# **ARM PERFORMANCE REVIEW**



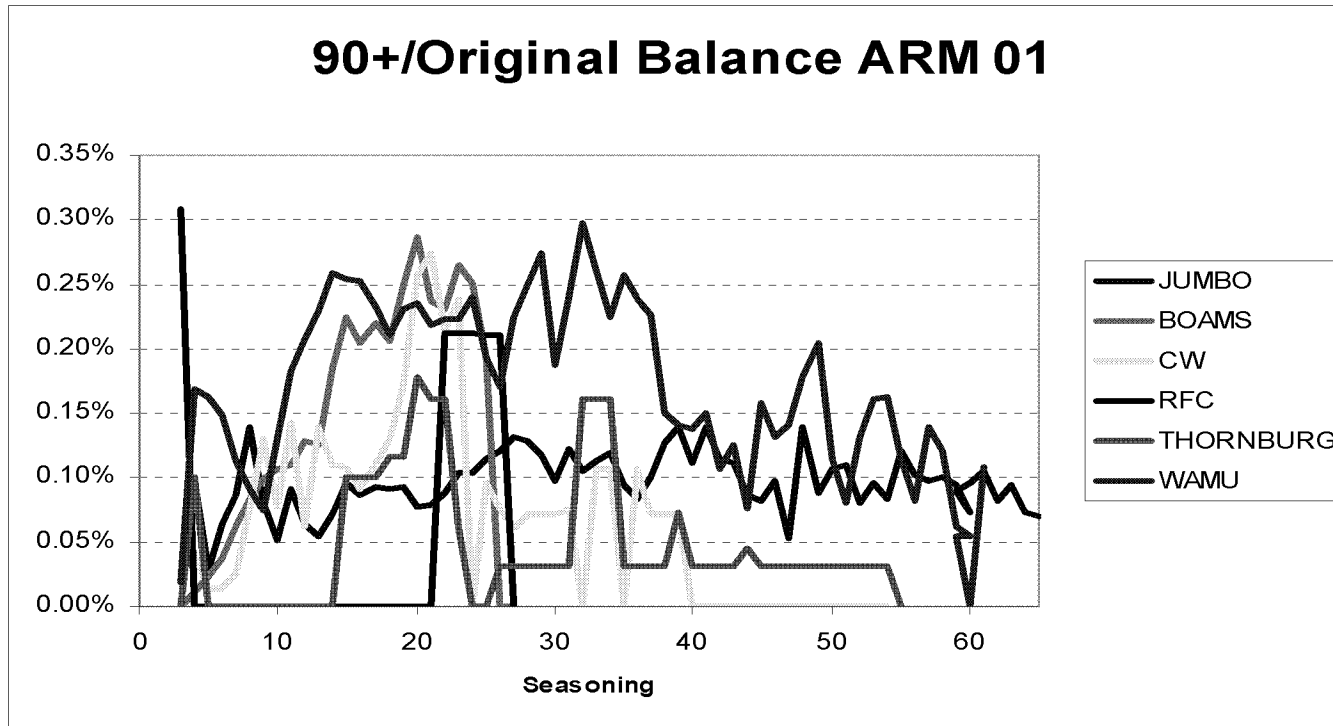
### 30-59 Delinquency ARM 01







## 90+/Original Balance ARM 01

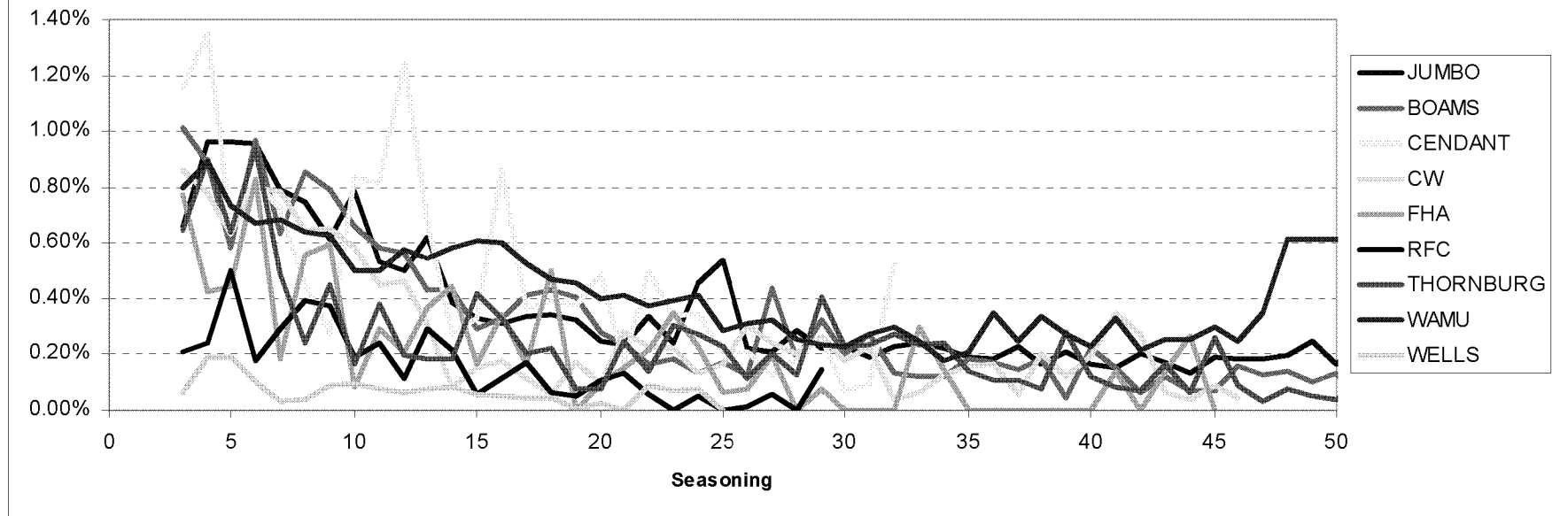


**Best Performance: Countrywide - RFC**

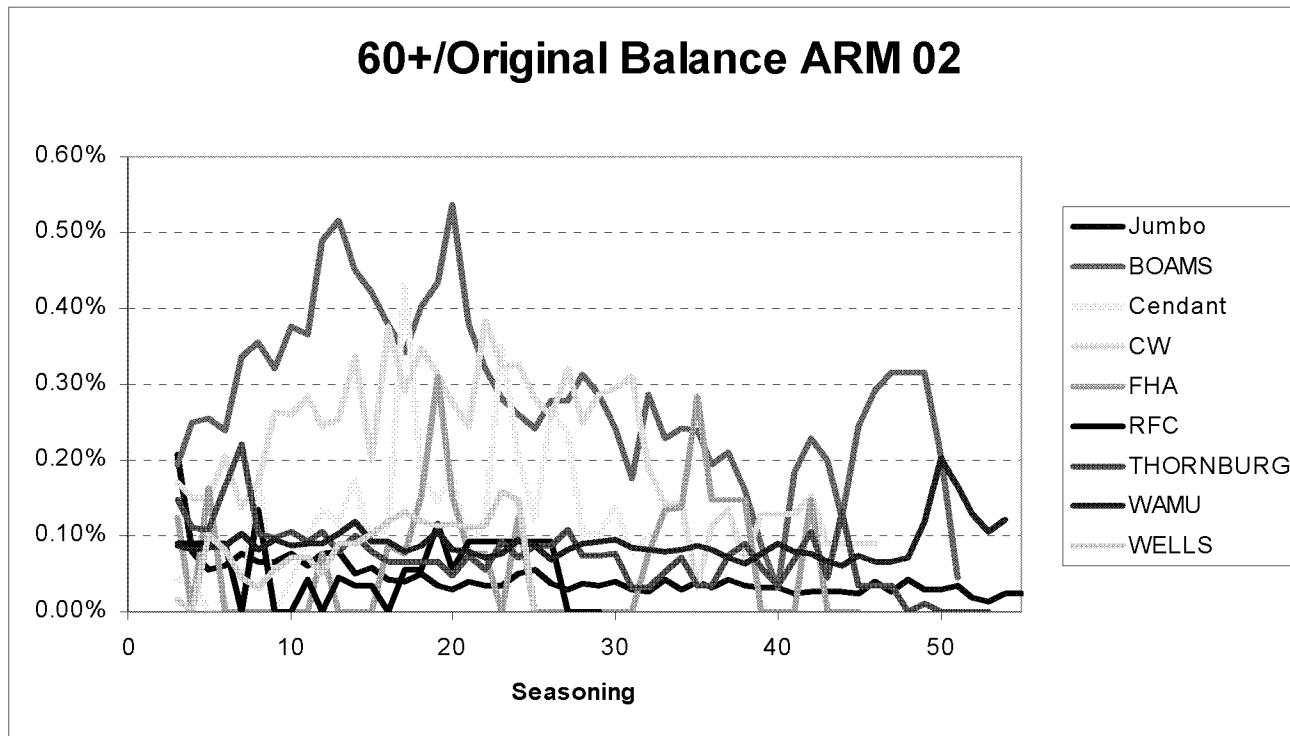


**Moody's Investors Service**

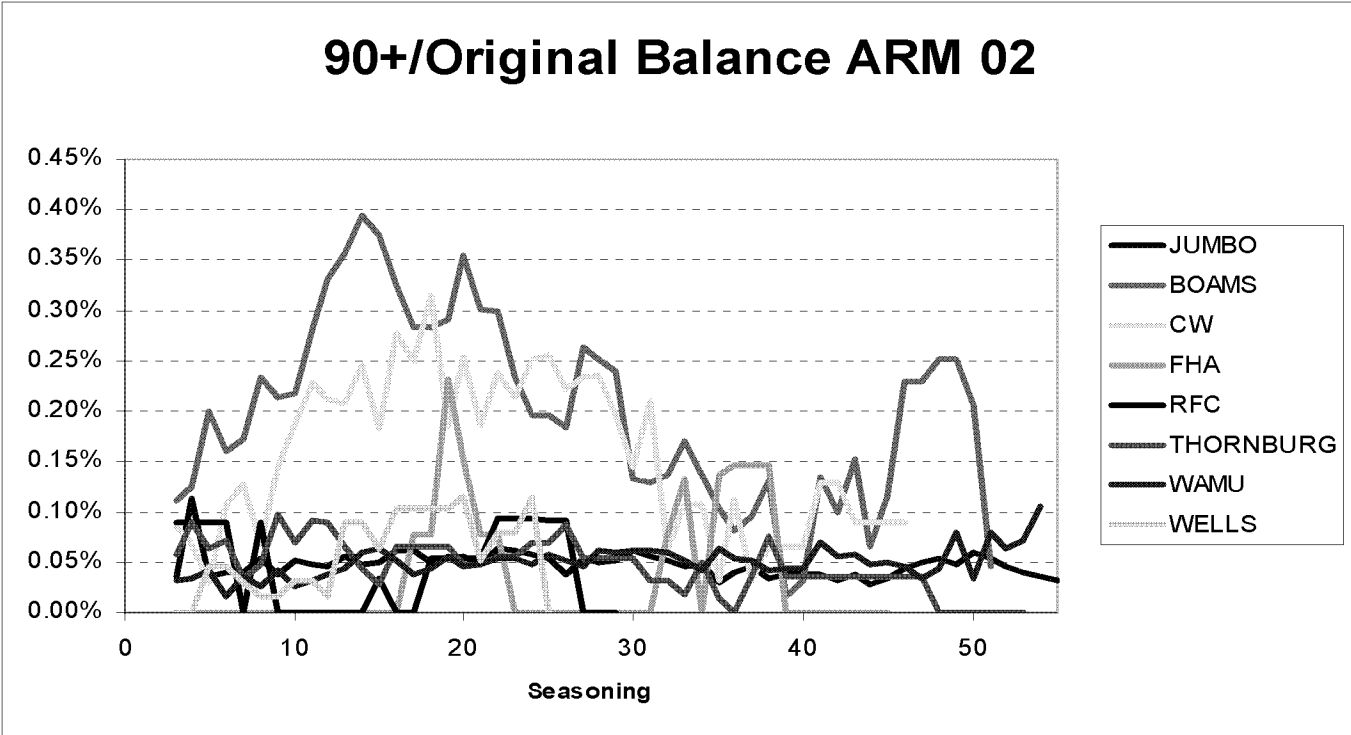
## 30-59 Delinquency ARM 02



### 60+/Original Balance ARM 02



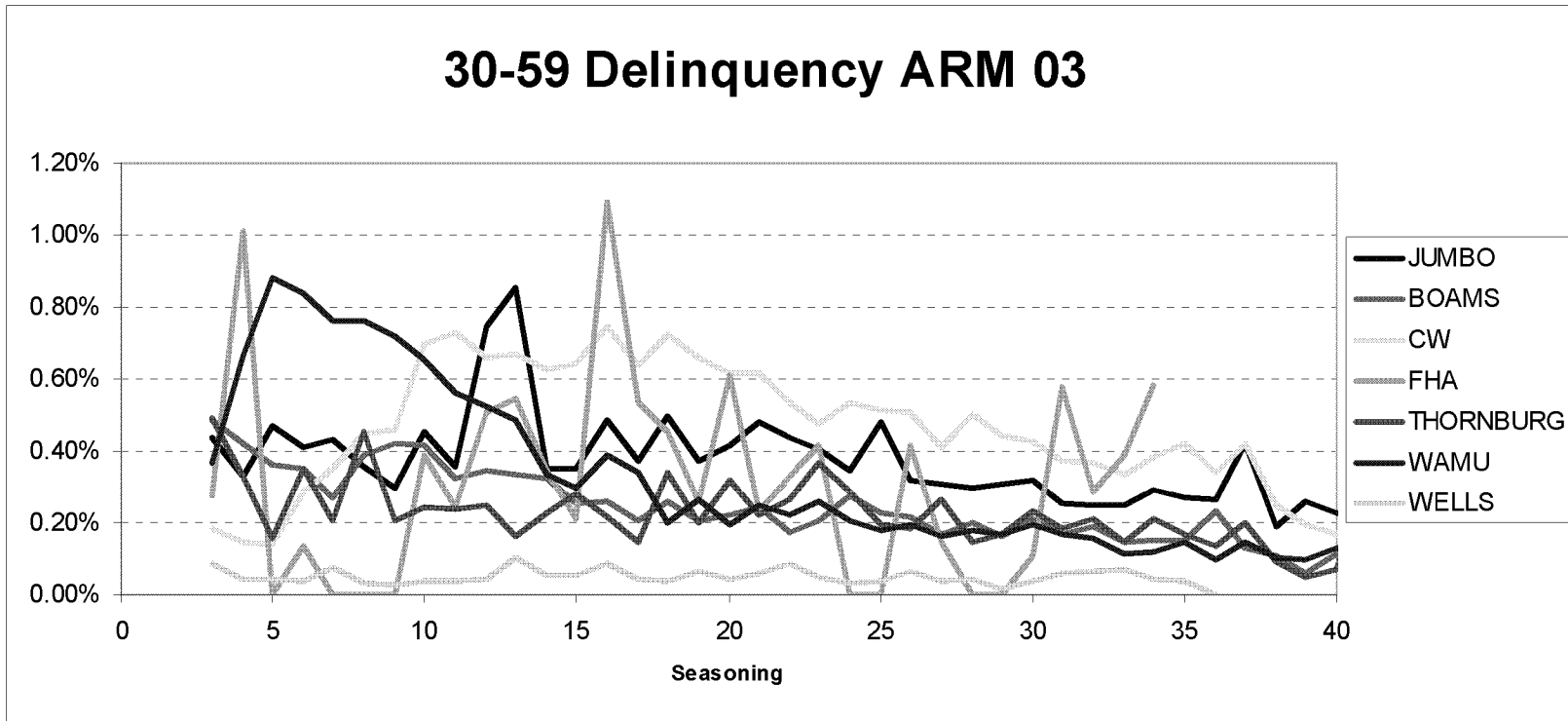
### 90+/Original Balance ARM 02



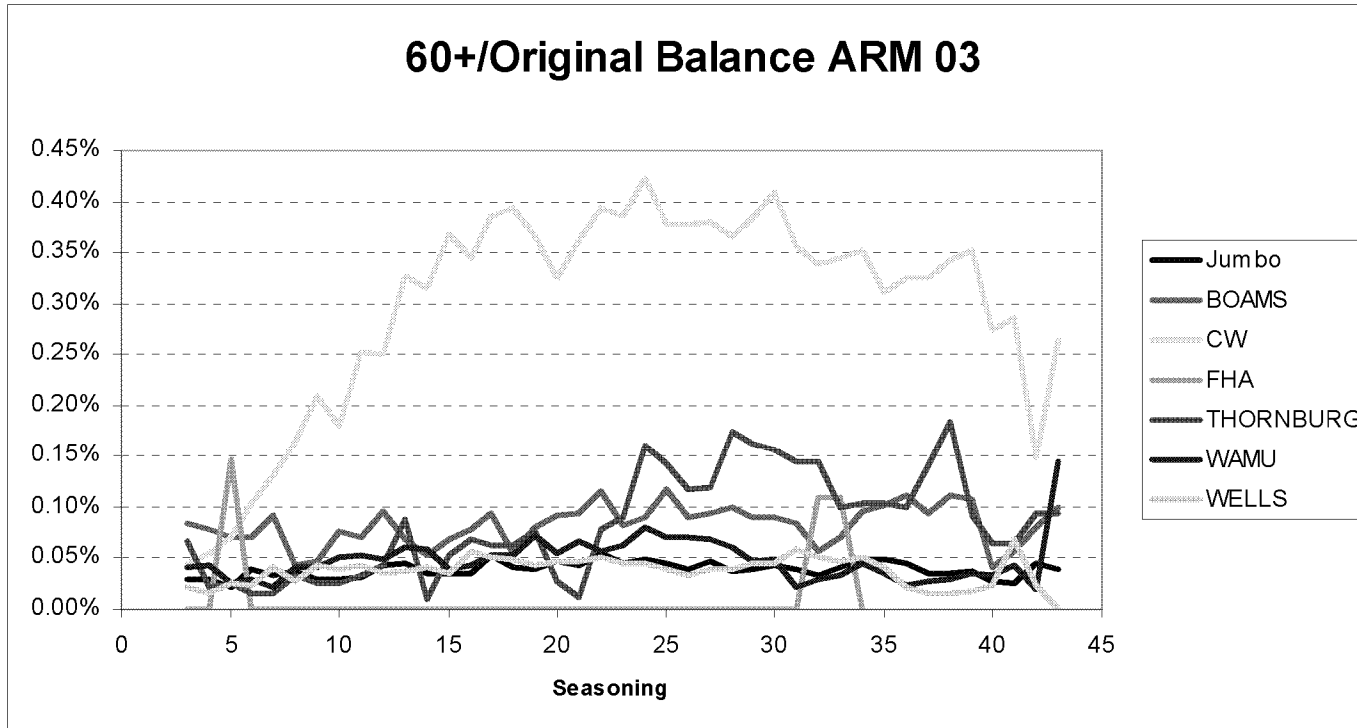
**Best Performance: RFC – WAMU - Wells**



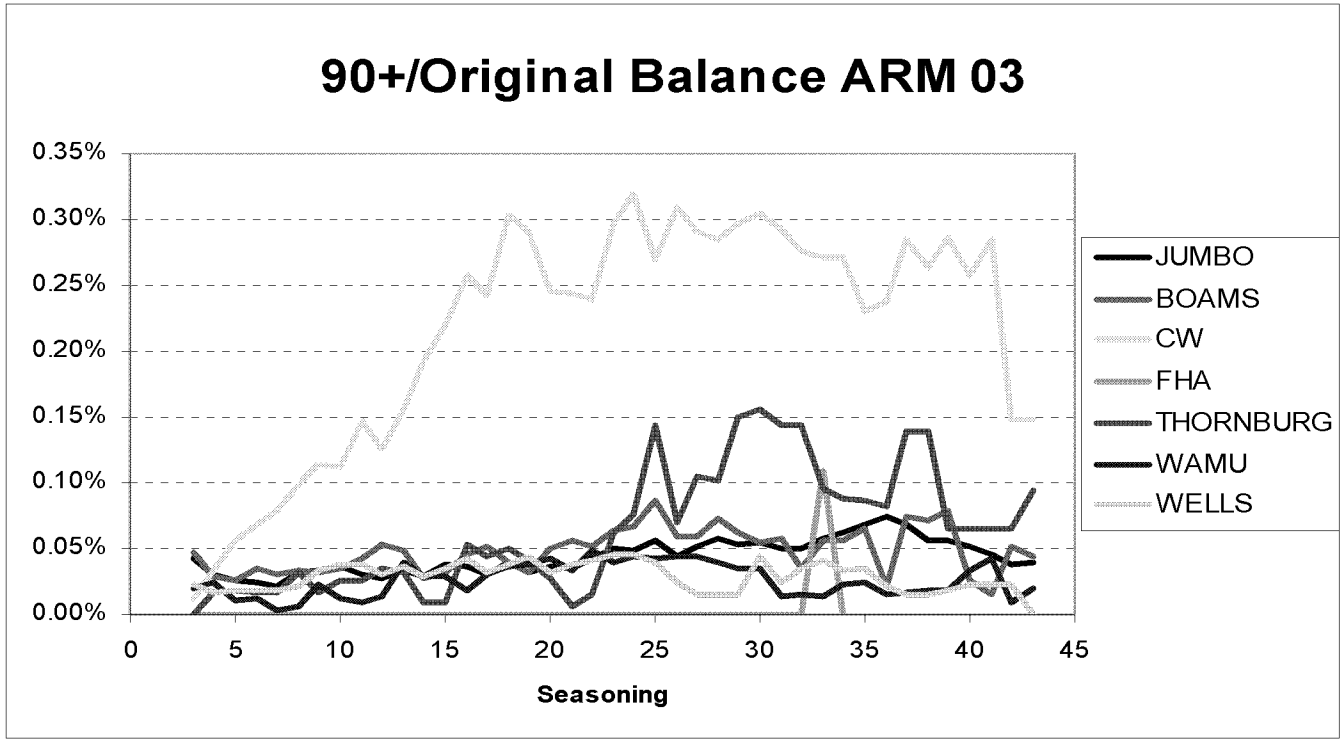
### 30-59 Delinquency ARM 03



### 60+/Original Balance ARM 03



### 90+/Original Balance ARM 03

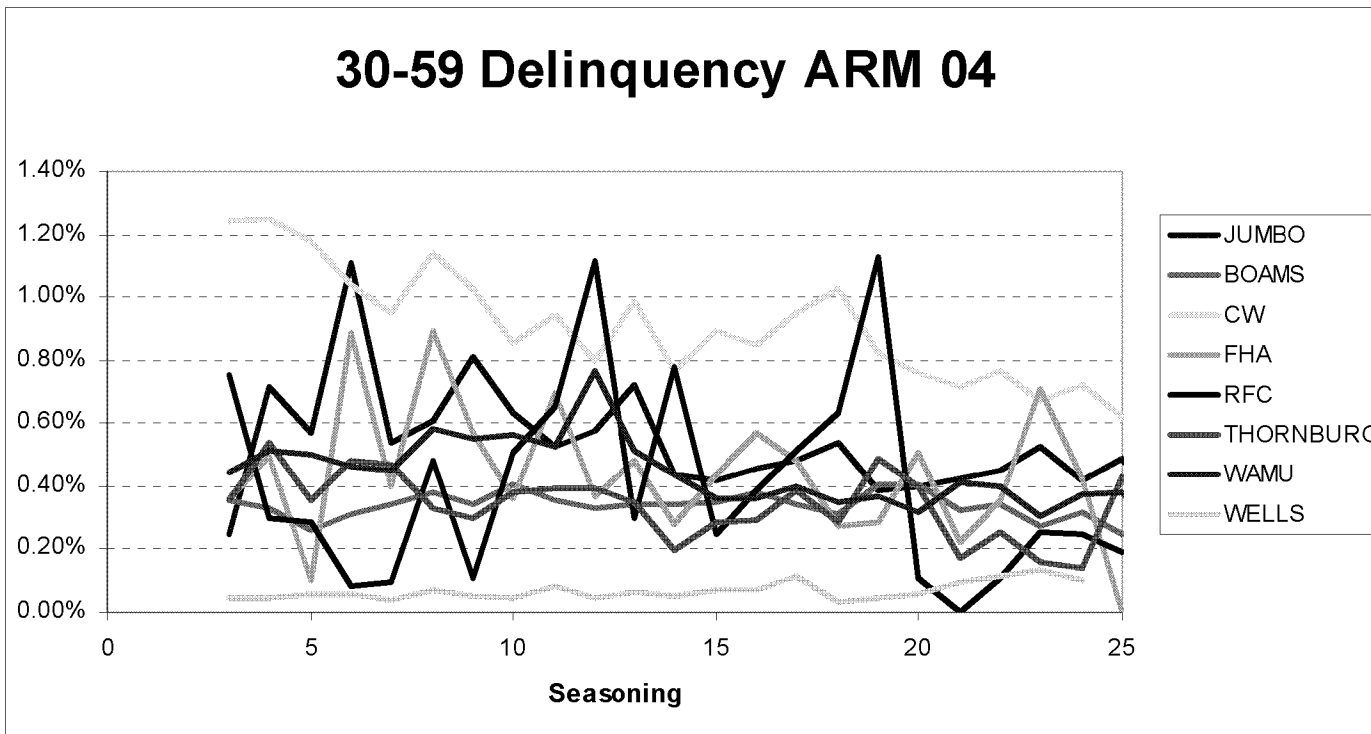


**Best Performance: Wells – WAMU - BOA**

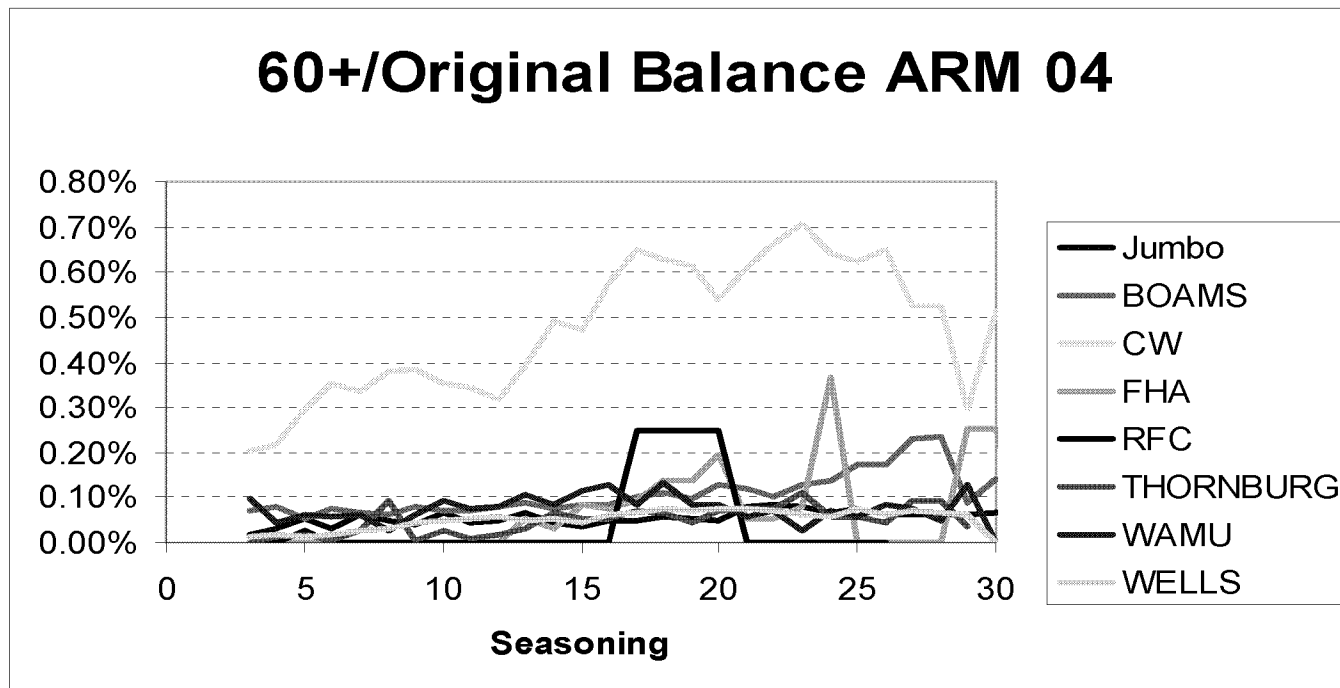




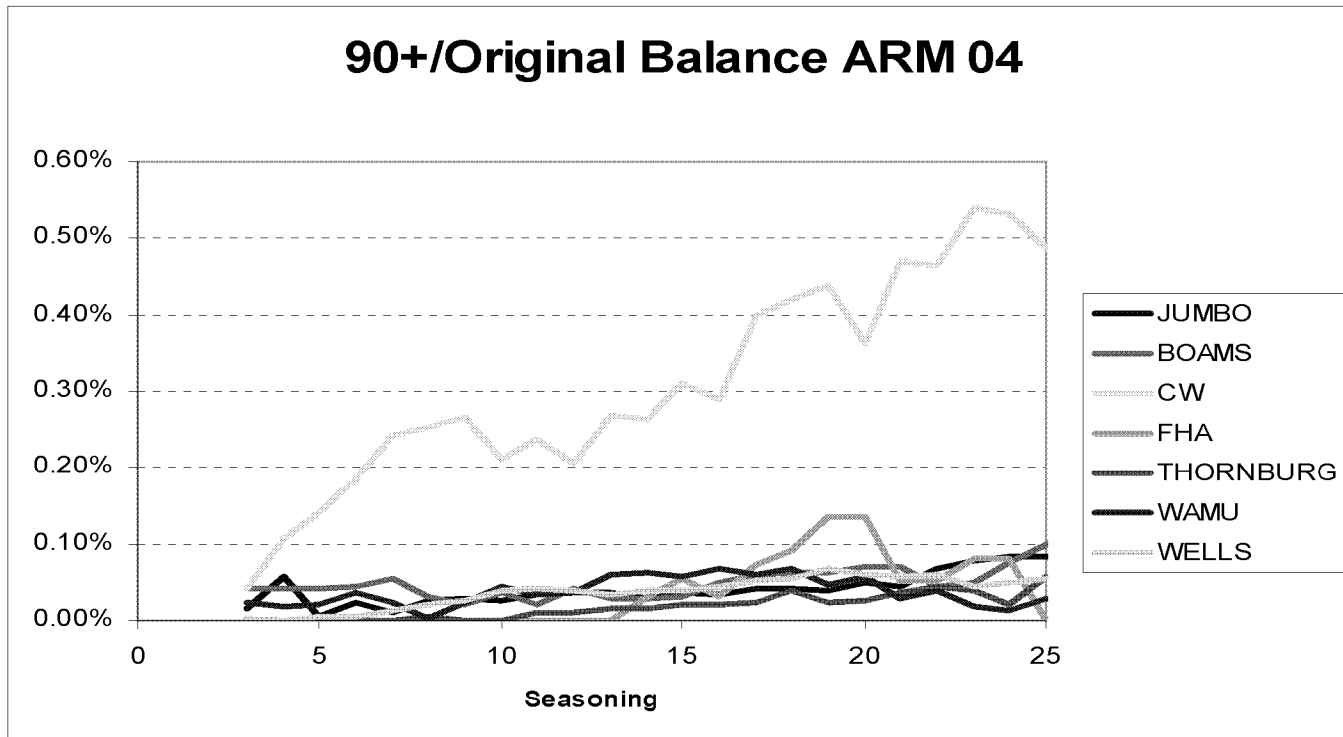
### 30-59 Delinquency ARM 04



## 60+ / Original Balance ARM 04



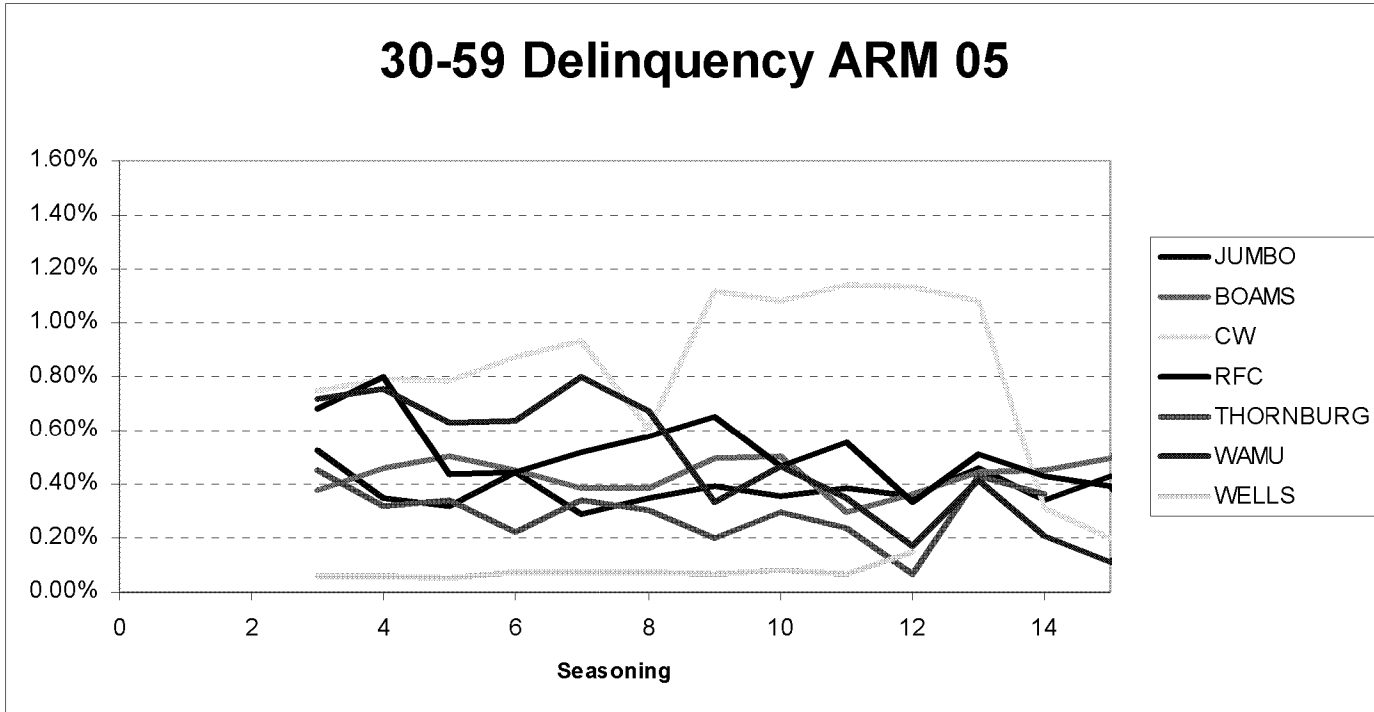
### 90+/Original Balance ARM 04



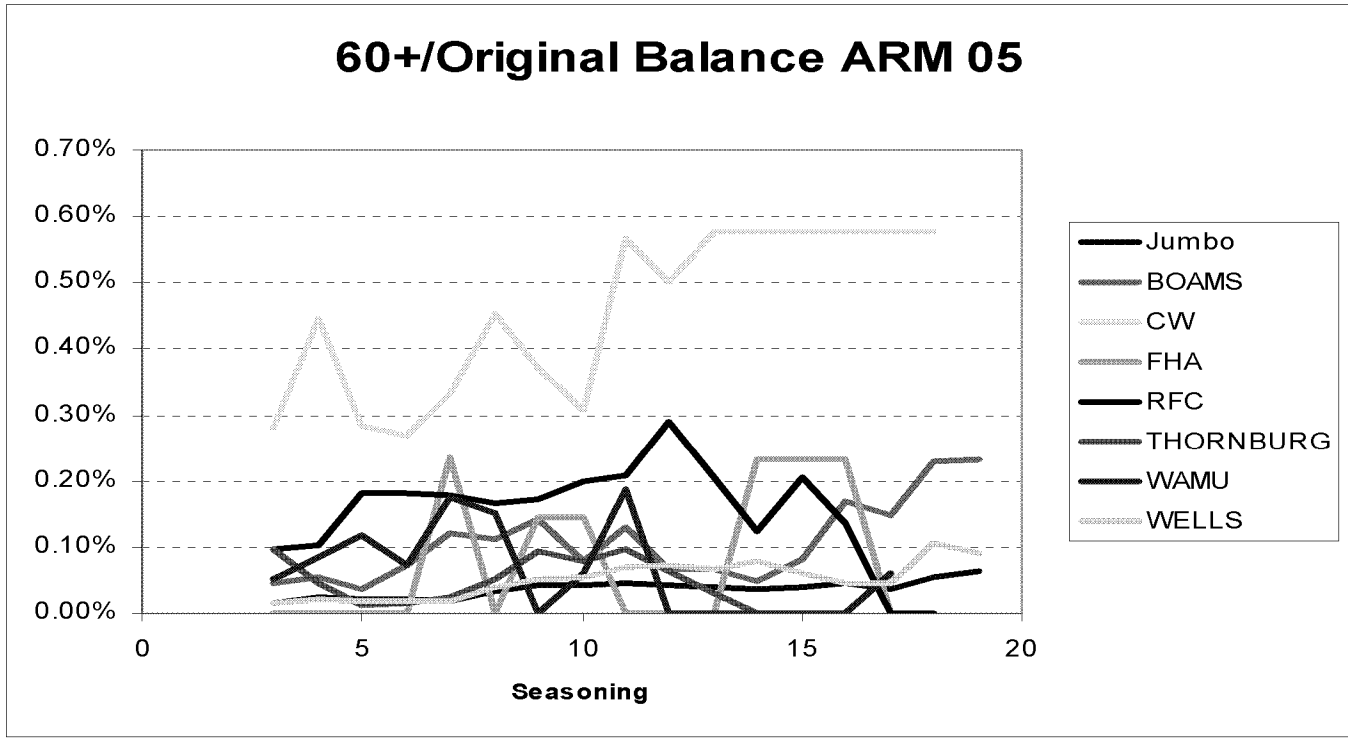
**Best Performance: Wells – WAMU – BOA/RFC**



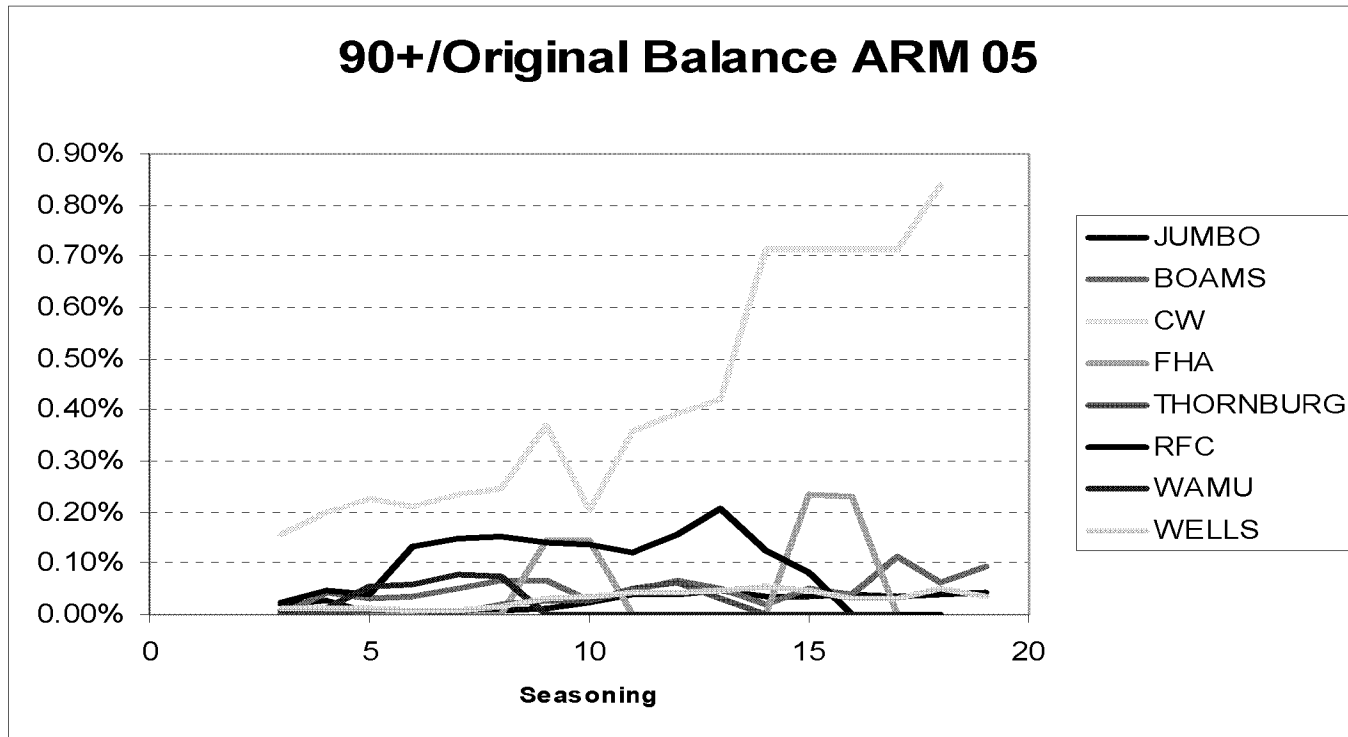
### 30-59 Delinquency ARM 05



### 60+/Original Balance ARM 05



### 90+/Original Balance ARM 05



**Best Performance: Wells – WAMU – RFC – BOA**



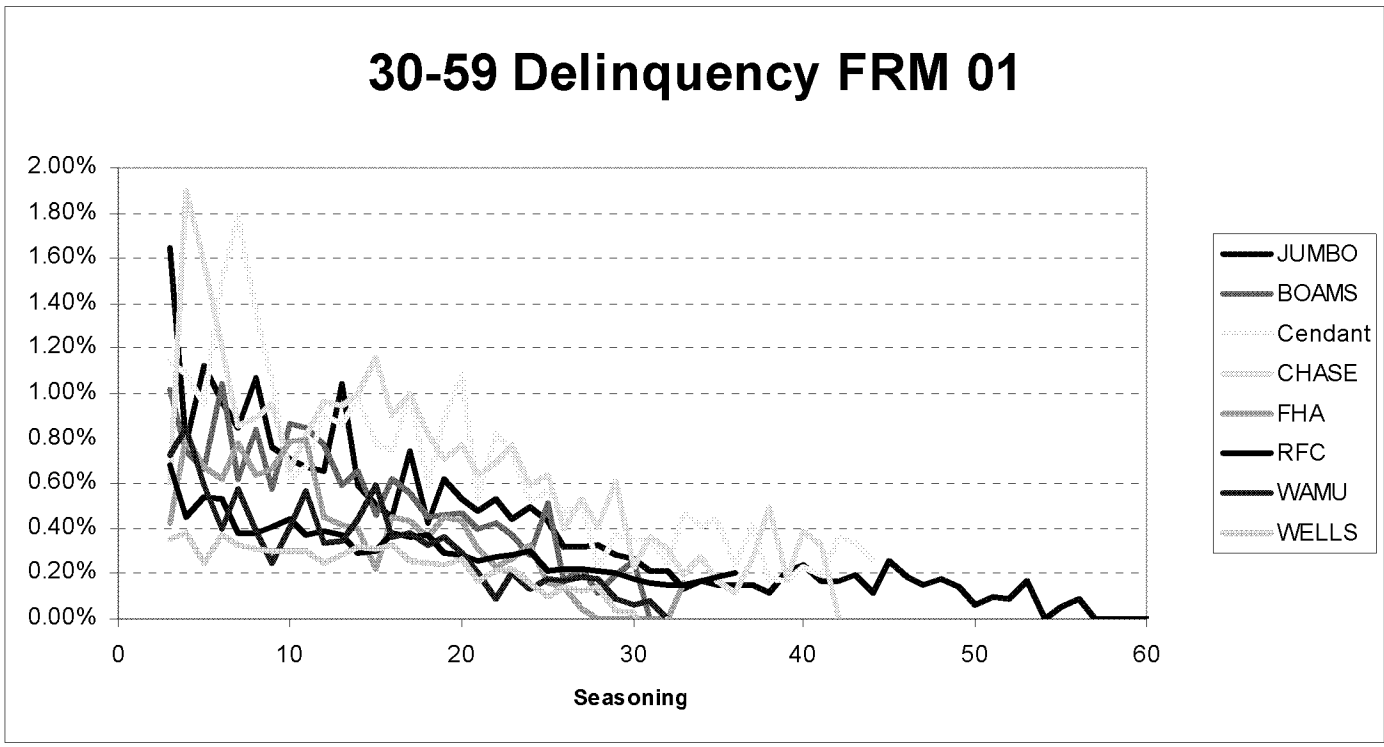
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# FRM

# PERFORMANCE REVIEW

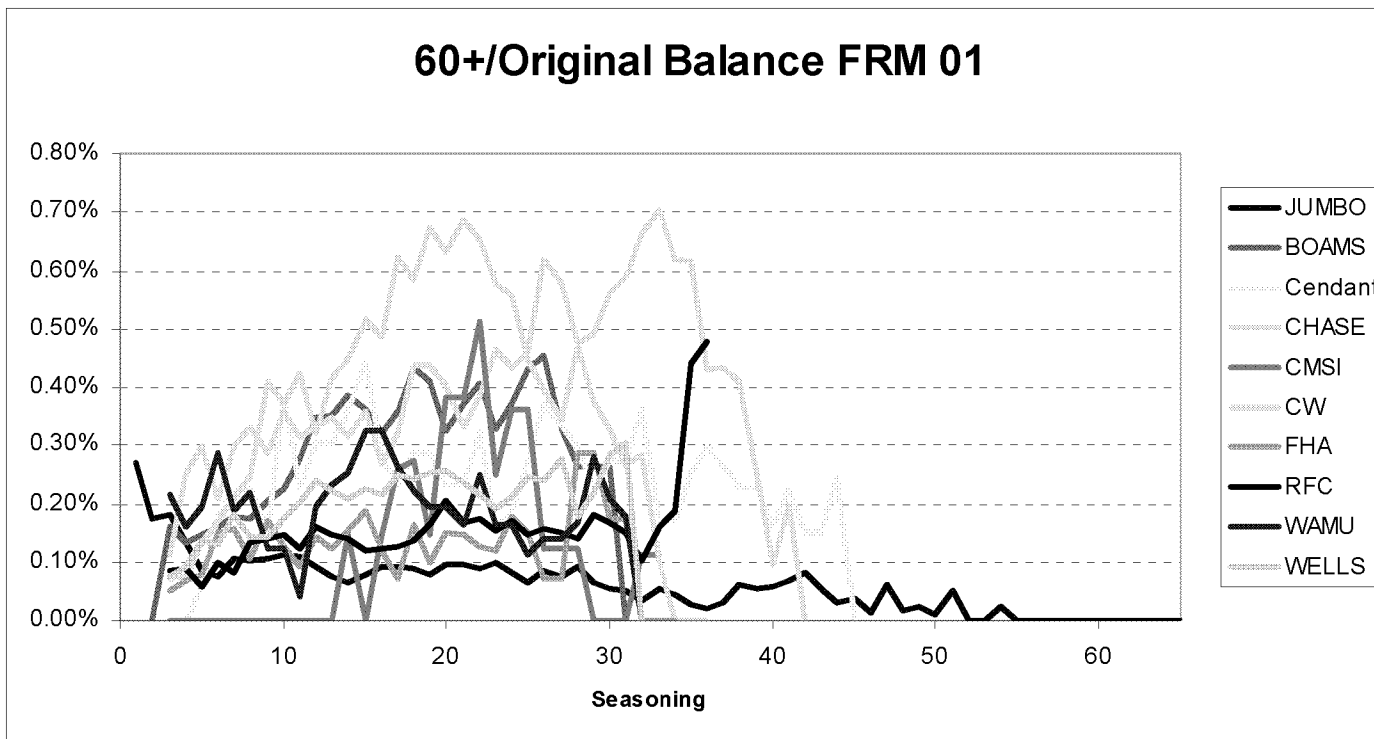


## 30-59 Delinquency FRM 01

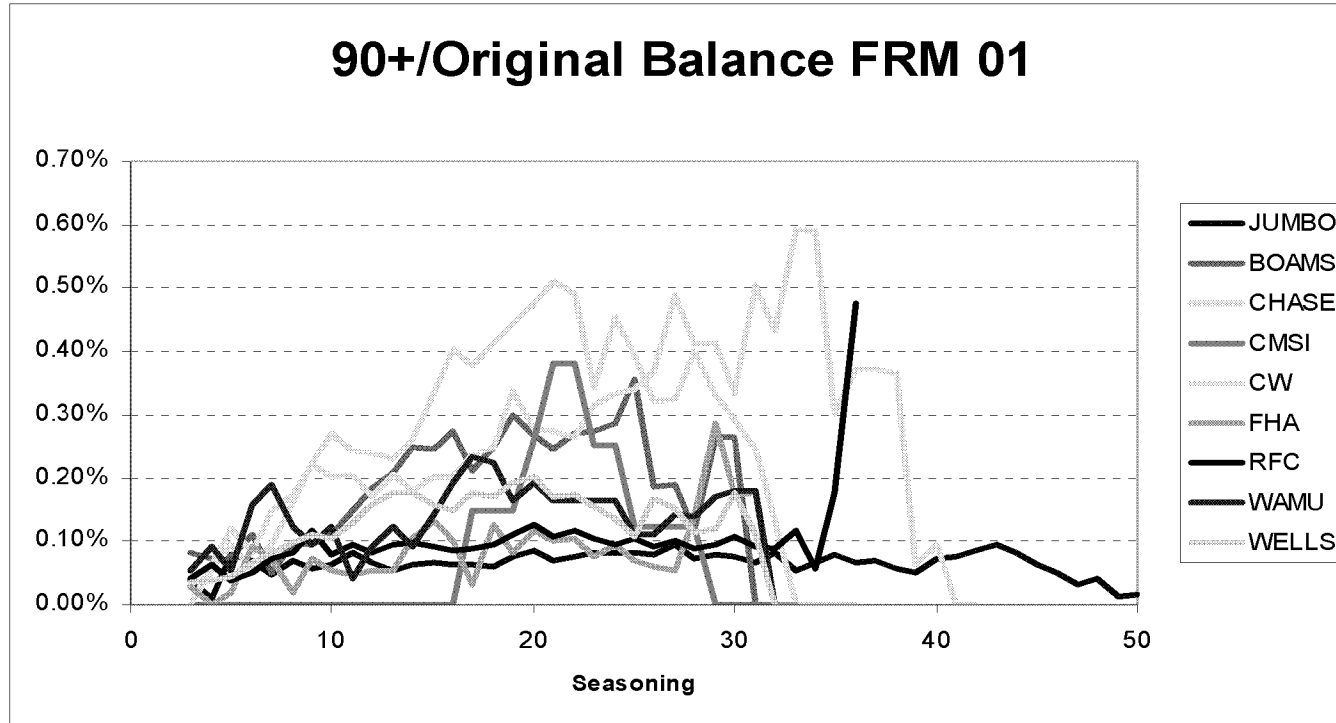




### 60+/Original Balance FRM 01



## 90+/Original Balance FRM 01

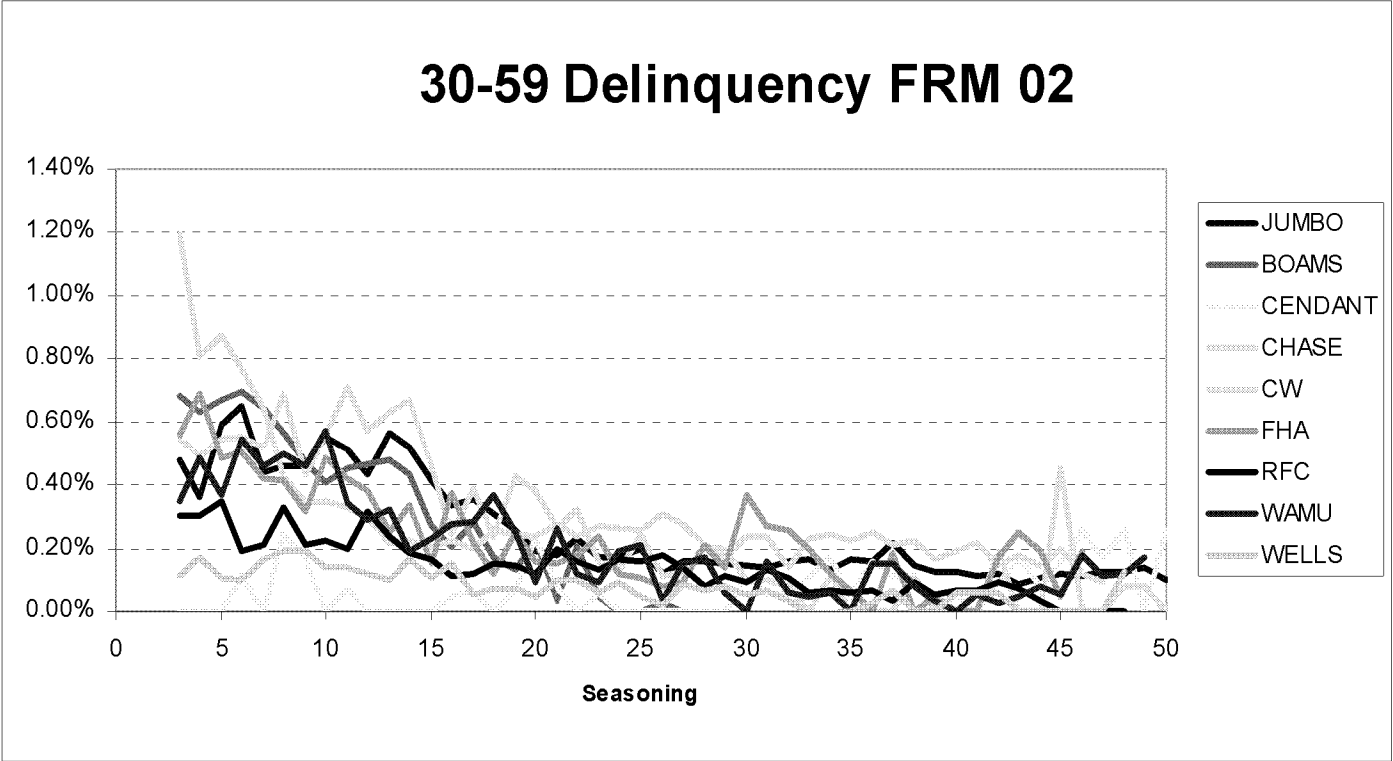


**Best Performance: RFC – WAMU - Wells**

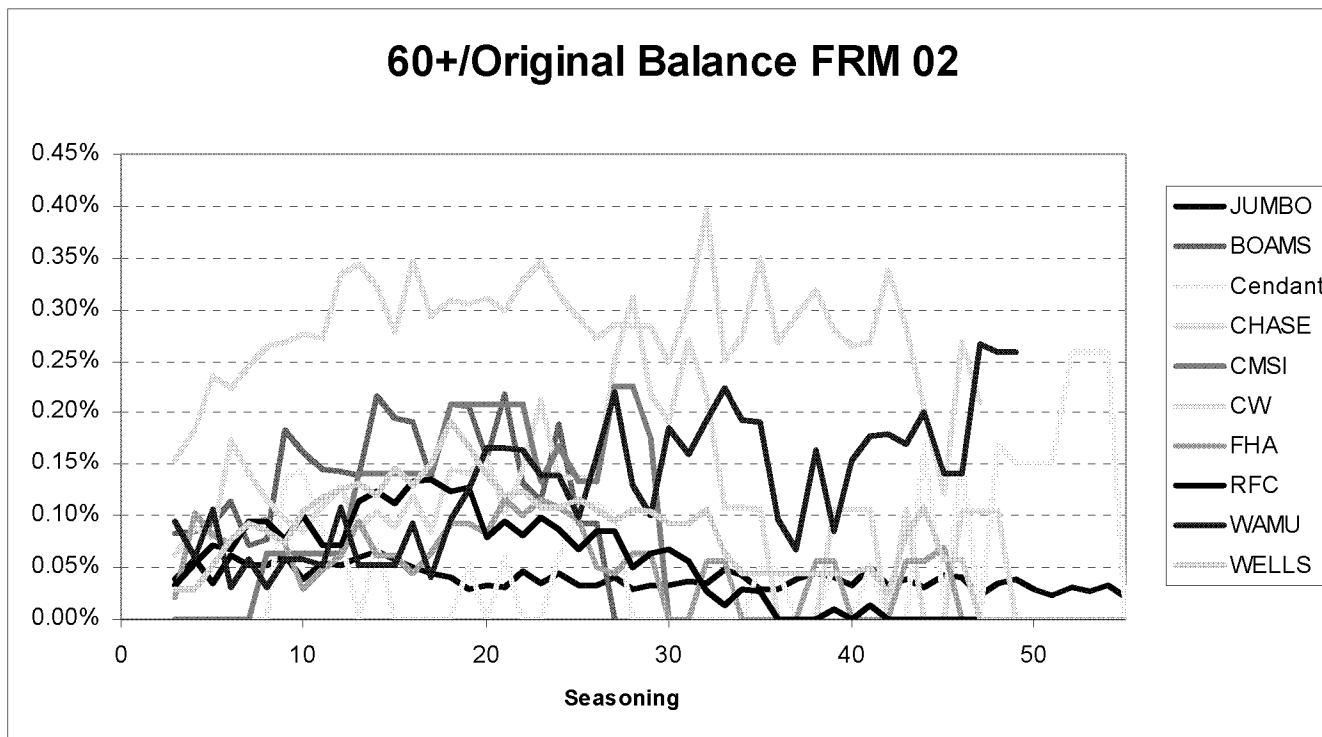


**Moody's Investors Service**

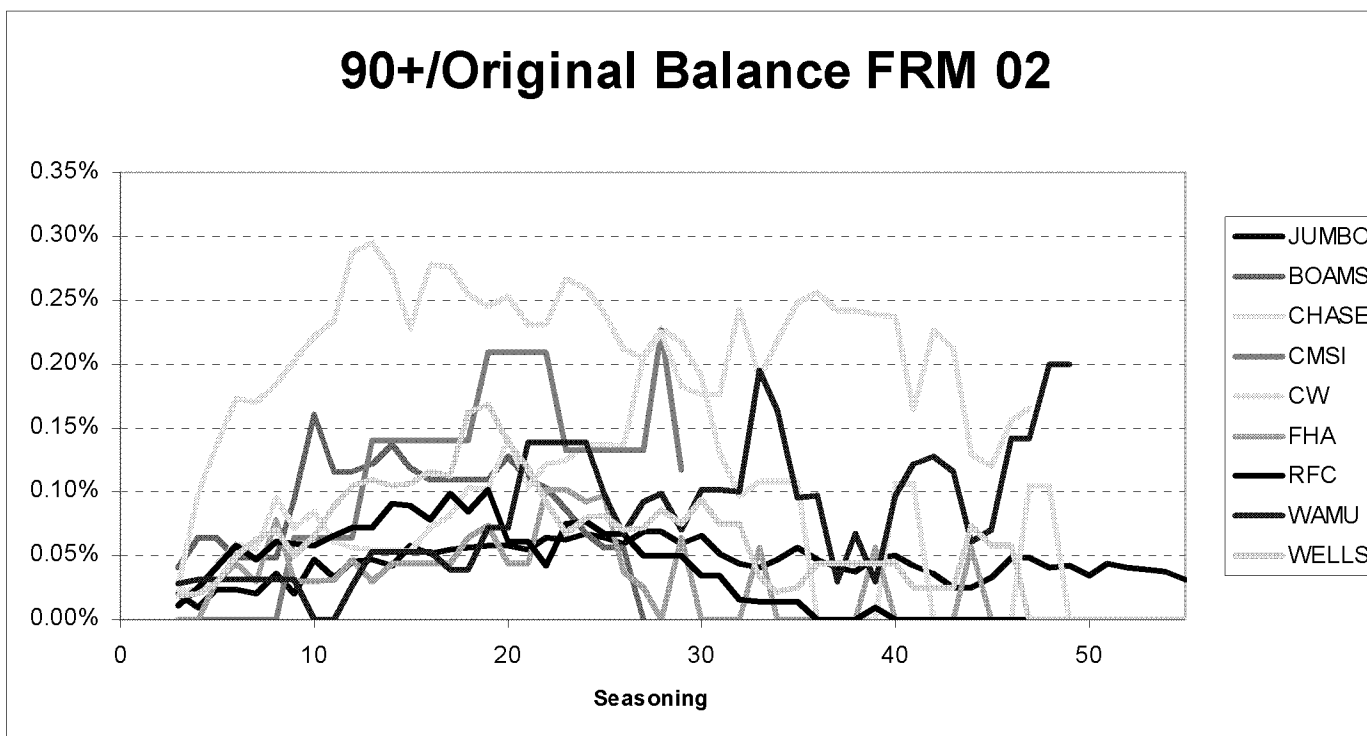
### 30-59 Delinquency FRM 02



### 60+/Original Balance FRM 02



## 90+/Original Balance FRM 02

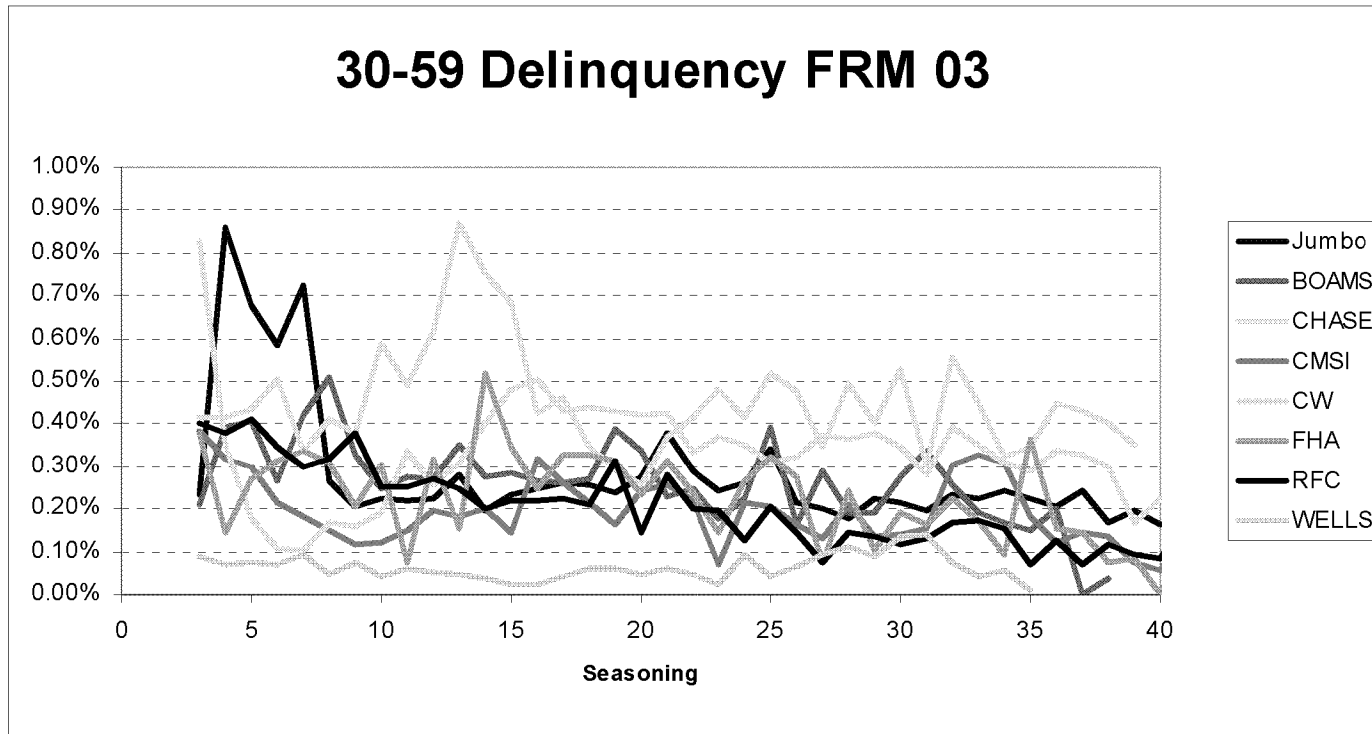


**Best Performance: WAMU – RFC – Wells - Chase**

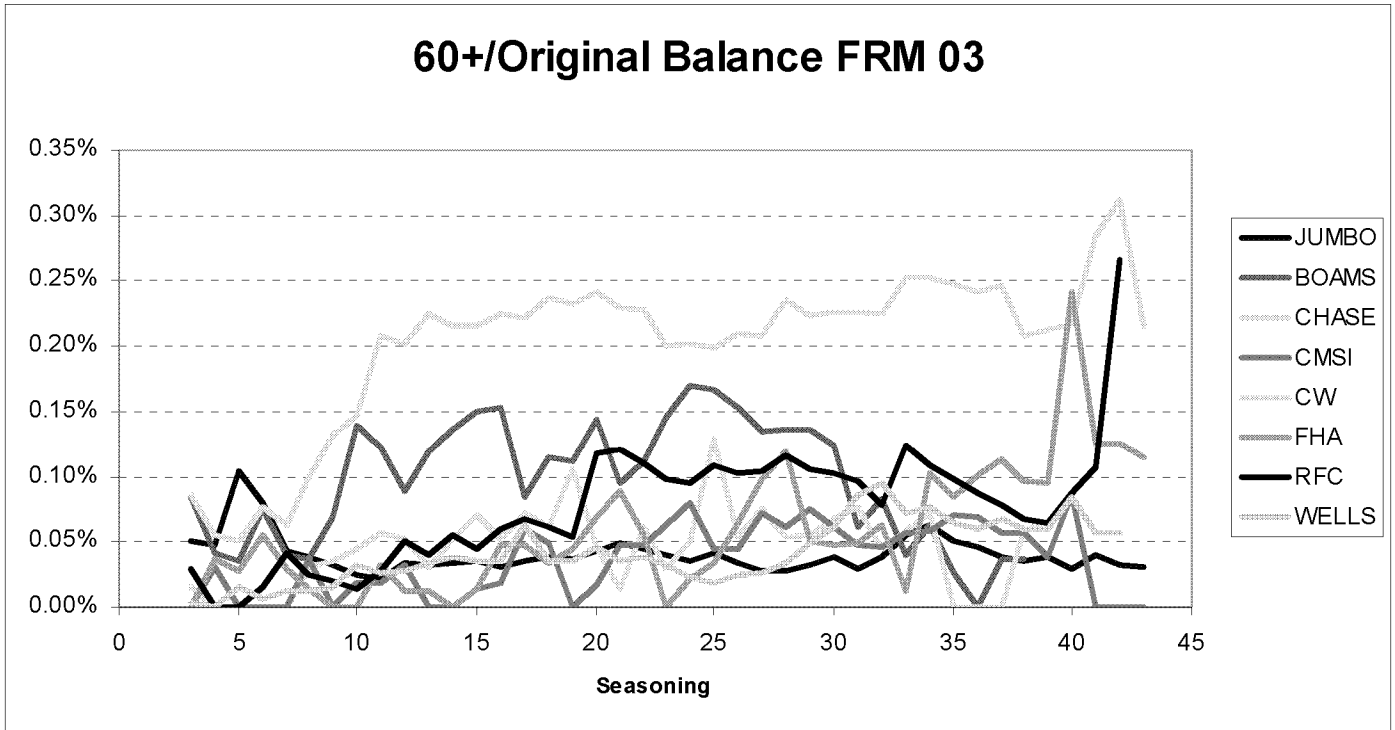


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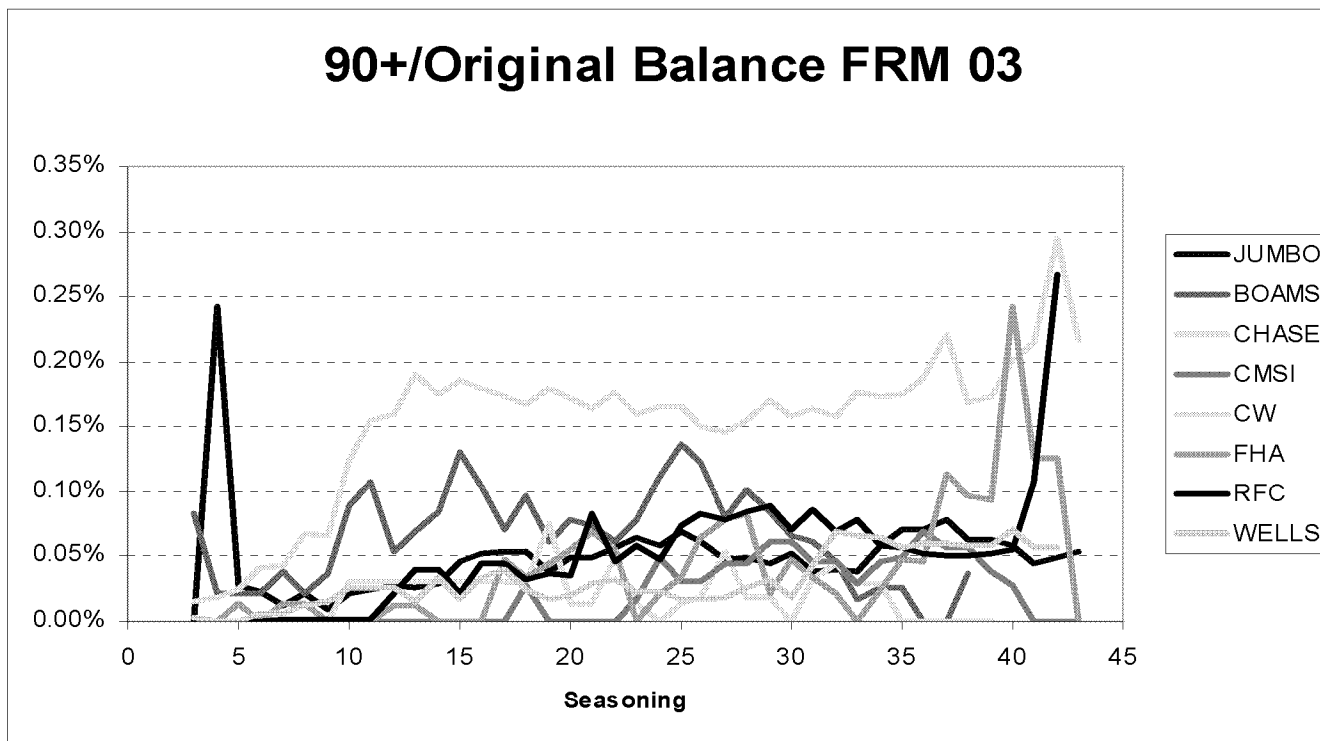
### 30-59 Delinquency FRM 03



### 60+ / Original Balance FRM 03



## 90+/Original Balance FRM 03

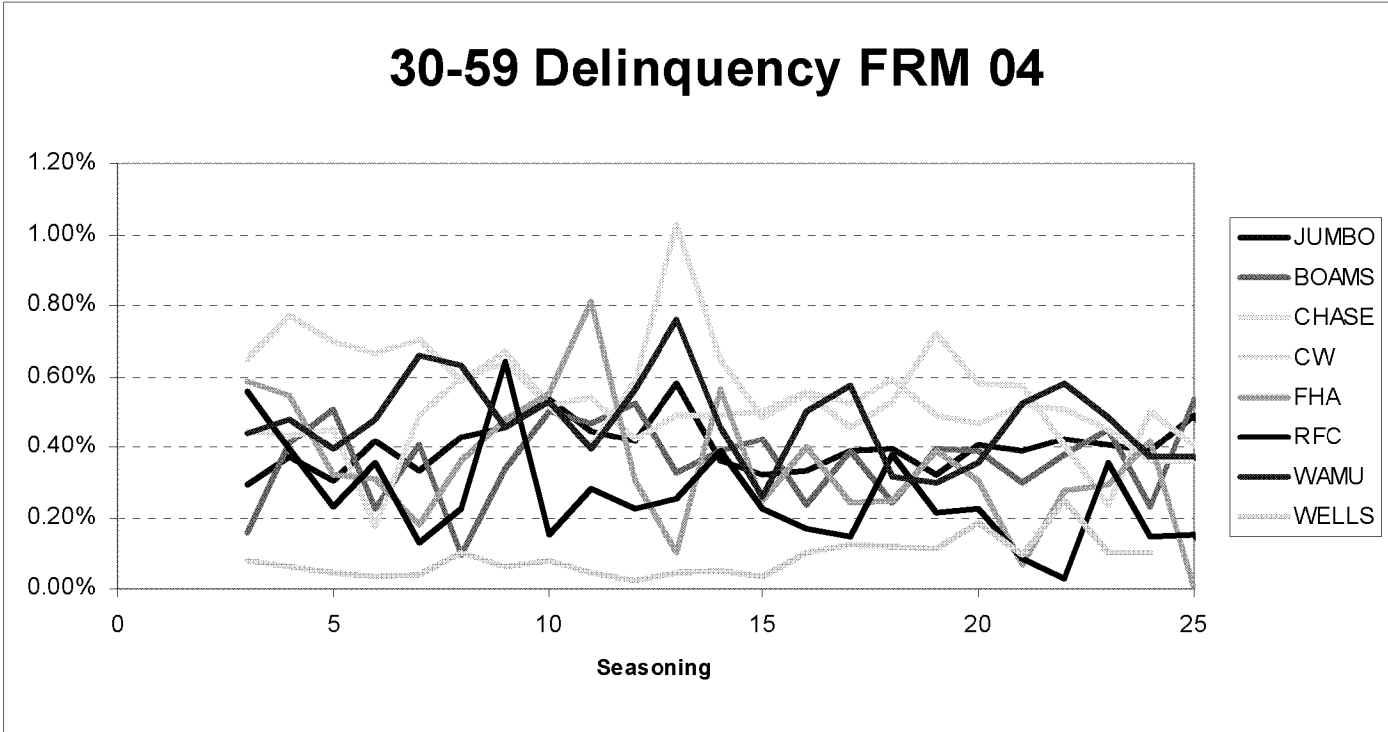


**Best Performance: Wells – Chase – RFC**

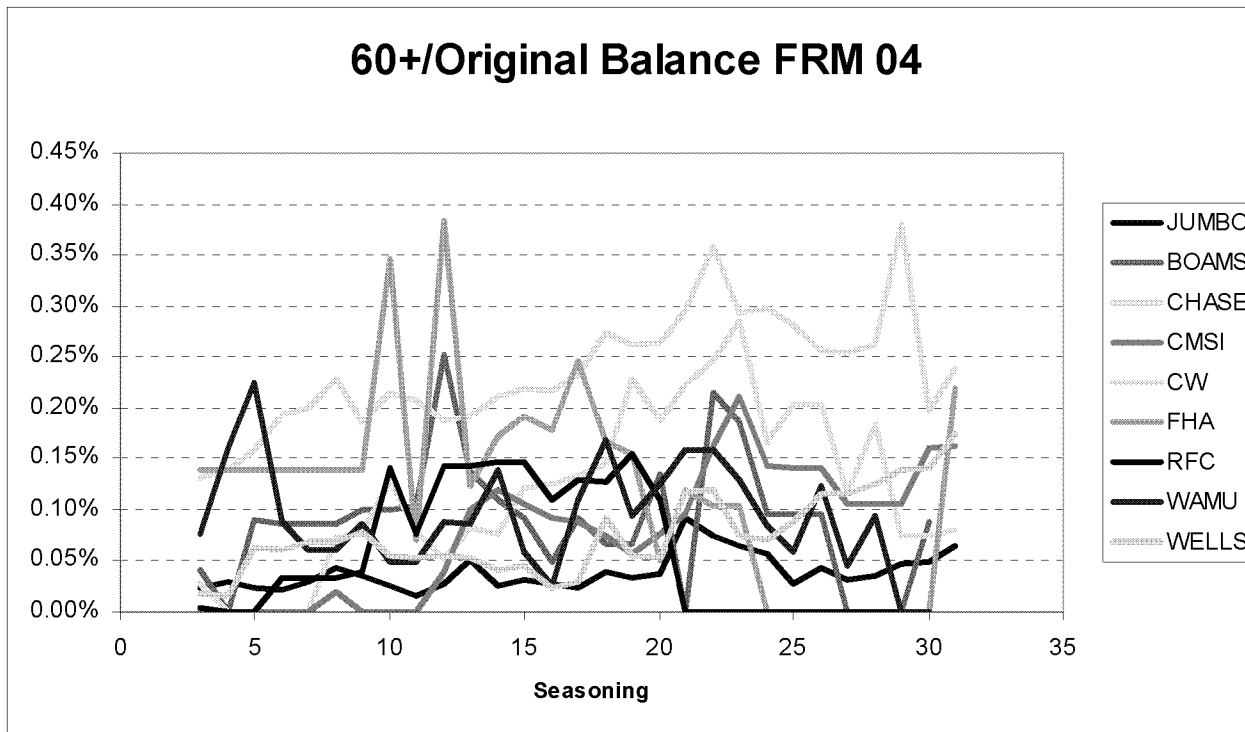




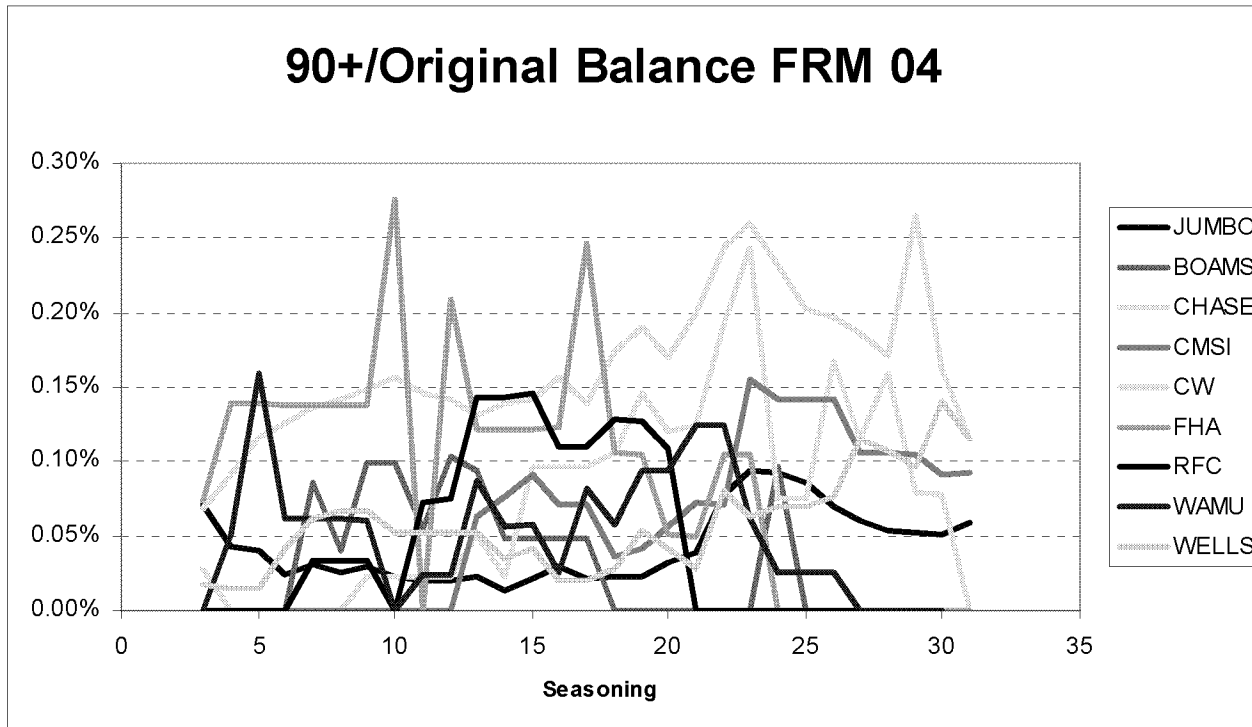
### 30-59 Delinquency FRM 04



### 60+/Original Balance FRM 04



## 90+/Original Balance FRM 04

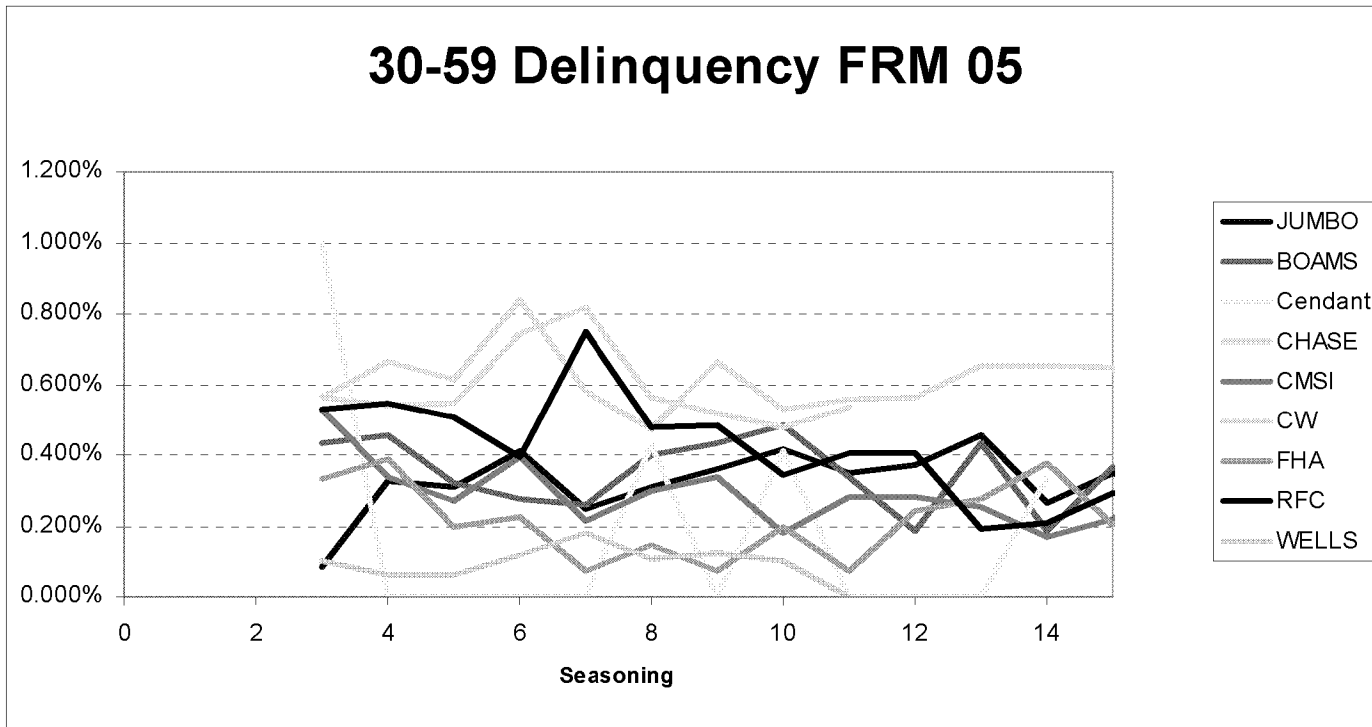


**Best Performance: RFC – Wells - WAMU**

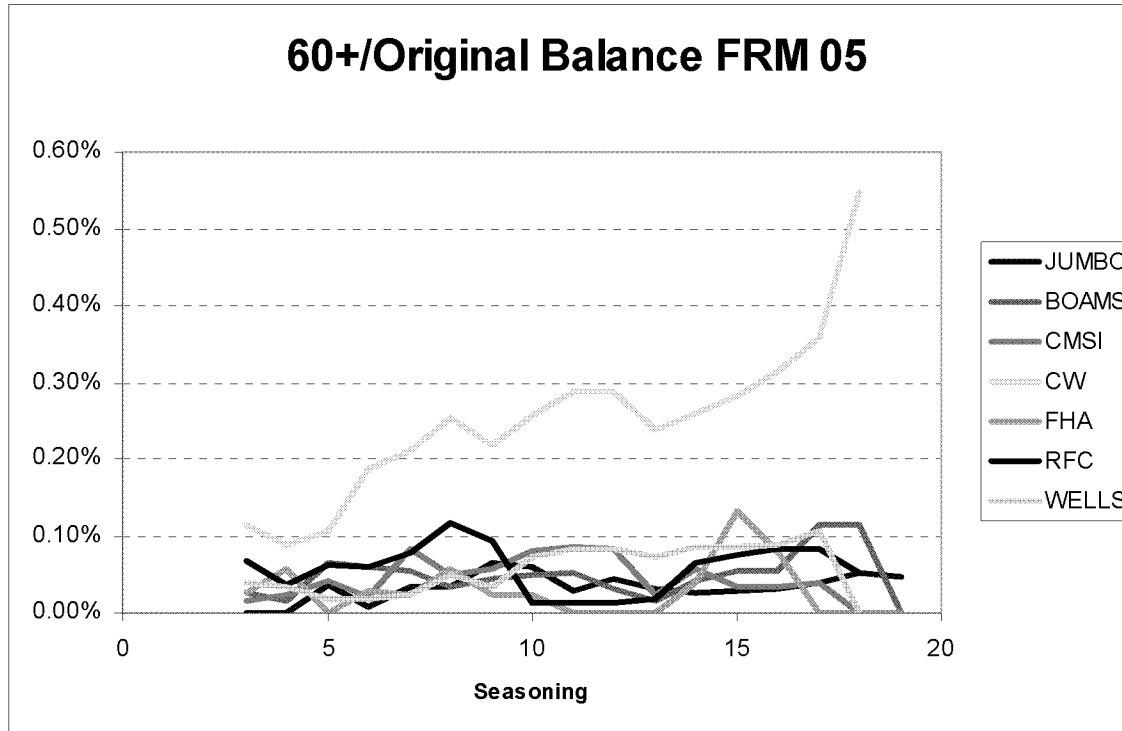


**Moody's Investors Service**

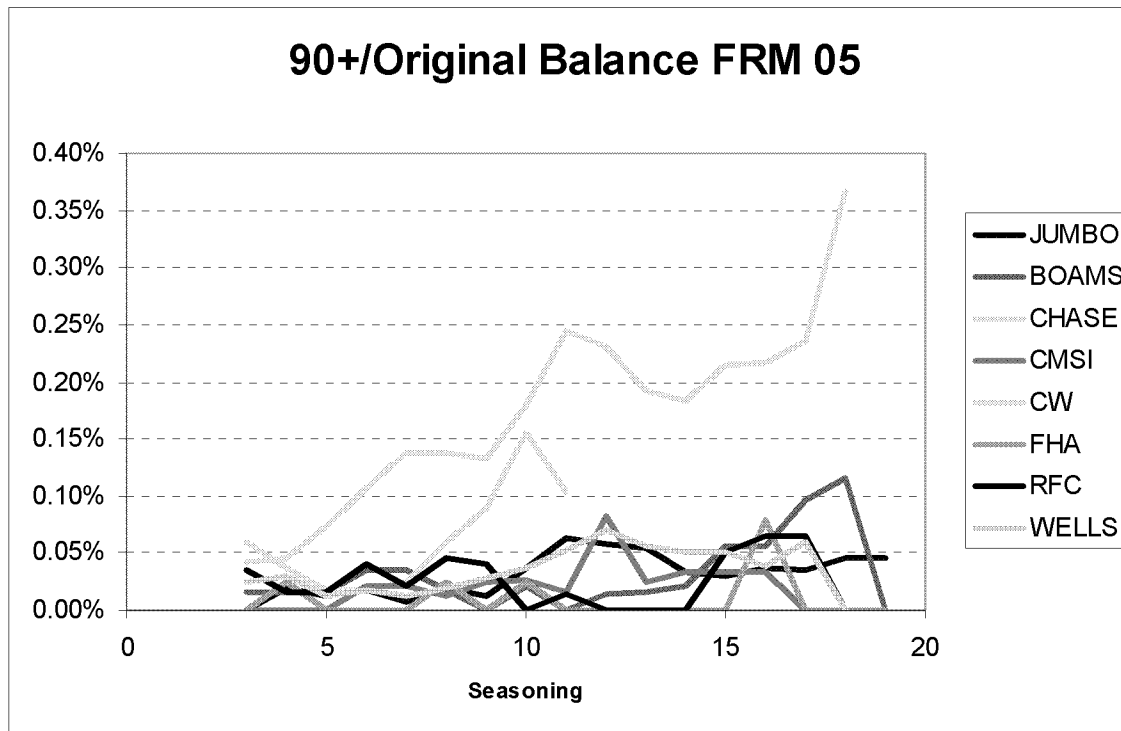
### 30-59 Delinquency FRM 05



### 60+/Original Balance FRM 05

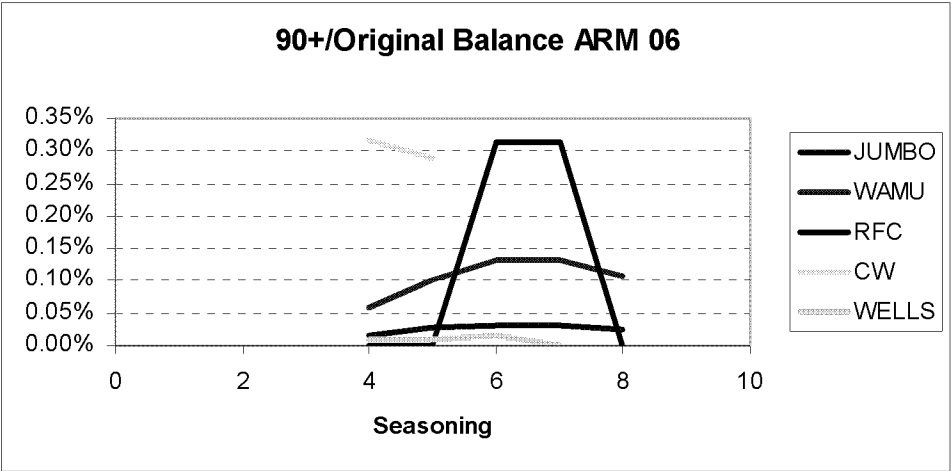


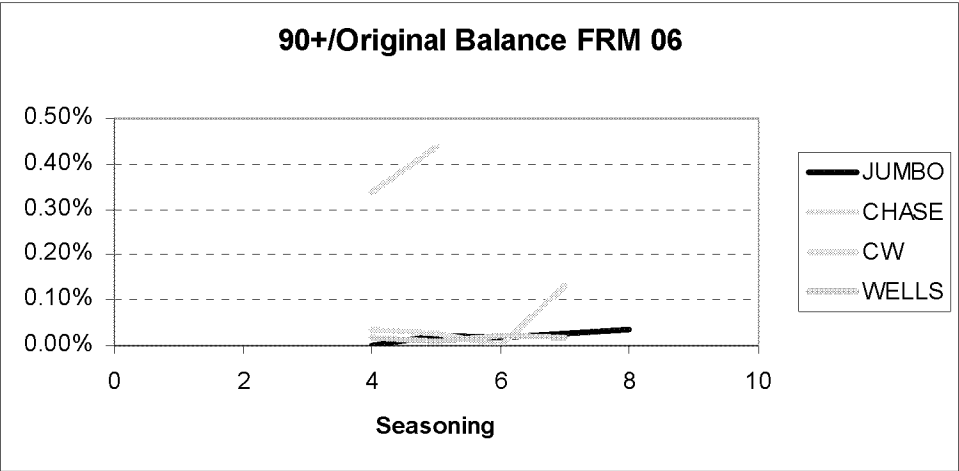
### 90+/Original Balance FRM 05



**Best Performance: RFC - BOA - Wells - Chase**

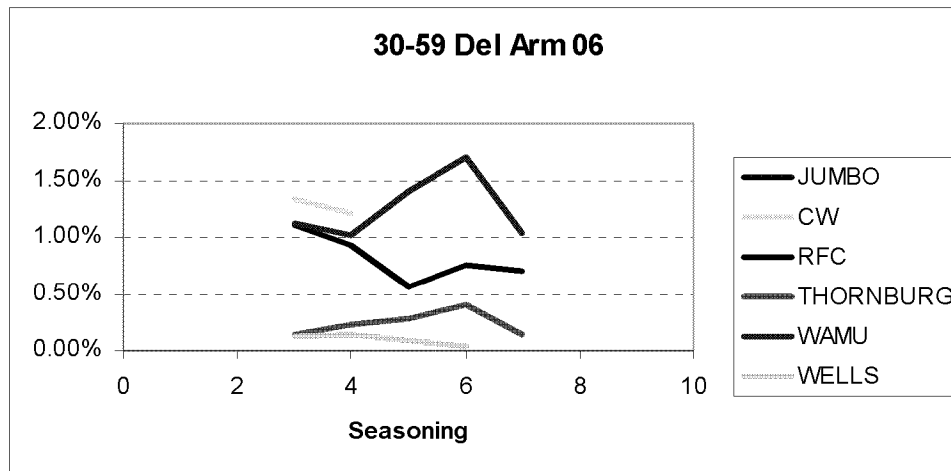


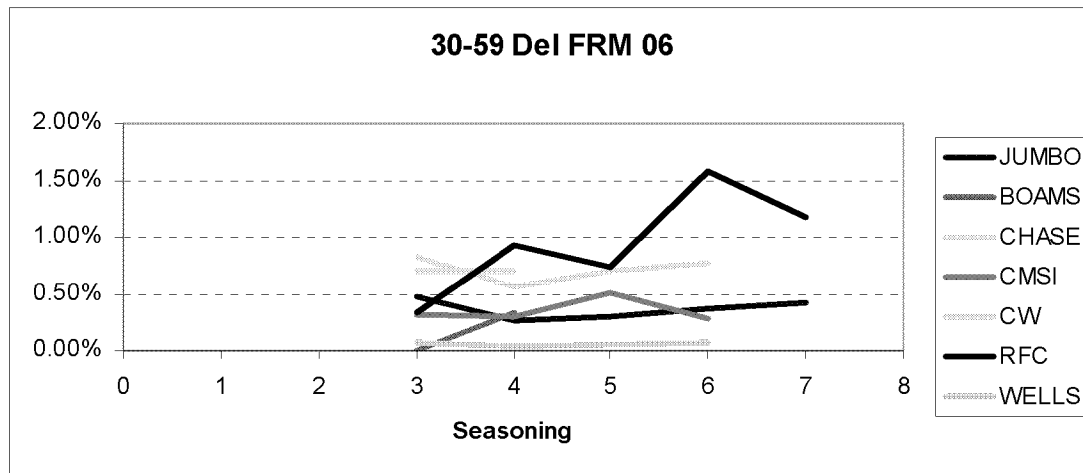
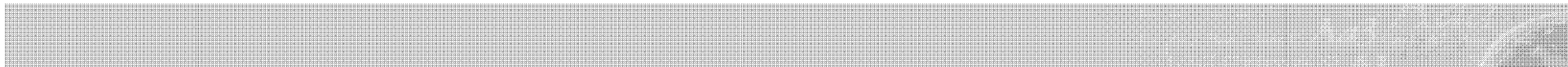


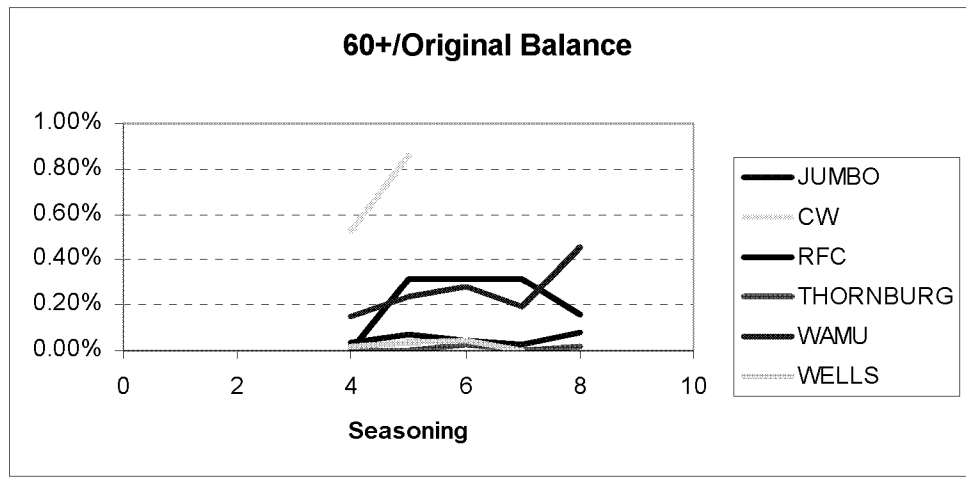
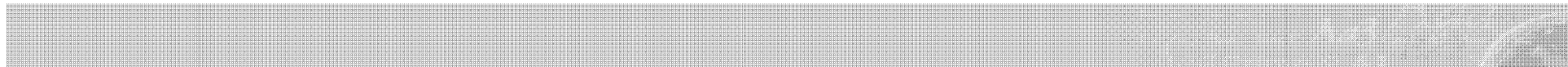


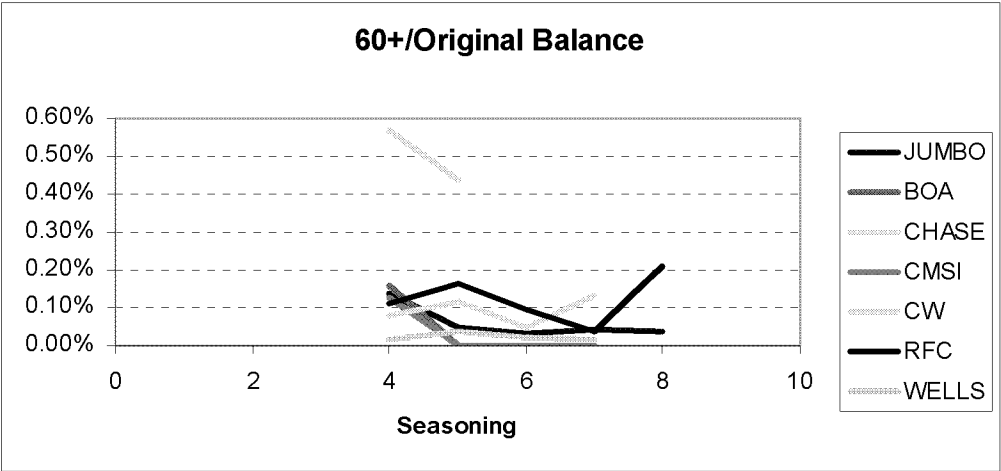
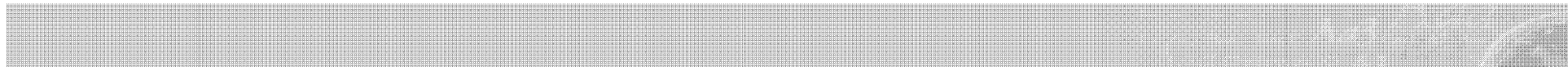


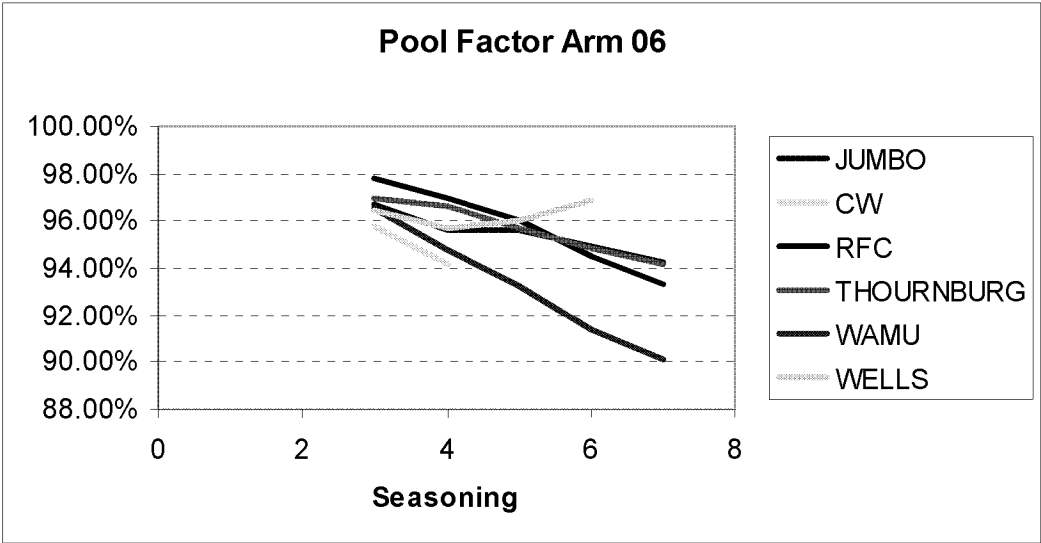
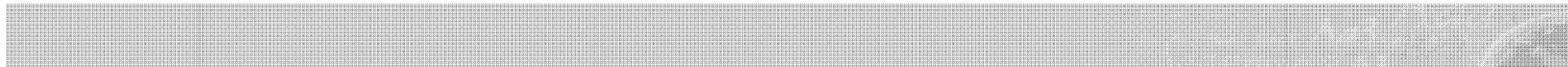
30-59 Del Arm 06



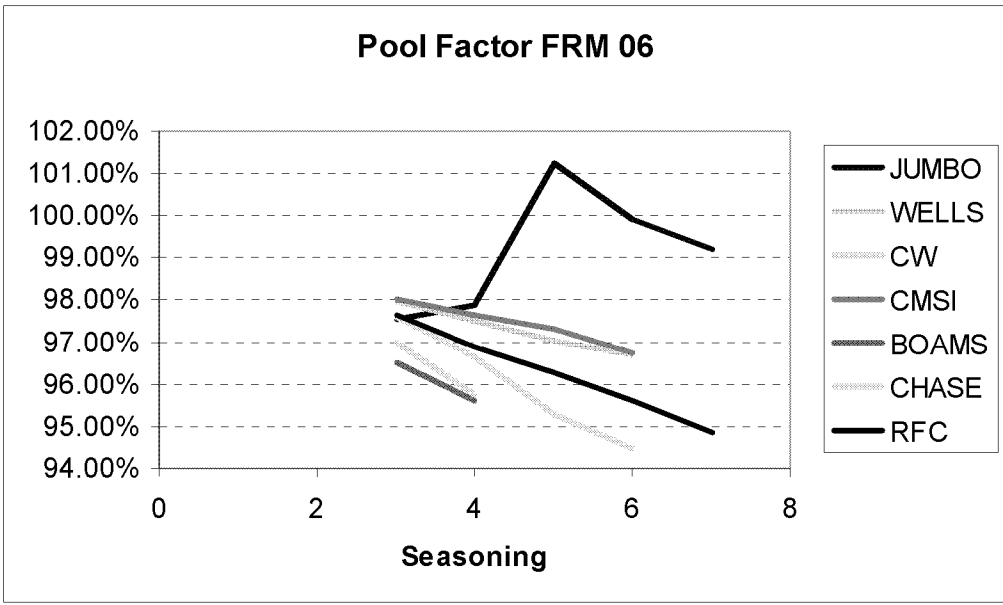








Pool Factor FRM 06



# RECOMMENDATIONS



# Overall Performance

ARM	
Vintage	Best Performers (Ranked)
2001	Countrywide - RFC
2002	RFC - WAMU - Wells
2003	Wells - WAMU - BOA
2004	Wells - RFC - WAMU - BOA
2005	Wells - WAMU - RFC - BOA

FRM	
Vintage	Best Performers (Ranked)
2001	RFC - WAMU - Wells
2002	WAMU - RFC - Wells - Chase
2003	Wells - Chase - RFC
2004	RFC - Wells - WAMU
2005	RFC - BOA - Wells - Chase





# Recommendations

ARM	
M3	Issuer
96%	WAMU - Wells - RFC
98%	BOA
100%	Countrywide - Chase

FRM	
M3	Issuer
96%	RFC - Wells
98%	WAMU - BOA - Chase
100%	Countrywide



## Final Recommendations

- **Based on consensual approval from all committee members:**

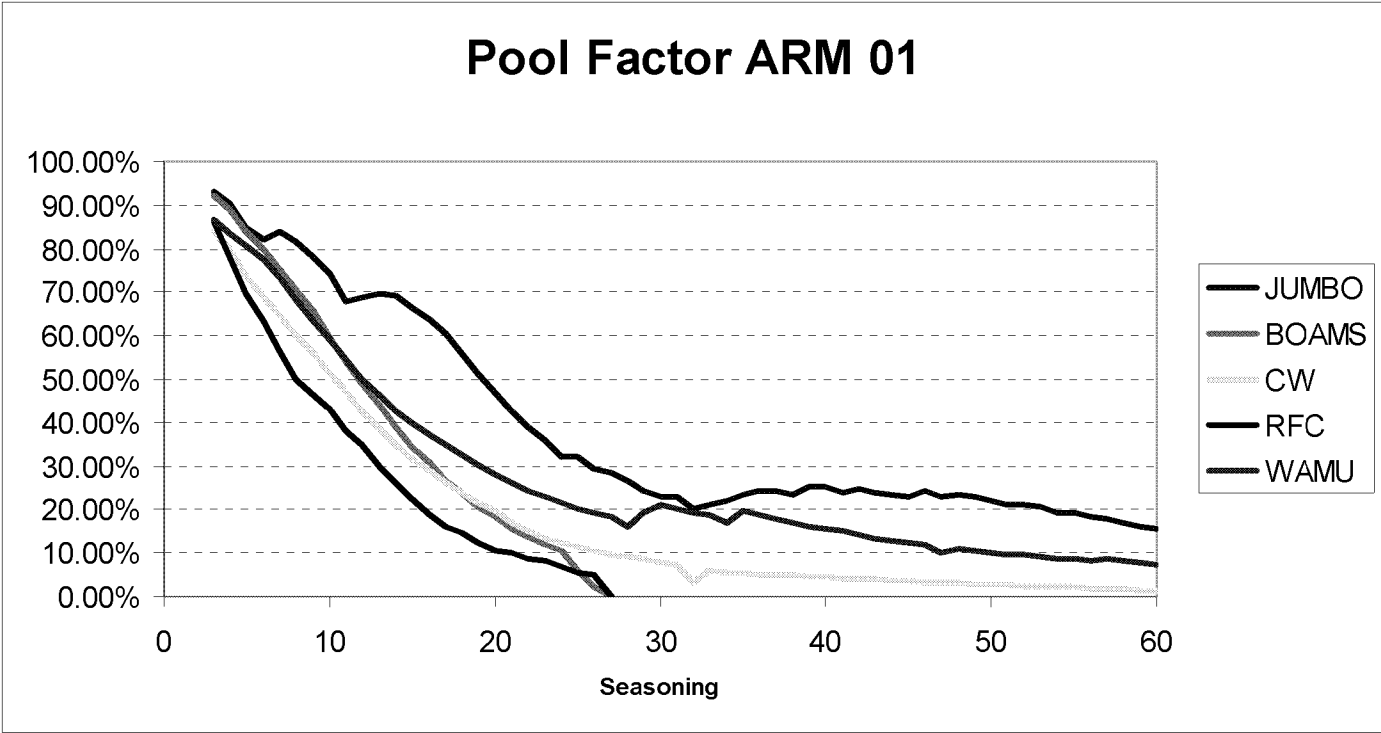
<b>M3</b>	<b>Issuer</b>
<b>95%</b>	<b>Wells - RFC</b>
<b>97.5%</b>	<b>BOA - WAMU - Chase</b>
<b>100%</b>	<b>Countrywide</b>



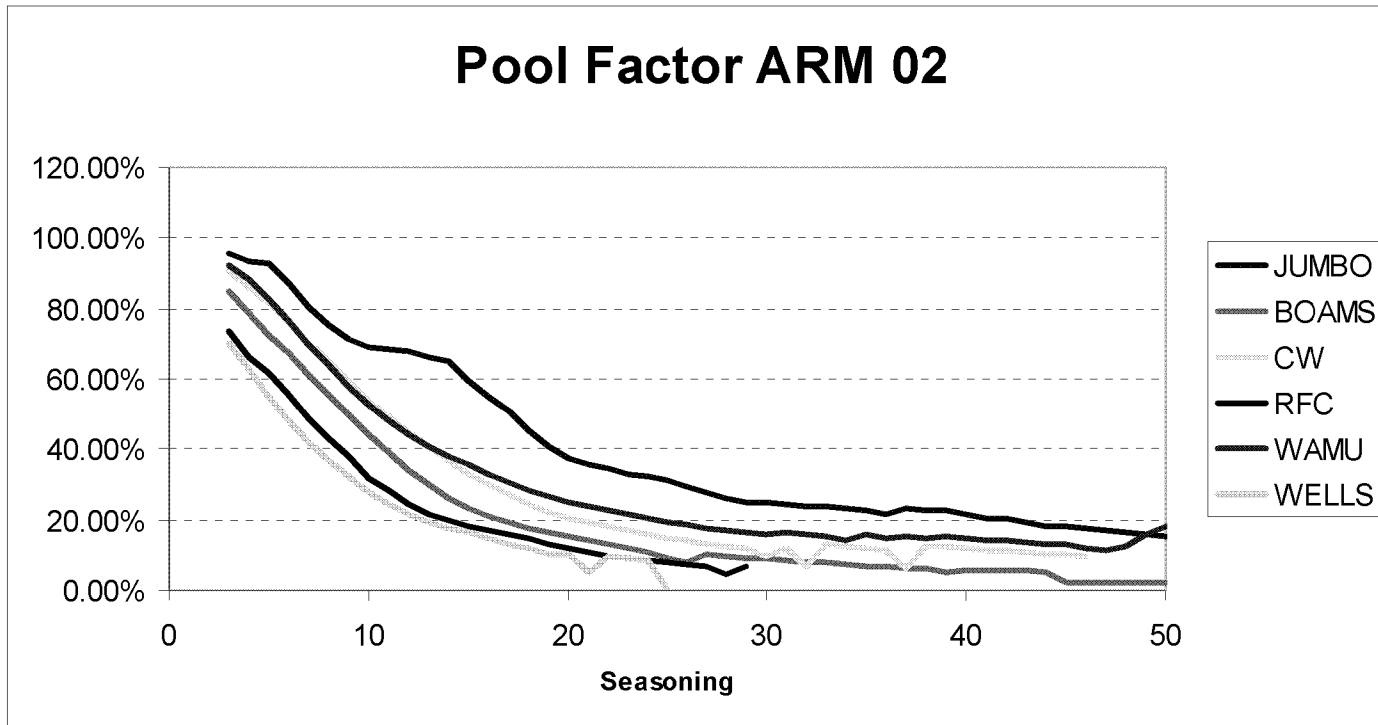
# ANNEX – Pool Factors



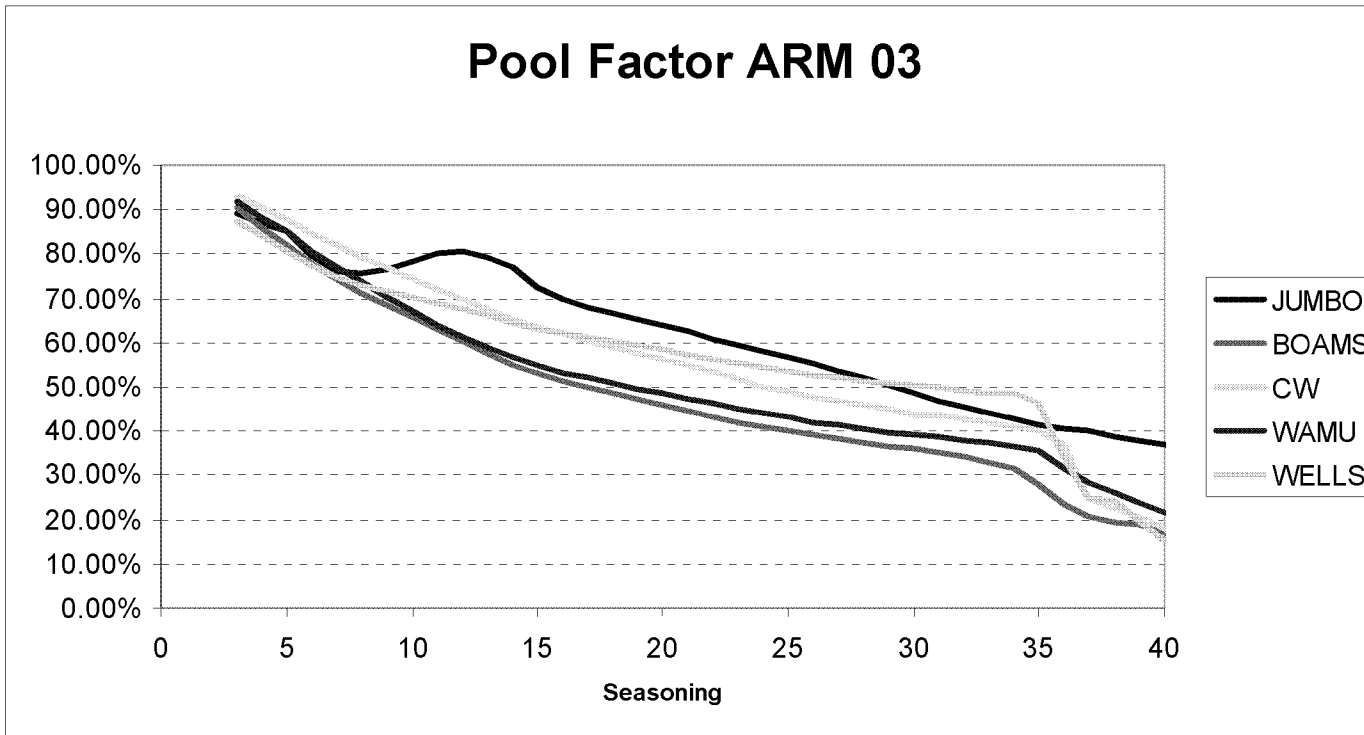
### Pool Factor ARM 01



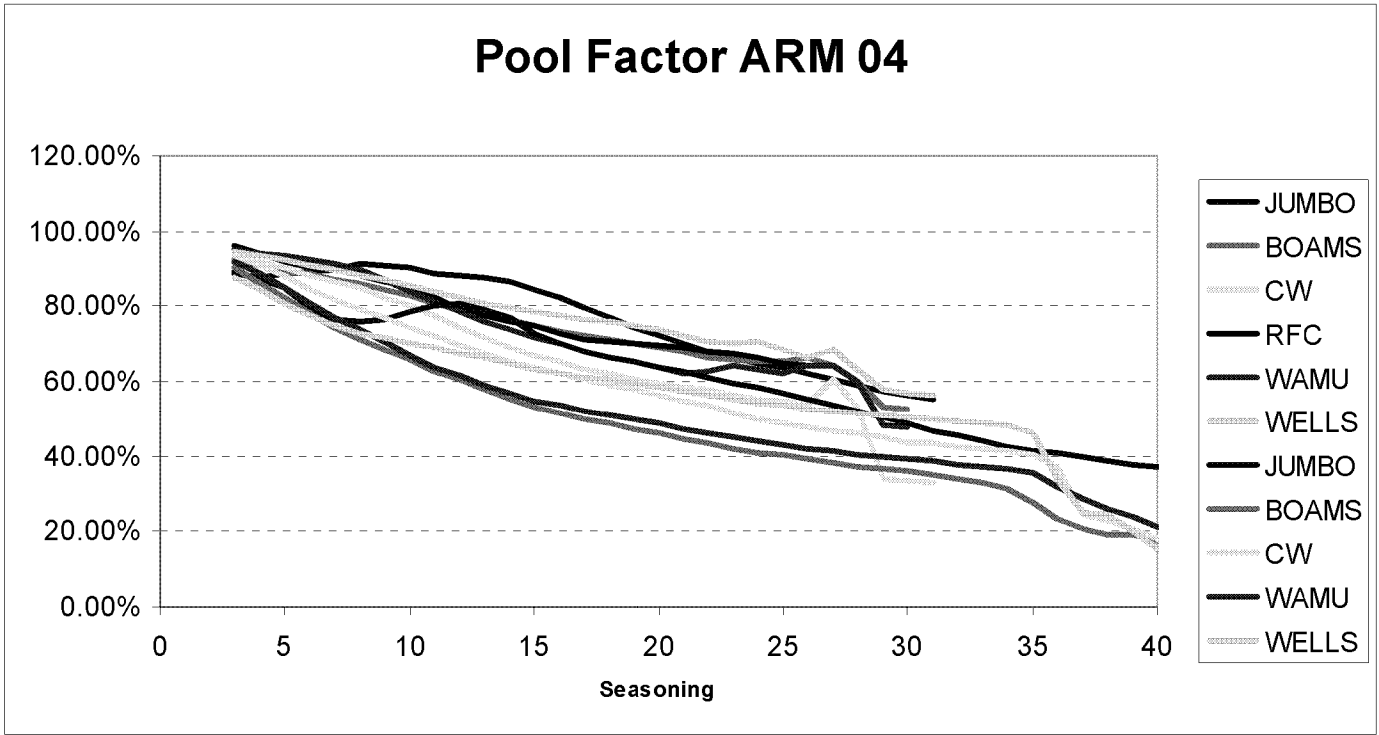
## Pool Factor ARM 02



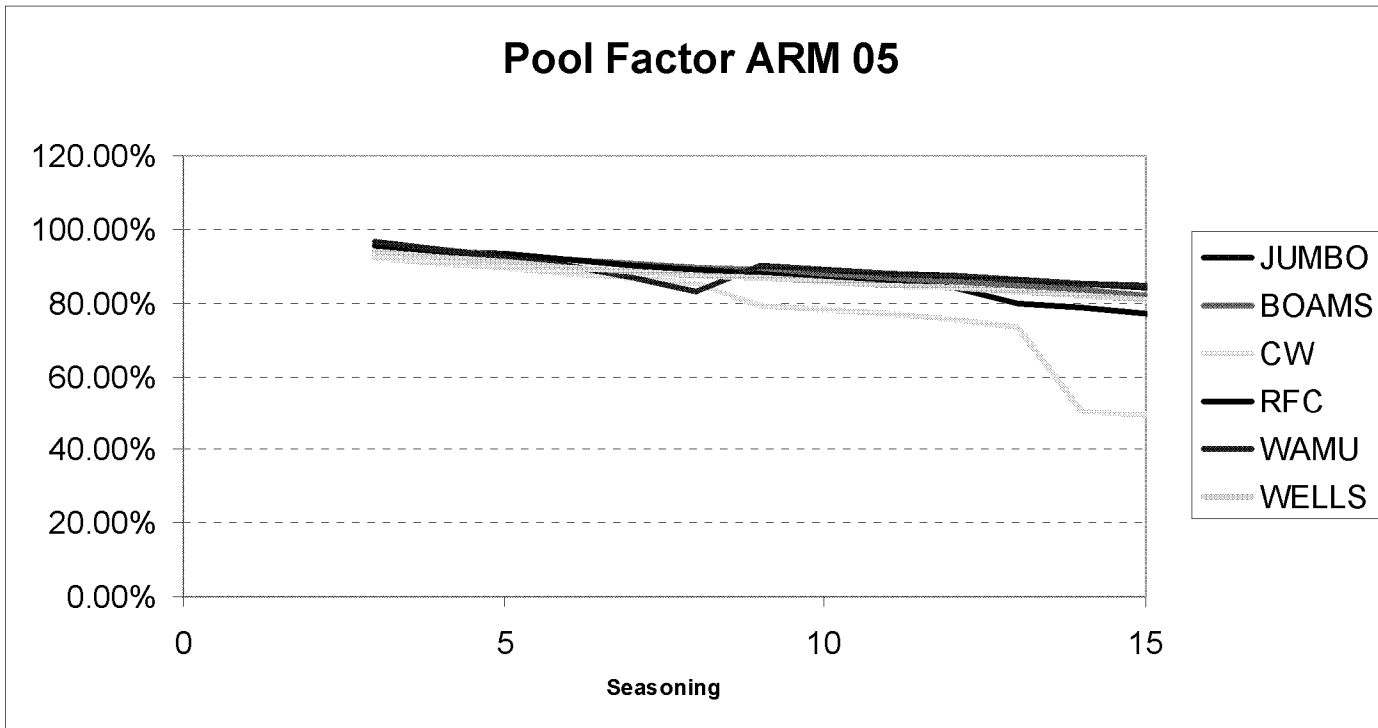
### Pool Factor ARM 03



### Pool Factor ARM 04

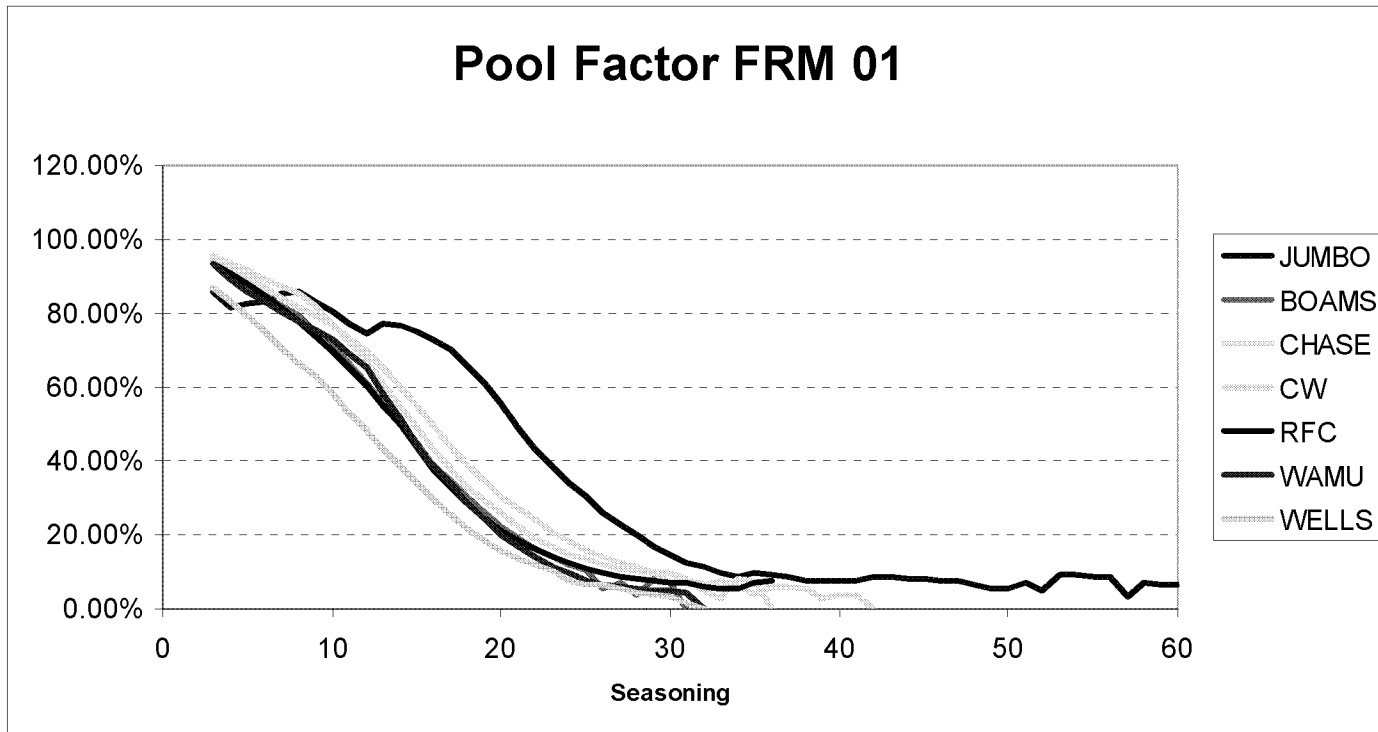


### Pool Factor ARM 05

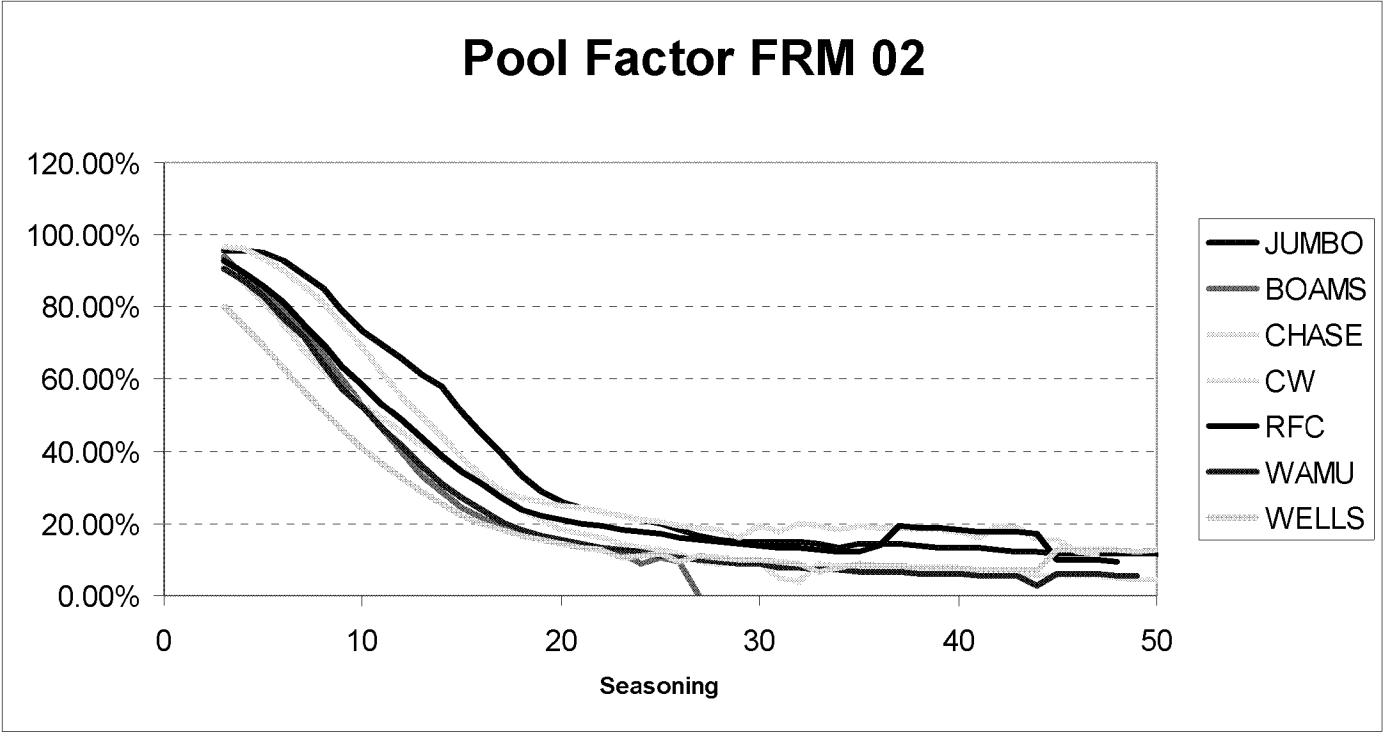




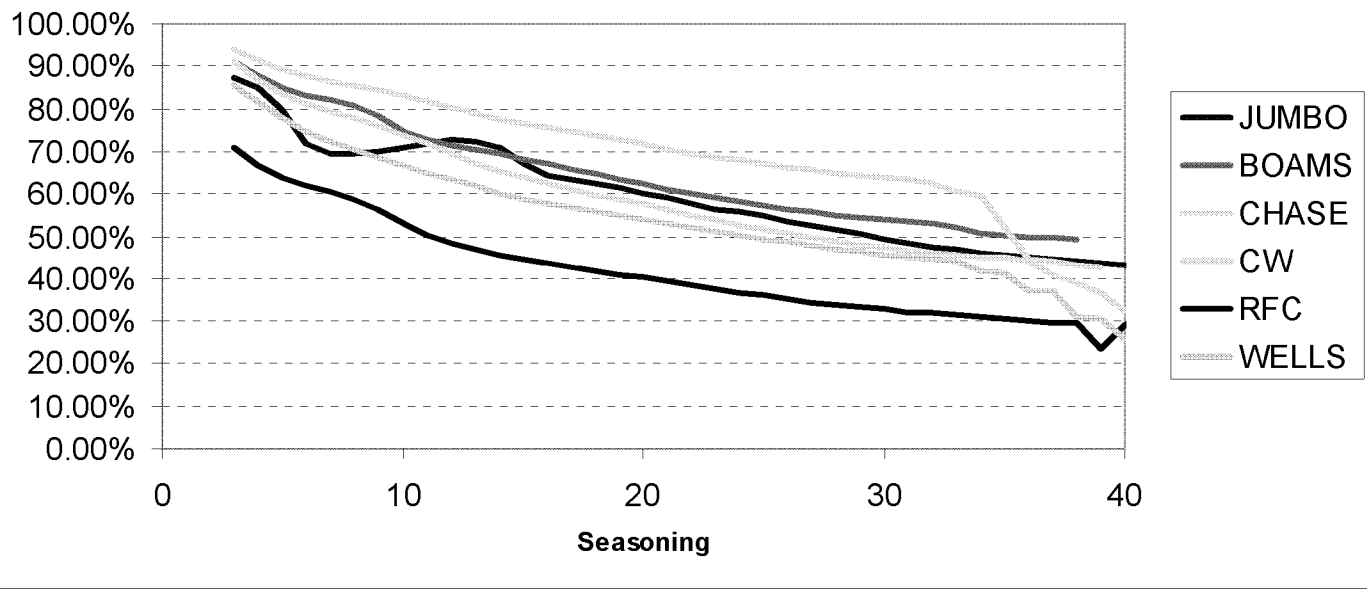
### Pool Factor FRM 01



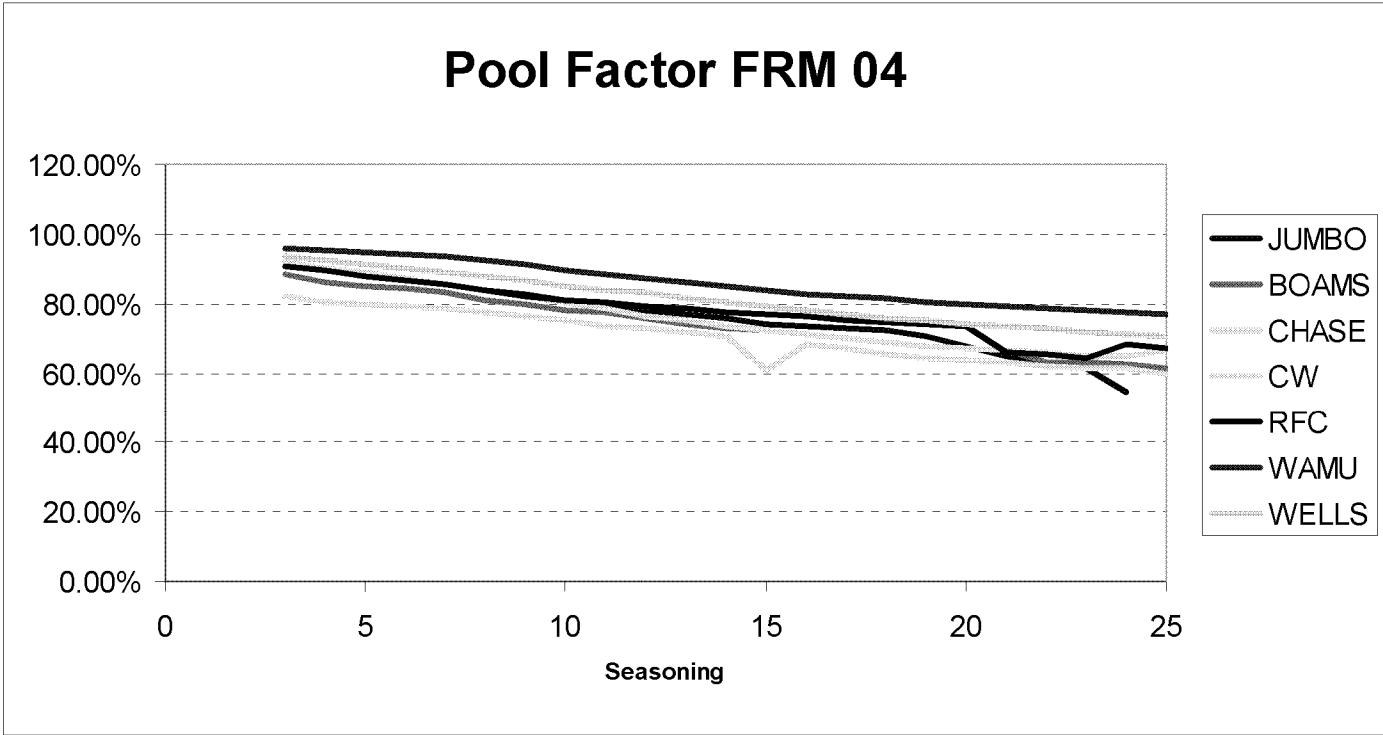
### Pool Factor FRM 02



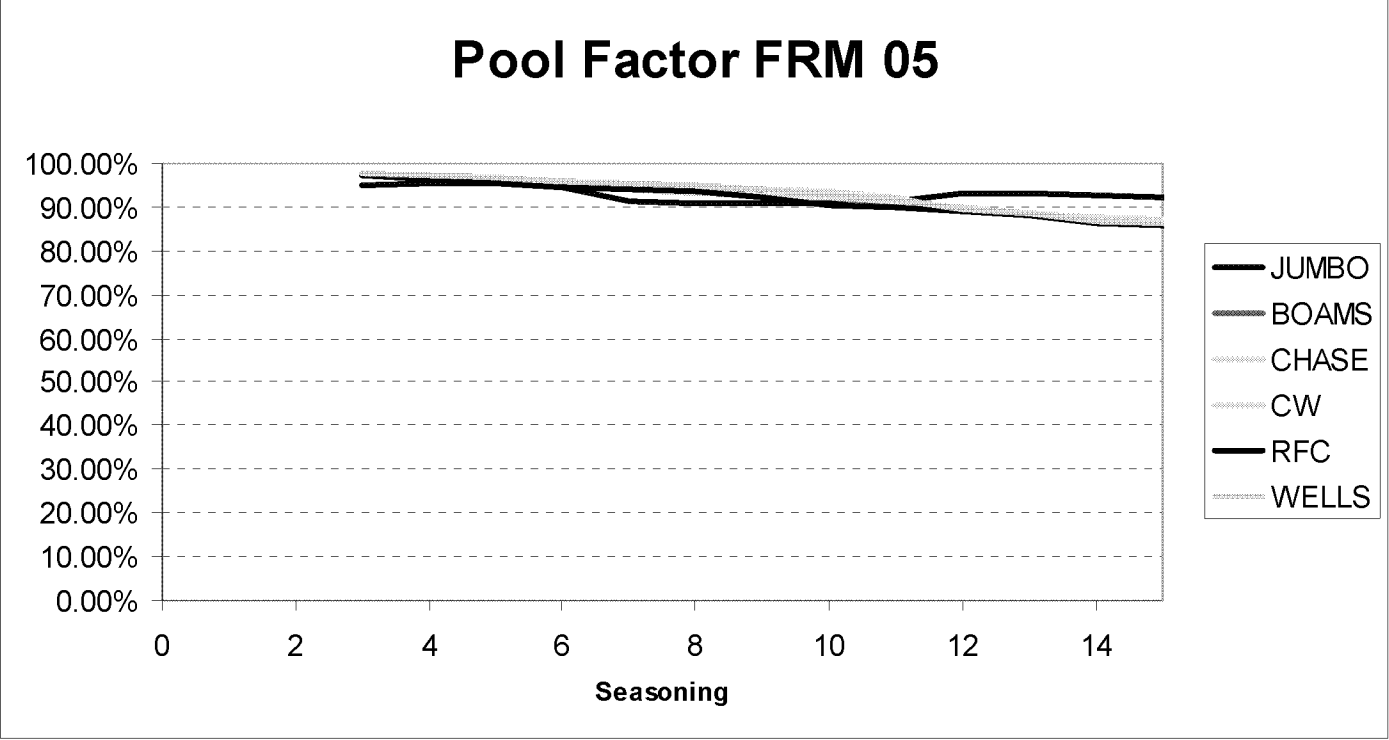
### Pool Factor FRM 03



### Pool Factor FRM 04



### Pool Factor FRM 05



## Subprime Originator Factor – Analysis

First Meeting on July 28, 2006

**Initial Recommendation:** To apply a factor of between 7.5% to -7.5% (7.5%, 5%, 2.5%, 0%, -2.5%, -5%, -7.5%); though the extreme factors would only be for very good / very very weak originators, backed by performance.

**Initial Analysis:** Based on the initial information we collected, it seems that most of the originators (13/24) are classified as Average and within this average group, the variance is not that substantial. Few originators are classified as “above average” (countrywide, FF, OO, WMC). As to the remainder of the originators, they are below average. The difference between those weaker originators vary more though.

Originator	Overall	
Countywide	Above Average	5%
First Franklin	Above Average	5%
Option One	Above Average	5%
WMC	Above average	5%
New Century	Average	+
Long Beach	Average	+
Wells	Average	+
Ameriquist - wholesale (Argent)	Average	
Ameriquist - retail	Average	
RFC	Average	
Fremont	Average	-
Accredited	Average	+
Centex	Average	
Novastar	Average	
Popular	Average	
Saxon	Average	-
Decision One	Average	
FieldStone	Average / Below Average	-2.5%
Aegis	Average / Below Average	-2.5%
Aames	Average/Below Average	TBD
Ownit	Below average	-5.0%
EquiFirst	Below Average	-2.5%
People's Choice	Below average	-5.0%
Encore	Below Average	-5.0%

**The Factors we considered:**

We have looked at operations related factors (appraisals, underwriting guidelines – including FICO related factors, documentation etc., and QC process).

We also looked at the companies’ financial strength (including their ratings, if available and how long they have been a player in the market, do they originate subprime loans only? Do they have a retail business?)

We also looked their motivations/goals/target borrowers.

<b>Overall assesment</b> (Average levels, below average, Above average)
<b>Levels - notches</b> (e.g one notch below average)
<b>Collateral Characteristics</b> (e.g. average than higher FICOs)
<b>Performance</b> (Average, Above Average, etc.)
<b>Financial Strenght</b> Originator Rating, if any
<b>Retail %</b> <b>Wholesale %</b>
<b>Appraisal practices</b> Overall assesment pre funding review of apps (%) post funding review of apps (%) reviews on high value loans other type of loans reviewed type of review tolerance if outside tolerance, addnt review? 2nd aprsails obtained if bal is over (xxx)? (please complete #) using outside vendors (e.g. CoreLogic) centralized appraisals pick (pre-selected or random pick) Appraisals include interior photos?

<b>FICO</b> report middle of 3/lowest of 2 qualify based on mid of 3/low 2 Min FICO
<b>Documentation</b> (Average, Above Average, etc.) + reason
<b>Exceptions %</b>
<b>Overall guidelines assesment</b> (Tight guidelines? Weak?)
<b>Kick-outs % from aggregators</b>
<b>QC / Audit processes</b> % of loans audited
<b>Target borrowers</b>
<b>Originates Subprime only?</b>
<b>Started securitizing in year</b> <b>Started operating in year</b>
<b>Other company specifics factors</b>

## Financial Strength:

Originator	Overall	Financial	Rating	Securitizing	Operating
Countywide	Above Average	Strong	A2		
First Franklin	Above Average	Average		1995	1981
Option One	Above Average	Strong. Option One's parent is HR Block /	HR blk A3	1999	1992
WMC	Above average	Above average	GE?		
New Century	<b>Average</b>	<b>Below Average</b>	<b>B1</b>	<b>1995</b>	<b>1995</b>
Long Beach	<b>Average</b>	<b>Strong</b>	<b>A3 for WaMu</b>	<b>2001</b>	<b>1999</b>
Wells	<b>Average</b>	<b>Very Strong</b>	<b>Aaa</b>	<b>1996</b>	
Ameriquest - wholesale (Argent)	<b>Average</b>	<b>Average</b>		<b>2003</b>	<b>2003</b>
Ameriquest - retail	<b>Average</b>	<b>Average</b>		<b>1996</b>	<b>1979</b>
RFC	<b>Average</b>	<b>Average</b>		<b>1998</b>	
Fremont	<b>Average</b>	<b>Below Average</b>	<b>B1</b>	<b>1994</b>	<b>1999 / 2003</b>
Accredited	<b>Average</b>	<b>Average</b>	<b>Public NR</b>	<b>1996 / 2000</b>	<b>1990</b>
Centex	<b>Average</b>	<b>Average</b>		<b>1998</b>	<b>1998</b>
Novastar	<b>Average</b>	<b>Average</b>		<b>1997</b>	<b>1997</b>
Popular	<b>Average</b>	<b>Above Average</b>	<b>Parent - single A</b>	<b>1997</b>	<b>1989</b>
Saxon	<b>Average</b>	<b>Below Average</b>	<b>B2 - Saxon Capital</b>	<b>1996</b>	<b>1989</b>
Decision One	<b>Average</b>	<b>Above Average</b>	<b>Strong Parent</b>	<b>1999</b>	<b>1999</b>
FieldStone	Average / Below Average	Average		2003	1996
Aegis	Average / Below Average	Average		2003	1993
Aames	Average/Below Average	Below Average		2003	1980s?
Ownit	Below average	Below Average		2004	2003
EquiFirst	Below Average	Above Average	A1-Parent-Regions Bank		1990
People's Choice	Below average	Average		2004	2004
Encore	Below Average	Below Average		2003	2002



## Operations:

Originator	Overall	Appraisals	Overall u/g assesement	Notes
Countywide	Above Average	Above average	Average	QC above average
First Franklin	Above Average			
Option One	Above Average	Average - above average	Average?	
WMC	Above average	Above Average	Average	15% exceptions
New Century	<b>Average</b>	<b>Above Average</b>	<b>Average</b>	10% exceptions
Long Beach	<b>Average</b>	<b>Average</b>	<b>Not tight</b>	QC above average
Wells	<b>Average</b>	<b>Average</b>	<b>Average</b>	
Ameriquest - wholesale (Argent)	<b>Average</b>	<b>Average</b>	<b>Average</b>	
Ameriquest - retail	<b>Average</b>	<b>Average</b>	<b>Average</b>	
RFC	<b>Average</b>	<b>Average</b>	<b>Good</b>	
Fremont	<b>Average</b>			
Accredited	<b>Average</b>	<b>Average</b>	<b>Average</b>	
Centex	<b>Average</b>	<b>Average</b>	<b>Average</b>	
Novastar	<b>Average</b>	<b>Average</b>	<b>Average</b>	
Popular	<b>Average</b>	<b>Average</b>	<b>Average</b>	
Saxon	<b>Average</b>	<b>Average</b>	<b>Average</b>	20-25% exception
Decision One	<b>Average</b>	<b>Average</b>	<b>Average</b>	
FieldStone	Average / Below Average	Average	Average	
Aegis	Average / Below Average	Average	Average	
Aames	Average/Below Average	Average	Average	
Ownit	Below average	Above average?	Average	
EquiFirst	Below Average			
People's Choice	Below average	Average	Average	
Encore	Below average			

**The Average group:** Within the average group, the characteristics seem fairly consistent. If we will use a factor based model, we may end up notching up some of those players (e.g. Wells, NC).

**Operations:** For appraisals and other operation related factors, it seems that almost all originators are ranked by the analysts as average. We will need to get more detailed information, including performance, in order to differentiate.

**Financial Strength:** Most of the average companies have average financial strength (7/13). Most of them have been securitizing since the mid/late 90ies (with the exception of Argent (2003) and Long Beach (2001)).

The exceptions are New Century and Fremont whose rating is B1 and Saxon – B2. However, NC have been around since 1995 and their practices are average. New Century also seems to have has above slightly average appraisal practices. Saxon started operating at 1989 and securitizing since 1996. Note, however, the high exceptions % for Saxon.

As to strong financial strength, the exceptions are Wells (Aaa); Long Beach (Wamu A3); and Popular (fna equityfirst). However, their operations seem average.

**The top group:** We have 4 issuers who are considered above average: Countrywide, FF, OO and WMC.

All except WMC have strong financial strength; all have strong appraisal practices (not sure about FF). All except OO have strong performance. Guidelines, however, seem to all be average and not tighter than average.

**Recommendation for the top group:** it seems that unless there will be material performance difference between those 4, there is no need to differentiate between them and we recommend levels of 5% above average (~one notch).

**The weaker group:**

The weaker group includes 7 originators (out of 24). The characteristics of the group seem to vary and we note that some of the originators are included in this group mainly due to lack of substantial/recent performance (Ownit, Fieldstone, Equifirst).

**Operations:** For appraisals and other operation related factors, it seems that all those weak originators are ranked by the analysts as average. We will need to get more detailed information in order to differentiate.

Financial Strength:

All the weak originators have been securitizing only for a few years only although some have been around from the 90ies.

In terms of financial strength, some of those originators have average financial strength (Aegis, Fieldstone, People's Choice) and some below average financial strength (ownit, encore). Only one originator in this group has above average financial strength: Equifirst (regions bank – A1; operated since 1990).

**Recommendation for the weak group:** If indeed, once we get more detailed information about the operations and appraisals, there are no material differences between all the originators in this group, we would make a differentiation based on financial strength and performance. If the financial strength is average, and the originator is considered weak because of lack of substantial performance – recommending -2.5%. If financial strength is weak and there is no performance or bad performance: -5% to 7-.5%.

**Notes:**

**Aggregators:**

The aggregators, although they have a large share of the subprime issuance market, have not yet been included in this analysis.

When they aggregate collateral from an originator we analyzed, the originator factor assigned to that originator will be applied. As to the small originators, **the initial recommendation would be to assign average factor to them.**

	A	B	C	D	E
1	<b>Originator</b>	<b>M3 Adjustment</b>	<b>Notes</b>		
2	<u>First Horizon</u>	-2.50%			
3	<u>American Home Mortgage</u>	5.00%	6% add'l hit for option ARM		
4	<u>Quicken</u>	15.00%			
5	<u>Impac</u>	30.00%	5% add'l hit for option ARM		
6	<u>Alliance Bancorp</u>	40.00%	10% add'l hit for cashout		
7	<u>Greenpoint</u>	10.00%		8/24/2007	
8	<u>Aurora</u>	10.00%		8/24/2007	
9	<u>National City</u>	10.00%		9/11/2007	

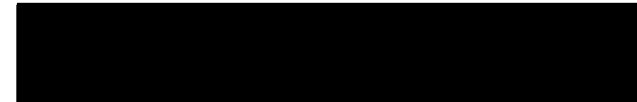
	A	B	C
1	Originator	Originator Quality	M3 Adjustment
2	<u>Wells Fargo</u> *	1	-5.00%
3	<u>Thornburg</u>	1	-25.00%
4	<u>Citi Mortgage</u> *	1	-5.00%
5	<u>Bank of America</u> *	[1]	-5.00%
6	<u>FHA</u>	2	-2.50%
7	<u>RFC</u>	2	-2.50%
8	<u>Wamu</u>	2	-2.50%
9	<u>Countrywide</u>	3	0.00%
10	<u>JP Morgan Chase</u>	3	0.00%

	A	B	C	D	E	F
1	Originator	Originator Quality	M3 Adjustment	CES levels (if different than M3 adjustment)		
2	Home Loan Investment Bank	[1]	-15.00%			
3	JP Morgan Chase	1	-5.00%			
4	First Franklin	1	0.00%	Use 1st lien to derive		
5	WELLS	1	-5.00%			
6	Countrywide	[3]	0.00%			
7	RFC (RASC)	[3]	0.00%		9/11/2007	
8	Popular	3	0.00%			
9	Ameriquest	3	0.00%			
10	Saxon	3	0.00%			
11	EquiFirst	3	0.00%			
12	Nationstar (formerly Centex )	[3]	2.50%			
13	Accredited	[4]	5.00%		9/28/2007	
14	Option One	[4]	5.00%		9/11/2007	
15	Novastar	[4]	5.00%			
16	Encore	4	5.00%			
17	Aegis	4	5.00%			
18	Decision One	4	5.00%			
19	Long Beach	[5]	10.00%	60/20	8/24/2007	
20	WMC	5	12.50%	75/25	7/18/2007	
21	Fremont	5	10.00%	75/25		
22	People's Choice	5	10.00%	M3 + 17.5%		
23	New Century	5	12.00%	70/25 (floor)	8/24/2007	
24	BNC	[5]	10.00%		8/24/2007	
25	FieldStone	[5]	15.00%		9/11/2007	

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# Performance of Main Jumbo Issuers

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# Agenda

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- **Summary of Main Jumbo players and collateral characteristics**
- **Performance by vintage broken out by FRM/ARM based on:**
  - **30-59 days delinquency**
  - **60+ delinquency as % of Original balance**
  - **90+ delinquency as % of Original balance (inc. Foreclosure and REO)**
- **Summary & Recommendations**





## Main Jumbo Issuers in 2004 and 2005

2006 (up to 09/06) Amount in \$B		2005 Amount in \$B		2004 Amount in \$B	
1 Wells Fargo	NA	1 Wells Fargo	36.2	1 Wells Fargo.	25.0
2 JP Morgan	NA	2 Goldman Sachs	16.9	2 Bank of America	17.3
3 Thornburg	NA	3 JP Morgan	15.8	3 WaMu	14.2
4 Countrywide	NA	4 Bank of America	15.2	4 Goldman Sachs	10.4
5 Bank of America	NA	5 Countrywide	12.9	5 Countrywide	9.8
6 RFC	NA	6 Bear Stearns	10.4	6 Merrill Lynch	9.5
7 CiticorpMtgSecInc	NA	7 Merrill Lynch	7.1	7 Sequoia	8.9
8 Citigroup (CMLT)	NA	8 Washington Mutu	6.6	8 CitiMortgage	6.0
9 Washington Mutu:	NA	9 Thornburg	5.5	9 JP Morgan	5.6
10 Merrill Lynch	NA	10 RFC	5.2	10 UBS	5.0



## Servicer Rating Adjustments

- On top of Performance benefit and capped at 5%

<i>CE Adjustments based on the SQ Rating of the Primary Servicer</i>	
Servicer's SQ Rating or equivalent	CE Adjustments
SQ1	-2.5%
SQ1-	-1.65%
SQ2+	-0.85%
SQ2	0%
SQ2-	+0.85%
SQ3+	+1.65%
SQ3	+2.5%
SQ3-	+3.5%
SQ4+, SQ4, SQ4-	5-10%+
SQ5	Case specific



# Collateral Characteristics

	FRM								
	<u>WELLS</u>	<u>BOA</u>	<u>CHASE</u>	<u>WAMU</u>	<u>CW</u>	<u>RFC</u>	<u>Citi</u>	<u>FH</u>	<u>Thorn.</u>
1 Observed Avg FICO	740-750	745-750	730-740	-	735-745	725-735	742	745	-
2 Observed Avg LTV/CLTV	68/71	67/72	68/?	-	73/74	70/74	66/69	72	-
3 Origination channel: R/W (%)	?	65/35	45/55	-	30/70	0/100	100/0	55/45	-
4 Underwriting Engine (DU,LP, Proprietary)	ECS	Capstone	ZIPPY	-	CLUES	Proprietary	Proprietary	DU & LP	-
5 Appraisal Requirements	\$1.5M	\$1.25M	\$1M	-	\$1M	\$1M	\$1.5M	\$1.5M	-
6 Avg concentration in CA	40%-50%	40%-50%	30%-40%	-	40%-50%	30%-40%	30-40%	20% - 25%	-
7 Avg IO %/ 40yrs	30%	0%	0%	-	20%	25%	15%	25%	-
8 Avg Investor Properties	0%	0%	0%-1%	-	0%-1%	0%	0%	0%	-
9 Servicer Rating	SQ1	SQ1	SQ1	Private (SQ2)	SQ1	SQ1	SQ1	SQ2+	N/A
	ARM								
	<u>WELLS</u>	<u>BOA</u>	<u>CHASE</u>	<u>WAMU</u>	<u>CW</u>	<u>RFC</u>	<u>Citi</u>	<u>FH</u>	<u>Thorn.</u>
1 Observed Avg FICO	740-750	745-750	740-750	735-745	720-730	730-740	-	740	>740
2 Observed Avg LTV/CLTV	69/73	72/75	70/?	67/68	71/78	72/78	-	72	65-70
3 Origination channel: R/W (%)	?	65/35	45/55	?	30/70	0%/100%	-	55/45	Corres.
4 Underwriting Engine (DU,LP, Proprietary)	ECS	Capstone	ZIPPY	Proprietary	CLUES	Proprietary	-	DU & LP	Human
5 Appraisal Requirements	\$1.5M	\$1.25M	\$1M	**	\$1M	\$1M	-	\$1.5M	\$1.5M
6 Avg concentration in CA	40%-50%	40%-50%	30%-40%	60%-70%	40%-50%	30%-40%	-	25%-30%	25%-30%
7 Avg IO %/ 40yrs	30%	70%	75%	95%	90%	80%	-	85%	95%
8 Avg Investor Properties	4%	0%-1%	0%-1%	0%-1%	0%-1%	0%	-	0%-3%	10%
9 Servicer Rating	SQ1	SQ1	SQ1	Private (SQ2)	SQ1	SQ1	SQ1	SQ2+	N/A
Current Postion relative to M3 (perf. Only)	-5.0%	-2.5%	-2.5%	-2.5%	0%	-5.0%	0%	0%	-25%



# Jumbo Index Composition

Shelf	2001	2002	2003	2004	2005	2006
ABNAMRO	4.7%	1.5%	2.0%	0.0%	0.0%	0.0%
BoAFunding	0.0%	0.0%	0.9%	0.2%	2.2%	5.4%
BOAMS	9.1%	6.4%	9.1%	8.4%	5.8%	1.2%
BSARM	12.9%	7.0%	5.9%	3.4%	3.9%	1.2%
Cendant	0.9%	0.9%	0.0%	0.0%	0.0%	0.0%
ChaseMortgageFinanceTrust	2.6%	1.7%	2.3%	1.0%	2.0%	4.2%
ChevyChaseFunding	0.0%	0.0%	1.6%	4.8%	3.6%	0.0%
CHLMortgage	6.0%	9.3%	14.2%	12.4%	7.1%	7.6%
CiticorpMtgSecInc	0.4%	0.7%	2.0%	2.1%	3.7%	3.5%
CitigroupMtgLoanTrust	0.0%	0.0%	0.1%	1.0%	1.3%	2.6%
CSFB	1.5%	6.6%	10.6%	0.8%	2.4%	0.0%
CWMBS	6.8%	0.0%	0.0%	1.1%	0.0%	0.8%
DeutscheMtgSec	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
ETRADE	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%
FirstHorizonMtgPassThrough	2.5%	2.6%	2.2%	1.3%	1.8%	0.5%
FirstRepublicMtgLoanTrust	0.6%	0.8%	0.0%	0.0%	0.0%	0.0%
FNT	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
GMACM	0.7%	1.8%	1.2%	2.7%	1.8%	0.6%
GSRMtgLoanTrust	0.6%	5.6%	2.7%	4.2%	5.3%	3.7%
IndyMacINDA	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%
JPMorganMtgLoanTrust	0.0%	0.0%	0.2%	1.5%	7.1%	11.4%
MASTRARMTrust	0.3%	1.2%	0.1%	2.3%	0.0%	0.0%
MASTRAssetSecTrust	0.8%	4.6%	1.7%	0.5%	0.3%	1.1%
MLCC	1.0%	0.0%	6.7%	6.7%	3.8%	1.4%
MLMI	0.0%	1.0%	2.4%	0.4%	1.3%	0.3%
MRFCMtg	2.0%	0.5%	0.0%	0.0%	0.0%	0.0%
MSDWCapital	0.4%	0.6%	0.2%	0.0%	0.0%	0.0%
NewYork	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%
PHHMtgCapital	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
PNCMtgSecCorp	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PrimeMtgTrust	0.0%	0.0%	0.6%	0.2%	0.4%	0.0%
ProvidentFundingMtgLoanTrust	0.0%	0.0%	0.3%	0.3%	1.3%	0.0%
RAST	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%
RFMSI	8.5%	3.4%	2.6%	1.3%	4.3%	4.3%
SalomonMtgLoanTrust	0.7%	0.3%	0.0%	0.0%	0.0%	0.0%
Sequoia	0.7%	5.0%	4.8%	8.1%	1.2%	0.0%
Thornburg	1.4%	1.4%	3.1%	3.8%	5.6%	10.7%
WAMU MSC	4.8%	3.3%	0.6%	0.0%	0.0%	0.0%
WAMUMtg	11.2%	26.1%	12.5%	10.5%	4.7%	1.8%
Wells Fargo	14.4%	7.1%	9.4%	21.0%	28.6%	35.8%
ZionsResidentialMtgLoanTrust	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Zuni	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%
<b>Grand Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



## Deals per Originator

	Number of Deals
Wells	132
Countrywide	112
B of A	74
Wa Mu	72
RFC	51
FHA	32
Citi	24
Chase	24
Thornburg	18
Cendant-PHH	5

**Total number of deals is 818**

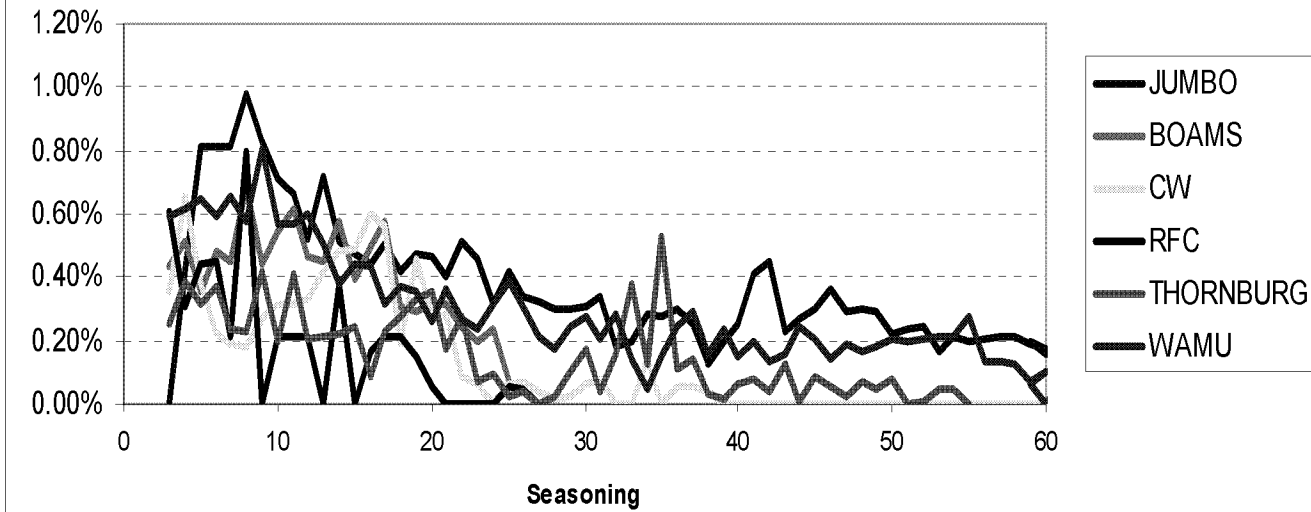


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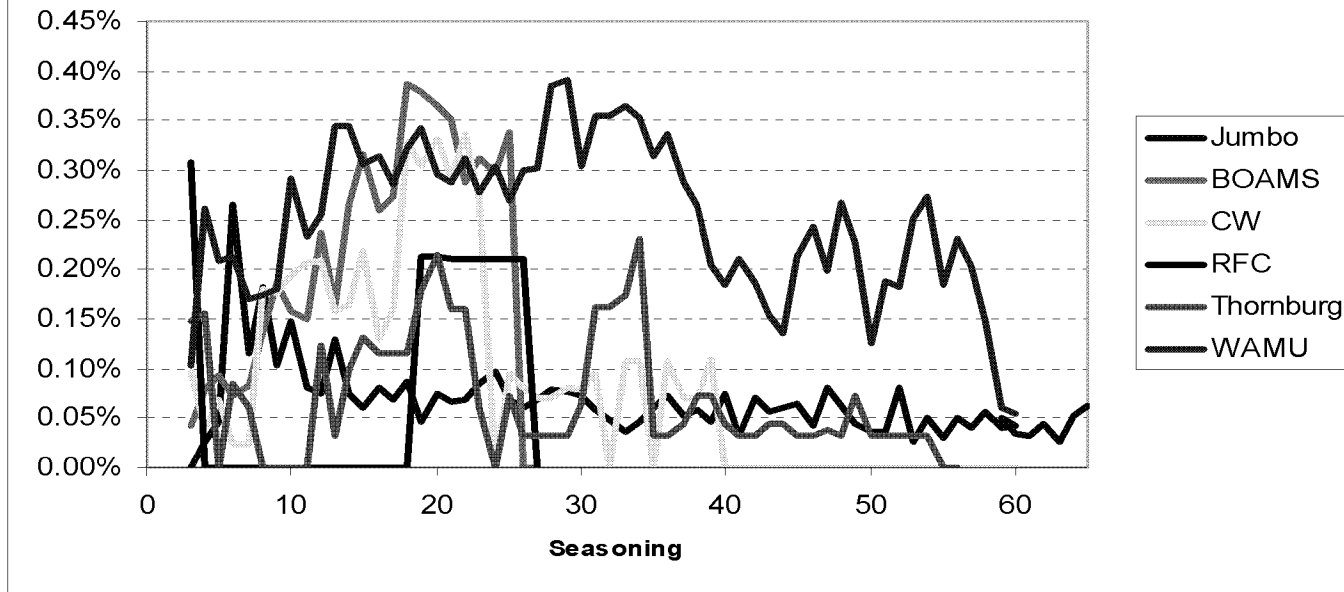
# **ARM PERFORMANCE REVIEW**



## 30-59 Delinquency ARM 01

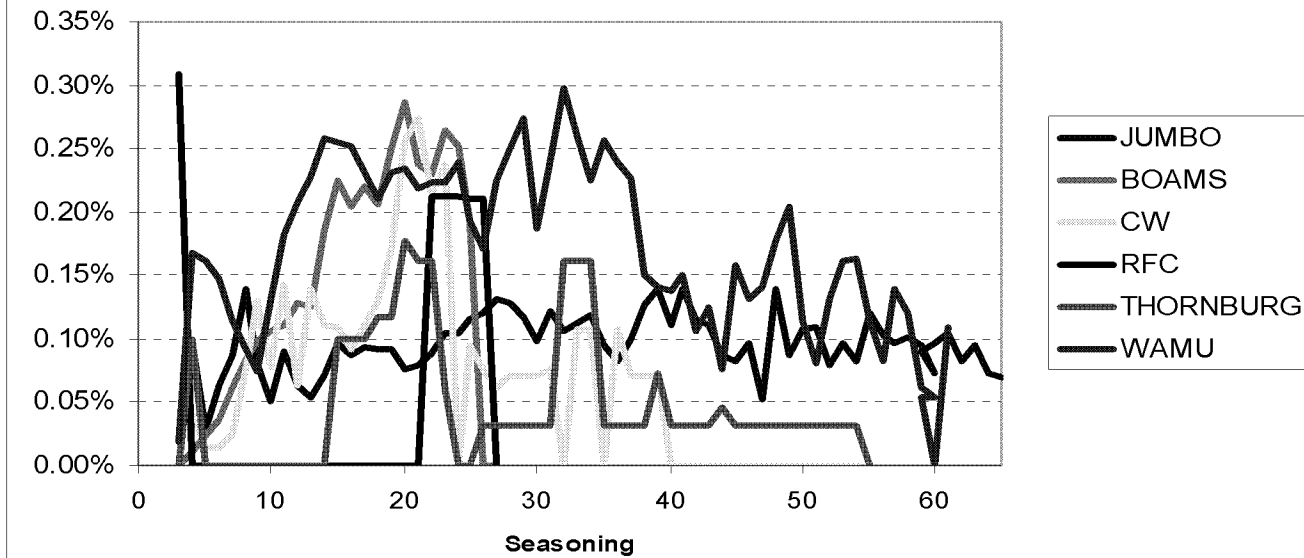


## 60+/Original Balance ARM 01





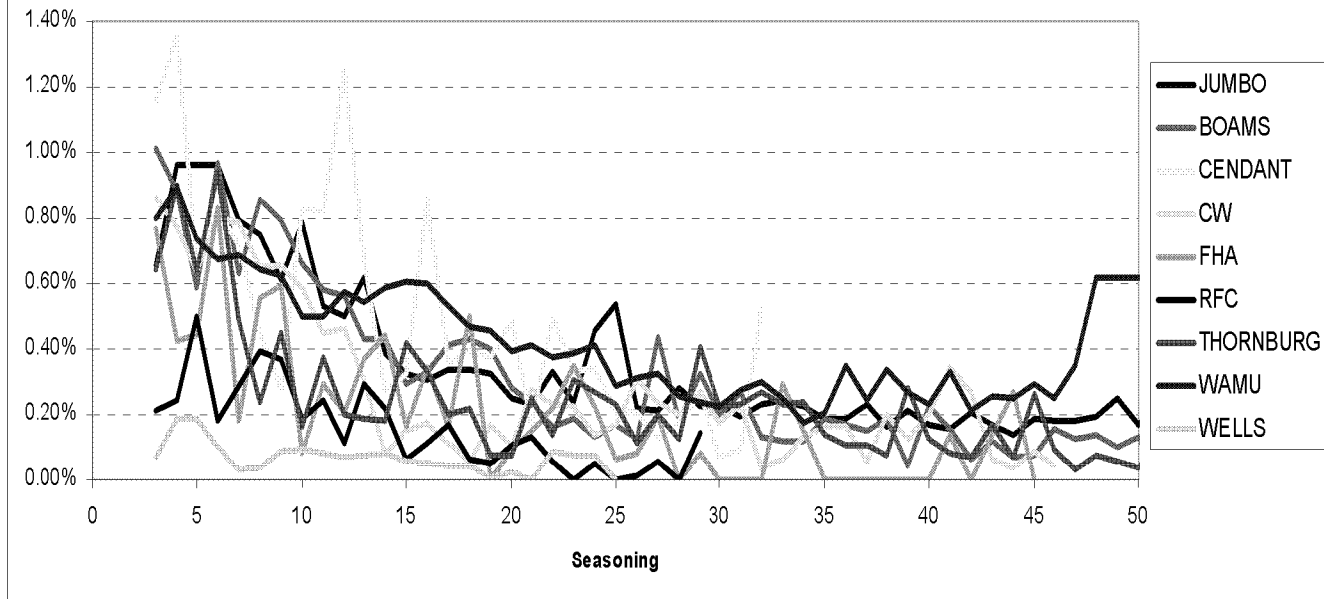
## 90+/Original Balance ARM 01



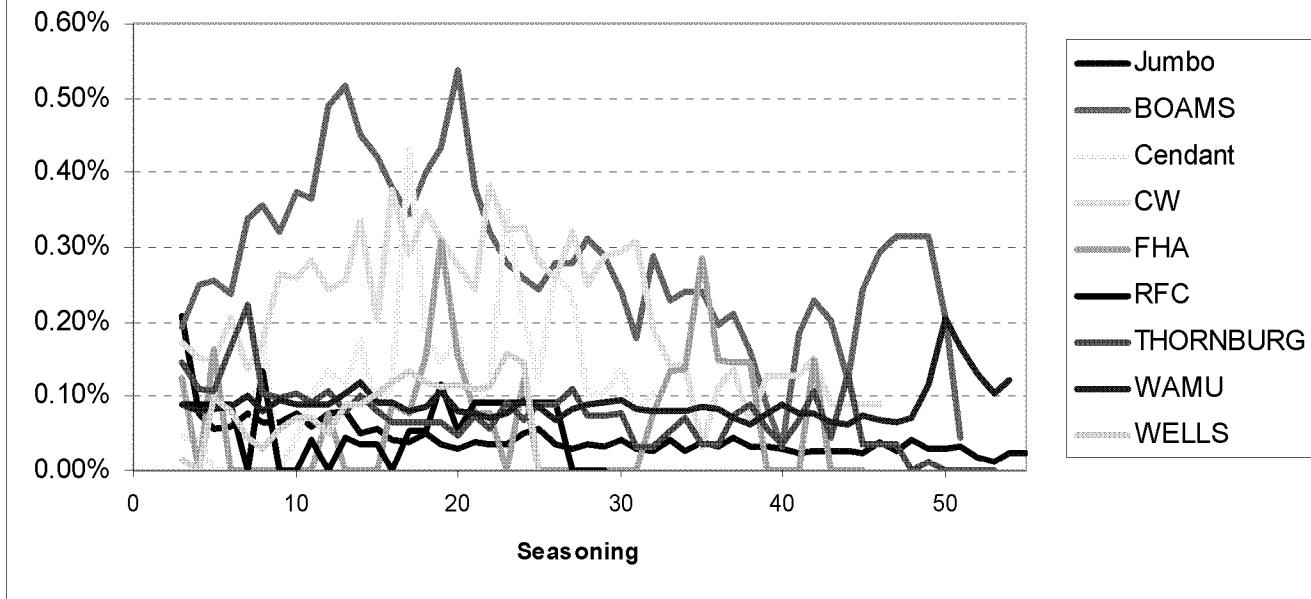
<b><u>Best Performers</u></b>	<b>CW – RFC - Thornburg</b>
<b><u>Average</u></b>	<b>BOA - Jumbo</b>
<b><u>Weak Performers</u></b>	<b>WAMU</b>



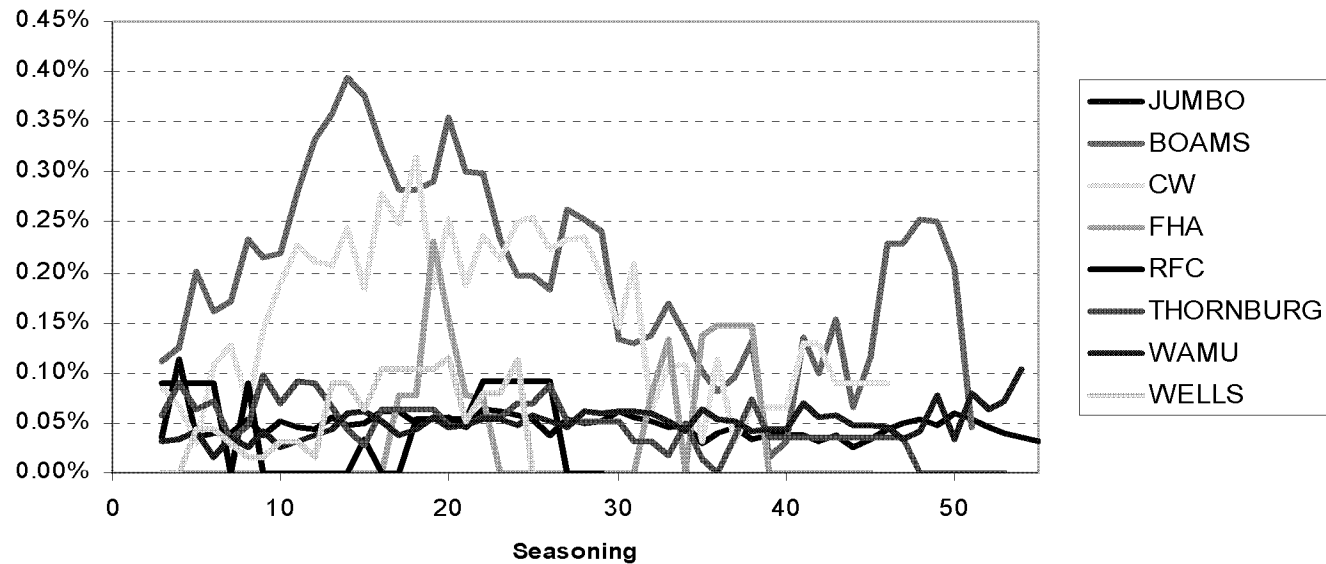
### 30-59 Delinquency ARM 02



## 60+ / Original Balance ARM 02



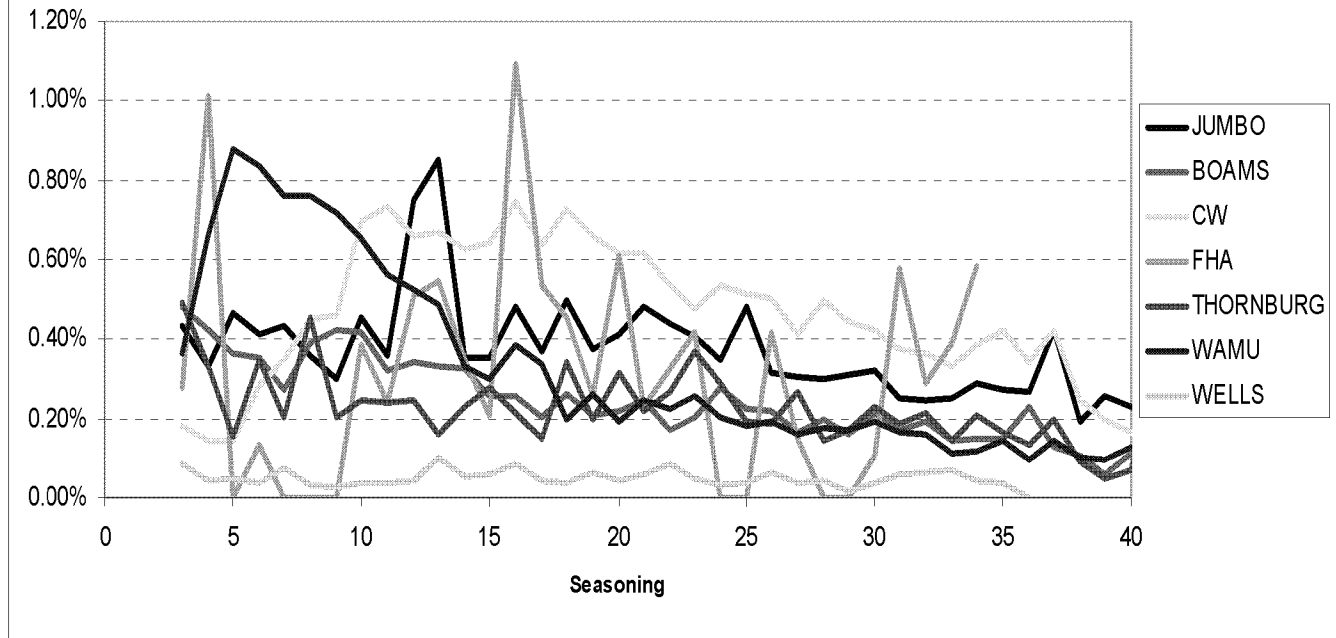
## 90+/Original Balance ARM 02



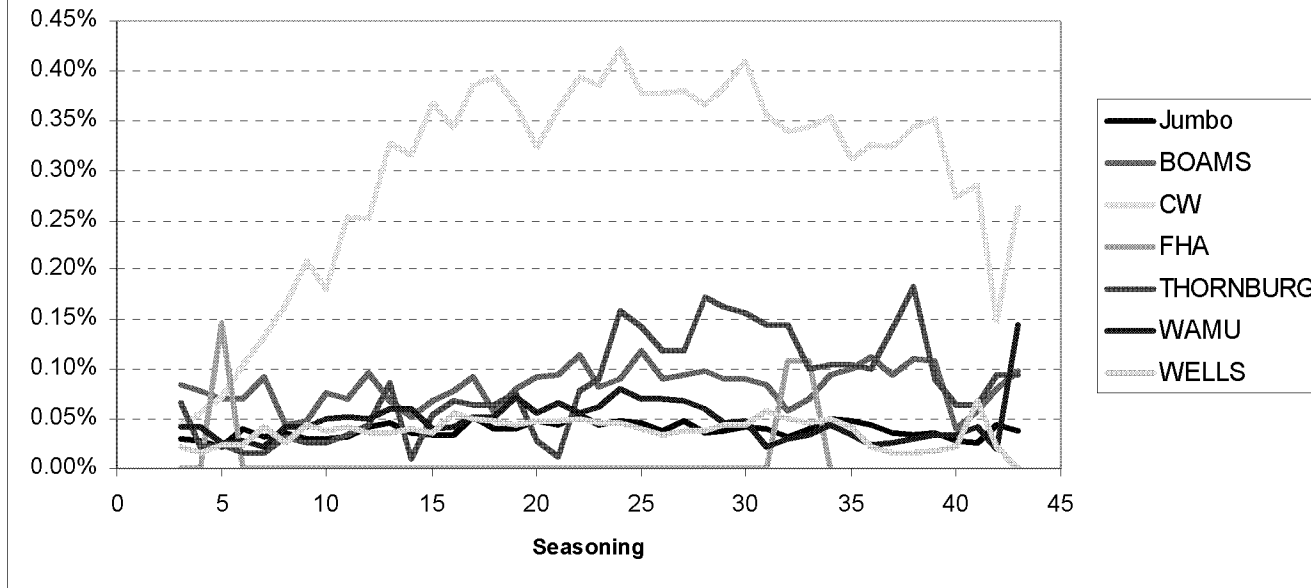
<b><u>Best Performers</u></b>	<b>RFC – Thornburg - Wells</b>
<b><u>Average</u></b>	<b>WAMU – FHA - Jumbo</b>
<b><u>Weak Performers</u></b>	<b>CW – BOA - Cendant</b>



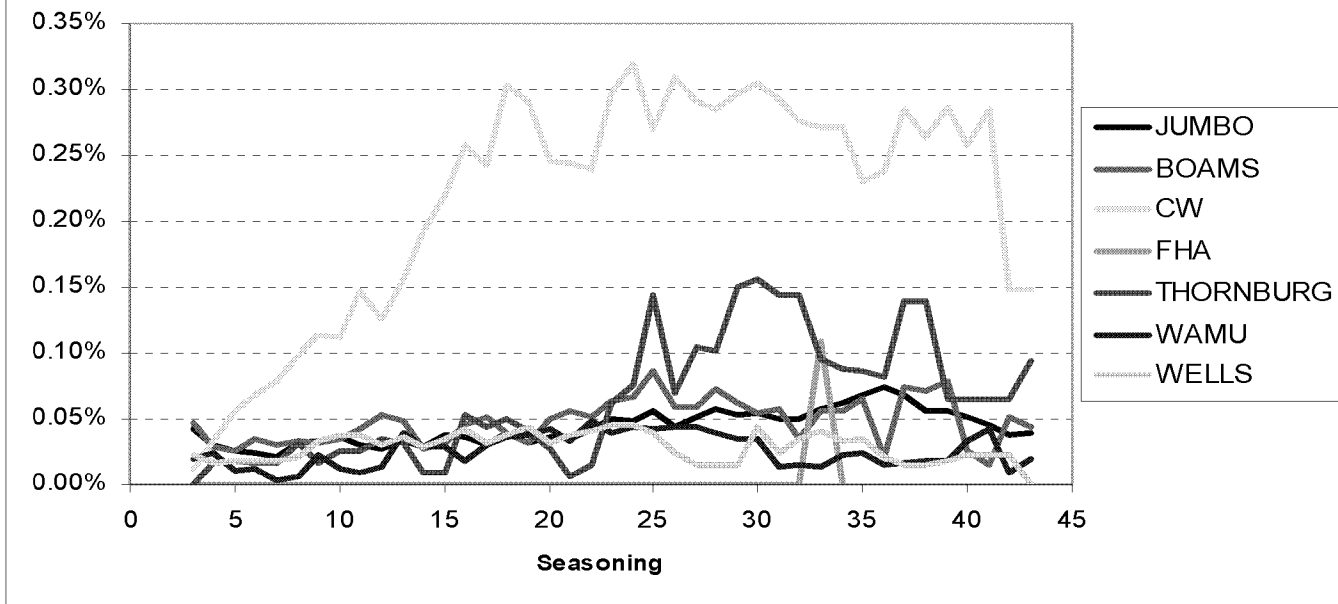
### 30-59 Delinquency ARM 03



## 60+/Original Balance ARM 03



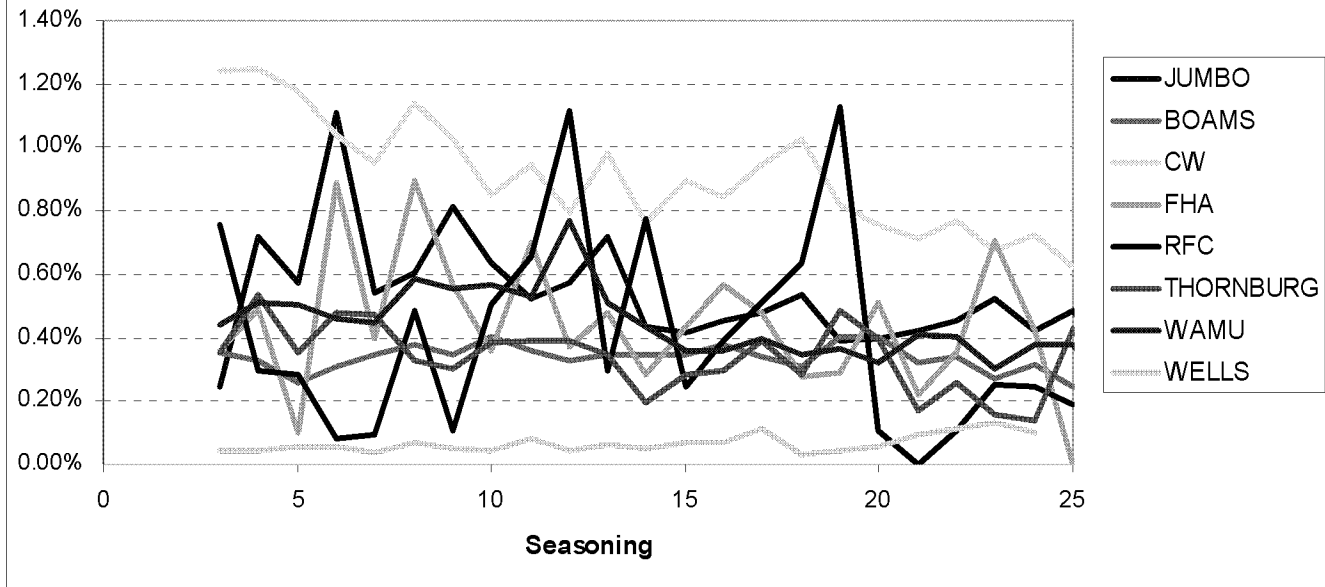
## 90+/Original Balance ARM 03



<b><u>Best Performers</u></b>	<b>Wells - FHA</b>
<b><u>Average</u></b>	<b>WAMU – Thornburg – BOA – Jumbo</b>
<b><u>Weak Performers</u></b>	<b>CW</b>

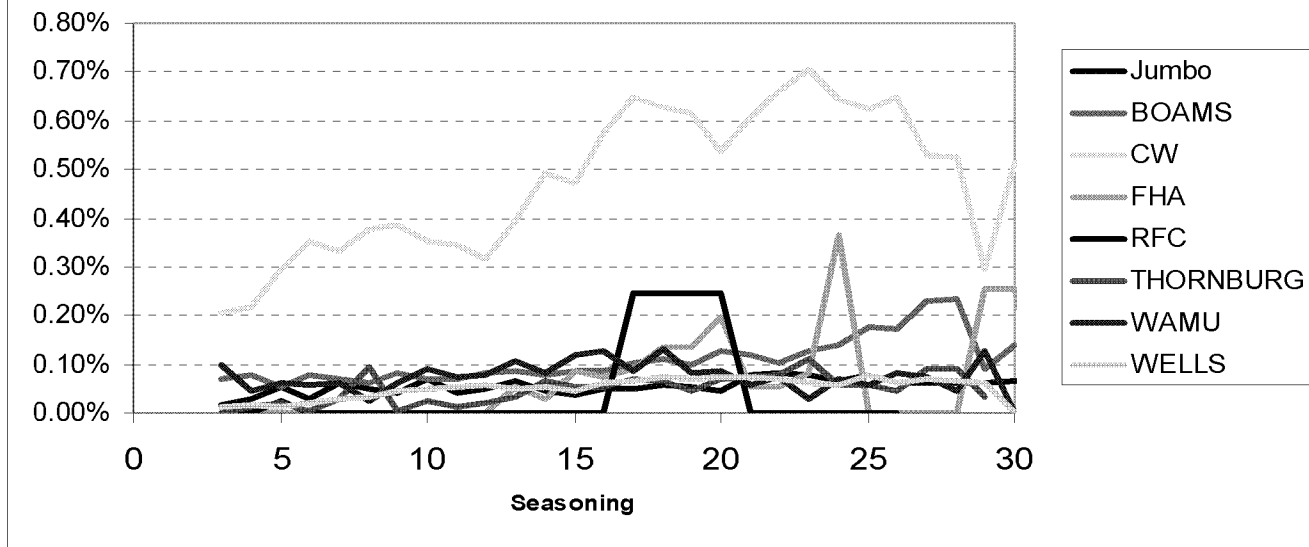


### 30-59 Delinquency ARM 04

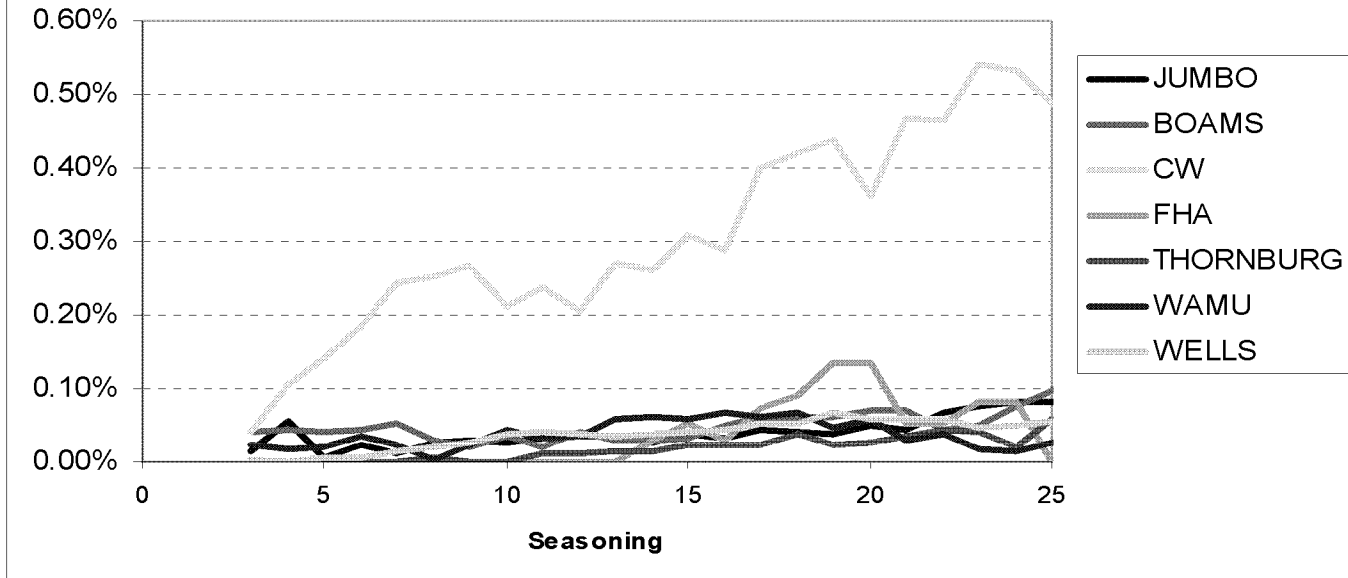




## 60+/Original Balance ARM 04



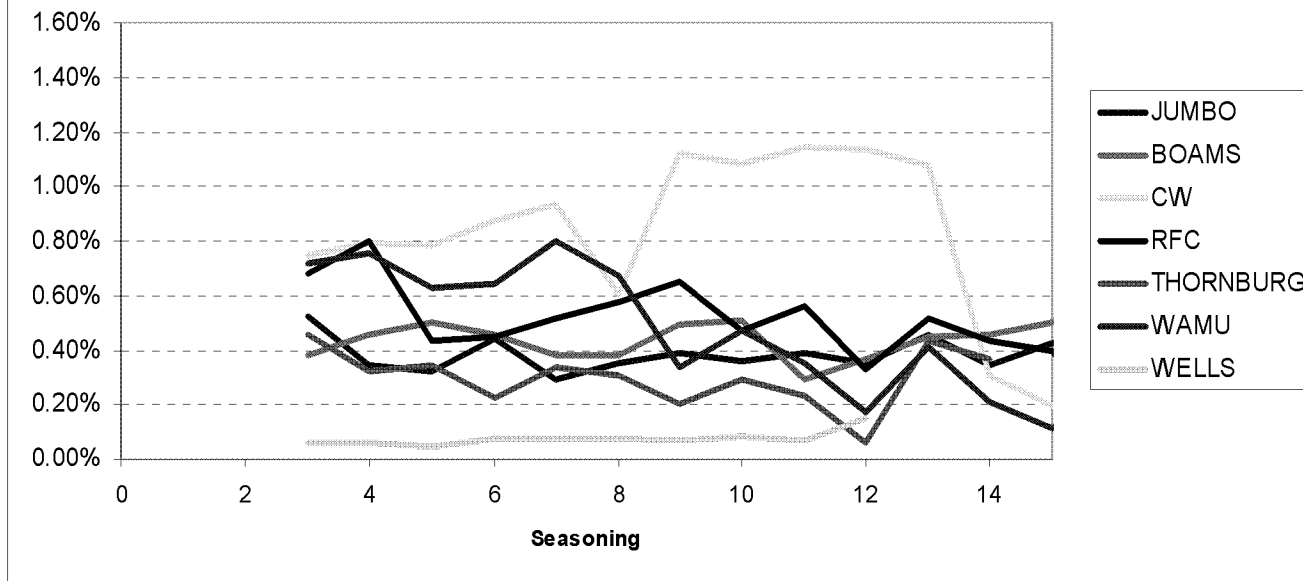
## 90+/Original Balance ARM 04



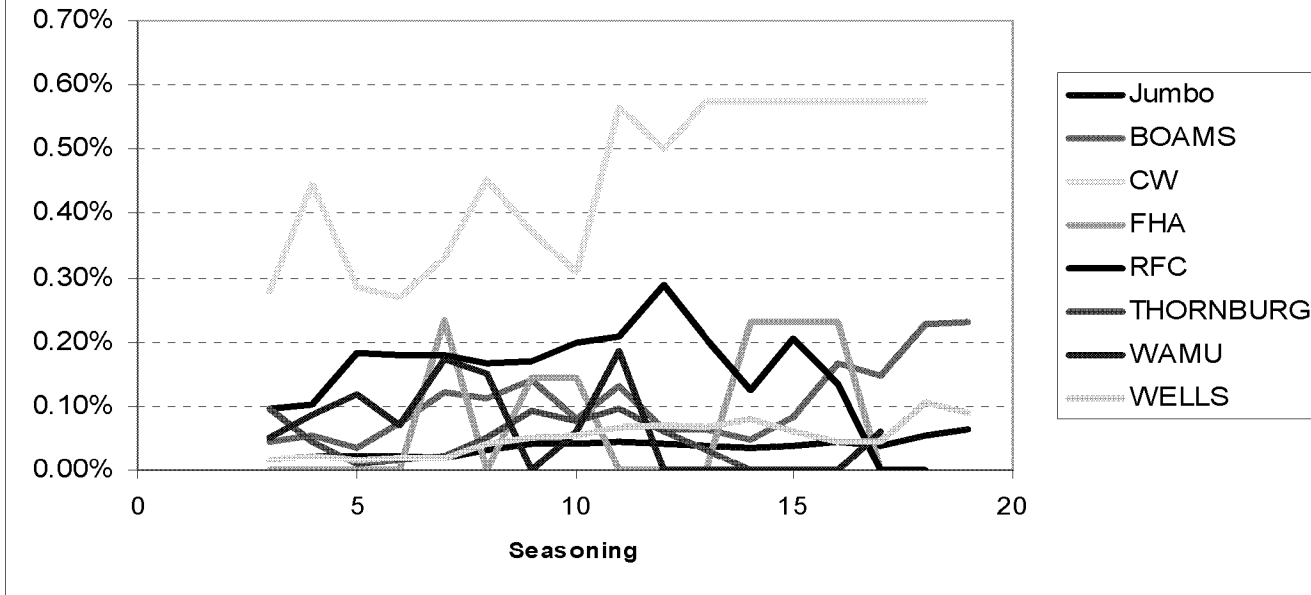
<b><u>Best Performers</u></b>	<b>Wells - Thornburg</b>
<b><u>Average</u></b>	<b>RFC – WAMU – BOA – Jumbo - FHA</b>
<b><u>Weak Performers</u></b>	<b>CW</b>



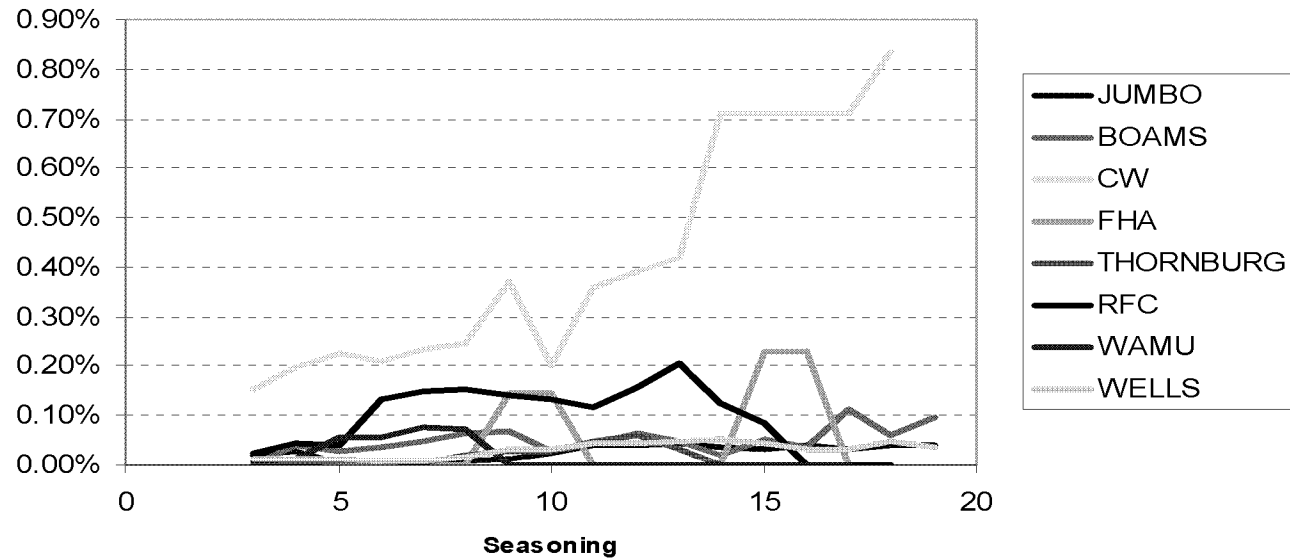
## 30-59 Delinquency ARM 05



## 60+/Original Balance ARM 05



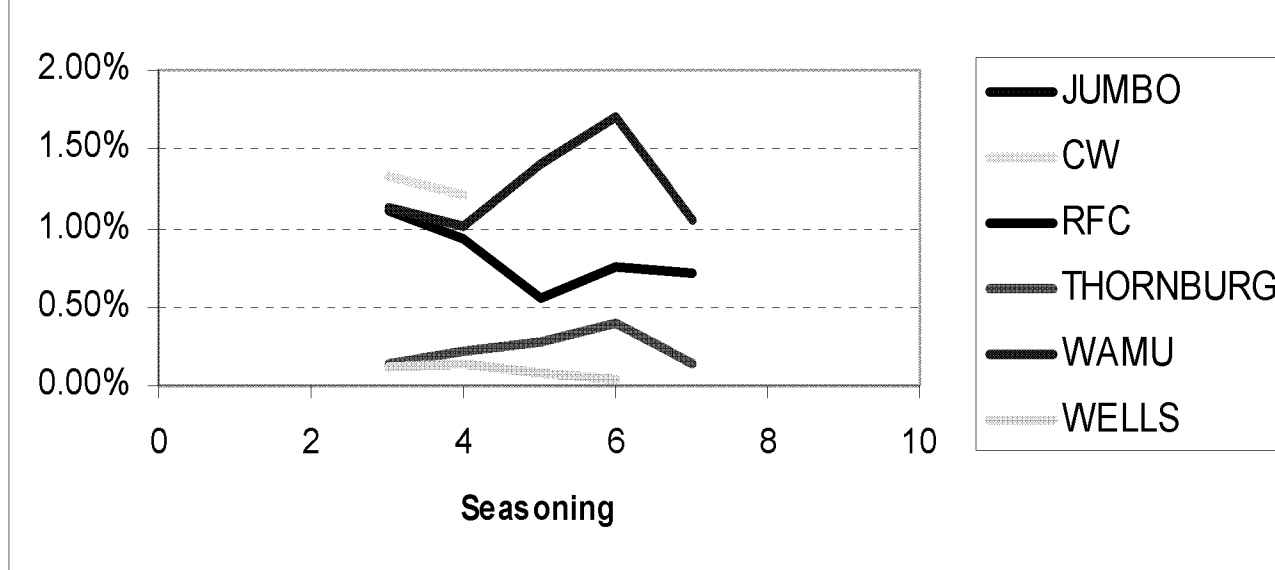
## 90+/Original Balance ARM 05



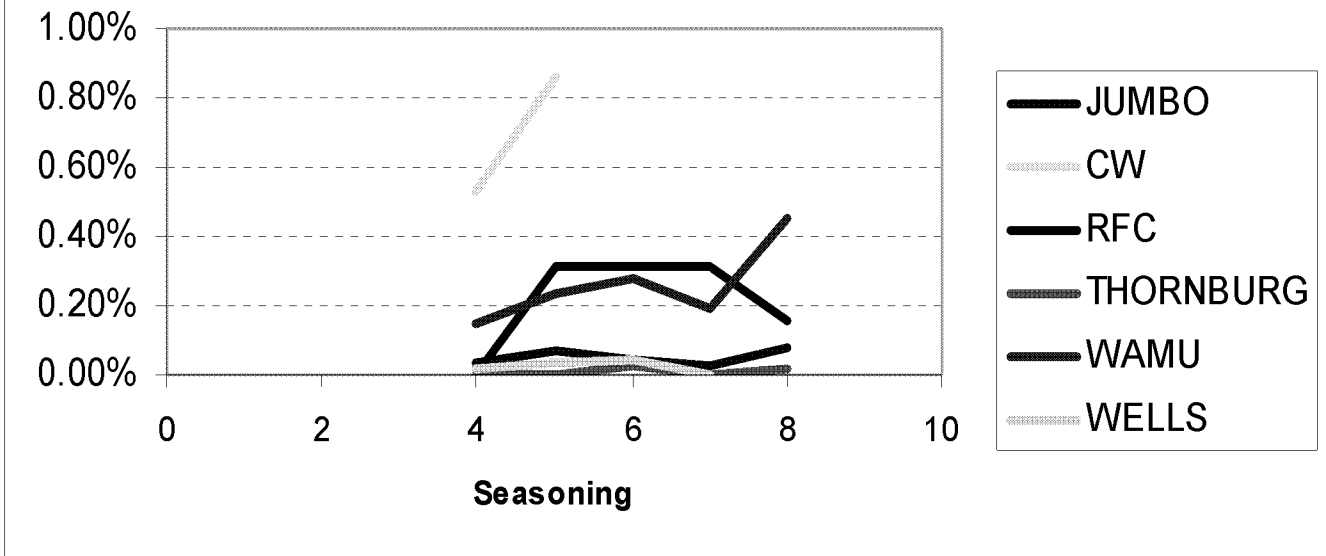
<b><u>Best Performers</u></b>	<b>Wells – Thornburg - Jumbo</b>
<b><u>Average</u></b>	<b>WAMU – BOA – FHA - RFC</b>
<b><u>Weak Performers</u></b>	<b>CW</b>



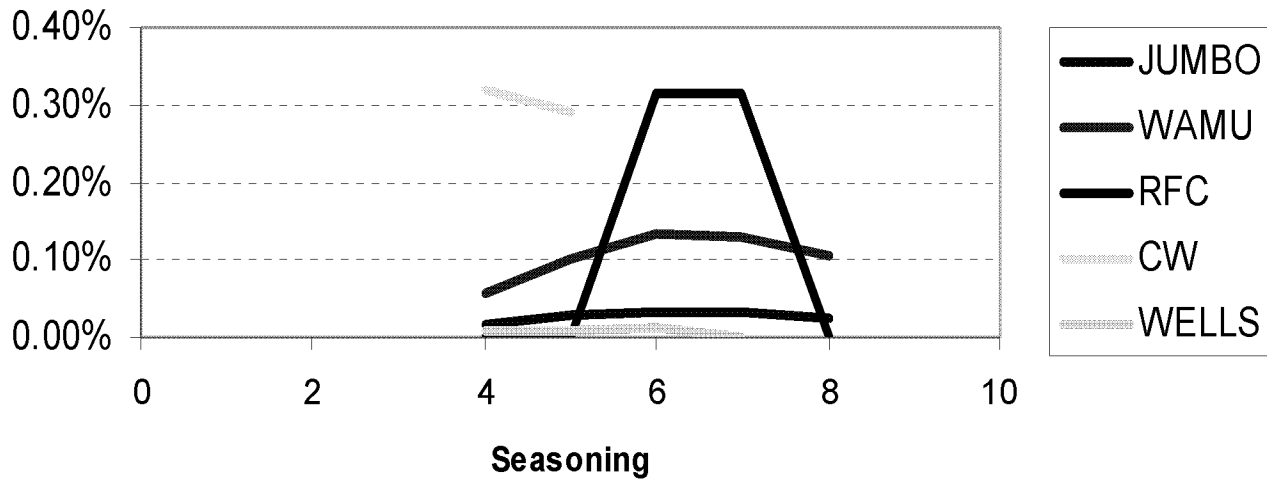
## 30-59 Delinquency Arm 06



### 60+/Original Balance ARM 06



## 90+/Original Balance ARM 06



<b><u>Best Performers</u></b>	<b>Wells - Thornburg</b>
<b><u>Average</u></b>	<b>WAMU – RFC – Jumbo</b>
<b><u>Weak Performers</u></b>	<b>CW</b>





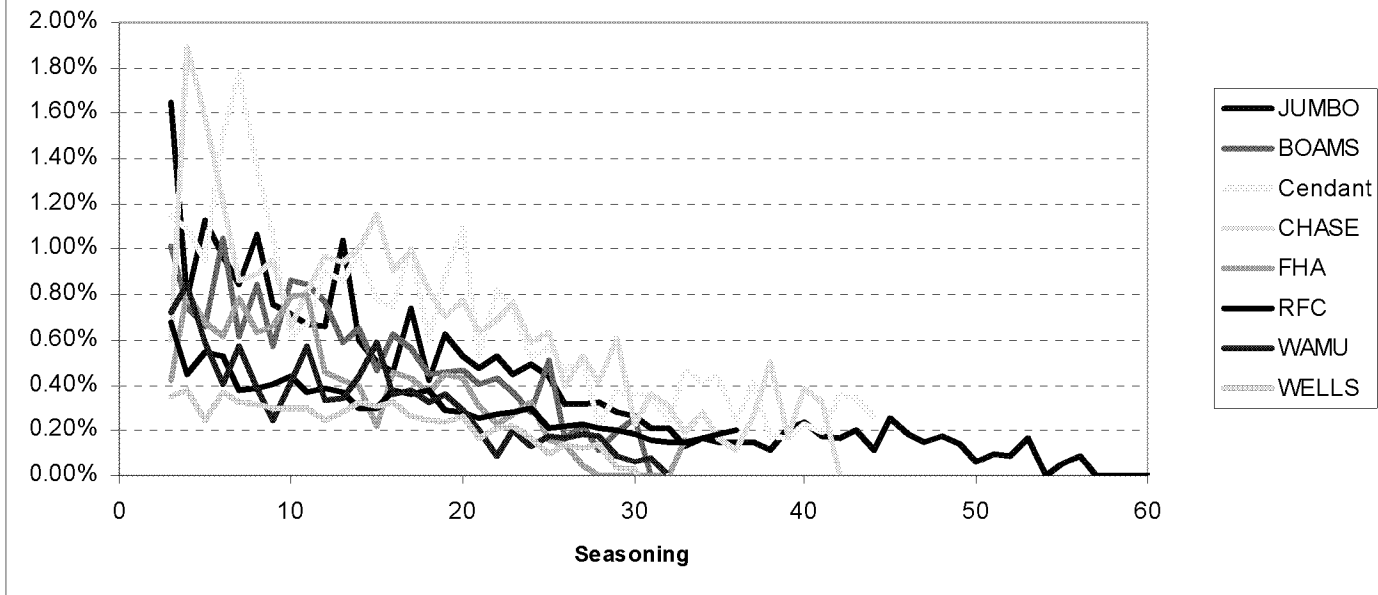
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# FRM

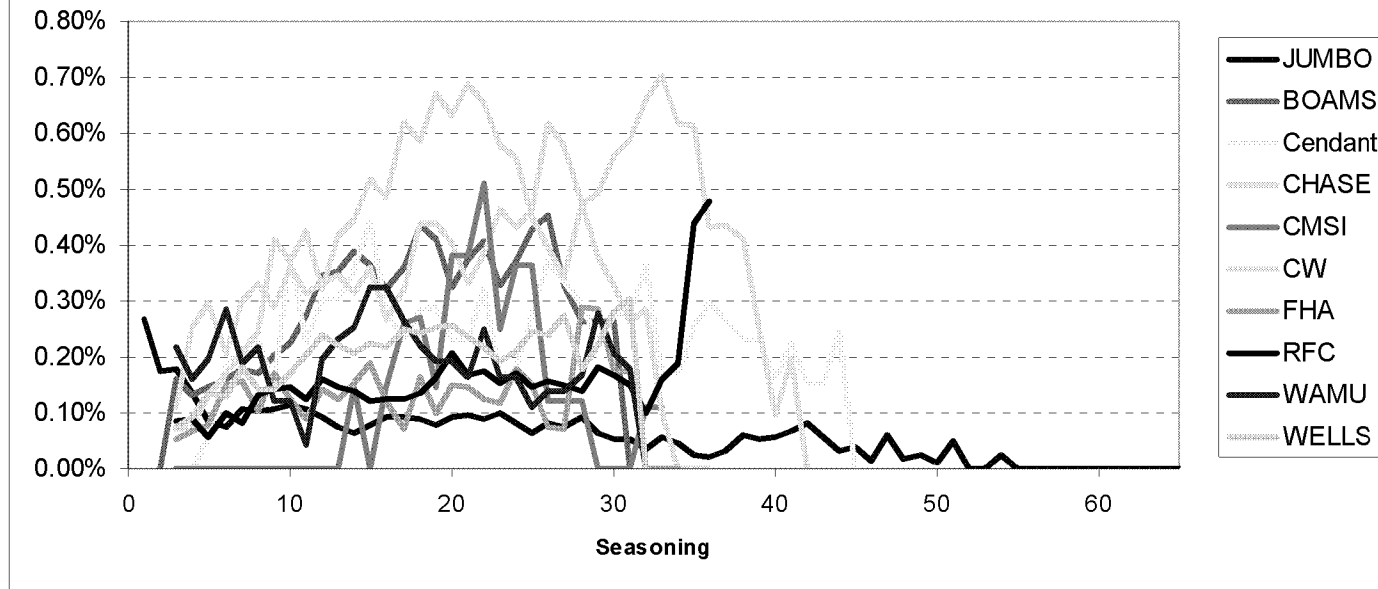
# PERFORMANCE REVIEW



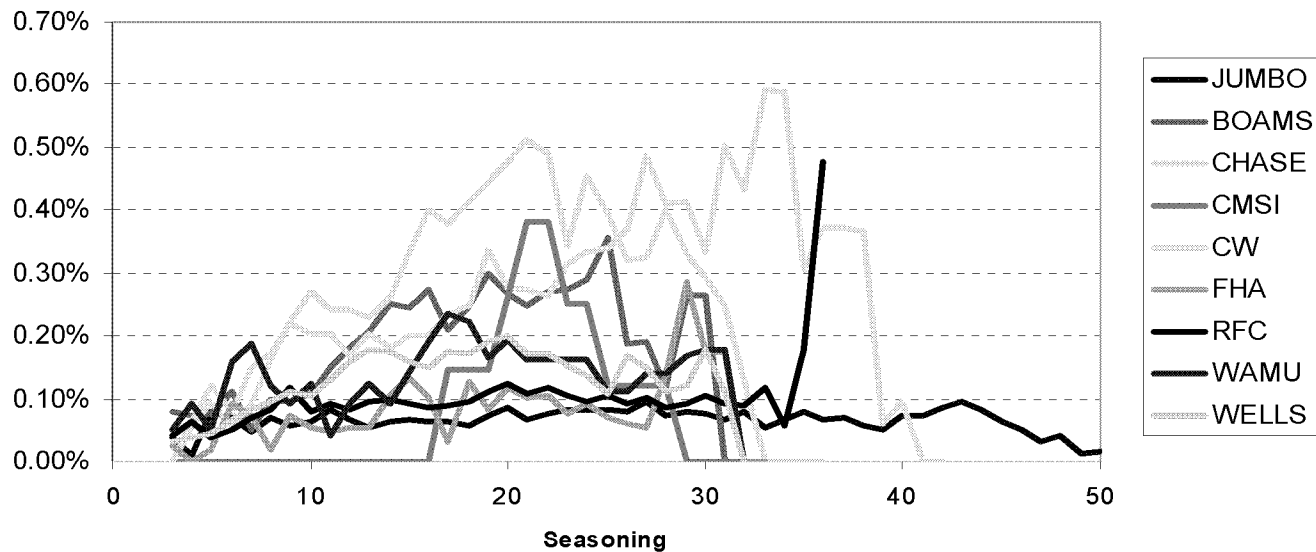
## 30-59 Delinquency FRM 01



## 60+/Original Balance FRM 01



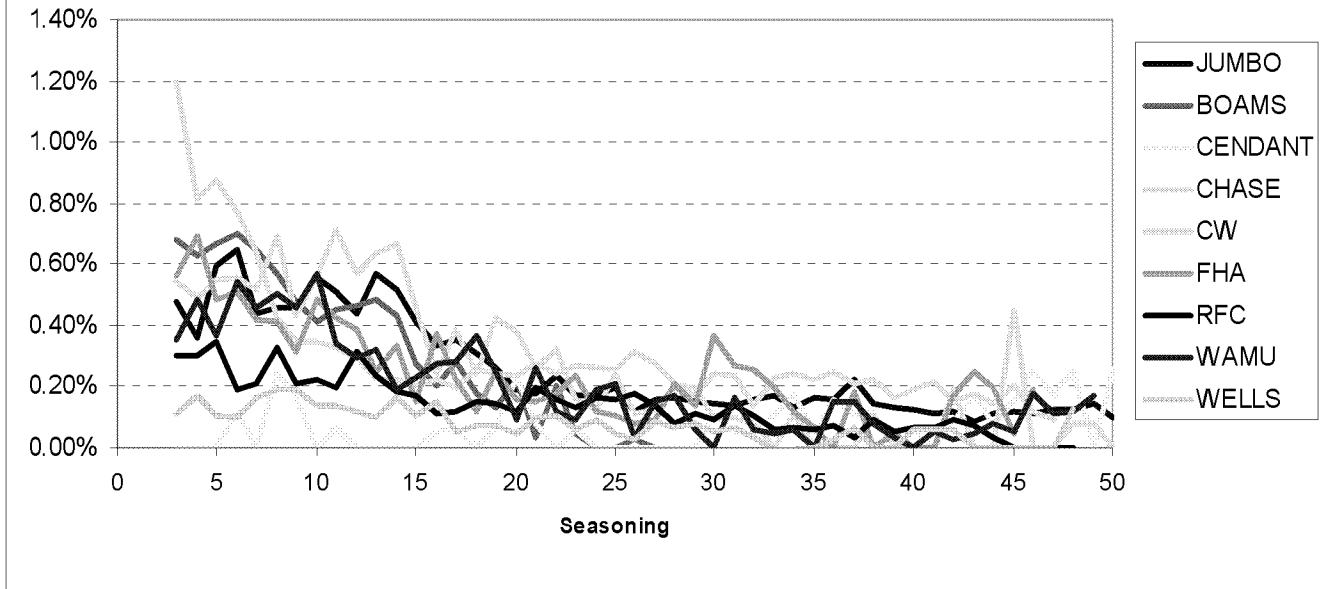
## 90+/Original Balance FRM 01



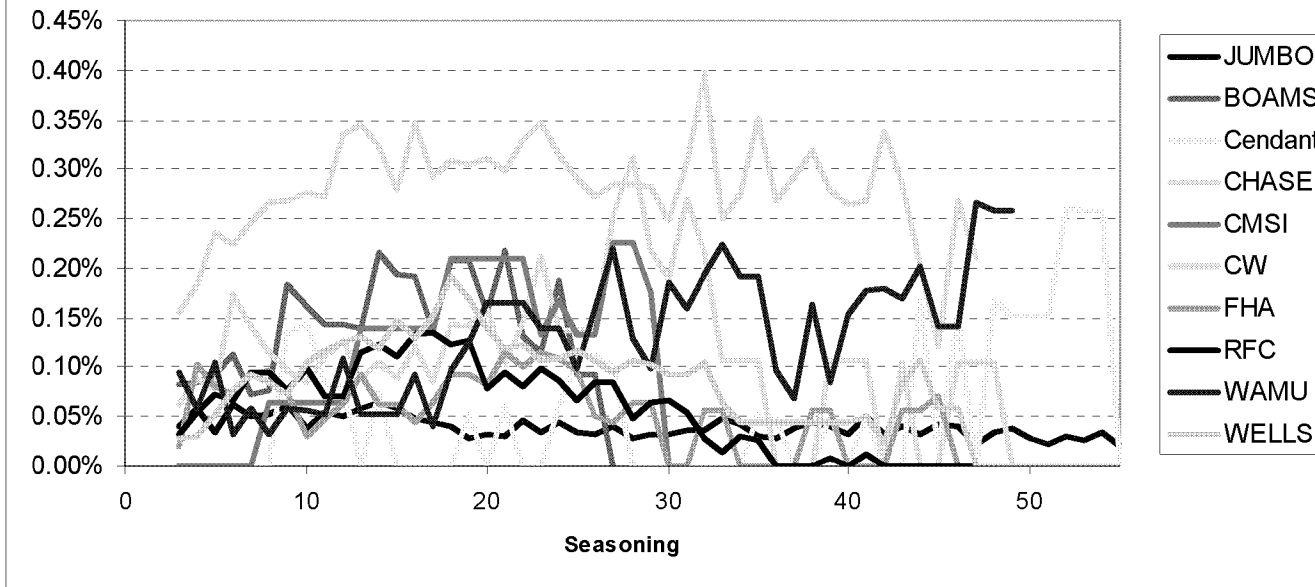
<b><u>Best Performers</u></b>	<b>FHA – RFC - Jumbo</b>
<b><u>Average</u></b>	<b>Wells – BOA – Citi – WAMU</b>
<b><u>Weak Performers</u></b>	<b>Chase – CW - Cendant</b>



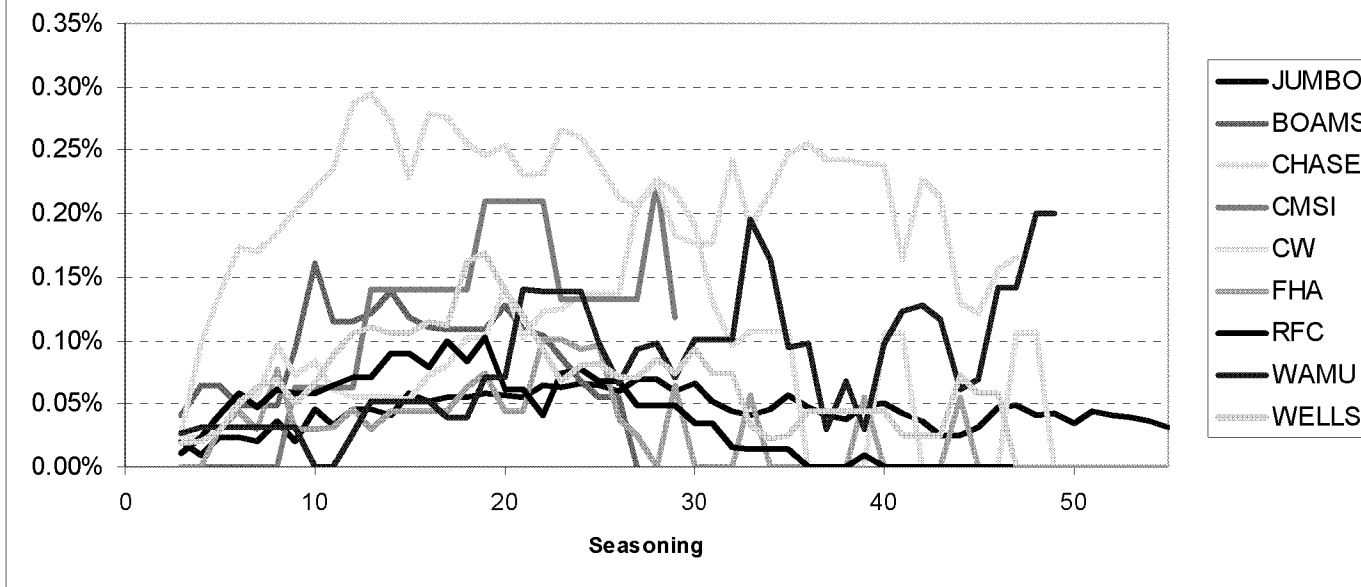
## 30-59 Delinquency FRM 02



## 60+/Original Balance FRM 02



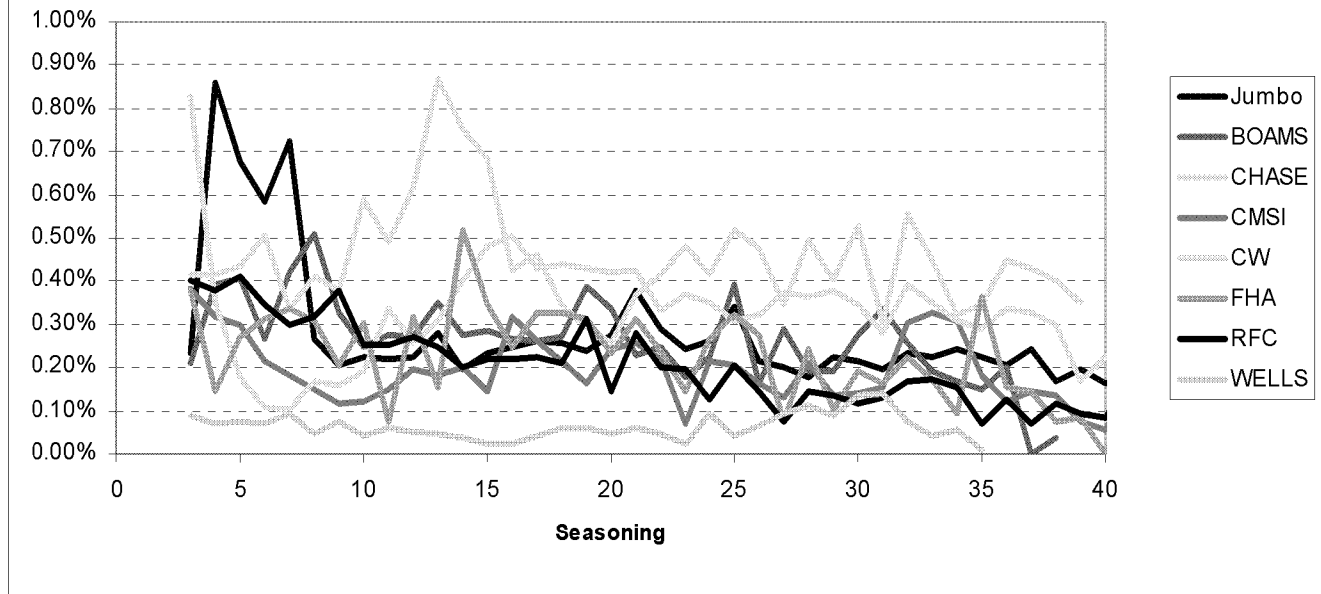
## 90+/Original Balance FRM 02



<b><u>Best Performers</u></b>	<b>RFC – FHA – Wells - Cendant</b>
<b><u>Average</u></b>	<b>BOA – Citi – Chase – Jumbo – WAMU</b>
<b><u>Weak Performers</u></b>	<b>CW</b>

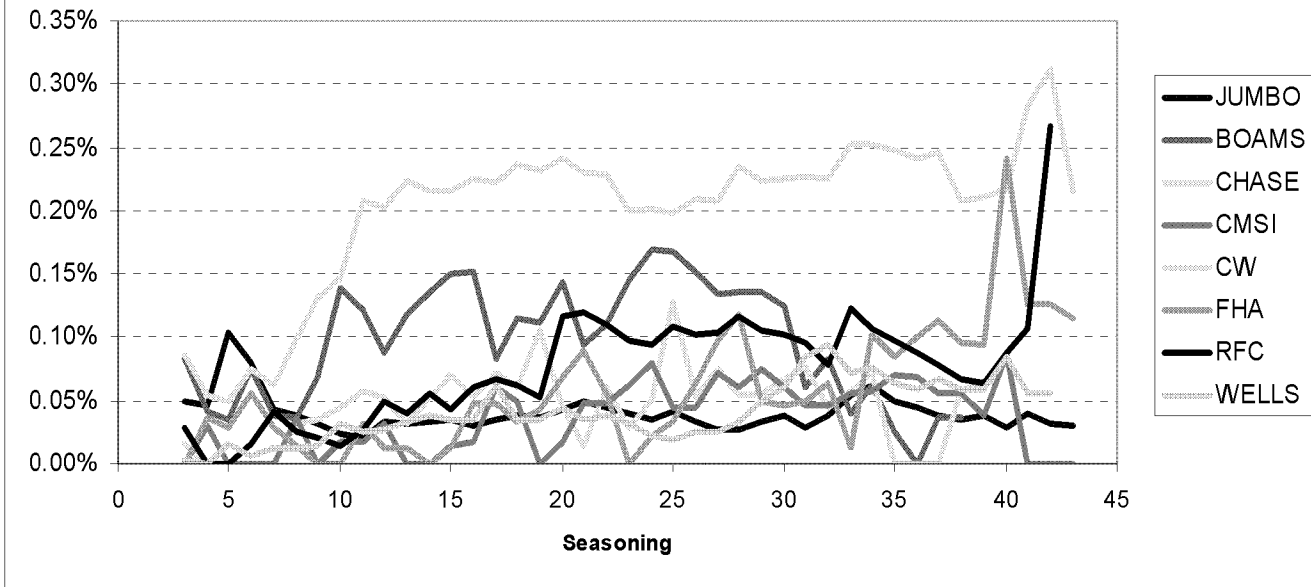


## 30-59 Delinquency FRM 03

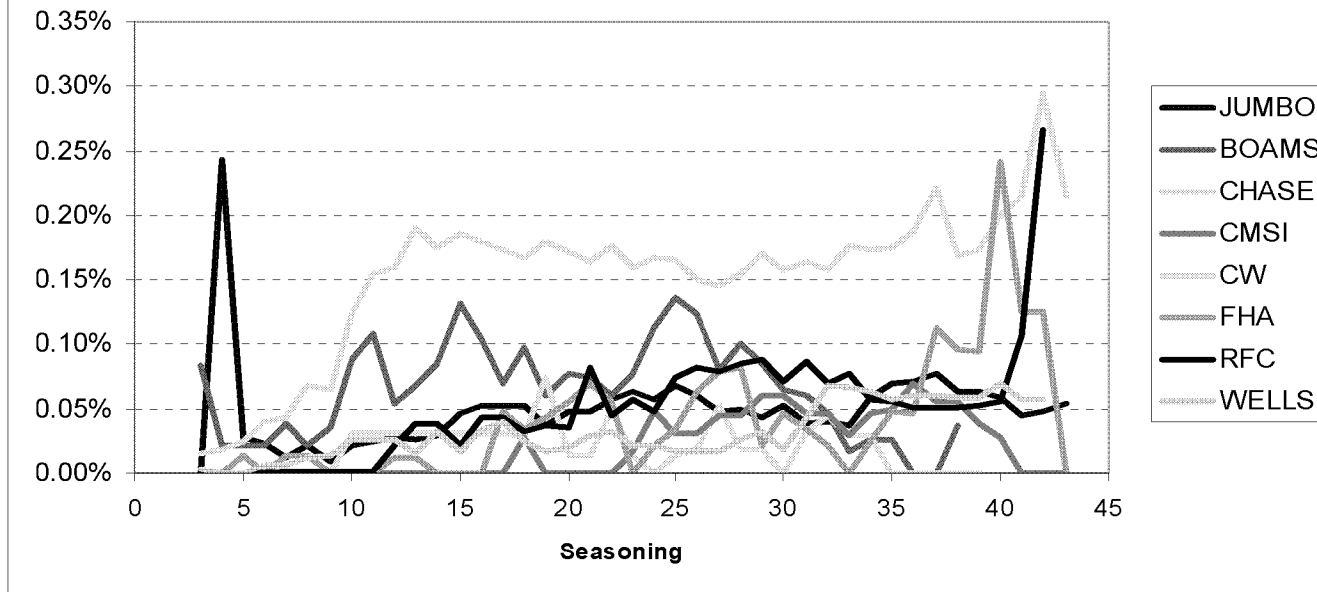




## 60+/Original Balance FRM 03



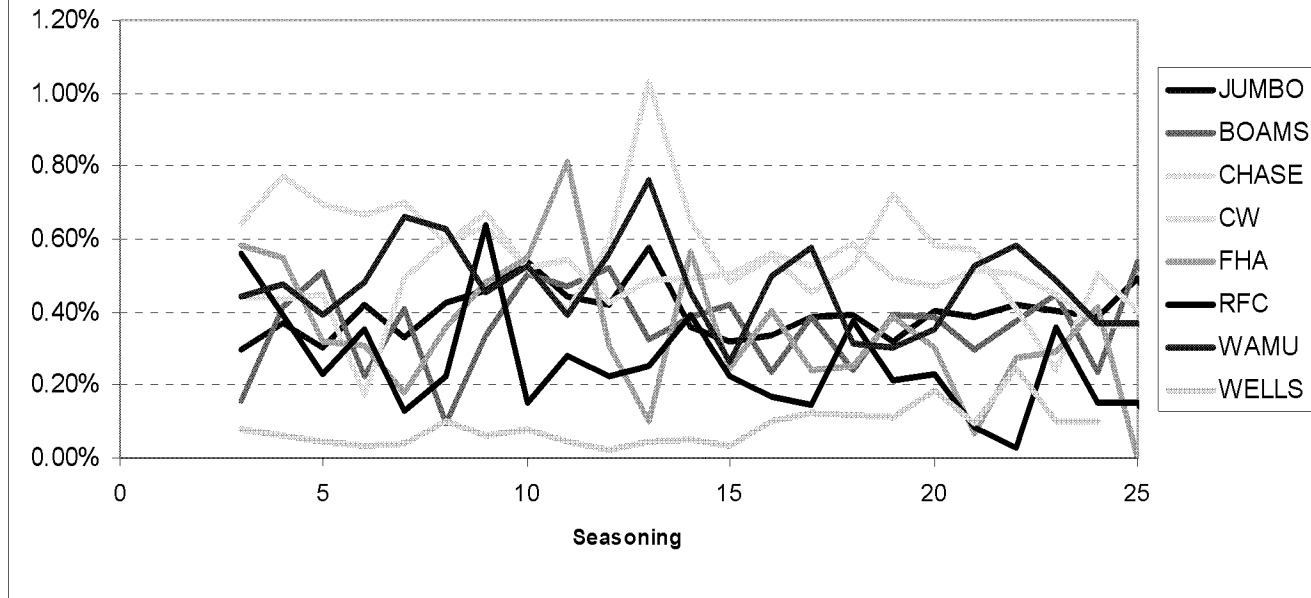
## 90+/Original Balance FRM 03



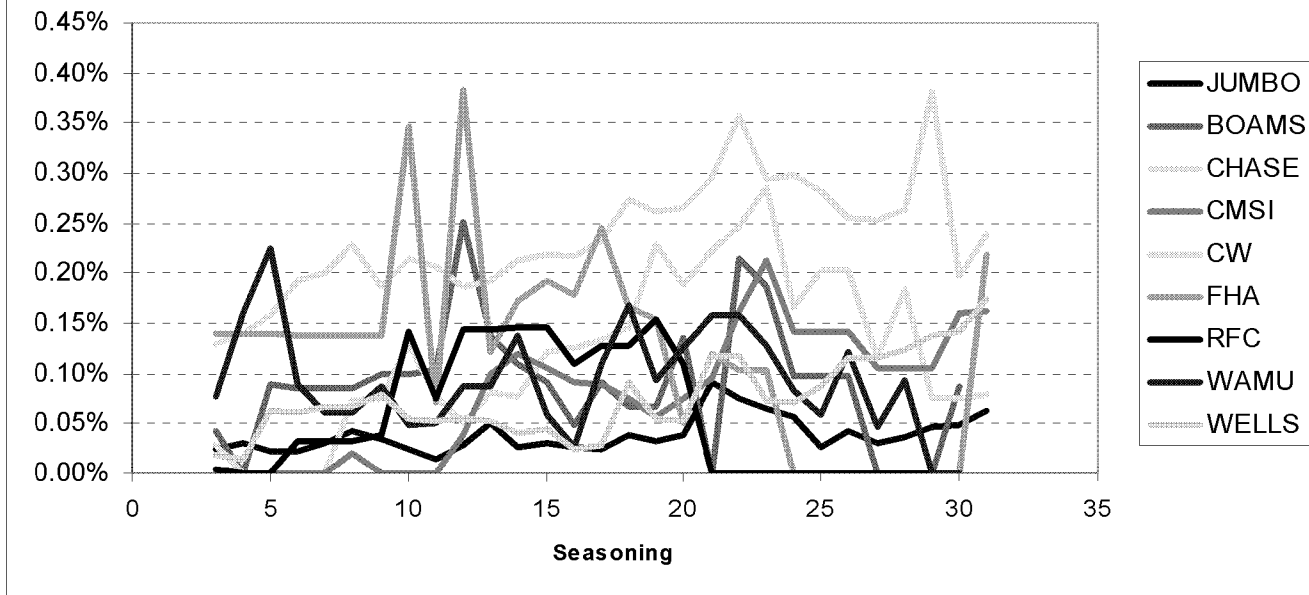
<b><u>Best Performers</u></b>	<b>Wells - Citi</b>
<b><u>Average</u></b>	<b>RFC – BOA – Jumbo – Chase - FHA</b>
<b><u>Weak Performers</u></b>	<b>CW</b>



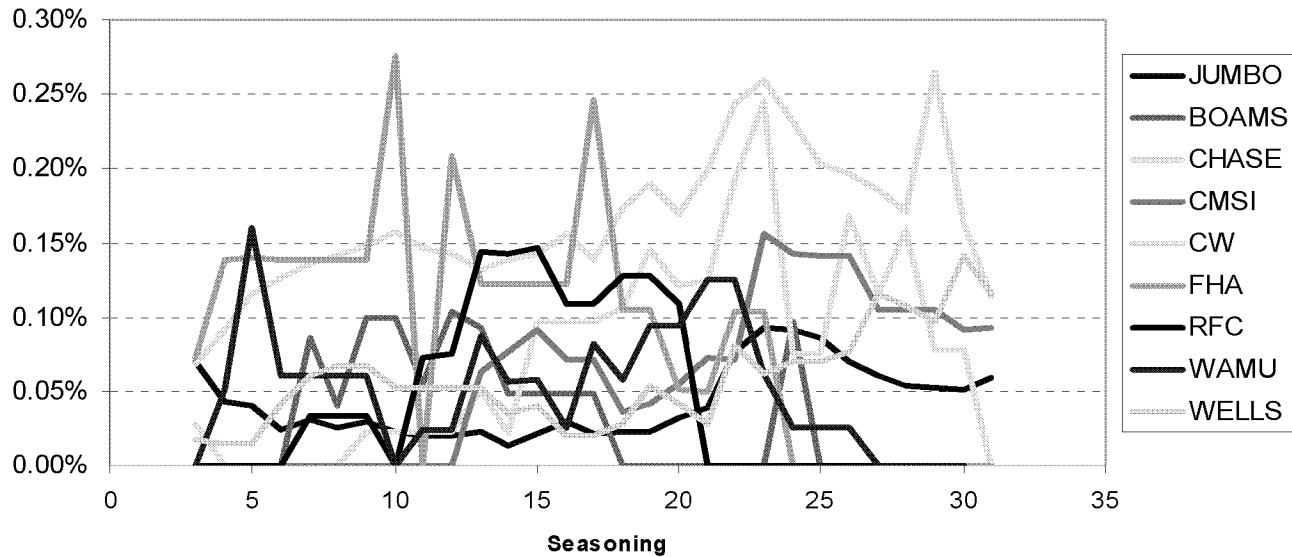
## 30-59 Delinquency FRM 04



## 60+/Original Balance FRM 04



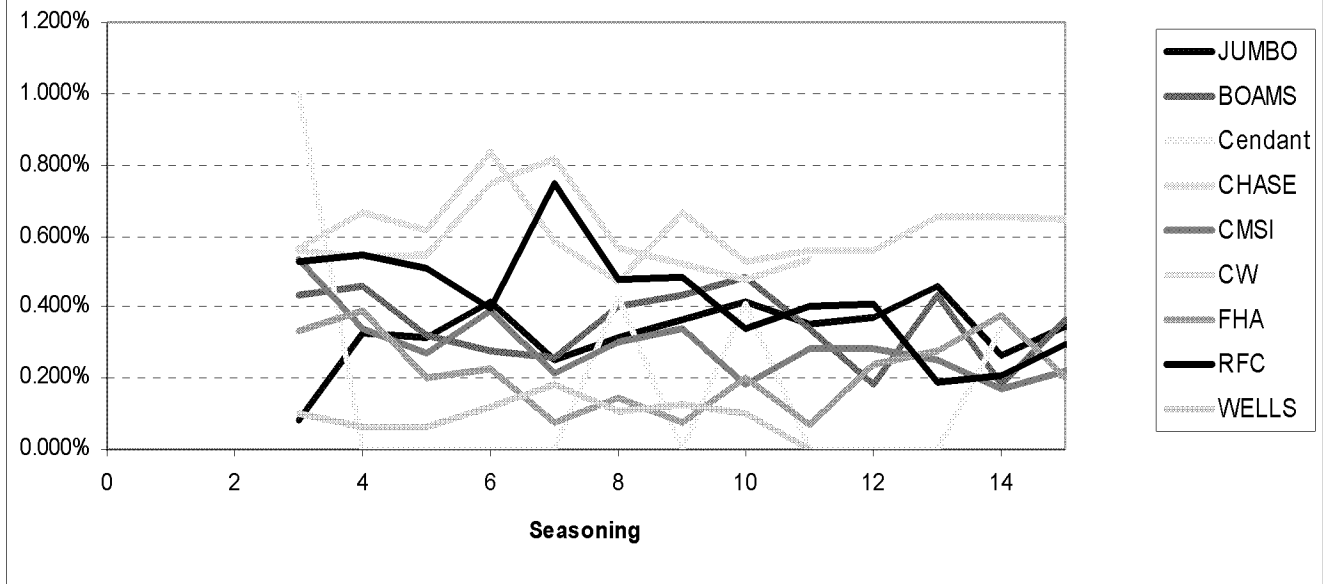
## 90+/Original Balance FRM 04



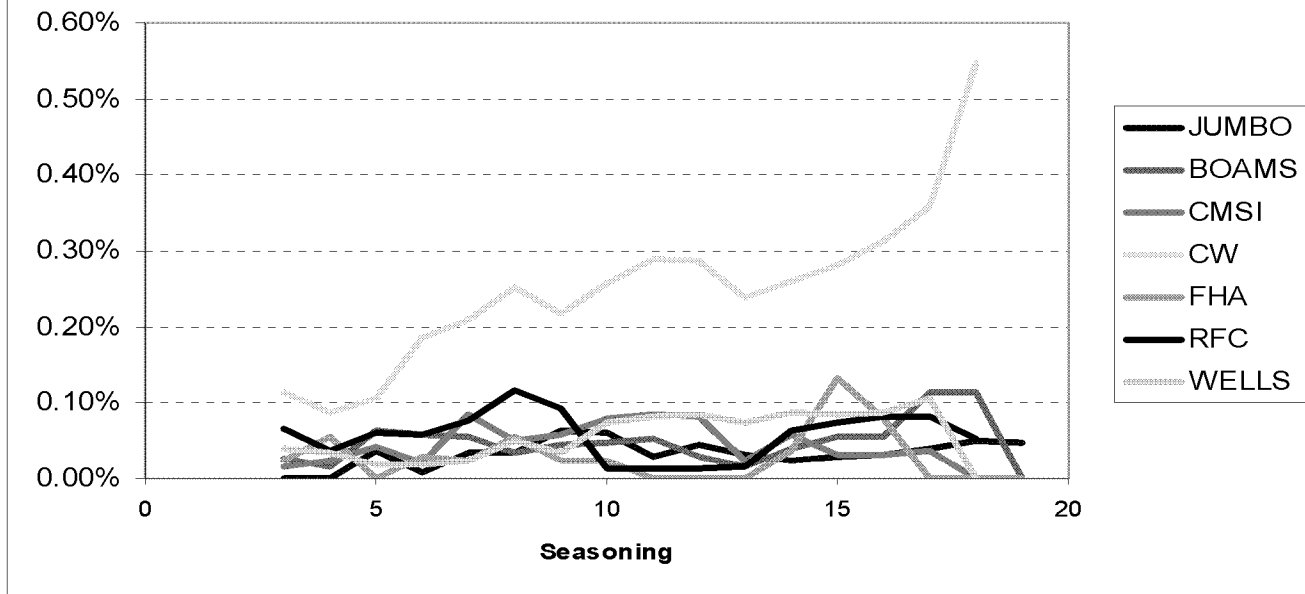
<b><u>Best Performers</u></b>	<b>Wells - RFC</b>
<b><u>Average</u></b>	<b>BOA – Citi – Wamu - Jumbo</b>
<b><u>Weak Performers</u></b>	<b>CW – FHA - Chase</b>



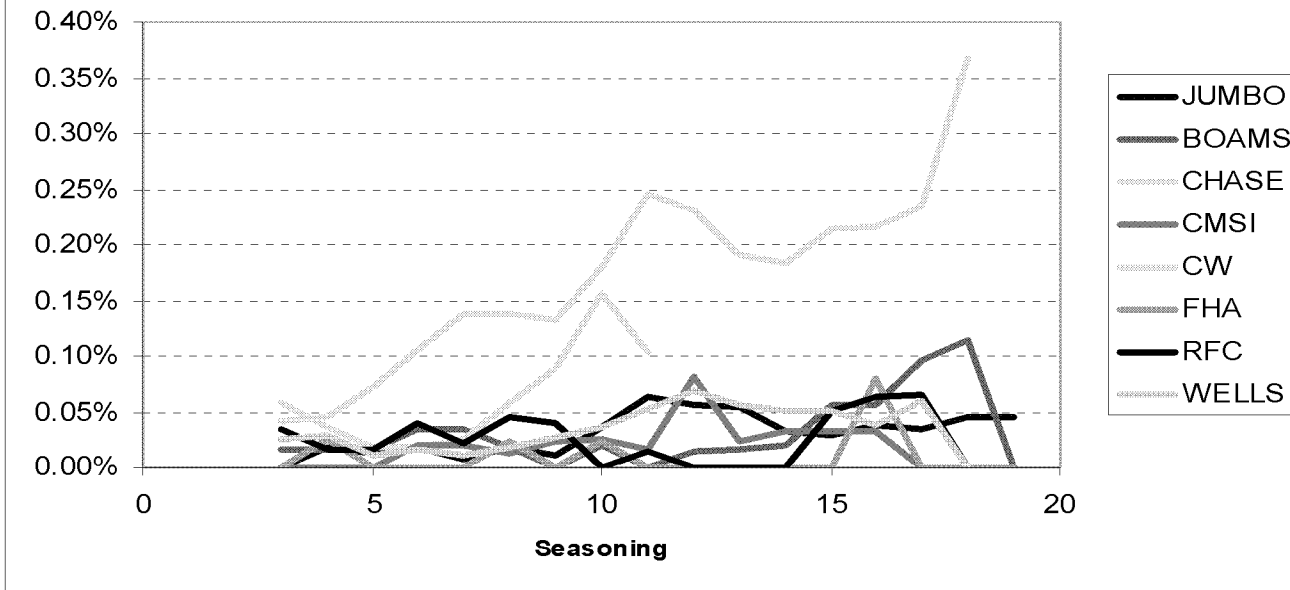
## 30-59 Delinquency FRM 05



## 60+/Original Balance FRM 05



## 90+/Original Balance FRM 05

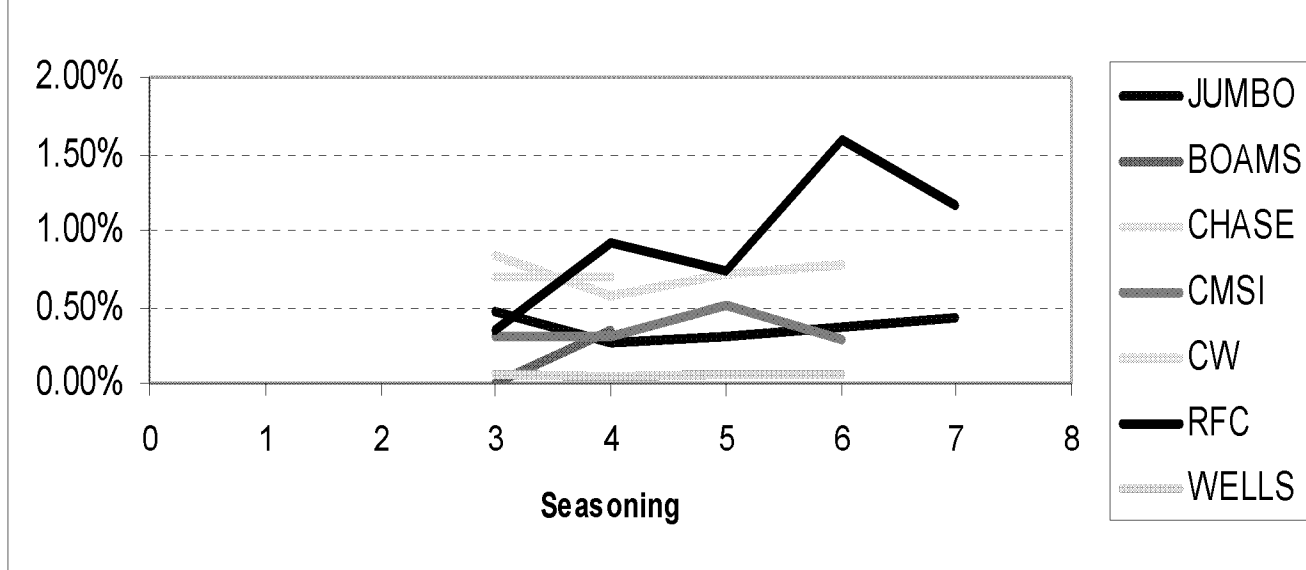


<b><u>Best Performers</u></b>	<b>FHA</b>
<b><u>Average</u></b>	<b>Citi – RFC – BOA – Wells – Jumbo</b>
<b><u>Weak Performers</u></b>	<b>CW - Chase</b>

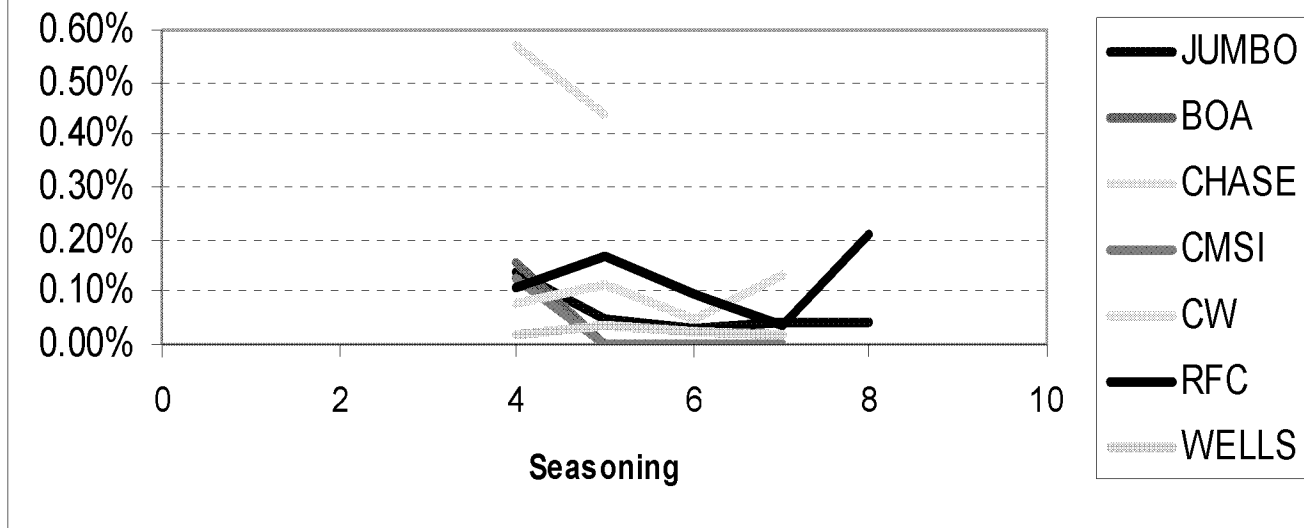




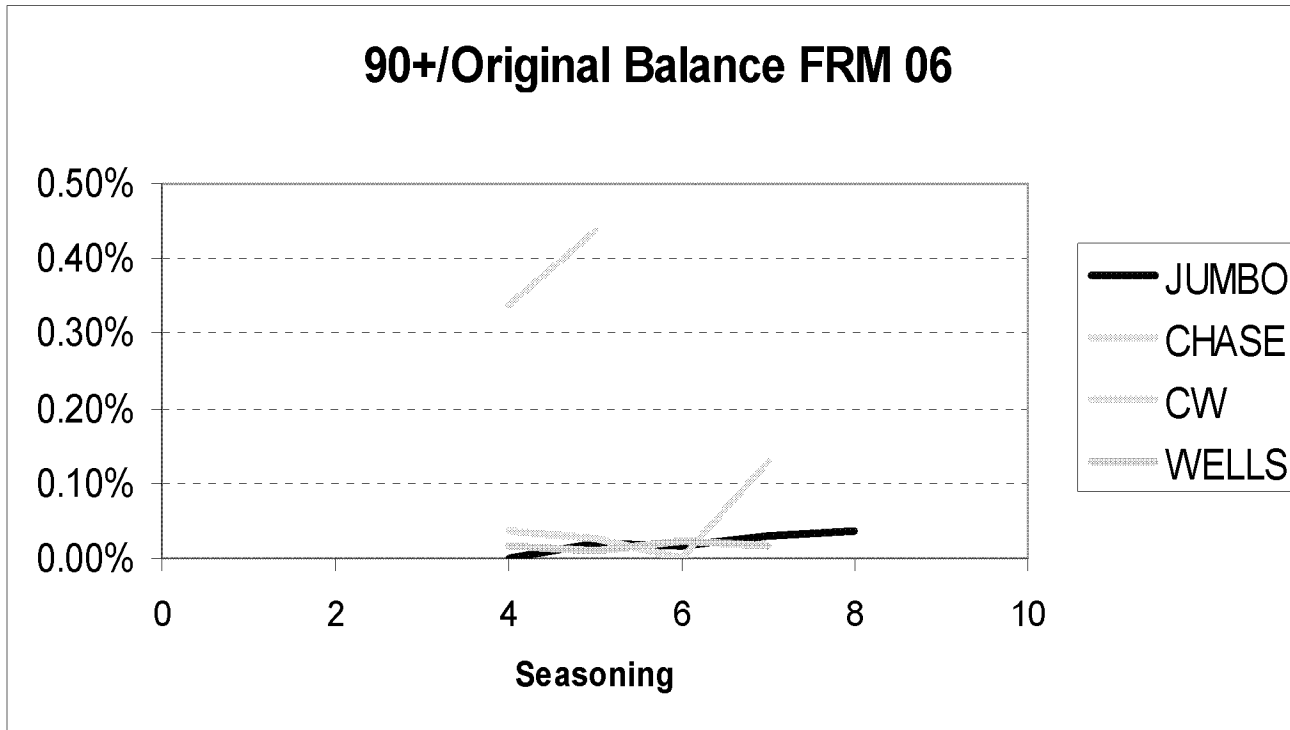
## 30-59 Del FRM 06



## 60+/Original Balance FRM 06



### 90+/Original Balance FRM 06



<b><u>Best Performers</u></b>	<b>Wells – Citi – BOA</b>
<b><u>Average</u></b>	<b>RFC – CW - Jumbo</b>
<b><u>Weak Performers</u></b>	<b>Chase</b>



# RECOMMENDATIONS



## Graph Overall Performance

ARM			
Vintage	Best Performers	Average	Below Average
2001	CW - RFC - Thornburg	BOA	WAMU
2002	RFC - Thornburg - Wells	WAMU - FHA	CW - BOA - Cendant
2003	Wells - FHA	WAMU - Thornburg - BOA	CW
2004	Wells - Thornburg	RFC - WAMU - BOA - FHA	CW
2005	Wells - Thornburg	WAMU - BOA - FHA - RFC	CW
2006	Wells - Thornburg	WAMU - RFC	CW

FRM			
Vintage	Best Performers	Average	Below Average
2001	FHA - RFC	Wells - BOA - Citi - WAMU	Chase - CW - Cendant
2002	RFC - FHA - Wells - Cendant	BOA - Citi - Chase - WAMU	CW
2003	Wells - Citi	RFC - BOA - Chase - FHA	CW
2004	Wells - RFC	BOA - Citi - WAMU	CW - FHA - Chase
2005	FHA	Citi - RFC - BOA - Wells	CW - Chase
2006	Wells - Citi - BOA	RFC - CW	Chase



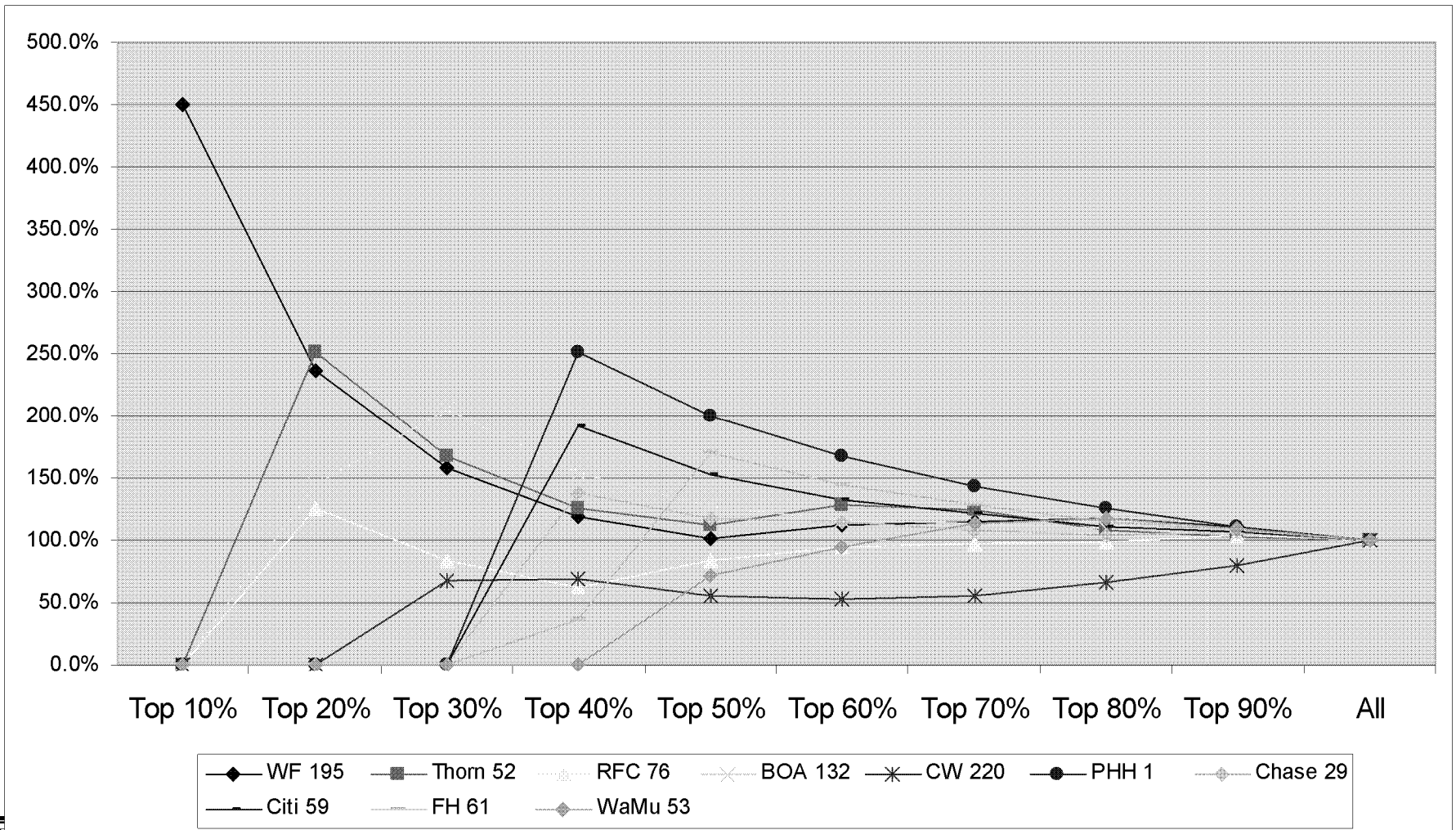
# Graph-Based Recommendations

ARM	
M3	Issuer
T1	Wells - Thornburg
T2	FHA - RFC - (BOA - WAMU)
T3	CW

FRM	
M3	Issuer
T1	Wells - FHA - Citi
T2	RFC - BOA - WAMU - Cendant
T3	CW - Chase



# CE Adjusted Performance



# Rankings

Issuer	Graph-based Approach	CE Adjusted Approach
1	Wells	Wells
2	Thorn	Thorn
3	Citi	BOA
4	FHA	Citi
5	RFC	Cendant/PHH
6	WAMU	Chase
7	BOA	FHA
8	Cendant/PHH	RFC
9	Chase	WAMU
10	CW	CW

OVERALL RECOMMENDATIONS	
M3	Issuer
95%	Wells - Thornburg - Citi
97.5%	BOA - FHA - (WAMU - RFC - Cendant)
100%	CW - Chase





## All-In benefit to M3 output

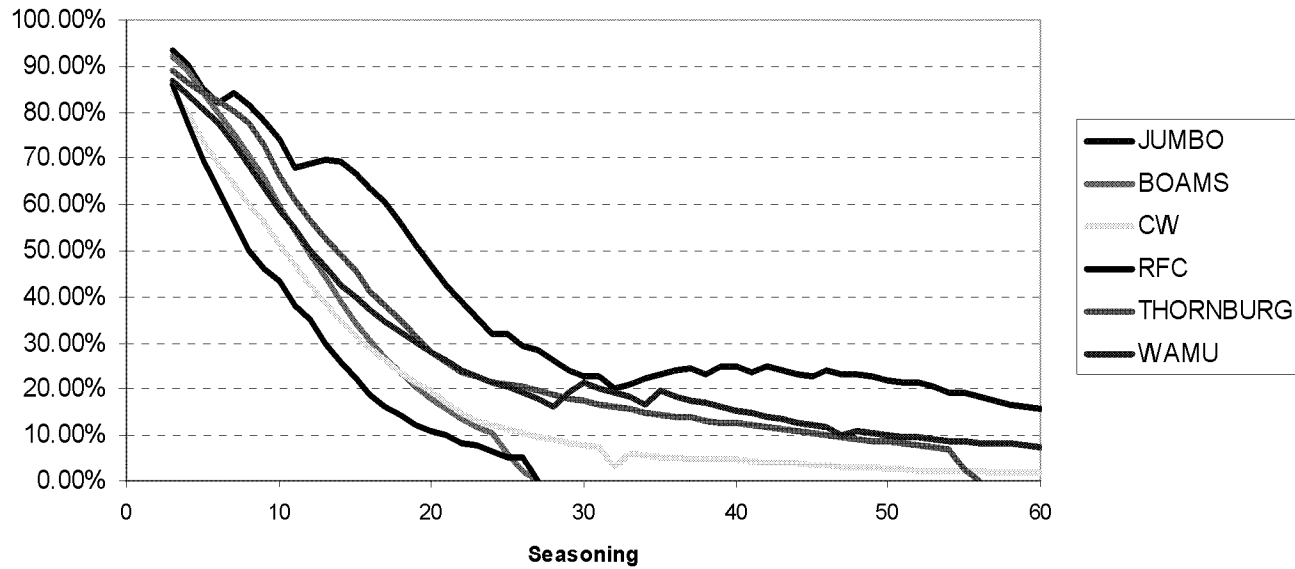
Issuer	Issuer		
	Originator Benefit	Servicing Benefit	Uncapped All-In benefit
Wells	5.0%	2.5%	7.5%
Thornbur	5.0%	0.0%	5.0%
Citi	5.0%	2.5%	7.5%
BOA	2.5%	2.5%	5.0%
FHA	2.5%	-0.85%	1.7%
RFC	2.5%	2.5%	5.0%
WAMU	2.5%	0.0%	2.5%
Cendant	2.5%	0.0%	2.5%
CW	0.0%	2.5%	2.5%
Chase	0.0%	2.5%	2.5%



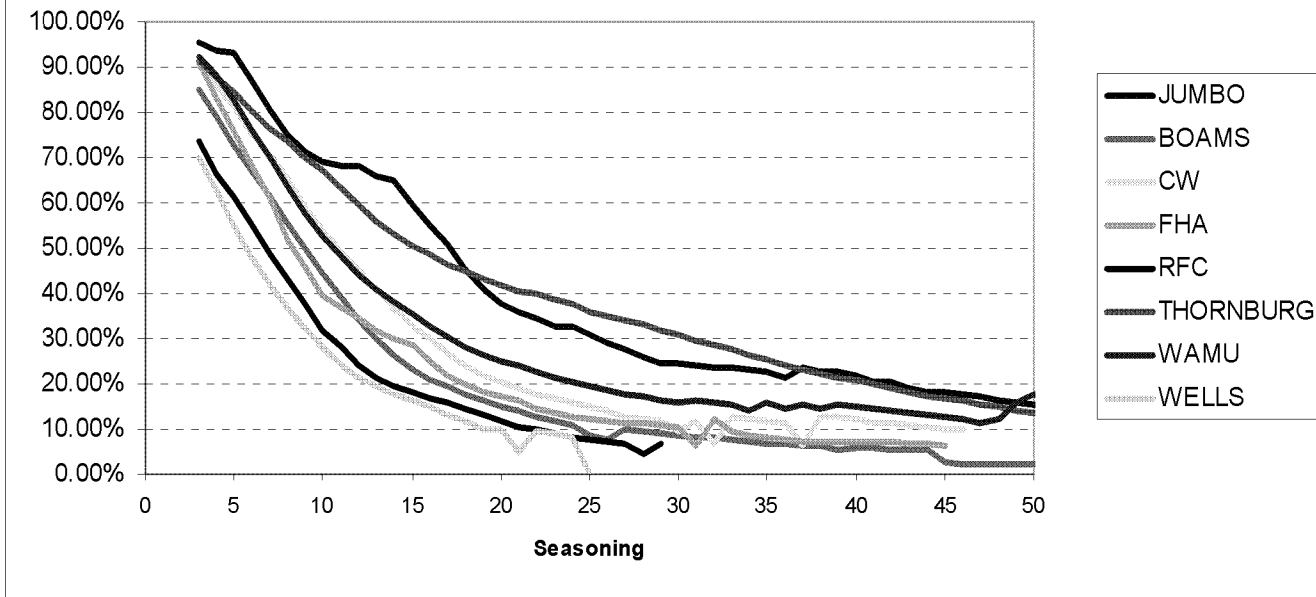
# ANNEX – Pool Factors



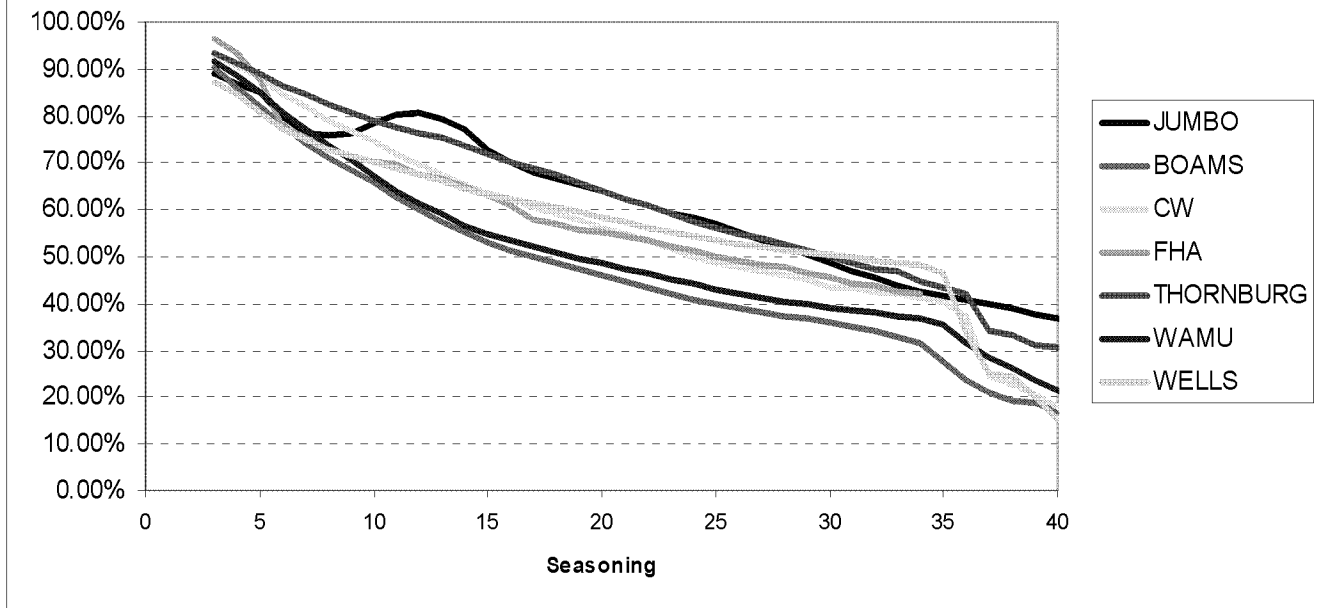
## Pool Factor ARM 01



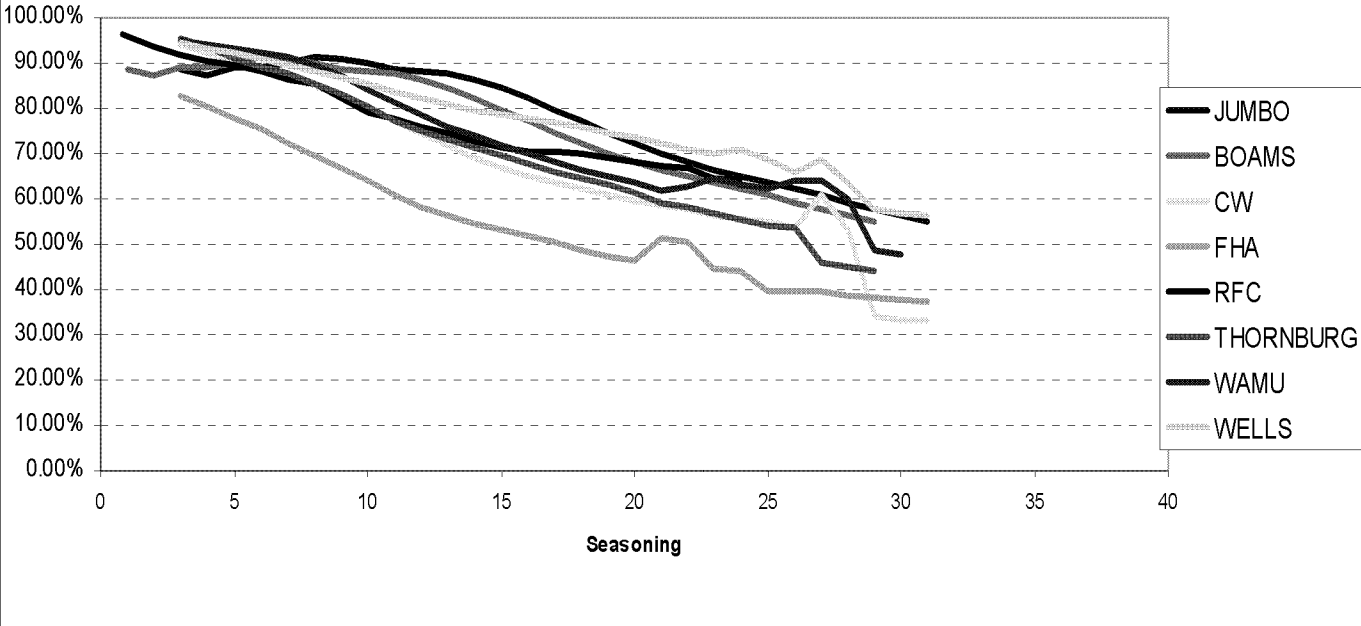
## Pool Factor ARM 02



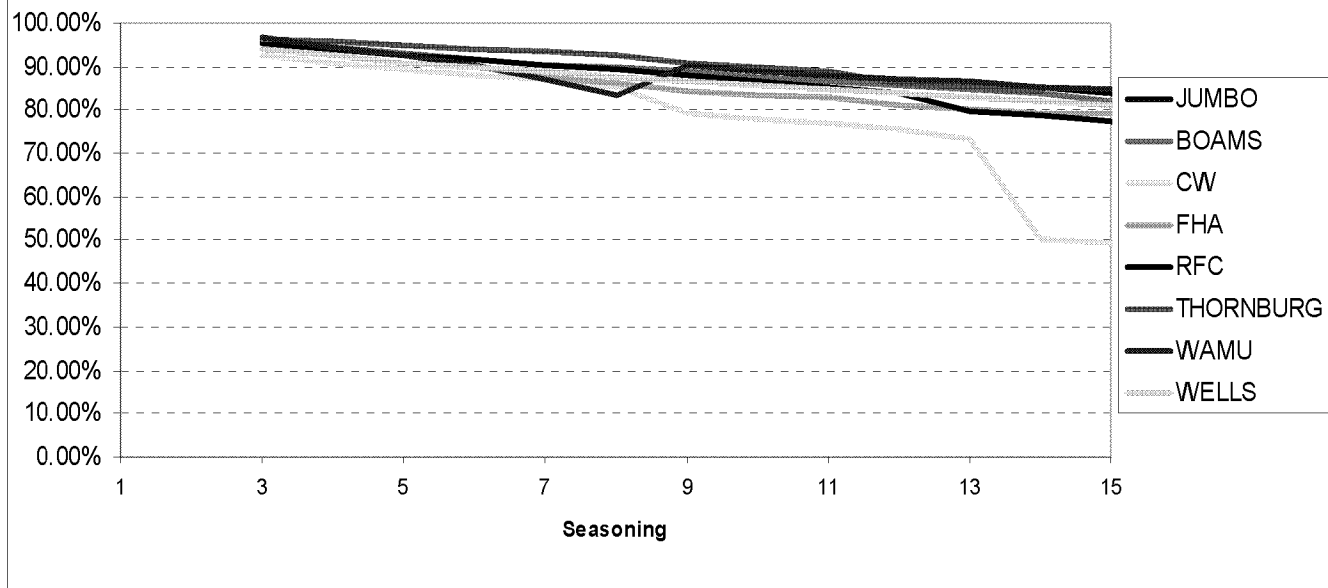
## Pool Factor ARM 03



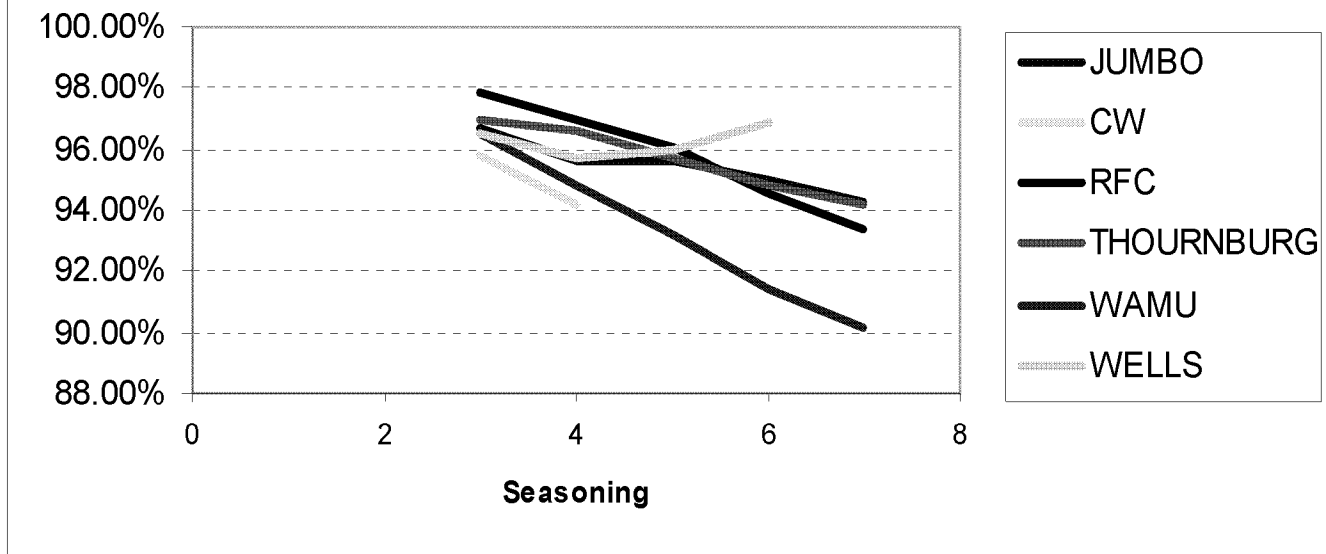
### Pool Factor ARM 04



## Pool Factor ARM 05

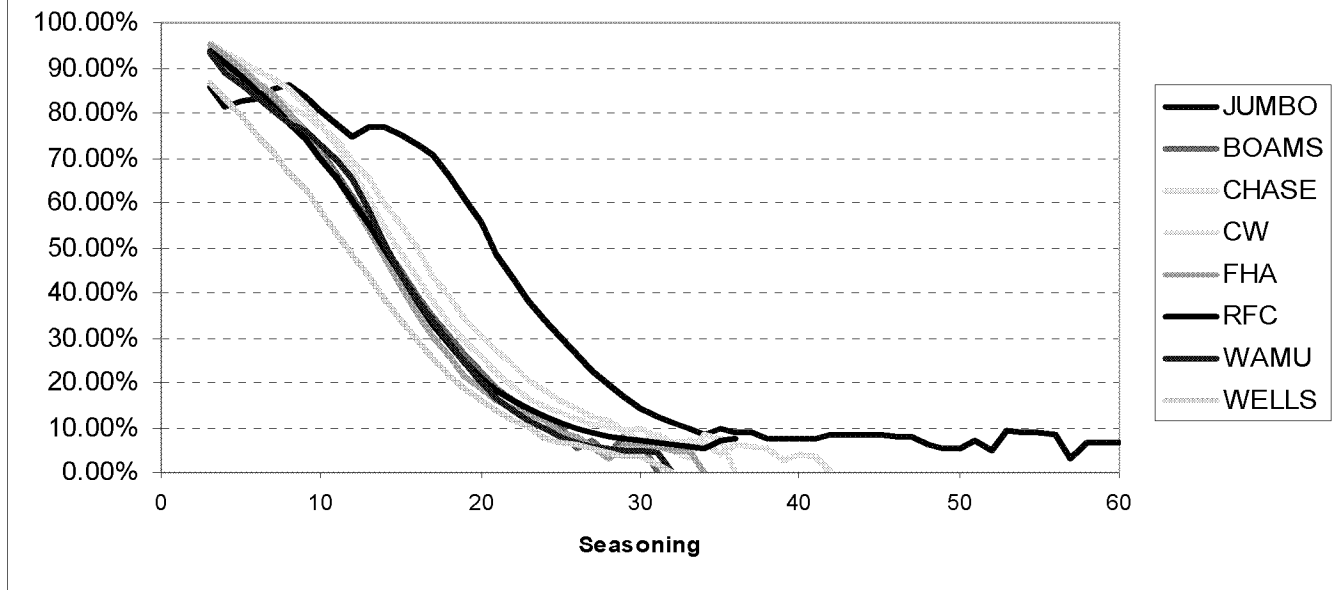


## Pool Factor Arm 06

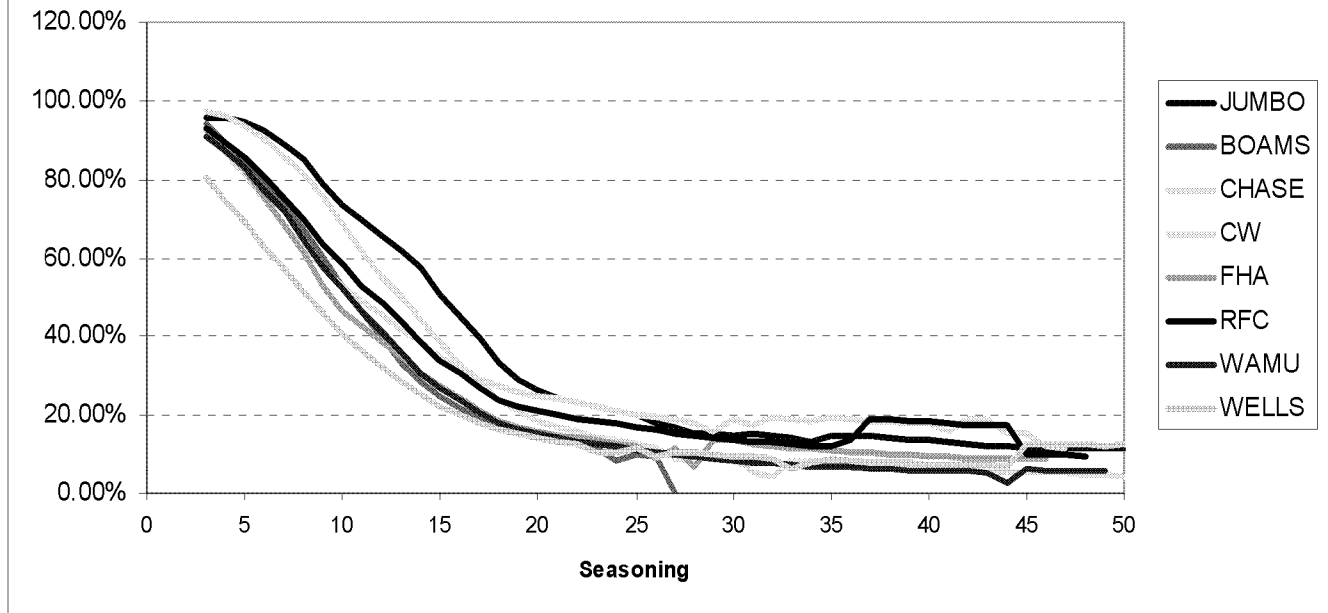




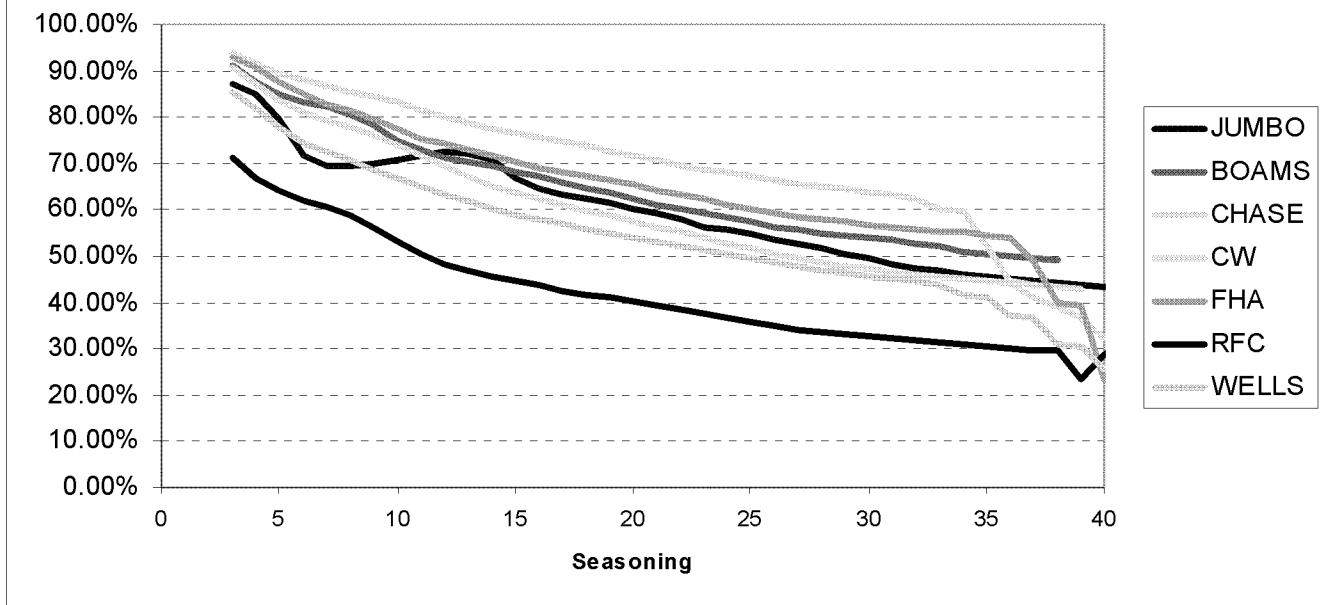
## Pool Factor FRM 01



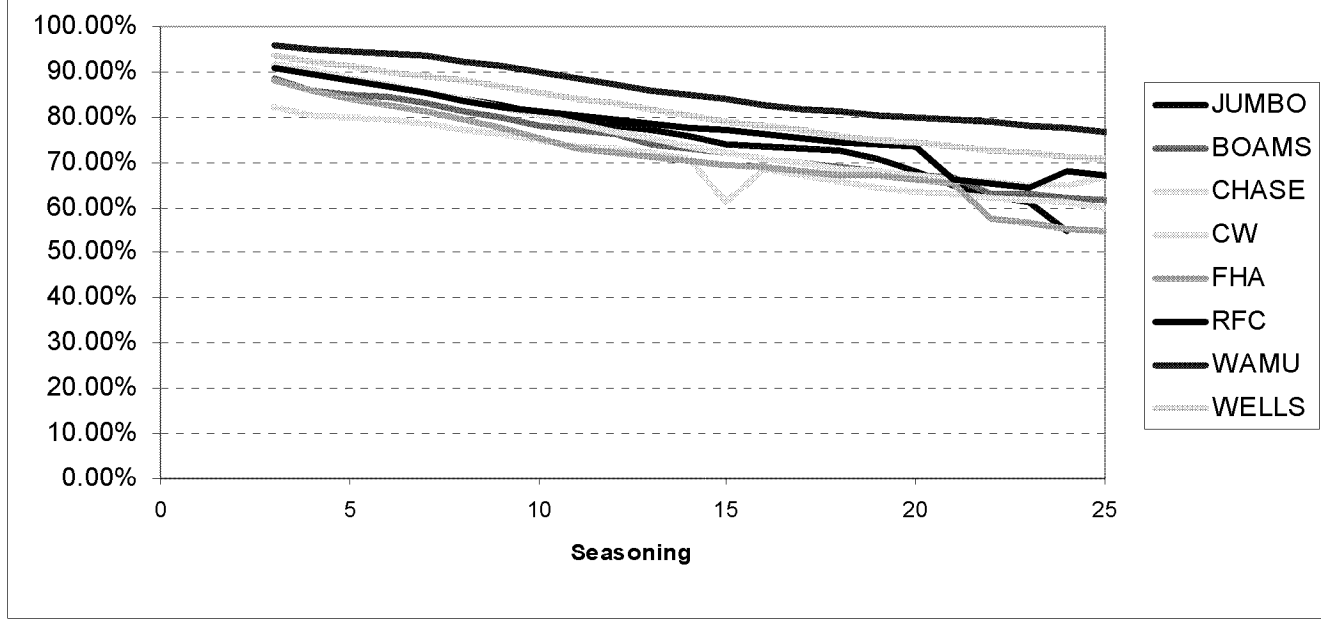
## Pool Factor FRM 02



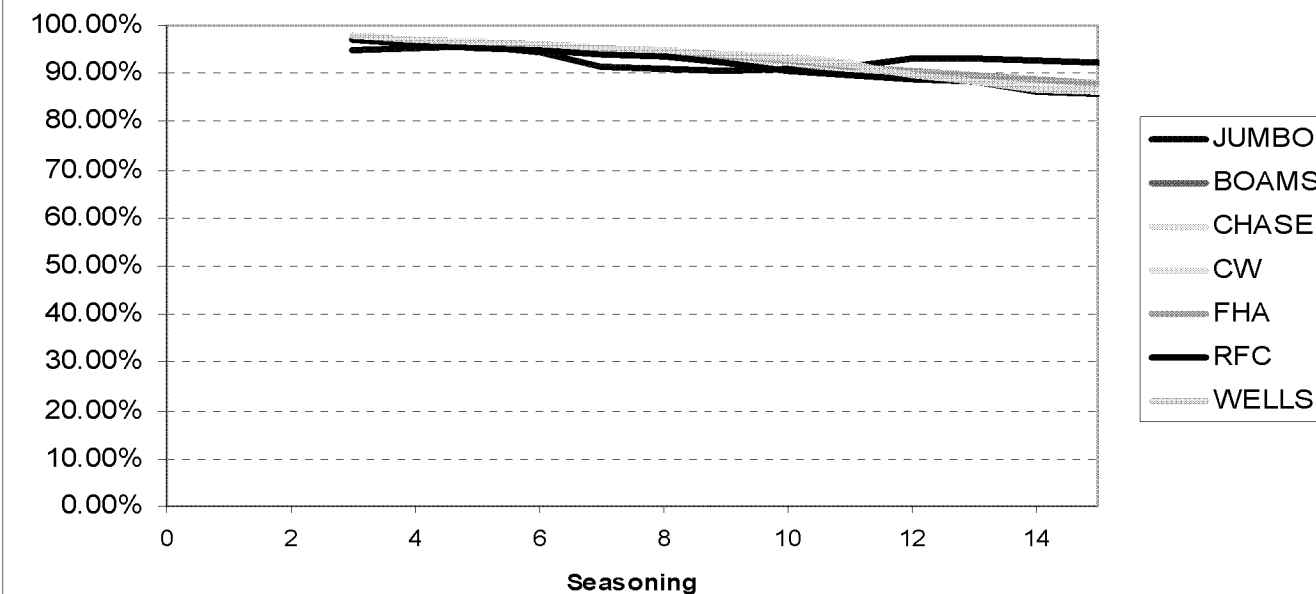
## Pool Factor FRM 03



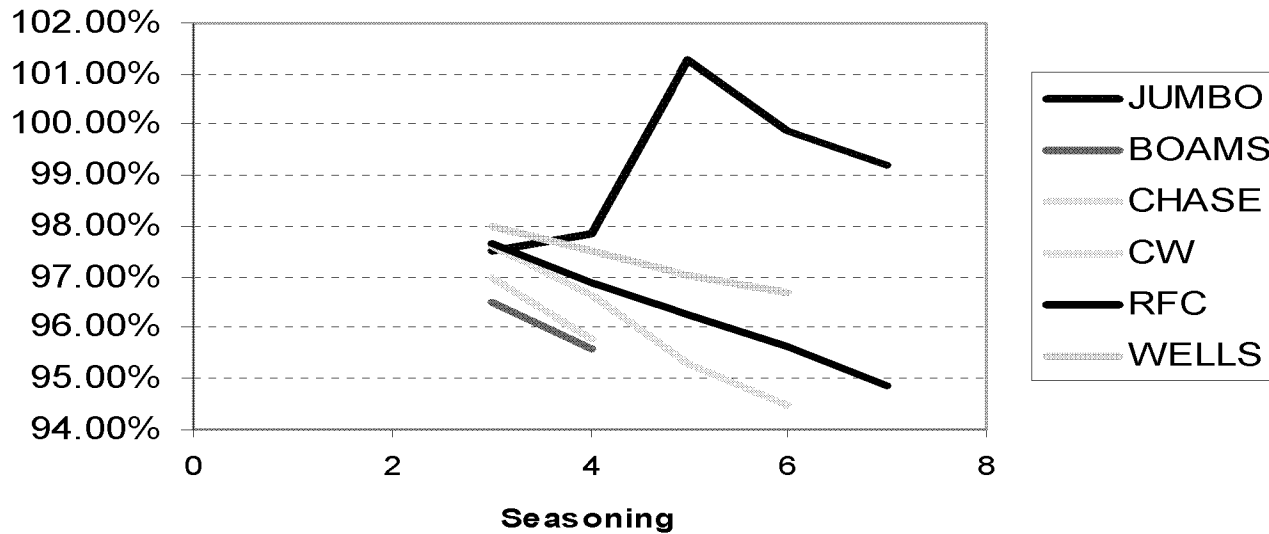
## Pool Factor FRM 04



## Pool Factor FRM 05



## Pool Factor FRM 06



## Originator Factor Follow Up Committee

Date: November 28, 2006

Committee Members:

### Background:

At our last meeting, we went over the origination practices data collected by our analysts, as well as the performance data that we compiled to determine each originators' performance relative to our initial committee-determined expectations.

After reviewing this data, we determined to come up with an originator factor based upon taking a straight average of the scores (1-3) for each originator's performance, financial strength and reputation.

### Final Committee'd Levels:

Originator	M3 Adjustment
Chase	-5.00%
WMC	-5.00%
First Franklin	-5.00%
Option One	-5.00%
WELLS	-5.00%
Accredited	-2.50%
Countywide	-2.50%
RFC (RASC)	-2.50%
RFC (RAMP)	-2.50%
New Century	0.00%
Long Beach	0.00%
Popular	0.00%
Ameriquest	0.00%
Saxon	0.00%
Novastar	0.00%
Centex	0.00%
FieldStone	0.00%
EquiFirst	0.00%
Encore	+5.00%
Aegis	+5.00%
Fremont	+10.00%
People's Choice	+10.00%

**Updated Recommendation:**

Originator	Performance Score	Reputation Score	Financial Stability Score	Overall Score	M3 Adjustment
Chase	1	1	1	1.00	-5.00%
WMC	1	1	1	1.00	-5.00%
First Franklin	1	1	1	1.00	-5.00%
Option One	1	1	1	1.00	-5.00%
WELLS	1	1	1	1.00	-5.00%
Accredited	1	1	2	1.33	-2.50%
Countywide	2	1	1	1.33	-2.50%
RFC (RASC)	2	1	1	1.33	-2.50%
RFC (RAMP)	2	1	1	1.33	-2.50%
New Century	1	2	2	1.67	0.00%
Long Beach	2	2	1	1.67	0.00%
Popular	2	2	2	2.00	0.00%
Ameriquest	2	2	2	2.00	0.00%
Saxon	2	2	2	2.00	0.00%
Novastar	2	2	2	2.00	0.00%
Centex	2	2	2	2.00	0.00%
FieldStone	2	2	3	2.33	0.00%
EquiFirst	3	2	2	2.33	0.00%
Encore	2	3	3	2.67	+2.50%
Ownit	3	2	3	2.67	+2.50%
Aegis	3	2	3	2.67	+2.50%
Fremont	3	3	3	3.00	+5.00%
People's Choice	3	3	3	3.00	+5.00%

**Recommendation:**

Originator	Overall Score	Originator Factor
WMC	1.00	-5.00%
First Franklin	1.00	-5.00%
Accredited	1.33	-5.00%
Countywide	1.33	-5.00%
RFC (RASC)	1.33	-5.00%
Fremont	1.67	0.00%
FieldStone	1.67	0.00%
Encore	1.67	0.00%
New Century	1.67	0.00%
Popular	1.67	0.00%
Long Beach	1.67	0.00%
Option One	1.67	0.00%
WELLS	1.67	0.00%



<b>RFC (RAMP)</b>	<b>1.67</b>	<b>0.00%</b>
<b>Ameriquest</b>	<b>2.00</b>	<b>0.00%</b>
<b>Saxson</b>	<b>2.00</b>	<b>0.00%</b>
<b>Aames</b>	<b>2.00</b>	<b>0.00%</b>
<b>Novastar</b>	<b>2.00</b>	<b>0.00%</b>
<b>EquiFirst</b>	<b>2.00</b>	<b>0.00%</b>
<b>Centex</b>	<b>2.33</b>	<b>0.00%</b>
<b>Ownit</b>	<b>2.67</b>	<b>+5.00%</b>
<b>Aegis</b>	<b>2.67</b>	<b>+5.00%</b>
<b>People's Choice</b>	<b>3.00</b>	<b>+5.00%</b>

**Reputation Score:**

At the end of the last meeting, we agreed upon the following reputation scores:

Fremont	2
FieldStone	2
Encore	3
New Century	2
WMC	1
First Franklin	1
Accredited	1
Countywide	1
Popular	2
Ameriquest	2
RFC (RASC)	1
Saxson	2
Aames	2
Novastar	2
Long Beach	2
Ownit	2
Centex	2
Option One	1
WELLS	1
Aegis	2
EquiFirst	2
People's Choice	3
RFC (RAMP)	1

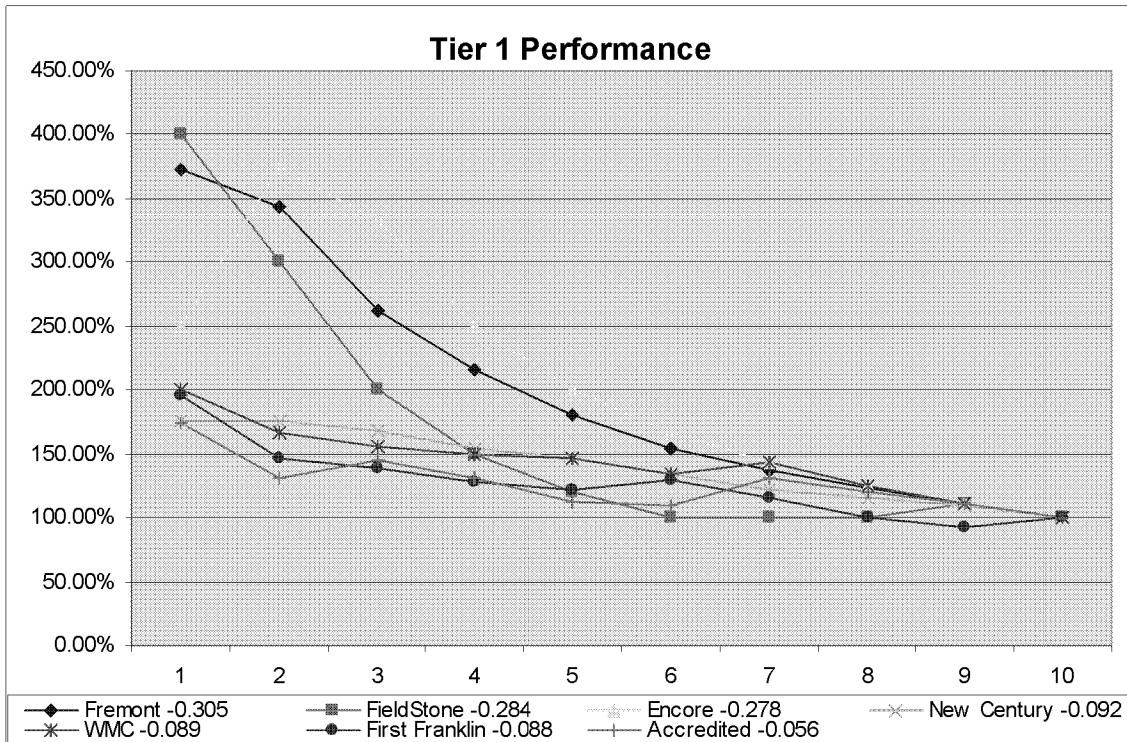
**Financial Stability Score:**

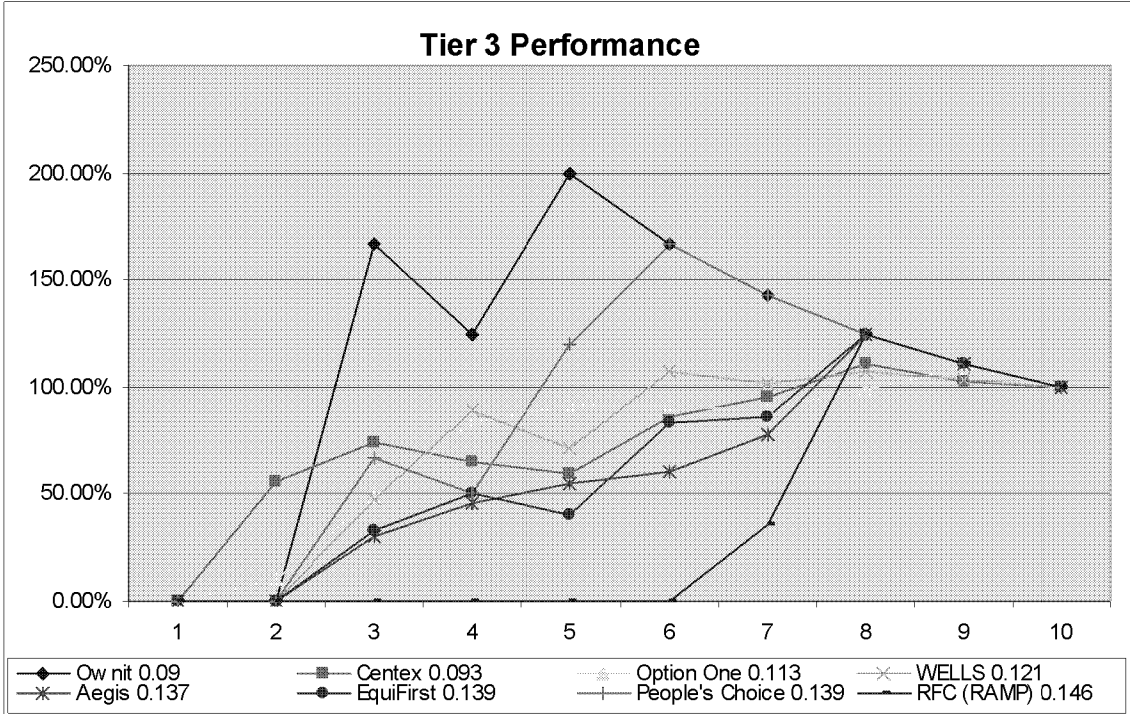
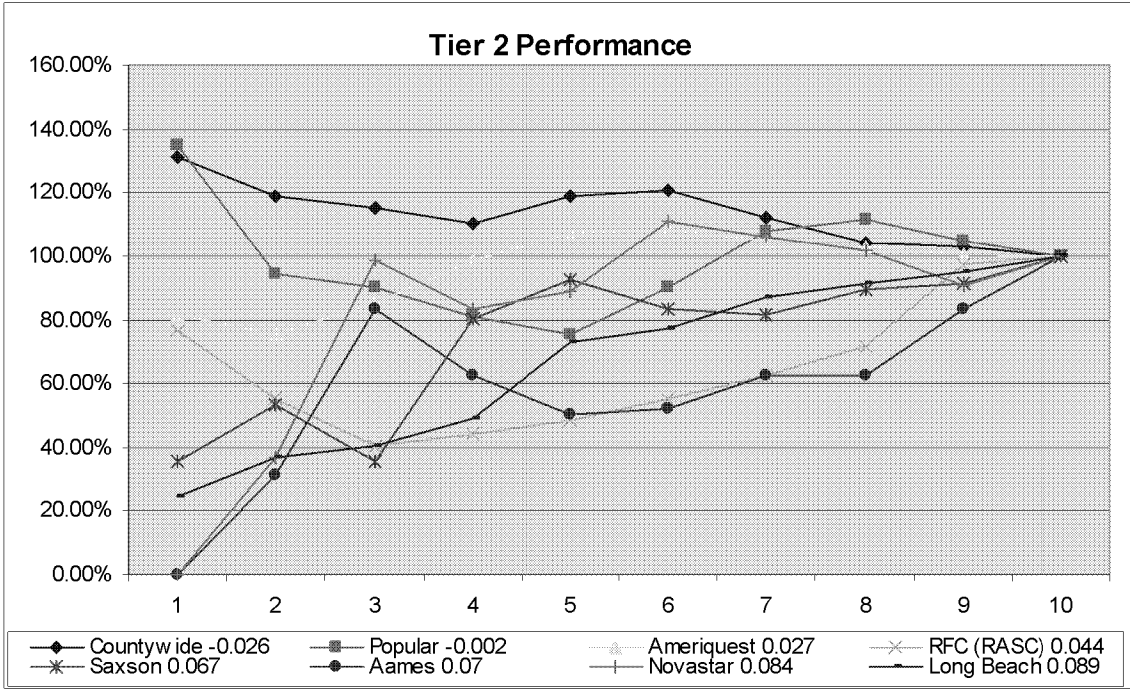
For financial stability, we used the servicer ratings team's Servicer Stability scores as a proxy, where available. When this was not available, a best guess was used, and is highlighted below:

Fremont	2
FieldStone	2
Encore	3
New Century	2
WMC	1
First Franklin	1
Accredited	1
Countywide	1
Popular	2
Ameriquest	2
RFC (RASC)	1
Saxson	2
Aames	2
Novastar	2
Long Beach	2
Ownit	2
Centex	2
Option One	1
WELLS	1
Aegis	2
EquiFirst	2
People's Choice	3
RFC (RAMP)	1

**Performance Score:**

We rank ordered each originator, in ascending order, by the slope of a best fit line through respective performance curves. They were then split into thirds, and scores were assigned based on which third they fell out in.





Performance scores, by originator, are as follows:

Fremont	1
FieldStone	1
Encore	1
New Century	1
WMC	1
First Franklin	1
Accredited	1
Countywide	2
Popular	2
Ameriquest	2
RFC (RASC)	2
Saxson	2
Aames	2
Novastar	2
Long Beach	2
Ownit	3
Centex	3
Option One	3
WELLS	3
Aegis	3
EquiFirst	3
People's Choice	3
RFC (RAMP)	3

Note that certain issuers, such as Encore, are ranked in the top tier, despite a very small number of observations. This is something that should probably be adjusted.

**Aggregated Scores:**

Originator	Performance Score	Reputation Score	Financial Stability Score	Overall Score	
Fremont	1	2	2	1.67	
FieldStone	1	2	2	1.67	
Encore	1	3	1	1.67	Assuming Bear Purchase goes through
New Century	1	2	2	1.67	
WMC	1	1	1	1.00	
First Franklin	1	1	1	1.00	Assuming Merrill purchase goes through
Accredited	1	1	2	1.33	
Countywide	2	1	1	1.33	
Popular	2	2	1	1.67	
Ameriquest	2	2	2	2.00	
RFC (RASC)	2	1	1	1.33	
Saxson	2	2	2	2.00	
Aames	2	2	2	2.00	Basing financial stability on accredited
Novastar	2	2	2	2.00	
Long Beach	2	2	1	1.67	
Ownit	3	2	3	2.67	
Centex	3	2	2	2.33	

<b>Option One</b>	3	1	1	<b>1.67</b>	Will financial stability change?
<b>WELLS</b>	3	1	1	<b>1.67</b>	
<b>Aegis</b>	3	2	3	<b>2.67</b>	Based upon ownership by highly rated bank.
<b>EquiFirst</b>	3	2	1	<b>2.00</b>	
<b>People's Choice</b>	3	3	3	<b>3.00</b>	
<b>RFC (RAMP)</b>	3	1	1	<b>1.67</b>	

- NOTES:**
- All scores are based on a scale of 3
  - Where available, servicing team's servicer stability was used as a proxy for financial stability
  - Due to originator sales/consolidation, Aames, Encore and First Franklin FS were determined based upon potential buyer.

I recommend putting the cutoff for “above average” originators at  $<1.67$ , “average” at  $\geq 1.67$  and  $\leq 2.33$ , and “below average” at  $>2.33$ .

## Subprime Originator Factor Second Committee

**Date:** November 10, 2006

**Committee Members:** [REDACTED]

### Background:

In the primary subprime originator factor committee, dated July 28, 2006, we recommended the use of up to seven different factors to be applied to potentially seven different classifications of originator quality, while at the same time recommending only designating the use of three or four factors for the current pool of originators. To come up with this recommendation, we collected and analyzed up to 26 originations based qualitative data points for each of the originators in our base pool. The basis for our recommendation lied primarily in one or two of the data fields, as the vast majority or the remainder of the fields did not display any meaningful variances.

In an attempt to capture more meaningful information, we produced a more robust and comprehensive list of questions for each originator, and also extracted performance data relating to a large portion of subprime securitizations over the last 5 years. We compared the original committee's loss coverage levels for each securitization with that securitizations projected cumulative loss levels to get a feel for which originators' collateral is outperforming our expectations, and which are underperforming our expectations.

### Recommendation:

After reviewing additional qualitative originator data requests in addition to the performance data, we are not changing our original recommendations as far as which originators are average, above average and below average. Our recommendation for the factors to be applied has changed slightly. We recommend using only three factors: -5% for above average, 0% for average and +5% for below average. Note that a 5% change results in roughly 1 notch change in loss coverage at subprime levels.

Originator	Overall	Factor
Countywide	Above Average	-5.00%
First Franklin	Above Average	-5.00%
Option One	Above Average	-5.00%
WMC	Above average	-5.00%
New Century	Average	0.00%
Long Beach	Average	0.00%
Wells	Average	0.00%
Amerquest - wholesale (Argent)	Average	0.00%
Amerquest - retail	Average	0.00%
RFC	Average	0.00%

Fremont	Average	0.00%
Accredited	Average	0.00%
Centex	Average	0.00%
Novastar	Average	0.00%
Popular	Average	0.00%
Saxon	Average	0.00%
Decision One	Average	0.00%
FieldStone	Average	0.00%
Aegis	Below Average	5.00%
Aames	Below Average	5.00%
Ownit	Below average	5.00%
EquiFirst	Below Average	5.00%
People's Choice	Below average	5.00%
Encore	Below Average	5.00%

**Analysis:**

Origination Practices:

As was the case in the initial data request, the latest data request did not provide meaningful results. Appraisal processes and QC practices did not differ in any material way that we could identify.

Below is a chart with the data fields we requested, "Average" answers, and the few outlier data points:

Originator	Average	Deviating Originators
<b>Appraisal practices</b>		
<b>AppraisAL Review Work Flow*</b>		
<b>AppraisER Review Process*</b>	<b>List of Appraisers not to accept appraisals from</b>	
pre funding app review (%)	<b>100%</b>	<b>Centex (90%)</b>
post funding app review (%)		
reviews on high value loans	<b>Yes</b>	
other type of loans reviewed	<b>Various Risk Factors</b>	
Type of review (automated/desk review?)	<b>Automated and Desk</b>	
What is the tolerance?	<b>10% to 15%</b>	
If outside tolerance, what is the additional review?		
2nd appraisals obtained		
if bal is over (xxx)?	<b>500 to 850</b>	<b>People's Choice (Highest requirement of \$850)</b>
Using outside vendors? If so, which ones? (e.g. CoreLogic)		



When are interior photos required?	Sometimes (older homes, when improvements have been made and are the base for appraisal values)	Ameriquest (Requires Photos)
Size of in house review staff, and% that are licensed appraisers	0(Saxon) to 43(WMC) Most have 20 or fewer	Saxon
% of appraisals with values reduced through appraisal review process (% of all loans)	20% ish - wide variance	
Can values be increased through appraisal review process?	No	
<b>QC</b>		
Sample Size (Both Pre and Post funding)	Under 30% (Post Funding)	
Random Sample? And if not random, what are the criteria for review?	Usually a combination of the two sum to the 30% number above	
How are results incorporated into underwriting/originating practices?*		
Internal Audit Practices*		
% of Early Pay Defaults (EPD***)	WIDE variance (differing definitions is one reason)	
Repurchase Rate (% of loans repurchased, not including EPD***)		
Non-Observable Exceptions (Things that would not be seen on a data tape, such as FICO or LTV)	No Responses	
Business Strategy*		
<b>Financials **</b>		
YTD Income		
2004 and 2005 Annual Income		
Net Worth		
Securitizedizations accounted for gain on sale (Y or N)		
% of originations sold on a whole loan basis		
Other Notes		
Origination Volume for 2003,2004, 2005 and first half of 2006		
How is DTI Computed(what is included in debt and income)? Does it differ between programs?	Back End DTI - Includes non-mortgage debt.	
How is FICO determined (lower of 2/middle of 3)?	lower of 2/middle of 3	
What are reserves policies? How many months are required? Does it differ between different programs?		Decision One offers a rate reduction for providing reserves for loans originated under programs which do not require reserves.
Is foreclosure allowed? If so, are there requirements for time from FC?		
IS BK allowed? If so, are there requirements for time from BK?		

Performance:

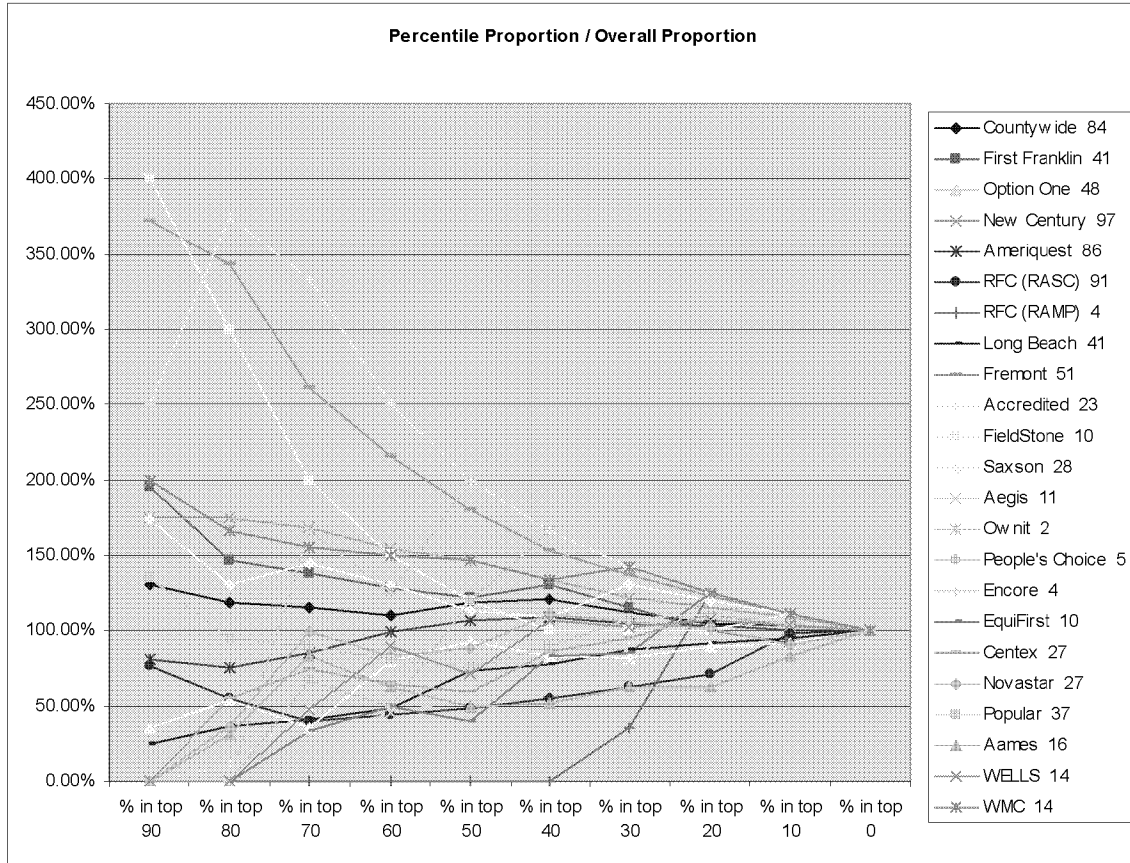
In addition to collecting qualitative information on originations practices, we pulled performance data for securitizations from the same originators over a five year period. Quantitative data

regarding FICO, and other objective credit quality determinants was not available for these securitizations, so we compared the projected cumulative loss rates of each securitization with the originally committee'd expected losses in an effort to determine how each originators pools performed relative to our expectations.

Due to the strength in the overall housing market over the past few years, the majority of the pools outperformed our expectations. In order to come up with a means to compare originators, we rank ordered, in ascending order, each securitization by a factor that was defined as the projected cumulative loss divided by the committee'd expected loss. The projected cumulative loss was defined as the cumulative losses to date added to the future expected losses based on the following roll rates:

Current	11.25%
30 day Roll Rate	17.50%
60 day Roll Rate	30.00%
90 day Roll Rate	50.00%
FC Roll Rate	65.00%
REO Roll Rate	98.00%
Severity Assumption	40.00%

With this definition, the pool with the lowest factor was outperforming the committee'd expected loss by the largest margin. Originators with a larger percentage of their securitizations with low factors, and thus low rankings would be outperforming their expectations on a more consistent basis. The graph below illustrates the performance trends for the pool of originators.



**Graph Description:**

The pool of securitizations for which we had performance data was further bucketed into percentile buckets, with the top 90% representing securitizations with the lowest 10% of the rankings.

Each data point on this graph is defined as the particular originators proportional share for the given percentile bucket divided by that originators proportional share of the entire pool. So, if the data point is greater than 100%, then that originator has a larger share of that particular percentile bucket than it does of the entire pool. By this definition, all originators will end up with a data point of 100% when all securitizations are accounted for – at the 0 percentile bucket.

In general, a downward sloping line represents an originator whose performance exceeded our expectations more consistently. An upward sloping line, on the other hand, represents an originator whose performance exceeded our expectations less consistently. Note that the legend includes the number of observations for each originator as well.

**Performance Data Conclusions:**

While this data does provide some good insight into how certain originators may have been outperforming/underperforming our expectations, it is not sufficient to serve as a base for originator factor recommendations. Many of the originators are represented by very few data points, and we also do not have reliable information regarding how the original expected loss coverage levels were determined. For example, while the graph clearly illustrates that Fremont

has been outperforming expectations, we do not know how many “notches” above the average pool were being attributed to Fremont loss coverage levels in the 2001 through 2003 vintage pools.

We recommend using this data as additional support to the factors recommended, as opposed to the basis for determining factors.



**Moody's**  
**Rating Symbols & Definitions**

*Aa3*

March 2007



**Moody's Investors Service**

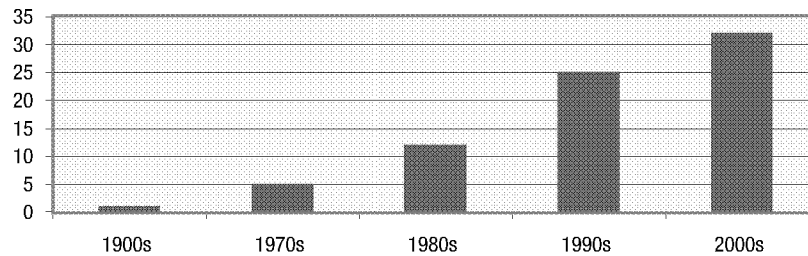
## Preface

In the spirit of promoting transparency and clarity, Moody's Standing Committee on Rating Systems & Practices offers this updated reference guide which defines Moody's various symbols and rating scales.

Since John Moody devised the first bond ratings almost a century ago, Moody's rating systems have evolved in response to the increasing depth and breadth of the global capital markets. Much of the innovation in Moody's rating system is a response to market needs for clarity around the components of credit risk or to demands for finer distinctions in rating classifications.

From the original 1909 bond rating definitions, Moody's ratings have expanded to the extent that today we maintain 32 systems, with the number growing every year.<sup>1</sup>

### **Rating Systems Outstanding by Decade**



In its simplest terms, Moody's assigns and publishes two kinds of ratings:

#### **1) Credit ratings and other credit signals**

Moody's credit ratings are opinions of the credit quality of individual obligations or of an issuer's general creditworthiness (without respect to individual debt obligations or other specific securities). Examples include our long-term obligation ratings, syndicated loan ratings, bank deposit ratings, national scale ratings and insurance financial strength ratings. Moody's also provides auxiliary signals about credit risk through the use of Rating Outlooks and Watchlist designations (review for rating change).

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1. By counting National Scale Ratings for each country as a separate system, the total exceeds 40.



## **2) Non-credit ratings**

Moody's has implemented special rating systems to address other aspects of risk, including market risk ratings, investment manager quality ratings, servicer quality ratings, and Lloyd's syndicate volatility ratings.

Unless otherwise indicated within the definition, all rating systems are monitored, that is, surveillance is ongoing. Ratings may also be withdrawn for various reasons. Please refer to *Moody's Guidelines for the Withdrawal of Ratings*, available on moodys.com, for a list of such circumstances.

The Standing Committee on Rating Systems & Practices, one of several at Moody's that focuses on credit policy issues, is comprised of structured finance, corporate finance, public finance, financial institutions and sovereign credit analysts. The names, direct telephone numbers and e-mail addresses of the members of the Standing Committee are listed below. I invite you to contact us with your comments.

*Jerome S. Fons*  
*Chair, Standing Committee on Rating Systems & Practices*



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## Introduction

The modern bond rating industry traces its roots to the 1909 publication of *Moody's Analyses of Railroad Investments*. The "Key to the Bond Ratings," found at the beginning of each annual volume, provided definitions for the various rating categories. It was clear that John Moody's initial emphasis was on the investment quality or performance of securities. For example, the earliest definition for the **Aaa** rating category states:

**Aaa** The bonds and stocks which are given this rating are regarded as of the highest class, both as regards security and general convertibility. Practically all such issues are dependent for their prices on the current rates for money, rather than the fluctuations in earning power. In other words, their position is such that their value is not affected, or likely to be affected (except in the cases of stocks not limited as to dividends), by any normal changes in the earning capacity of the railroad itself, either for better or worse.

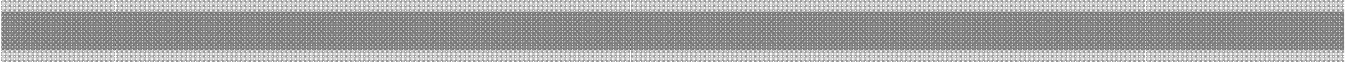
Any change in value for such highly rated securities was thus anticipated to result from changes in the level of interest rates, rather than from changes in the issuer's credit quality or circumstances. Moody was in effect addressing the stability of the security's credit spread.

### **Separate Meaning for Certain Sectors**

Moody's maintains two separate bond rating systems, or scales. One mapping — Moody's Global Scale — applies to ratings assigned to nonfinancial and financial institutions, sovereigns and subsovereign issuers outside the United States, and structured finance obligations.<sup>2</sup> The Global Scale is a mapping between rating categories and relative expected loss rates across multiple horizons. Expected loss comprises an assessment of probability of default as well as expectation of loss in the event of default. It is Moody's intention that the expected loss rate associated with a given rating symbol and time horizon be the same across obligations and issuers rated on the Global Scale. Moody's rating methodologies, rating practices and performance monitoring systems are each designed to ensure a consistency of meaning.

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<sup>2</sup> Moody's structured finance ratings are engineered to replicate the expected loss content of Moody's Global Scale. The trade-off between probability of default and severity of loss given default may vary within the structured finance sector depending on asset type.



A separate rating system – Moody's US Municipal Scale – encompasses ratings assigned to state and local governments, non-profit organizations and related entities that issue debt in the U.S. tax-exempt bond market. Historical default and loss rates for obligations rated on the US Municipal Scale are significantly lower than for similarly rated corporate obligations. Municipal investors are generally risk averse and in the case of individuals, often dependent on debt service payments for income. As a result, the US Municipal Scale evolved to meet investor needs for identifying the most secure municipal investments among obligations with similar credit profiles. It is important that users of Moody's ratings understand these differences in default and loss rates when making rating comparisons between the Municipal and Global Scales.

Moreover, to meet the needs of investors in certain local jurisdictions, Moody's will assign National Scale Ratings, which are opinions of the relative creditworthiness of issuers and issues within a particular country and are not suitable for global comparisons.

### ***Scope of Rating Definitions***

The definitions in this handbook are not intended to provide a detailed view of how ratings are determined. Instead, Moody's publishes rating methodologies for each industry sector and these are designed to illustrate the factors underpinning Moody's rating opinions. We encourage readers to consult the relevant rating methodology in order to better understand how individual ratings are derived.

## General Credit Ratings

### Long-Term Corporate Obligation Ratings

Moody's long-term obligation ratings are opinions of the relative credit risk of fixed-income obligations with an original maturity of one year or more. They address the possibility that a financial obligation will not be honored as promised. Such ratings use Moody's Global Scale and reflect both the likelihood of default and any financial loss suffered in the event of default.

<b>Aaa</b>	Obligations rated Aaa are judged to be of the highest quality, with minimal credit risk.
<b>Aa</b>	Obligations rated Aa are judged to be of high quality and are subject to very low credit risk.
<b>A</b>	Obligations rated A are considered upper-medium grade and are subject to low credit risk.
<b>Baa</b>	Obligations rated Baa are subject to moderate credit risk. They are considered medium-grade and as such may possess certain speculative characteristics.
<b>Ba</b>	Obligations rated Ba are judged to have speculative elements and are subject to substantial credit risk.
<b>B</b>	Obligations rated B are considered speculative and are subject to high credit risk.
<b>Caa</b>	Obligations rated Caa are judged to be of poor standing and are subject to very high credit risk.
<b>Ca</b>	Obligations rated Ca are highly speculative and are likely in, or very near, default, with some prospect of recovery of principal and interest.
<b>C</b>	Obligations rated C are the lowest rated class of bonds and are typically in default, with little prospect for recovery of principal or interest.

*Note: Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.*

## Medium-Term Note Ratings

Moody's assigns long-term ratings to individual debt securities issued from medium-term note (MTN) programs, in addition to indicating ratings to MTN programs themselves. These long-term ratings are expressed on Moody's general long-term scale. Notes issued under MTN programs with such indicated ratings are rated at issuance at the rating applicable to all *pari passu* notes issued under the same program, at the program's relevant indicated rating, provided such notes do not exhibit any of the characteristics listed below:

- Notes containing features that link interest or principal to the credit performance of any third party or parties (i.e., credit-linked notes);
- Notes allowing for negative coupons, or negative principal;
- Notes containing any provision that could obligate the investor to make any additional payments;
- Notes containing provisions that subordinate the claim.

For notes with any of these characteristics, the rating of the individual note may differ from the indicated rating of the program.

For credit-linked securities, Moody's policy is to "look through" to the credit risk of the underlying obligor. Moody's policy with respect to non-credit linked obligations is to rate the issuer's ability to meet the contract as stated, regardless of potential losses to investors as a result of non-credit developments. In other words, as long as the obligation has debt standing in the event of bankruptcy, we will assign the appropriate debt class level rating to the instrument.

Market participants must determine whether any particular note is rated, and if so, at what rating level. Moody's encourages market participants to contact Moody's Ratings Desks or visit [www.moodys.com](http://www.moodys.com) directly if they have questions regarding ratings for specific notes issued under a medium-term note program. Unrated notes issued under an MTN program may be assigned an NR (not rated) symbol.

## Short-Term Ratings

Moody's short-term ratings are opinions of the ability of issuers to honor short-term financial obligations. Ratings may be assigned to issuers, short-term programs or to individual short-term debt instruments. Such obligations generally have an original maturity not exceeding thirteen months, unless explicitly noted.

Moody's employs the following designations to indicate the relative repayment ability of rated issuers:

- P-1** Issuers (or supporting institutions) rated Prime-1 have a superior ability to repay short-term debt obligations.

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- P-2** Issuers (or supporting institutions) rated Prime-2 have a strong ability to repay short-term debt obligations.

---

- P-3** Issuers (or supporting institutions) rated Prime-3 have an acceptable ability to repay short-term obligations.

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- NP** Issuers (or supporting institutions) rated Not Prime do not fall within any of the Prime rating categories.

*Note: Canadian issuers rated P-1 or P-2 have their short-term ratings enhanced by the senior-most long-term rating of the issuer, its guarantor or support-provider.*

### Short-Term vs. Long-Term Ratings

	Long-Term	Short-Term	
Investment-Grade	Aaa	Prime-1	
	Aa1 Aa2 Aa3		
	A1 A2 A3		
	Baa1 Baa2 Baa3	Prime-3	
	Speculative-Grade	Ba1 Ba2 Ba3	Not Prime
		B1 B2 B3	
		Caa1 Caa2 Caa3	
		Ca	
		C	



## Issuer Ratings

Issuer Ratings are opinions of the ability of entities to honor senior unsecured financial obligations and contracts. Moody's expresses Issuer Ratings on its general long-term and short-term scales.



## Sector Specific

### Structured Finance

#### **Structured Finance Long-Term Ratings**

Moody's ratings on long-term structured finance obligations primarily address the expected credit loss an investor might incur on or before the legal final maturity of such obligations vis-à-vis a defined promise. As such, these ratings incorporate Moody's assessment of the default probability and loss severity of the obligations. They are calibrated to Moody's Global Scale. Such obligations generally have an original maturity of one year or more, unless explicitly noted. Moody's credit ratings address only the credit risks associated with the obligations; other non-credit risks have not been addressed, but may have a significant effect on the yield to investors.

<b>Aaa</b>	Obligations rated Aaa are judged to be of the highest quality, with minimal credit risk.
<b>Aa</b>	Obligations rated Aa are judged to be of high quality and are subject to very low credit risk.
<b>A</b>	Obligations rated A are considered upper-medium grade and are subject to low credit risk.
<b>Baa</b>	Obligations rated Baa are subject to moderate credit risk. They are considered medium-grade and as such may possess certain speculative characteristics.
<b>Ba</b>	Obligations rated Ba are judged to have speculative elements and are subject to substantial credit risk.
<b>B</b>	Obligations rated B are considered speculative and are subject to high credit risk.
<b>Caa</b>	Obligations rated Caa are judged to be of poor standing and are subject to very high credit risk.
<b>Ca</b>	Obligations rated Ca are highly speculative and are likely in, or very near, default, with some prospect of recovery of principal and interest.
<b>C</b>	Obligations rated C are the lowest rated class of bonds and are typically in default, with little prospect for recovery of principal or interest.

**Note:** Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.



### ***Structured Finance Issuer Ratings***

Structured Finance Issuer Ratings are opinions of an entity's general financial capacity to ultimately honor its contracts and financial obligations. The opinions are founded upon an expected loss-based assessment of the credit quality of the entity's assets and also incorporate Moody's opinion of the quality of its management and its investment process and strategy. Moody's ratings symbols for Structured Finance Issuer Ratings are identical to those used to indicate the credit quality of long-term obligations. The credit quality of entities that leverage their structured finance asset portfolios is more accurately expressed via a Counterparty Rating for derivatives product companies.

### ***Credit Default Swaps Ratings***

Moody's Credit Default Swaps Ratings — expressed on the long-term scale — measure the risk posed to a credit protection provider on an expected loss basis arising from the possibility that the credit protection provider will be required to make payments in respect of credit events under the terms of the transaction. The ratings also address the potential for any unpaid premiums due to the credit protection provider, up until an early termination date, if any. The ratings do not address potential losses resulting from an early termination of the transaction, nor any market risk associated with the transaction.

### ***Counterparty Ratings: Derivatives Product Companies***

Issuer ratings assigned to derivative product companies and clearinghouses are opinions of the financial capacity of an obligor to honor its senior obligations under financial contracts, given appropriate documentation and authorizations. Moody's employs the general long-term scale for Counterparty Ratings.

### ***Counterparty Instrument Ratings: Special Purpose Vehicles***

Counterparty Instrument Ratings measure the risk posed to a counterparty on an expected loss basis arising from a special purpose vehicle's (SPV's) inability to honor its obligations under the referenced financial contract. The ratings do not address potential losses in relation to any market risk associated with the transaction. Moody's employs the general long-term scale for Counterparty Instrument Ratings.



## US Municipal Ratings

Moody's US Municipal ratings are opinions of the investment quality of issuers and issues in the US municipal market. As such, these ratings incorporate Moody's assessment of the default probability and loss severity of these issuers and issues. The default and loss content for Moody's municipal long-term rating scale differs from Moody's general long-term rating scale. Historical default and loss rates for obligations rated on the US Municipal Scale are significantly lower than for similarly rated corporate obligations. It is important that users of Moody's ratings understand these differences when making rating comparisons between the Municipal and Global Scales.

## **US Municipal Long-Term Debt Ratings**

Municipal Ratings are based upon the analysis of five primary factors related to municipal finance: market position, financial position, debt levels, governance, and covenants. Each of the factors is evaluated individually and for its effect on the other factors in the context of the municipality's ability to repay its debt.

<b>Aaa</b>	Issuers or issues rated Aaa demonstrate the strongest creditworthiness relative to other US municipal or tax-exempt issuers or issues.
<b>Aa</b>	Issuers or issues rated Aa demonstrate very strong creditworthiness relative to other US municipal or tax-exempt issuers or issues.
<b>A</b>	Issuers or issues rated A present above-average creditworthiness relative to other US municipal or tax-exempt issuers or issues.
<b>Baa</b>	Issuers or issues rated Baa represent average creditworthiness relative to other US municipal or tax-exempt issuers or issues.
<b>Ba</b>	Issuers or issues rated Ba demonstrate below-average creditworthiness relative to other US municipal or tax-exempt issuers or issues.
<b>B</b>	Issuers or issues rated B demonstrate weak creditworthiness relative to other US municipal or tax-exempt issuers or issues.
<b>Caa</b>	Issuers or issues rated Caa demonstrate very weak creditworthiness relative to other US municipal or tax-exempt issuers or issues.
<b>Ca</b>	Issuers or issues rated Ca demonstrate extremely weak creditworthiness relative to other US municipal or tax-exempt issuers or issues.
<b>C</b>	Issuers or issues rated C demonstrate the weakest creditworthiness relative to other US municipal or tax-exempt issuers or issues.

**Note:** Moody's appends numerical modifiers 1, 2, and 3 to each generic rating category from Aa through Caa. The modifier 1 indicates that the issuer or obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.

## US Municipal Short-Term Debt and Demand Obligation Ratings

### **Short-Term Obligation Ratings**

There are three rating categories for short-term municipal obligations that are considered investment grade. These ratings are designated as Municipal Investment Grade (MIG) and are divided into three levels — MIG 1 through MIG 3. In addition, those short-term obligations that are of speculative quality are designated SG, or speculative grade. MIG ratings expire at the maturity of the obligation.

<b>MIG 1</b>	This designation denotes superior credit quality. Excellent protection is afforded by established cash flows, highly reliable liquidity support, or demonstrated broad-based access to the market for refinancing.
<b>MIG 2</b>	This designation denotes strong credit quality. Margins of protection are ample, although not as large as in the preceding group.
<b>MIG 3</b>	This designation denotes acceptable credit quality. Liquidity and cash-flow protection may be narrow, and market access for refinancing is likely to be less well-established.
<b>SG</b>	This designation denotes speculative-grade credit quality. Debt instruments in this category may lack sufficient margins of protection.

### **Demand Obligation Ratings**

In the case of variable rate demand obligations (VRDOs), a two-component rating is assigned; a long or short-term debt rating and a demand obligation rating. The first element represents Moody's evaluation of the degree of risk associated with scheduled principal and interest payments. The second element represents Moody's evaluation of the degree of risk associated with the ability to receive purchase price upon demand ("demand feature"), using a variation of the MIG rating scale, the Variable Municipal Investment Grade or VMIG rating.

When either the long- or short-term aspect of a VRDO is not rated, that piece is designated NR, e.g., Aaa/NR or NR/VMIG 1.

VMIG rating expirations are a function of each issue's specific structural or credit features.

- |               |   |
|---------------|---|
| <b>VMIG 1</b> | This designation denotes superior credit quality. Excellent protection is afforded by the superior short-term credit strength of the liquidity provider and structural and legal protections that ensure the timely payment of purchase price upon demand.  |
| <b>VMIG 2</b> | This designation denotes strong credit quality. Good protection is afforded by the strong short-term credit strength of the liquidity provider and structural and legal protections that ensure the timely payment of purchase price upon demand.   |
| <b>VMIG 3</b> | This designation denotes acceptable credit quality. Adequate protection is afforded by the satisfactory short-term credit strength of the liquidity provider and structural and legal protections that ensure the timely payment of purchase price upon demand.   |
| <b>SG</b>     | This designation denotes speculative-grade credit quality. Demand features rated in this category may be supported by a liquidity provider that does not have an investment grade short-term rating or may lack the structural and/or legal protections necessary to ensure the timely payment of purchase price upon demand. |

## Corporate Family Ratings

Moody's Corporate Family Ratings are generally employed for speculative grade corporate issuers. A Corporate Family Rating is an opinion of a corporate family's ability to honor all of its financial obligations and is assigned to a corporate family as if it had:

- a single class of debt;
- a single consolidated legal entity structure.

A Corporate Family Rating does not reference an obligation or class of debt and thus does not reflect priority of claim. It normally applies to all affiliates under the management control of the entity to which it is assigned. Moody's employs the general long-term rating scale for Corporate Family Ratings.

## Probability of Default Ratings

A probability of default rating (PDR) is a corporate family-level opinion of the relative likelihood that any entity within a corporate family will default on one or more of its debt obligations.

- For families not in default, PDRs are expressed using Moody's long-term rating scale.
- For families in default on all of their debt obligations (such as might be the case in bankruptcy), a PDR of **D** is assigned.
- For families in default on a limited set of their debt obligations, PDRs reflect the risk of an additional default within the family and are expressed using Moody's long-term rating scale appended by the symbol **"LD"**, for example, **Caa1/LD**.

A **D** or **LD** rating is not assigned until a failure to pay interest or principal extends beyond any grace period specified by the terms of the debt obligation.

A **D** or **LD** rating is not assigned for distressed exchanges until they have been completed, as opposed to simply announced.

## Loss Given Default Assessments

Moody's Loss Given Default (LGD) assessments are opinions about expected loss given default on fixed income obligations expressed as a percent of principal and accrued interest at the resolution of the default.<sup>3</sup> LGD assessments are assigned to individual loan, bond, and preferred stock issues. The firm-wide or enterprise expected LGD rate is a weighted average of the expected LGD rates on all constituent liabilities (excluding preferred stock), where the weights equal each obligation's expected share of the total liabilities at default.

The following scale is used in the assignment of LGD assessments:

<b>Assessments</b>	<b>Loss range</b>
LGD1	≥ 0% and < 10%
LGD2	≥ 10% and < 30%
LGD3	≥ 30% and < 50%
LGD4	≥ 50% and < 70%
LGD5	≥ 70% and < 90%
LGD6	≥ 90% and ≤ 100%

*3. Expected LGD is the difference between value received at default resolution (either through bankruptcy resolution, distressed exchange, or outright cure) and principal outstanding and accrued interest due at resolution. An LGD assessment (or rate) is the expected LGD divided by the expected amount of principal and interest due at resolution. Equivalently, the LGD assessment is expected LGD discounted by the coupon rate back to the date the last coupon payment was made.*





## Covenant Quality Assessments

Moody's covenant quality assessments measure the investor protections provided by key bond covenants within an indenture. The assessments are unmonitored, point-in-time scores, but may be updated as circumstances dictate. Key covenants assessed include provisions for restricted payments, change of control, limitations on debt incurrence, negative pledges, and merger restrictions, among others.

## Speculative Grade Liquidity Ratings

Moody's Speculative Grade Liquidity Ratings are opinions of an issuer's relative ability to generate cash from internal resources and the availability of external sources of committed financing, in relation to its cash obligations over the coming 12 months. Speculative Grade Liquidity Ratings will consider the likelihood that committed sources of financing will remain available. Other forms of liquidity support will be evaluated and consideration will be given to the likelihood that these sources will be available during the coming 12 months. Speculative Grade Liquidity Ratings are assigned to speculative grade issuers that are by definition Not Prime issuers.

**SGL-1** Issuers rated SGL-1 possess very good liquidity. They are most likely to have the capacity to meet their obligations over the coming 12 months through internal resources without relying on external sources of committed financing.

**SGL-2** Issuers rated SGL-2 possess good liquidity. They are likely to meet their obligations over the coming 12 months through internal resources but may rely on external sources of committed financing. The issuer's ability to access committed sources of financing is highly likely based on Moody's evaluation of near-term covenant compliance.

**SGL-3** Issuers rated SGL-3 possess adequate liquidity. They are expected to rely on external sources of committed financing. Based on its evaluation of near-term covenant compliance, Moody's believes there is only a modest cushion, and the issuer may require covenant relief in order to maintain orderly access to funding lines.

**SGL-4** Issuers rated SGL-4 possess weak liquidity. They rely on external sources of financing and the availability of that financing is, in Moody's opinion, highly uncertain.



## Bank Deposit Ratings

Moody's Bank Deposit Ratings are opinions of a bank's ability to repay punctually its foreign and/or domestic currency deposit obligations. Foreign currency deposit ratings are subject to Moody's country ceilings for foreign currency deposits. This may result in the assignment of a different (and typically lower) rating for the foreign currency deposits relative to the bank's rating for domestic currency deposits.

Moody's Bank Deposit Ratings are intended to incorporate those aspects of credit risk that are relevant to the prospective payment performance of the rated bank with respect to its foreign and/or domestic currency deposit obligations. Included are factors such as intrinsic financial strength, sovereign transfer risk (for foreign currency deposits), and both implicit and explicit external support elements.

Moody's Bank Deposit Ratings do not take into account the benefit of deposit insurance schemes that make payments to depositors, but they do recognize the potential support from schemes that may provide direct assistance to banks.

In addition to its Bank Deposit Ratings, Moody's also publishes Bank Financial Strength Ratings, which exclude certain of these external risk and support elements (i.e., sovereign risk and external support). Such ratings are intended to elaborate and explain Moody's Bank Deposit Ratings, which incorporate and reflect such elements of credit risk.

Moody's employs the general long-term and short-term rating scales for bank deposits.



## US Bank Other Senior Obligation Ratings

Deposit notes and bank notes are bank obligations that are structured to be sold and traded as securities similar to corporate bonds or medium-term notes. As bank obligations, such instruments are exempt from SEC registration (if issued by a US bank or by the US branch of a foreign bank). Deposit notes have the legal status of deposits and will rank *pari passu* in liquidation with certificates of deposit and other domestic deposit obligations. Bank notes, although nominally senior, are not deposit obligations. US law provides that foreign deposits and senior unsecured obligations, including bank notes, will rank behind domestic deposit obligations of US banks in the event of liquidation.

Moody's employs the general long-term and short-term scales for Other Senior Obligations (OSOs). OSO ratings may be assigned to foreign deposits of US banks and International Banking Facility deposits, as well as to other senior non-depository obligations, including bank notes, letter-of-credit supported obligations, federal funds and financial contracts. A rating distinction between domestic deposits and OSOs will be reflected in those cases where there is a material susceptibility for impairment at a future time. Bank subordinated notes will rank behind both domestic deposits and OSOs in a failed bank liquidation.



## Bank Financial Strength Ratings

Moody's Bank Financial Strength Ratings (BFSRs) represent Moody's opinion of a bank's intrinsic safety and soundness and, as such, exclude certain external credit risks and credit support elements that are addressed by Moody's Bank Deposit Ratings. In addition to commercial banks, Moody's BFSRs may also be assigned to other types of financial institutions such as multilateral development banks, government-sponsored financial institutions and national development financial institutions.

Unlike Moody's Bank Deposit Ratings, Bank Financial Strength Ratings do not address the probability of timely payment. Instead, Bank Financial Strength Ratings are a measure of the likelihood that a bank will require assistance from third parties such as its owners, its industry group, or official institutions.

Bank Financial Strength Ratings do not take into account the probability that the bank will receive such external support, nor do they address risks arising from sovereign actions that may interfere with a bank's ability to honor its domestic or foreign currency obligations.

Factors considered in the assignment of Bank Financial Strength Ratings include bank-specific elements such as financial fundamentals, franchise value, and business and asset diversification. Although Bank Financial Strength Ratings exclude the external factors specified above, they do take into account other risk factors in the bank's operating environment, including the strength and prospective performance of the economy, as well as the structure and relative fragility of the financial system, and the quality of banking regulation and supervision.

## **Bank Financial Strength Rating Definitions**

- A** Banks rated A possess superior intrinsic financial strength. Typically, they will be institutions with highly valuable and defensible business franchises, strong financial fundamentals, and a very predictable and stable operating environment.
- B** Banks rated B possess strong intrinsic financial strength. Typically, they will be institutions with valuable and defensible business franchises, good financial fundamentals, and a predictable and stable operating environment.
- C** Banks rated C possess adequate intrinsic financial strength. Typically, they will be institutions with more limited but still valuable business franchises. These banks will display either acceptable financial fundamentals within a predictable and stable operating environment, or good financial fundamentals within a less predictable and stable operating environment.
- D** Banks rated D display modest intrinsic financial strength, potentially requiring some outside support at times. Such institutions may be limited by one or more of the following factors: a weak business franchise; financial fundamentals that are deficient in one or more respects; or an unpredictable and unstable operating environment.
- E** Banks rated E display very modest intrinsic financial strength, with a higher likelihood of periodic outside support or an eventual need for outside assistance. Such institutions may be limited by one or more of the following factors: a weak and limited business franchise; financial fundamentals that are materially deficient in one or more respects; or a highly unpredictable or unstable operating environment.

**Note:** Where appropriate, a "+" modifier will be appended to ratings below the "A" category and a "-" modifier will be appended to ratings above the "E" category to distinguish those banks that fall in the higher and lower ends, respectively, of the generic rating category.



## Insurance Financial Strength Ratings

Moody's Insurance Financial Strength Ratings are opinions of the ability of insurance companies to repay punctually senior policyholder claims and obligations. Specific obligations are considered unrated unless they are individually rated because the standing of a particular insurance obligation would depend on an assessment of its relative standing under those laws governing both the obligation and the insurance company.

Insurance Financial Strength Ratings, shown in connection with property/casualty groups, represent the ratings of individual companies within those groups, as displayed in Moody's insurance industry ratings list. The rating of an individual property/casualty company may be based on the benefit of its participation in an intercompany pooling agreement. Pooling agreements may or may not provide for continuation of in-force policyholder obligations by pool members in the event that the property/casualty insurer is sold to a third party or otherwise removed from the pooling agreement.

Moody's assumes in these ratings that the pooling agreement will not be modified by the members of the pool to reduce the benefits of pool participation, and that the insurer will remain in the pool. Moody's makes no representation or warranty that such pooling agreement will not be modified over time, nor does Moody's opine on the probability that the rated entity may be sold or otherwise removed from the pooling agreement.

## Long-Term Insurance Financial Strength Ratings

Moody's rating symbols for Insurance Financial Strength Ratings are identical to those used to indicate the credit quality of long-term obligations. These rating gradations provide investors with a system for measuring an insurance company's ability to meet its senior policyholder claims and obligations.

<b>Aaa</b>	Insurance companies rated Aaa offer exceptional financial security. While the credit profile of these companies is likely to change, such changes as can be visualized are most unlikely to impair their fundamentally strong position.
<b>Aa</b>	Insurance companies rated Aa offer excellent financial security. Together with the Aaa group, they constitute what are generally known as high-grade companies. They are rated lower than Aaa companies because long-term risks appear somewhat larger.
<b>A</b>	Insurance companies rated A offer good financial security. However, elements may be present which suggest a susceptibility to impairment sometime in the future.
<b>Baa</b>	Insurance companies rated Baa offer adequate financial security. However, certain protective elements may be lacking or may be characteristically unreliable over any great length of time.
<b>Ba</b>	Insurance companies rated Ba offer questionable financial security. Often the ability of these companies to meet policyholder obligations may be very moderate and thereby not well safeguarded in the future.
<b>B</b>	Insurance companies rated B offer poor financial security. Assurance of punctual payment of policyholder obligations over any long period of time is small.
<b>Caa</b>	Insurance companies rated Caa offer very poor financial security. They may be in default on their policyholder obligations or there may be present elements of danger with respect to punctual payment of policyholder obligations and claims.
<b>Ca</b>	Insurance companies rated Ca offer extremely poor financial security. Such companies are often in default on their policyholder obligations or have other marked shortcomings.
<b>C</b>	Insurance companies rated C are the lowest-rated class of insurance company and can be regarded as having extremely poor prospects of ever offering financial security.

**Note:** Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa. Numeric modifiers are used to refer to the ranking within a group - with 1 being the highest and 3 being the lowest. However, the financial strength of companies within a generic rating symbol (Aa, for example) is broadly the same.



## **Short-Term Insurance Financial Strength Ratings**

Short-Term Insurance Financial Strength Ratings are opinions of the ability of the insurance company to repay punctually its short-term senior policyholder claims and obligations. The ratings apply to senior policyholder obligations that mature or are payable within one year or less.

Specific obligations are considered unrated unless individually rated because the standing of a particular insurance obligation would depend on an assessment of its relative standing under those laws governing both the obligation and the insurance company.

<b>P-1</b>	Insurers (or supporting institutions) rated Prime-1 have a superior ability for repayment of senior short-term policyholder claims and obligations.
<b>P-2</b>	Insurers (or supporting institutions) rated Prime-2 have a strong ability for repayment of senior short-term policyholder claims and obligations.
<b>P-3</b>	Insurers (or supporting institutions) rated Prime-3 have an acceptable ability for repayment of senior short-term policyholder claims and obligations.
<b>NP</b>	Insurers (or supporting institutions) rated Not Prime (NP) do not fall within any of the Prime rating categories.

When ratings are supported by the credit of another entity or entities, then the name or names of such supporting entity or entities are listed within parenthesis beneath the name of the insurer, or there is a footnote referring to the name or names of the supporting entity or entities.

In assigning ratings to such insurers, Moody's evaluates the financial strength of the affiliated insurance companies, commercial banks, corporations, foreign governments, or other entities, but only as one factor in the total rating assessment. Moody's makes no representation and gives no opinion on the legal validity or enforceability of any support arrangement.

## Money Market and Bond Fund Ratings

Moody's Money Market and Bond Fund Ratings are opinions of the investment quality of shares in mutual funds and similar investment vehicles which principally invest in short-term and long-term fixed income obligations, respectively. As such, these ratings incorporate Moody's assessment of a fund's published investment objectives and policies, the creditworthiness of the assets held by the fund, as well as the management characteristics of the fund. The ratings are not intended to consider the prospective performance of a fund with respect to appreciation, volatility of net asset value, or yield.

<b>Aaa</b>	Money Market Funds and Bond Funds rated Aaa are judged to be of an investment quality similar to Aaa-rated fixed income obligations - that is, they are judged to be of the best quality.
<b>Aa</b>	Money Market Funds and Bond Funds rated Aa are judged to be of an investment quality similar to Aa-rated fixed income obligations - that is, they are judged to be of high quality by all standards.
<b>A</b>	Money Market Funds and Bond Funds rated A are judged to be of an investment quality similar to A-rated fixed income obligations - that is, they are judged to possess many favorable investment attributes and are considered as upper-medium-grade investment vehicles.
<b>Baa</b>	Money Market Funds and Bond Funds rated Baa are judged to be of an investment quality similar to Baa-rated fixed income obligations - that is, they are considered as medium-grade investment vehicles.
<b>Ba</b>	Money Market Funds and Bond Funds rated Ba are judged to be of an investment quality similar to Ba-rated fixed income obligations - that is, they are judged to have speculative elements.
<b>B</b>	Money Market Funds and Bond Funds rated B are judged to be of an investment quality similar to B-rated fixed income obligations - that is, they generally lack characteristics of a desirable investment.
<b>Caa</b>	Money Market Funds and Bond Funds rated Caa are judged to be of an investment quality similar to Caa-rated fixed income obligations - that is, they are of poor standing.
<b>Ca</b>	Money Market Funds and Bond Funds rated Ca are judged to be of an investment quality similar to Ca-rated fixed income obligations - that is, they represent obligations that are speculative in a high degree.
<b>C</b>	Money Market Funds and Bond Funds rated C are judged to be of an investment quality similar to C-rated fixed income obligations - that is, they are the lowest-rated class of bonds.

**Note:** Numerical modifiers 1, 2 and 3 may be appended to each rating classification from Aa to Caa. The modifier 1 indicates that the fund or similar investment vehicle ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates that the fund or similar investment vehicle ranks in the lower end of its letter rating category.



## National Scale Ratings

Moody's assigns national scale ratings in certain local capital markets in which investors have found the global rating scale provides inadequate differentiation among credits or is inconsistent with a rating scale already in common use in the country.

Moody's currently maintains national scale ratings for the following countries:

- Argentina (.ar)
- Bolivia (.bo)
- Brazil (.br)
- Chile (.cl)
- Czech Republic (.cz)
- Mexico (.mx)
- Russia (.ru)
- Slovakia (.sk)
- South Africa (.za)
- Taiwan (.tw)
- Tunisia (.tn)
- Turkey (.tr)
- Ukraine (.ua)
- Uruguay (.uy)

### Relative Rankings

Moody's National Scale Ratings are opinions of the relative creditworthiness of issuers and issues within a particular country. While loss expectation will be an important differentiating factor in the ultimate rating assignment, it should be noted that loss expectation associated with National Scale Ratings can be expected to be significantly higher than apparently similar rating levels on Moody's global scale.

Moody's National Scale Ratings rank issuers and issues in order of relative creditworthiness: higher ratings are associated with lower expected credit loss.



## **Not Globally Comparable**

National Scale Ratings can be understood as a relative ranking of creditworthiness (including relevant external support) within a particular country. National Scale Ratings are not designed to be compared among countries; rather, they address relative credit risk within a given country. Use of National Scale Ratings by investors is only appropriate within that portion of a portfolio that is exposed to a given country's local market, taking into consideration the various risks implied by that country's foreign and local currency ratings.

## **Rating Criteria**

National Scale Ratings take into account the intrinsic financial strength of the obligor, including such traditional credit factors as management quality, market position and diversity, financial flexibility, transparency, the regulatory environment, and the issuer's ability to meet its financial obligations through the course of normal local business cycles. Issuer segments subject to an abrupt decline in creditworthiness will generally be rated lower than segments less exposed. Certain external support factors may be taken into consideration, including instrument-specific guarantees and indentures, and parent company or government support (if any).

## **Treatment of Sovereign Risk**

National Scale Ratings take into account all credit risks that bear on timely and full payment of a debt obligation, including sovereign related risks such as relative vulnerability to political developments, national monetary and fiscal policies, and, in rare cases, foreign currency convertibility and transfer risk.

Certain extreme events, such as a local currency payment system disruption, are largely extraneous to the analysis (at least as a differentiating factor) since all issuers would probably be equally affected by such a failure. In other extreme cases, such as a government rescheduling or moratorium on local or foreign currency debt obligations, issuers or issues with higher ratings should be relatively more insulated from such an event; nonetheless, in such a situation, even the highest-rated entities may be at risk of temporary default.

For this reason, the traditional concept of "investment grade" that is applied in the international markets cannot necessarily be applied even to the highest national ratings. Although national governments are often in a position to receive the highest national credit ratings, it cannot, in Moody's view, be taken for granted that a country's national government is necessarily the best credit on a domestic scale, since it is possible for a government to default on its local currency obligations while other issuers continue to perform.

## National Scale Long-Term Ratings

The rating definitions are as follows, with an “n” modifier signifying the relevant country, for example, Aaa.br for Brazil, or Aaa.tw for Taiwan.

<b>Aaa.n</b>	Issuers or issues rated Aaa.n demonstrate the strongest creditworthiness relative to other domestic issuers.
<b>Aa.n</b>	Issuers or issues rated Aa.n demonstrate very strong creditworthiness relative to other domestic issuers.
<b>A.n</b>	Issuers or issues rated A.n present above-average creditworthiness relative to other domestic issuers.
<b>Baa.n</b>	Issuers or issues rated Baa.n represent average creditworthiness relative to other domestic issuers.
<b>Ba.n</b>	Issuers or issues rated Ba.n demonstrate below-average creditworthiness relative to other domestic issuers.
<b>B.n</b>	Issuers or issues rated B.n demonstrate weak creditworthiness relative to other domestic issuers.
<b>Caa.n</b>	Issuers or issues rated Caa.n are speculative and demonstrate very weak creditworthiness relative to other domestic issuers.
<b>Ca.n</b>	Issuers or issues rated Ca.n are highly speculative and demonstrate extremely weak creditworthiness relative to other domestic issuers.
<b>C.n</b>	Issuers or issues rated C.n are extremely speculative and demonstrate the weakest creditworthiness relative to other domestic issuers.

**Note:** Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category. National scale long-term ratings of D.ar and E.ar may also be applied to Argentinian obligations.

## **National Scale Short-Term Ratings**

Moody's short-term national scale debt ratings are opinions of the ability of issuers in a given country, relative to other domestic issuers, to repay debt obligations that have an original maturity not exceeding one year. Moody's short-term national scale ratings are a measure of relative risk within a single market. National scale ratings in one country should not be compared with national scale ratings in another, or with Moody's global ratings. Loss expectations for a given national scale rating will generally be higher than for its global scale equivalent.

There are four categories of short-term national scale ratings, generically denoted N-1 through N-4. In each specific country, the first two letters will change to indicate the country in which the issuer is located, i.e. BR-1 through BR-4 for Brazil and TW-1 through TW-4 for Taiwan.

**N-1** Issuers rated N-1 have the strongest ability to repay short-term senior unsecured debt obligations relative to other domestic issuers.

**N-2** Issuers rated N-2 have an above average ability to repay short-term senior unsecured debt obligations relative to other domestic issuers.

**N-3** Issuers rated N-3 have an average ability to repay short-term senior unsecured debt obligations relative to other domestic issuers.

**N-4** Issuers rated N-4 have a below average ability to repay short-term senior unsecured debt obligations relative to other domestic issuers.

**Note:** The short-term rating symbols P-1.za, P-2.za, P-3.za and NPza are used in South Africa. National scale short-term ratings of AR-5 and AR-6 may also be applied to Argentinian obligations.



## Country Ceilings

### Country Ceiling for Bonds and Other Foreign Currency Obligations

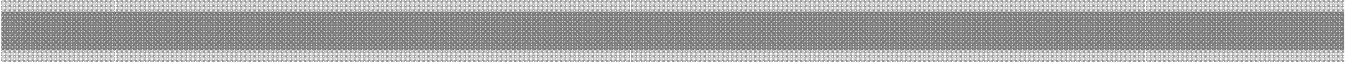
Moody's assigns a ceiling for foreign-currency bonds and notes to every country (or separate monetary area) in which there are rated obligors. The ceiling generally indicates the highest rating that can be assigned to a foreign-currency denominated security issued by an entity subject to the monetary sovereignty of that country or area. Ratings that pierce the country ceiling may be permitted, however, for foreign-currency denominated securities benefiting from special characteristics that are judged to give them a lower risk of government interference than is indicated by the ceiling. Such characteristics may be intrinsic to the issuer and/or related to Moody's view regarding the government's likely policy actions during a foreign currency crisis. The country ceiling for foreign-currency bonds and notes is expressed on the long-term scale.

### Country Ceiling for Foreign Currency Bank Deposits

Moody's assigns a ceiling for foreign-currency bank deposits to every country (or distinct monetary area) in which there are rated bank deposits. The ceiling specifies the highest rating that can be assigned to foreign-currency denominated deposit obligations of 1) domestic and foreign branches of banks headquartered in that domicile (even if subsidiaries of foreign banks); and 2) domestic branches of foreign banks. The country ceiling for foreign-currency bank deposits is expressed on the long-term scale.

### Country Ceiling for Bonds and Other Local Currency Obligations

Moody's assigns a local currency ceiling for bonds and notes to every country (or distinct monetary areas) in order to facilitate the assignment of local currency ratings to issues and/or issuers. Local currency ratings measure the credit performance of obligations denominated in the local currency and therefore exclude the transfer risk relevant for foreign-currency obligations. They are intended to be globally comparable.



The local currency country ceiling for bonds summarizes the general country-level risks (excluding foreign-currency transfer risk) that should be taken into account in assigning local currency ratings to locally domiciled obligors or locally originated structured transactions. They indicate the rating level that will generally be assigned to the financially strongest obligations in the country, with the proviso that obligations benefiting from support mechanisms based outside the country (or area) may on occasion be rated higher. The country ceiling for local currency bonds and notes is expressed on the long-term scale.

## Local Currency Deposit Ceiling

Moody's local currency deposit ceiling is the highest rating that can be assigned to the local currency deposits of a bank domiciled within the rated jurisdiction. It reflects the risk that an important bank would be allowed to default upon local currency deposits either due to limited local currency resources or to the imposition of a domestic deposit freeze. As such, it reflects: (1) the degree to which a country's ability to support an important bank may be limited due to a monetary regime which does not permit the creation of unlimited quantities of local currency; and/or (2) the risk of a local currency deposit freeze. The local currency deposit ceiling is expressed on the long-term scale.



## Other Non-Credit Ratings

### Equity Fund Ratings

Moody's equity and balanced/mixed fund ratings are opinions of past investment performance and risk results achieved by mutual funds and investment vehicles which principally invest in common stocks and related securities or in combination of these with fixed-income securities. Equity Fund Ratings, expressed using a scale ranging between Aaa-EF and Ba-EF, incorporate Moody's quantitative assessment of historical risk-adjusted total return, manager skill and other risk measures, combined with a qualitative evaluation of the fund's objectives, policies and management characteristics relative to similarly managed funds.

The ratings are not intended to represent the prospective performance of a fund with respect to appreciation, volatility of net asset value or yield.

<b>Aaa-EF</b>	Equity and balanced funds rated Aaa-EF demonstrate the strongest historical investment performance results and adherence to fund objectives, relative to similarly managed funds.
<b>Aa-EF</b>	Equity and balanced funds rated Aa-EF demonstrate strong historical investment performance results and adherence to fund objectives, relative to similarly managed funds.
<b>A-EF</b>	Equity and balanced funds rated A-EF demonstrate average historical investment performance results and adherence to fund objectives, relative to similarly managed funds.
<b>Baa-EF</b>	Equity and balanced funds rated Baa-EF demonstrate below-average historical investment performance results and adherence to fund objectives, relative to similarly managed funds.
<b>Ba-EF</b>	Equity and balanced funds rated Ba-EF demonstrate the weakest historical investment performance results and adherence to fund objectives, relative to similarly managed funds.

**Note:** Numerical modifiers 1, 2 and 3 may be appended to each rating classification from Aa to Ba (e.g., Aa3-EF). The modifier 1 indicates that the fund or similar investment vehicle ranks in the higher end of the generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates that the fund or similar investment vehicle ranks in the lower end of its letter rating category. In order to conform with local regulatory mandates in markets such as Argentina, the rating category D would apply to the riskiest of funds and E to funds which do not meet the minimum information requirements.

## Market Risk Ratings

Moody's Mutual Fund Market Risk (MR) ratings are opinions of the relative degree of volatility of a rated fund's net asset value (NAV). In forming an opinion on the fund's future price volatility, Moody's analysts consider risk elements that may have an effect on a fund's net asset value, such as interest rate risk, prepayment and extension risk, liquidity and concentration risks, currency risk, and derivatives risk. The ratings are not intended to reflect the prospective performance of a fund with respect to price appreciation or yield.

**MR1** Money Market Funds and Bond Funds rated MR1 are judged to have very low sensitivity to changing interest rates and other market conditions.

**MR2** Money Market Funds and Bond Funds rated MR2 are judged to have low sensitivity to changing interest rates and other market conditions.

**MR3** Money Market Funds and Bond Funds rated MR3 are judged to have moderate sensitivity to changing interest rates and other market conditions.

**MR4** Money Market Funds and Bond Funds rated MR4 are judged to have high sensitivity to changing interest rates and other market conditions.

**MR5** Money Market Funds and Bond Funds rated MR5 are judged to have very high sensitivity to changing interest rates and other market conditions.

*Note: A "+" modifier appended to the MR1 rating category denotes constant NAV money market funds and other qualifying funds.*

## Investment Manager Quality Ratings

Moody's Investment Manager Quality ratings represent an assessment of the manner in which an investment manager, either at a company or a business unit level, creates, manages and monitors its investment offerings and serves its clientele. Investment managers are defined as entities whose principal activities involve the management of retail, high net worth and/or institutional assets.

The ratings incorporate Moody's assessment of an entity's investment management activities and other management characteristics, including, as applicable, the performance of its product offerings, its financial profile, and client servicing performance. The scope of Moody's assessment applies to an entity's sphere of operations and may vary somewhat from one operational unit to another.

Moody's Investment Manager Quality ratings do not indicate a company's ability to repay a fixed financial obligation, or satisfy contractual financial obligations either in its own right or any that may have been entered into through actively managed portfolios.

Also, the ratings are not intended to consider the prospective performance of a portfolio, mutual fund or other investment vehicle with respect to appreciation, volatility of net asset value, or yield.

Investment Manager Quality ratings may be assigned to investment management companies and similar entities, public housing authorities (whose principle activity involves administering US Department of Housing and Urban Development funds and managing public housing), or not-for-profit organizations whose principal activity involves administering government funds and managing low income housing.

Investment Manager Quality rating definitions are, as follows:

**MQ1** Entities rated MQ1 are judged to exhibit an excellent management and control environment.

**MQ2** Entities rated MQ2 are judged to exhibit a very good management and control environment.

**MQ3** Entities rated MQ3 are judged to exhibit a good management and control environment.

**MQ4** Entities rated MQ4 are judged to exhibit an adequate management and control environment.

**MQ5** Entities rated MQ5 are judged to exhibit a poor management and control environment.

*Note: A "+" modifier may be appended to the MQ1 rating category to denote the strongest management and control environment.*

## Servicer Quality Ratings

Moody's Servicer Quality (SQ) ratings are opinions of the ability of a servicer to prevent or mitigate losses in a securitization. SQ ratings are provided for servicers who act as the Primary Servicer (servicing the assets from beginning to end), Special Servicer (servicing only the more delinquent assets), or Master Servicer (overseeing the performance and reporting from underlying servicers). For Primary Servicers, each SQ rating is assigned to a specific asset type.

SQ ratings represent Moody's assessment of a servicer's ability to affect losses based on factors under the servicer's control. The SQ approach works by separating a servicer's performance from the credit quality of the assets being serviced. In doing this, Moody's evaluates how effective a servicer is at preventing defaults and maximizing recoveries to a transaction when defaults occur.

SQ ratings consider the operational and financial stability of a servicer as well as its ability to respond to changing market conditions. This assessment is based on the company's organizational structure, management characteristics, financial profile, operational controls and procedures as well as its strategic goals.

Moody's SQ ratings are different from traditional debt ratings, which are opinions as to the credit quality of a specific instrument. SQ ratings do not apply to a company's ability to repay a fixed financial obligation or satisfy contractual financial obligations other than, in limited circumstances, the obligation to advance on delinquent assets it services, when such amounts are believed to be recoverable.

**SQ1** Strong combined servicing ability and servicing stability

**SQ2** Above average combined servicing ability and servicing stability

**SQ3** Average combined servicing ability and servicing stability

**SQ4** Below average combined servicing ability and servicing stability

**SQ5** Weak combined servicing ability and servicing stability

**Note:** Where appropriate, a "+" or "-" modifier will be appended to the SQ2, SQ3, and SQ4 rating category and a "-" modifier will be appended to the SQ1 rating category. A "+" modifier indicates the servicer ranks in the higher end of the designated rating category. A "-" modifier indicates the servicer ranks in the lower end of the designated rating category.

## Hedge Fund Operations Quality Ratings

A Moody's Hedge Fund Operations Quality rating expresses an opinion of a specific fund's operations environment, given its investment strategy. The scope of the assessment includes the fund's valuation process, accounting controls, legal structure, compliance system, backgrounds of key personnel and relationships with service providers such as prime brokers, auditors and administrators.

**OQ1** Hedge funds rated OQ1 are judged to have an operational infrastructure of excellent quality given their investment strategy.

**OQ2** Hedge funds rated OQ2 are judged to have an operational infrastructure of very good quality given their investment strategy.

**OQ3** Hedge funds rated OQ3 are judged to have an operational infrastructure of good quality given their investment strategy.

**OQ4** Hedge funds rated OQ4 are judged to have an operational infrastructure of fair quality given their investment strategy.

**OQ5** Hedge funds rated OQ5 are judged to have an operational infrastructure of poor quality given their investment strategy.

**Note:** Where appropriate, a "+" or "-" modifier will be appended to the OQ2, OQ3, and OQ4 rating category and a "-" modifier will be appended to the OQ1 rating category. A "+" modifier indicates the fund ranks in the higher end of the designated rating category. A "-" modifier indicates the fund ranks in the lower end of the designated rating category.

## Real Estate Portfolio Cash Flow Volatility Ratings

Moody's Real Estate Portfolio Cash Flow Volatility Ratings represent opinions about the risks in real estate funds regarding cash flow volatility. Cash flow is defined here as Net Operating Income (NOI) generated by a portfolio. Volatility is assessed quantitatively from a property database at Moody's Japan, taking into consideration individual real estate property characteristics and portfolio diversity effects. The ratings are Japanese domestic ones and used only in the domestic market. They do not represent the risks regarding property value volatility. As assessments of an existing portfolio, they are not monitored.

**CFV-1** Portfolios rated CFV-1 are judged to have the most stable NOI, with minimal cash flow volatility risk.

**CFV-2** Portfolios rated CFV-2 are judged to have stable NOI, with low cash flow volatility risk.

**CFV-3** Portfolios rated CFV-3 are judged to have moderate cash flow volatility risk.

**CFV-4** Portfolios rated CFV-4 are judged to have substantial cash flow volatility risk.

**CFV-5** Portfolios rated CFV-5 are judged to have high cash flow volatility risk.

**Note:** A "+" and "-" modifier may be appended to each rating classification from CFV-2 to CFV-5. The "+" modifier indicates that the portfolio ranks at the higher end of its generic rating category; and the "-" modifier indicates that it ranks at the lower end of its letter rating category. Ratings without modifiers indicate a mid-range ranking.

## Common Representative Quality Ratings

Moody's Common Representative Quality (CRQ) Ratings are opinions regarding an organization's ability to represent the interests of investors, relative to other common representatives within a given country. The ratings represent Moody's assessment of a common representative's organizational structure and other management characteristics, including its human resources allocation, information technology, and operational controls and procedures.

The rating definitions are as follows, with an "nn" modifier signifying the relevant country (e.g. CRQ1.mx for Mexico). Moody's currently maintains common representative ratings for Mexico.

<b>CRQ1.nn</b>	Strong ability to represent interests of the trust certificate holders.
<b>CRQ2.nn</b>	Above-average ability to represent interests of the trust certificate holders. Common representative is judged to have "good" financial and operational stability.
<b>CRQ3.nn</b>	Average ability to represent interests of the trust certificate holders. Common representative is judged to have average financial and operational stability.
<b>CRQ4.nn</b>	Below-average ability to represent interests of the trust certificate holders, and below-average financial and operational stability.
<b>CRQ5.nn</b>	Weak ability to represent interests of the trust certificate holders, and weak financial and operational stability.

**Note:** Where appropriate, a "+" or "-" modifier will be appended to the CRQ2, CRQ3, and CRQ4 rating category and a "-" modifier will be appended to the CRQ1 rating category (e.g. CRQ1-.nn). A "+" modifier indicates the common representative ranks in the higher end of the designated rating category. A "-" modifier indicates the common representative ranks in the lower end of the designated rating category.

## Trustee Quality Ratings

Moody's Trustee Quality (TQ) Ratings are opinions regarding an organization's ability to manage the entrusted assets for the benefit of investors, relative to other trustees within a given country. The ratings represent Moody's assessment of a trustee's organizational structure and other management characteristics, including its monitoring and reporting system, human resources allocation, information technology, operational controls and procedures, and master servicing capability.

The rating definitions are as follows, with an "nn" modifier signifying the relevant country (e.g. TQ1.ar for Argentina, or TQ4.mx for Mexico). Moody's currently maintains trustee quality ratings for the following countries:

- Argentina (TQ.ar)
- Brazil (TQ.br)
- Mexico (TQ.mx)

**TQ1.nn** Strong capability of managing entrusted assets for the benefit of the trust certificate holders.

**TQ2.nn** Above-average capability of managing entrusted assets for the benefit of the trust certificate holders. Trustee is judged to have "good" financial and operational stability.

**TQ3.nn** Average capability of managing entrusted assets for the benefit of the trust certificate holders. Trustee is judged to have average financial and operational stability.

**TQ4.nn** Below-average capability of managing entrusted assets for the benefit of the trust certificate holders, and below-average financial and operational stability.

**TQ5.nn** Weak capability of managing entrusted assets for the benefit of the trust certificate holders, and weak financial and operational stability.

**Note:** Where appropriate, a "+" or "-" modifier will be appended to the TQ2, TQ3, and TQ4 rating category and a "-" modifier will be appended to the TQ1 rating category (e.g. TQ1-.nn). A "+" modifier indicates the trustee ranks in the higher end of the designated rating category. A "-" modifier indicates the trustee ranks in the lower end of the designated rating category.





## Lloyd's Syndicate Performance and Volatility Ratings

Moody's Lloyd's Syndicate Performance and Volatility Ratings have been developed in response to the needs of capital providers and insurance purchasers involved with the Lloyd's Market to compare the relative attraction of individual syndicates. The desire to identify those syndicates with the potential to outperform over the medium to long term is coupled with the requirement to identify syndicates with whom insurance purchasers are content to build long-term business relationships. Moody's Lloyd's Syndicate Performance and Volatility Ratings aim to address these needs.

### ***Lloyd's Syndicate Ratings***

Qualitative ratings for each syndicate, based on an assessment of both quantitative and qualitative information, indicate Moody's view of the syndicate's relative long-run potential performance based on currently known factors. The ratings are relative to the rest of the syndicates operating in the Lloyd's market. It should be stressed that the ratings do not attempt to assess the security underlying Lloyd's policies.

The syndicate rating is forward looking, only using historical data as a basis for the assessment of the syndicate's future potential. The emphasis is therefore on a given syndicate's potential future performance rather than claims-paying ability.

- A+** Lloyd's syndicates rated A+ for performance offer excellent performance and continuity characteristics, with a very high degree of likelihood that their potential future returns will significantly outperform the market average result over the cycle, and a very limited likelihood that their fundamentally strong position will be impaired.
- A** Lloyd's syndicates rated A for performance offer very good performance and continuity characteristics, with a high degree of likelihood that their potential future returns will significantly outperform the market average result over the cycle. They are rated lower than A+ because longer-term risks appear somewhat larger.
- A-** Lloyd's syndicates rated A- for performance offer good performance and continuity characteristics, with a high degree of likelihood that their potential future returns will outperform the market average result over the cycle.
- B+** Lloyd's syndicates rated B+ for performance offer above-average performance and continuity characteristics, with a good degree of likelihood that their potential future returns will outperform the market average result over the cycle.
- B** Lloyd's syndicates rated B for performance offer average performance and continuity characteristics, with the likelihood that their potential future returns will be in line with the market average result over the cycle.
- B-** Lloyd's syndicates rated B- for performance offer below average performance and continuity characteristics, with it being questionable whether their potential future returns will be in line with the market average result and the likelihood that they will perform below the market average result over the cycle and that they will offer below average continuity prospects to policyholders.
- C+** Lloyd's syndicates rated C+ for performance offer below-average performance and continuity characteristics, with a good degree of likelihood that their potential future returns will be below the market average result over the cycle and that they will offer below-average continuity prospects to policyholders.
- C** Lloyd's syndicates rated C for performance offer below-average performance and continuity characteristics, with a good degree of likelihood that their potential future returns will be significantly below the market average result over the cycle and that they will offer significantly below-average continuity prospects to policyholders.
- C-** Lloyd's syndicates rated C- for performance offer below-average performance and continuity characteristics, with a high degree of likelihood that their potential future returns will be significantly below the market average result over the cycle and that they will offer significantly below-average continuity prospects to policyholders.

## **Lloyd's Volatility Ratings**

The volatility rating indicates Moody's view of the potential variability of a syndicate's underwriting returns over the insurance cycle based on the historical variability of pure year underwriting returns and the potential for catastrophe losses in the book currently underwritten, the ratings being relative to the rest of the syndicates operating in the Lloyd's market.

<b>Extremely High</b>	Lloyd's syndicates rated Extremely High for volatility demonstrate the potential for returns to vary significantly from their mean due to the nature of the book of business written. Syndicates in the Extremely High rating category include all those syndicates demonstrating potential volatility in their returns that is in excess of the six relative rating categories of Low to Very High, this category not being relative on an absolute basis to the underlying rating categories.
<b>Very High, High, Above Average, Average, Below Average</b>	Lloyd's syndicates rated in these categories are considered to demonstrate the potential for their returns to be respectively up to two, three, four, five and six times more variable than those syndicates in the Low rating category, due to the nature of the book of business written.
<b>Low</b>	Lloyd's syndicates rated Low for volatility demonstrate the lowest potential for returns to vary from their mean, relative to the other syndicates trading at Lloyd's, due to the nature of the book of business written.

## Hybrid Security Baskets

In determining equity credit for a hybrid security, Moody's analyzes the instrument along three dimensions of equity: No Maturity, No Ongoing Payments, and Loss Absorption. For each of these dimensions, Moody's ranks the instrument's features as either None, Weak, Moderate, or Strong, where None represents more debt-like and Strong represents more equity-like. The equity credit assigned to the instrument – expressed in baskets from A to E – weights the rankings for each dimension depending on the credit quality of the issuer.

### ***Classifications for Hybrid Baskets***

<b>Basket</b>	<b>Debt</b>	<b>Equity</b>
A	100%	0
B	75%	25%
C	50%	50%
D	25%	75%
E	0%	100%



## Other Rating Symbols

### Expected ratings - e

To address market demand for timely information on particular types of credit ratings, Moody's has licensed to certain third parties the right to generate "Expected Ratings." Expected Ratings are designated by an "e" after the rating code, and are intended to anticipate Moody's forthcoming rating assignments based on reliable information from third party sources (such as the issuer or underwriter associated with the particular securities) or established Moody's rating practices (i.e., medium term notes are typically, but not always, assigned the same rating as the note's program rating). Expected Ratings will exist only until Moody's confirms the Expected Rating, or issues a different rating for the relevant instrument. Moody's encourages market participants to contact Moody's Ratings Desk or visit [www.moodys.com](http://www.moodys.com) if they have questions regarding Expected Ratings, or wish Moody's to confirm an Expected Rating.

### Provisional Ratings - (P)

As a service to the market and typically at the request of an issuer, Moody's will assign a provisional rating when it is highly likely that the rating will become final after all documents are received, or an obligation is issued into the market. A provisional rating is denoted by placing a (P) in front of the rating. Such ratings may also be assigned to shelf registrations under SEC rule 415.

### Refundeds - #

Issues that are secured by escrowed funds held in trust, reinvested in direct, non-callable US government obligations or non-callable obligations unconditionally guaranteed by the US Government or Resolution Funding Corporation are identified with a # (hatch mark) symbol, e.g., #Aaa.



## Withdrawn - WR

When Moody's no longer rates an obligation on which it previously maintained a rating, the symbol WR is employed. Please see Moody's Guidelines for the Withdrawal of Ratings, available on [www.moodys.com](http://www.moodys.com).

## Not Rated - NR

NR is assigned by a rating committee to an unrated issuer, obligation and/or program.

## Not Available - NAV

An issue that Moody's has not yet rated is denoted by the NAV symbol.

## Terminated Without Rating - TWR

The symbol TWR applies primarily to issues that mature or are redeemed without having been rated.



## Other Rating Services

### Credit Estimates

Credit estimates are one-time opinions of the approximate credit quality of individual securities or financial contracts. They are opinions about overall credit quality and are generally used in conjunction with a securitization.

### Internal Ratings

Moody's internal ratings are unpublished credit assessments assigned to certain securities and issuers where the underlying credit components are not publicly rated but need to be evaluated to support other published ratings.

### Underlying Ratings

An underlying rating is Moody's published assessment of a particular debt issue's credit quality absent credit enhancement. Moody's will assign and publicly release an underlying rating requested by an issuer for debt that is entirely credit enhanced. The rating scale is identical to the one used for Moody's long-term obligation ratings.

## Policies and Procedures

### Rating Outlooks

A Moody's rating outlook is an opinion regarding the likely direction of an issuer's rating over the medium term. Where assigned, rating outlooks fall into the following four categories: Positive (POS), Negative (NEG), Stable (STA), and Developing (DEV - contingent upon an event). In the few instances where an issuer has multiple ratings with outlooks of differing directions, an "(m)" modifier (indicating multiple, differing outlooks) will be displayed, and Moody's written research will describe any differences and provide the rationale for these differences. A RUR (Rating(s) Under Review) designation indicates that the issuer has one or more ratings under review for possible change, and thus overrides the outlook designation. When an outlook has not been assigned to an eligible entity, NOO (No Outlook) may be displayed.

### Watchlist

Moody's uses the Watchlist to indicate that a rating is under review for possible change in the short-term. A rating can be placed on review for possible upgrade (UPG), on review for possible downgrade (DNG), or more rarely with direction uncertain (UNC). A credit is removed from the Watchlist when the rating is upgraded, downgraded or confirmed.

### Confirmation of a Rating

A confirmation occurs when a rating is removed from Watchlist. Rating confirmations are formally entered in Moody's databases and rating action lists (rating release sheets), and are communicated via a press release.

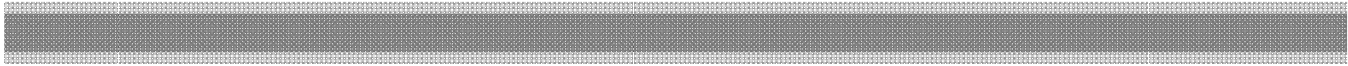
### Affirmation of a Rating

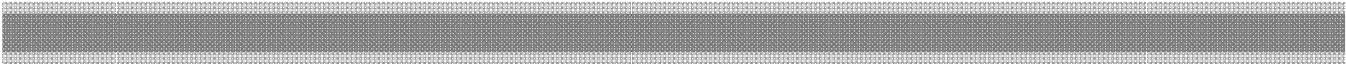
Affirmations are used to indicate that the current rating remains in force. Affirmations are communicated through a press release and may occur:

- following an informal review
- following the release of new information by the issuer
- following a major market event (such as regulatory changes, a major acquisition, and/or market turbulence, etc.)
- in conjunction with an Outlook change

There may be other situations in which ratings are affirmed.







New York ▪ Tokyo ▪ London ▪ Paris ▪ Sydney ▪ San Francisco ▪ Frankfurt ▪ Madrid ▪ Dallas ▪ Toronto  
Hong Kong ▪ Singapore ▪ Limassol ▪ São Paulo ▪ Milan ▪ Mexico City ▪ Beijing ▪ Buenos Aires ▪ Taipei  
Chicago ▪ Johannesburg ▪ Jersey City ▪ Boston ▪ Seoul ▪ Moscow ▪ Mumbai ▪ Prague ▪ Jakarta

*Business* *Value* *Added*

*Investment* *Value*



**Moody's Investors Service**

## Moody's Enhanced Approach to Originator Assessments for U.S. Residential Mortgage Backed Securities (RMBS)\*\*

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### SUMMARY OPINION:

This report describes our enhanced approach to originator assessments. Our enhanced approach will apply to originators seeking to issue new U.S. RMBS after publication of this report. Moody's welcomes your comments pertaining to this special report, please direct them to [cpc@moody.com](mailto:cpc@moody.com).

Originator quality can have a significant positive or negative effect on pool performance and, by extension, on the credit enhancement levels called for to support a tranche at a given rating level. The originator assessment looks to isolate the effect an originator's policies and practices have on loan performance from the effects of external factors such as the macroeconomic environment and the ability of the servicer.

Our assessment of originators focuses principally on:

- i) Performance: An originator's track record of originating loans that under-perform, meet or exceed Moody's model loss expectations after neutralizing for variations in loan characteristics and economic environments.
- ii) Ability: The originator's lending practices, primarily concentrated on the process for assessing a borrower's ability and willingness to repay a loan, originator ability factors include
  - a. sales and marketing practices;
  - b. consistency in underwriting loans within prescribed underwriting guidelines;
  - c. property valuation management practices, policies and procedures;
  - d. closing and post closing policies and practices including lien perfection procedures;
  - d. management of brokers and correspondents; and
  - e. credit risk management.

### Overview of Moody's RMBS Enhancement Proposals

On March 26, 2008, Moody's published five proposals to enhance the U.S. RMBS securitization process.<sup>1</sup> Those proposals were: increased loan level data, stronger representations and warranties, independent third-party pre-securitization loan reviews, standardized forensic reviews for underperforming loans, and more comprehensive originator assessments. These enhancements are intended to work together to improve the reliability and transparency of information for RMBS transactions.

This paper addresses Moody's approach to more comprehensive originator assessments.

Separate papers released concurrently with this paper focus on stronger representations and warranties and independent third party pre-securitization reviews and post-securitization forensic reviews.

Moody's continues to work with the American Securitization Forum (ASF) on Project RESTART and the Securities Industry and Financial Markets Association (SIFMA) to achieve an industry consensus for our proposed enhancements for U.S. RMBS securitization, including increased loan level data. The results of these projects are expected to be reported in Moody's publications throughout 2009.

1 See "Moody's Proposed Enhancement to U.S. Residential Mortgage Securitizations: Call for Comments", Moody's Structured Finance, March 26, 2008

**\*\* As of September 22, 2009 this methodology contains an update regarding seasoned loans in the annex at the end of the report.\*\***



**Moody's Investors Service**

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- iii) **Stability:** The resources that an originator brings to bear in maintaining or improving on the quality of the loans that they originate. Key attributes of originator stability include financial strength, management strength, staff quality, quality control, internal audit, technology and other support functions that lead to operational stability.

Originator assessments are intended to provide a performance-based, third-party assessments that will allow RMBS market participants a consistent comparison across originators. Moody's originator assessments are comprised of component assessments which roll up to an aggregate assessment. Moody's will publish its originator assessment reports on Moody's.com.

## **Originator Participation**

Moody's enhanced reviews will require regular and active originator participation. For originators that want a Moody's rating on future RMBS, Moody's expects that in most cases it will conduct on-site reviews every 12 to 18 months. Moody's expects that these site visits will be supplemented by quarterly reports supplied by the originator that detail loan production characteristics and performance by loan program, changes in underwriting guidelines, underwriting/program exceptions, audited financial statements, repurchase activity, audit findings, significant IT initiatives and other relevant information described in Exhibit 1. In addition, calls with key management to review reports and data trends generally will be held quarterly. Finally, Moody's will seek to review the results of the third-party pre-securitization loan-level review for each transaction to which the originator contributed loan collateral during the latest rolling 18 months, whether the transaction was rated by Moody's or not. Where third-party pre-securitization loan-level review data is sparse, stale or unavailable, Moody's may request that a third party loan-level review be conducted which is unaffiliated with any particular securitization or may look for other alternative methods to evaluate the originator's ability to comply with its own policies and procedures.

Originator assessments will be applicable to lenders that originate and securitize prime, alt-A and subprime, first- and second-lien, U.S. residential mortgage loans.

Originator assessments will also be applicable to aggregators that issue RMBS with underlying loans originated by multiple lenders. Throughout this report the term "originator" will apply to both lenders and aggregators.

Moody's will not rate an RMBS transaction in which any loans are contributed by an originator whose assessment is "unacceptable" or that include loans from unassessed originators that receive a Grade of C or D from the third party pre-securitization review.<sup>2</sup>

**For each loan in the securitization, the party providing the loan-level representations and warranties will be considered the originator of that loan for purposes of Moody's originator review. Representation and warranty providers with little or no tangible net worth and no origination platform would likely be assessed as "unacceptable" under our enhanced originator assessments.<sup>3</sup>**

Moody's will conduct an originator assessment for any single originator whose loans represent more than 10% of an RMBS pool. For originators contributing 10% or less to the pool, where Moody's does not have a current originator assessment,<sup>4</sup> we generally will require a third-party pre-securitization review of 100% of the loans from that originator.<sup>5</sup> We also may seek to review historic loan level performance of loans originated by originator's contributing more than 5% [but less than 10%] of the loans in the pool.

<sup>2</sup> See "Moody's Criteria for Evaluating Independent Third-Party Loan Level Reviews for U.S. Residential Mortgage Backed Securities (RMBS)", Moody's Structured Finance, November 24, 2008.

<sup>3</sup> Moody's will consider an entity other than the representation and warranty provider as the originator only if such entity has provided the securitization trust with an irrevocable guaranty of the representation and warranty provider's obligations (or other similar arrangement).

<sup>4</sup> Generally, an originator assessment is considered current if Moody's has consistently received the quarterly reporting described in Exhibit 1, had an on site review within the prior 18 months and has had third party review results for securitizations within the prior 12 months.

<sup>5</sup> See "Moody's Criteria for Evaluating Independent Third-Party Loan Level Reviews for U.S. Residential Mortgage Backed Securities (RMBS)", Moody's Structured Finance, November 24, 2008.

# ORIGINATOR ASSESSMENT

## Assessment Levels:

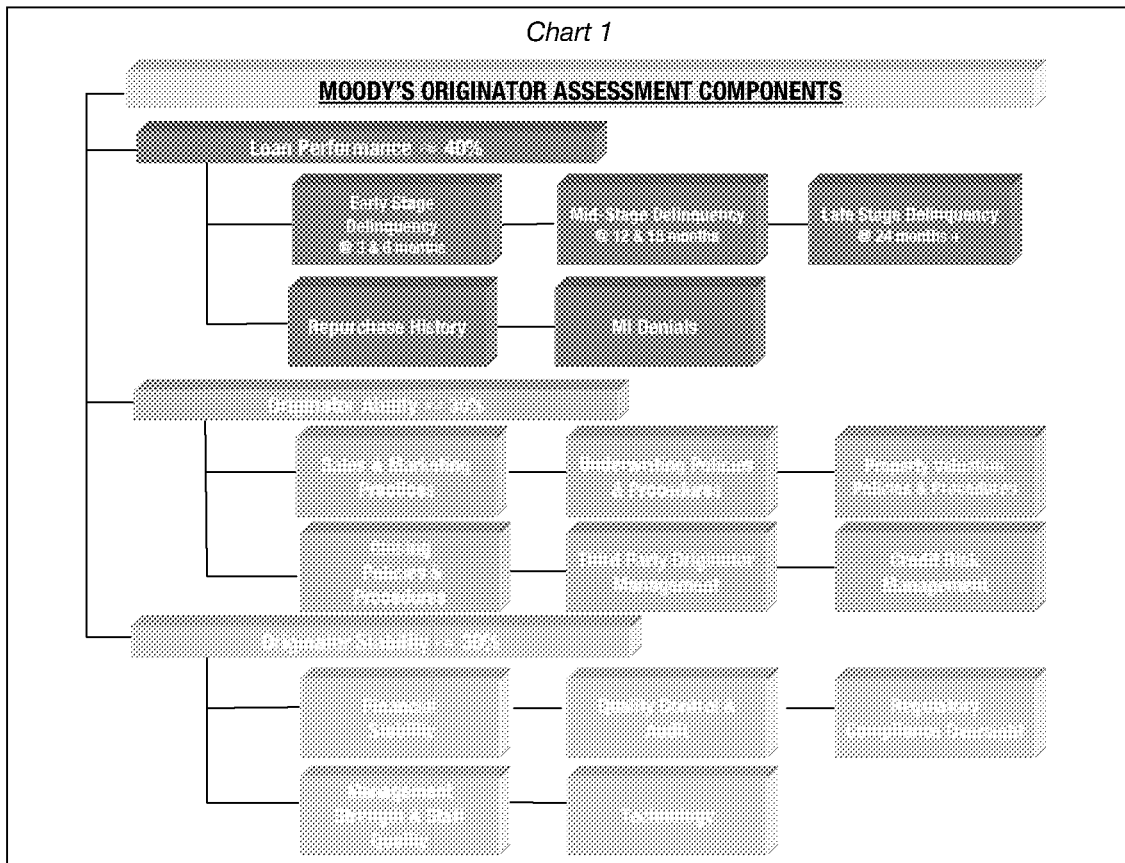
Moody's will assign originators one of six different assessments listed in the table below. Individual assessments will be provided for each originator for each loan type that they originate and securitize (prime, alt-A and subprime, first- and second-lien residential mortgages):

ASSESSMENT LEVEL	Assessment Score
<b>Strong</b>	<=1.5
<b>Above Average</b>	>1.5 and <=2.5
<b>Average</b>	>2.5 and <3.5
<b>Below Average</b>	=>3.5 and <4.5
<b>Weak</b>	=>4.5 and <= 5.0
<b>Unacceptable</b>	> 5.0

As seen on Chart 1, Moody's originator assessment incorporates a review of 1) historical loan performance weighted at 40%, 2) origination ability weighted at 30% and 3) origination stability weighted at 30%. The weightings assigned to each of these components generally reflect the degree to which Moody's believes that component provides insight about an originator's loan credit quality. These weights assume that an originator does not have any significant defects in any of the individual components. The weights may vary under those and certain other circumstances.

The subcomponents for historical loan performance will focus primarily on payment defaults during the first 18 months, while the subcomponents for originator ability will focus on the originator's policies and procedures. The originator stability subcomponents will focus on support functions such as human resources, finance and information technology that lead to operational stability.

The subcomponents shown on Chart 1 will be the focus of Moody's originator assessment. The weightings of the subcomponents will vary based on, among other things, the mortgage type the originator originates as well as any significantly deficient or exceptional finding for any one or more subcomponents. An "unacceptable" assessment in any component is likely to result in an overall originator assessment of "unacceptable".



## Originator Loan Performance

Loan performance accounts for approximately 40% of our overall originator assessment. The assessment for originator loan performance is comprised of five different subcomponents: 1) early stage serious delinquencies measured at 3 and 6 months; 2) mid stage serious delinquencies measured at 12 and 18 months; 3) late stage serious delinquencies measured at 24+ months; 4) representation and warranty repurchase performance; and 5) mortgage insurance claim denials.<sup>6</sup>

Moody's believes the relative strength of an originator's practices, policies and procedures will primarily manifest in early loan performance, generally during the first 18 months. When assessing loan performance, to the extent possible, Moody's will neutralize the effect of variations in loan characteristics and economic environments in order to isolate the effect of the originator's practices on performance. Moody's is of the opinion that early stage serious delinquency rates largely are a function of loan origination quality and that longer-term loan performance is driven mainly by servicing quality (assuming consistent loan quality based on loan characteristics) as well as borrower life events (which are not controlled by the originator). Therefore, while life-of-loan performance is reviewed as part of our originator assessment, Moody's primarily focuses on serious delinquency rates during the first 18 months following origination.

The volume of repurchase demands and mortgage insurance denials are additional metrics that Moody's will utilize to further support our assessment of performance.

## Originator Ability:

Moody's review of an originator's ability will primarily serve to evaluate if the originator's future loan performance will be of the same, better or worse quality than its past loan performance.

Moody's review of an originator's overall ability, loan origination strategy, loan origination policies, procedures and credit performance oversight is the next part of the originator assessment process. Originator ability accounts for approximately 30% of our overall originator assessment. This includes a review of the following six subcomponents:

- 1) *sales and marketing practices* - the manner in which an originator sets its loan production strategy and associated underwriting and sales approach to originate loans of a targeted quality;
- 2) *underwriting policy and procedures* - the robustness of the originator's loan approval guidelines and adherence thereto;
- 3) *property valuation policies and procedures* - the process by which an originator establishes an accurate property valuation for the purpose of determining loan-to-value;
- 4) *closing/funding/post closing policy and procedures* - the process undertaken by an originator to make certain that all loan conditions are met before closing and that liens are perfected and assigned to the trust as appropriate;
- 5) *third-party originator management* - an assessment of broker and correspondent approval process and the processes in place to monitor and manage broker and correspondent loan credit quality; and
- 6) *credit risk management* - the oversight implemented by an originator to continually assess actual loan performance against expected loan performance and adjust loan production strategies accordingly.

For aggregators, Moody's originator ability assessment will primarily focus on third party originator (TPO) management and credit risk management.

<sup>6</sup> A "seriously delinquent" loan is one that is 60+ days delinquent, in foreclosure, REO, or the loan was modified or a short payoff occurred and the lender experienced a loss or the borrower has filed for bankruptcy.

## Sales and Marketing Practices

Moody's assessment of an originator's sales and marketing practices will be a qualitative review. A table with some of Moody's key sales and marketing review criteria is below:

Assessment Level	Moody's Qualitative Sales & Market Policy and Procedures Review: Selected Criteria
Strong Score = 1	<ul style="list-style-type: none"> <li>• Clear separation of and independence of sales and loan approval functions.</li> <li>• Little or no change in underwriting guidelines through reduced demand cycles.</li> <li>• Underwriting exception rates are constant through demand cycles.</li> <li>• Loan Officers' / Brokers' compensation is significantly tied to loan quality and loan performance.</li> <li>• Loan Officer customer solicitation/advertising is produced, monitored and approved by management.</li> </ul>
Average Score = 3	<ul style="list-style-type: none"> <li>• Sales staff has minimal influence on loan approval functions.</li> <li>• Moderate changes in underwriting guidelines through reduced demand cycles.</li> <li>• Moderate increase in exception rates during reduced demand cycles.</li> <li>• Loan Officers' / Brokers' compensation has some components related to loan performance.</li> <li>• Loan Officer customer solicitation/advertising by Loan Officers is monitored by management.</li> </ul>
Weak Score = 5	<ul style="list-style-type: none"> <li>• Little or no separation of and independence of sales and loan approval functions.</li> <li>• Underwriting guidelines relax significantly through reduced demand cycles.</li> <li>• Exception loans increase drastically during reduced demand cycles.</li> <li>• Loan Officers' / Brokers' compensation not tied to loan performance.</li> <li>• Loan officer customer solicitation/advertising is unrestrained and unmonitored by management.</li> </ul>
Unacceptable Score=6	<ul style="list-style-type: none"> <li>• Sales activity and loan approval handled by same group.</li> <li>• Underwriting guidelines do not exist in a format that enables the assessor to determine if guidelines have been relaxed through reduced demand cycles or that exception loans are being made.</li> <li>• Loan Officers' / Brokers' compensation tied to loan production only.</li> <li>• Loan Officer customer solicitation/advertising is completely untethered to management or compliance reviews.</li> </ul>

Moody's believes that separation and independence of the sales function from the loan approval process is a critical element for an originator to consistently originate high quality loans.

During periods of growth in the housing and mortgage markets, increased borrowing demand allows existing mortgage lenders to expand their business and new lenders to enter the market. Eventually these trends create overcapacity in the mortgage lending market as borrowing demand slows or falls. As mortgage demand ebbs, competition among lenders increases for the reduced pool of borrowers, and lenders may lower credit underwriting standards in order to maintain or grow origination volume. Deterioration of underwriting standards is evidenced by relaxed underwriting guidelines, increased exceptions to guidelines or both. Moody's originator assessment will monitor the credit consistency of offered mortgage loan products across economic cycles in order to identify any shifting policy trends from the originator's typical credit risk management to riskier credit practices designed to enhance origination volumes.

Originator compensation plans will be reviewed to assess whether loan officers and sales staff are rewarded not only for production volume, but also for production quality as measured by loan performance for some period of time after origination.

An originator's business strategy and solicitation practices have a material impact on the quality of loans that are originated and their ensuing credit performance. Moody's assesses the marketing methods and targeted markets for each originator to gain an understanding of the originator's customer acquisition model and its associated risks and rewards.

## Underwriting Policies and Procedures

Moody's assessment of an originator's underwriting policies and procedures will consist of two parts. The first part will be a qualitative review of the originator's underwriting policies and procedures as shown in the table below.



Assessment Level	Moody's Qualitative Underwriting Policy & Procedures Review: Selected Criteria
Strong Score = 1	<ul style="list-style-type: none"> <li>• Thorough and unambiguous written guidelines with very limited exception to product guidelines. <ul style="list-style-type: none"> <li>– Where exception are made there a unambiguous compensating factors which are well documented.</li> </ul> </li> <li>• Robust process for assessing borrower's willingness and ability to repay the loan, including: <ul style="list-style-type: none"> <li>– originator does not overly rely on internal or external credit scores; <ul style="list-style-type: none"> <li>o the number of tradelines and tradeline limits, age and derogatories are analyzed with equal importance to the FICO score.</li> </ul> </li> <li>– originator utilizes tri-merge credit reports and does not use the highest FICO score for loan approval;</li> <li>– compensating factors and required approvals are thoroughly documented;</li> <li>– complete and thorough 1008s (underwriting transmittal summary) which accurately portray the key elements used to approve a loan.</li> </ul> </li> <li>• Underwriters employ robust processes for verifying and reviewing the reasonableness of the information stated on the loan application with a particular focus on : <ul style="list-style-type: none"> <li>– income, for all loans is checked for reasonableness, including extensive pre-closing use of a 4506T;</li> <li>– assets are verified with bank and other financial account statements;</li> <li>– employment status is verified rigorously, using techniques that involve more than a phone call to the employer.</li> </ul> </li> <li>• Rigorous effort to confirm occupancy status.</li> <li>• Anti-fraud software tools are integrated with the loan origination system (LOS) and utilized pre-closing for each loan. Well-defined procedures exist for clearance of high risk loans.</li> <li>• Underwriter compensation plans are based on credit quality not volume.</li> <li>• Underwriter approval authority is robust and is based on the underwriter's experience, tenure, and quality of loans underwritten.</li> <li>• Underwriters have adequate time to thoroughly review each loan file.</li> </ul>
Average Score = 3	<ul style="list-style-type: none"> <li>• Written guidelines exist, yet underwriter discretion is exercised liberally within 5% of most product parameters, but the required documentation is typically met or exceeded.</li> <li>• Standard process for assessing borrower's willingness and ability to repay the loan, including: <ul style="list-style-type: none"> <li>– originator relies on FICO or other internal or external credit scores with some weight given to trade lines and assets as further support of creditworthiness;</li> <li>– originator utilizes tri-merge credit reports and does not use the highest FICO score for loan approval;</li> <li>– compensating factors occur often but are usually documented and required approvals are documented;</li> <li>– 1008s (underwriting transmittal summary) are completed but fall short of providing a complete depiction of credit worthiness or motivation for approving the loan.</li> </ul> </li> <li>• Underwriters employ standard processes for verifying and reviewing the reasonableness of the information stated on the loan application, including: <ul style="list-style-type: none"> <li>– Income is generally checked for reasonableness. <ul style="list-style-type: none"> <li>o Use of 4506T for income reasonableness check for income is used primarily for self employed borrowers pre-closing and most other post-closing for QC purposes;</li> </ul> </li> <li>– assets generally are verified;</li> <li>– employment status is confirmed telephonically.</li> </ul> </li> <li>• There is discernable effort to confirm occupancy status.</li> <li>• Anti-fraud software tools are used for some loans on a pre-closing basis, but used primarily as QC tools post closing.</li> <li>• Underwriter compensation plans are based on credit quality and volume.</li> <li>• Underwriter approval authority is based on the underwriter's experience, tenure, and quality of loans underwritten.</li> <li>• Underwriters generally have adequate time to thoroughly review each loan file, but may be pressed in times of high volume.</li> </ul>

Assessment Level	Moody's Qualitative Underwriting Policy & Procedures Review: Selected Criteria
Weak Score = 5	<ul style="list-style-type: none"> <li>• Written guidelines are often ambiguous; underwriter discretion and exceptions occur on more than 25% of production.</li> <li>• Weak process for assessing borrower's willingness and ability to repay the loan. <ul style="list-style-type: none"> <li>– underwriter relies heavily on FICO or other internal or external credit scores and obtains documentation only as required by these scores/systems.</li> <li>– single repository FICO score is used <ul style="list-style-type: none"> <li>o credit tradelines are not regarded</li> </ul> </li> <li>– compensating factors are not thoroughly documented, underwriter authority and approval requirements are ambiguous</li> <li>– 1008s are incomplete (underwriting transmittal summary)</li> </ul> </li> <li>• Underwriter processes for verifying and reviewing the reasonableness of the information stated on the loan application are weak or non-existent, including: <ul style="list-style-type: none"> <li>– little or no check for the reasonableness of income;</li> <li>– assets are not or poorly or incompletely documented;</li> <li>– employment status is not checked for reasonableness; and</li> <li>– no discernable effort to confirm occupancy status.</li> </ul> </li> <li>• Little or no use of anti-fraud software tools.</li> <li>• Underwriter compensation plans primarily based on volume with little regard to past credit performance.</li> <li>• Underwriter approval authority is unclear or lax and not based on past performance.</li> <li>• Underwriters do not have adequate time to thoroughly review each file or production quotas are set.</li> </ul>
Unacceptable Score = 6	<ul style="list-style-type: none"> <li>• No written underwriting guidelines.</li> <li>• No underwriting documentation, no 1008 (underwriting transmittal summary).</li> <li>• No income reasonableness check.</li> <li>• Reasonableness of occupancy status not reviewed.</li> <li>• Loan Officer approves the loan.</li> <li>• No underwriter approval authority policy.</li> </ul>

The second part of Moody's underwriting policy and procedure review will incorporate the results of independent third-party loan-level credit reviews conducted for the originator's securitizations for the relevant, recent past. Appendix 1 provides Moody's assessment criteria for this review.

The primary factors in Moody's review of each originator's underwriting policies and procedures are (i) the manner in which originators gauge the ability and willingness of a borrower to repay the mortgage loan, (ii) the depth and robustness of an originator's lending guidelines, and (iii) the level of adherence to underwriting guidelines especially through different economic cycles.

Accurately assessing a borrower's income, employment status and prospects, assets, and overall debt burden is key to evaluating a borrower's ability to repay the loan. Regardless of documentation type, Moody's will assess the rigor of an originator's processes to assess the reasonableness, reliability and stability of a borrower's income. In this age of easily produced fraudulent documentation, it is important that originators employ a variety of measures to test the authenticity and reasonableness of the information provided. To this end, lenders that compare the income stated on the mortgage application to the borrower(s) taxable income reported to the IRS through processing form 4506T (where possible) prior to loan approval are viewed as having best-in-class income verification procedures. Other processes, such as the employment verification and asset verification methods that an originator uses to support the reasonableness of income also are analyzed.

The manner in which an originator qualifies a borrower for a mortgage loan will be reviewed. Another important factor in assessing the ability of the borrower to repay the loan is the method by which a borrower's debt burden is determined. Moody's believes that all reasonably anticipated monthly living expenses and resultant residual income should be considered by a lender when determining a borrower's ability to afford the monthly payments on a mortgage loan. Moody's assessment will include a review of the qualifying rate and associated payment used to calculate the monthly principal and interest payment as well as the extent to which taxes, insurance, homeowners dues and other typical, required housing expenses are included in the debt burden.

Finally, Moody's will review the policies and procedures for underwriters to incorporate monthly payment obligations associated with all other outstanding debt.

The approach taken by an originator to assess a borrower's willingness to repay the loan will also be examined. Moody's will review the processes employed by the originator to determine representative credit scores whether internal or credit repository based. In addition, Moody's will seek to determine if the originator relies solely on credit and mortgage scores to judge willingness to repay, or whether the originator conducts a thorough review of the borrower's credit trade line history. Moody's will take a positive view of originators that analyze the number of trade lines a borrower has as well as the trade line age, limits, outstanding balances and derogatories when underwriting a loan.

The originator's requirement for and verification of the level of the borrower's own equity in the home relative to its market value and the occupancy of the property will be reviewed by Moody's. Inaccuracy surrounding the borrowers' occupancy status has been problematic in recent origination vintages. Moody's evaluates each originator's process for assessing the borrower's actual and intended occupancy status. A lender should be vigilant of inconsistencies that would call into question the occupancy status. Underwriters that proactively verify and document support for the occupancy status will be considered superior to those that simply accept what the borrower states on the mortgage loan application.

Moody's also will analyze the originator's underwriting guidelines, the level of exceptions made to those guidelines and the exception approval process. In general, Moody's positively views originators that have comprehensive underwriting guidelines where the vast majority of loans are originated without exceptions. While an underwriter's discretion and expertise have the ability to add significant value to the underwriting process, the originator's guidelines should be well defined so that underwriters have clear direction on acceptable discretion limits. Further, Moody's will view favorably compensation plans for underwriters that create incentives to produce high credit quality loans that generally adhere to underwriting guidelines.

Moody's will evaluate the benefits of software tools used to not only combat fraud but also substantiate certain critical loan information such as borrower income, occupancy, and employment. Moody's takes a positive view of the use of anti-fraud software tools to identify fraud before closing loans, in conjunction with appropriate processes and practices to proactively respond to the findings.

**Property Valuation Policies and Procedures**

This subcomponent will also be analyzed in two parts. The first part will be based on our qualitative assessment using the criteria shown in the table below:

Assessment Level	Moody's Qualitative Property Valuation Procedures Review: Selected Criteria
Strong Score = 1	<ul style="list-style-type: none"> <li>• Appraisers are chosen independently and anonymously from production personnel or brokers</li> <li>• Licensed in-house appraisers review all appraisals for acceptability</li> <li>• A single underwriter assesses appraisal in conjunction with the other credit aspects of the file after the in-house appraiser renders approval for the appraisal</li> <li>• Automated valuation models (AVMs) are independently verified and systematically tested, updated and modified as necessary</li> <li>• Whenever possible, AVMs or broker price opinions (BPOs) are obtained for reasonableness check pre-closing and for post-closing QC</li> <li>• Appraisers are approved and routinely tested for appropriate licensure and other qualifications</li> <li>• Clear escalation procedures exist for circumstances in which appraisals come in lower than borrower or lender expectations</li> </ul>

Assessment Level	Moody's Qualitative Property Valuation Procedures Review: Selected Criteria
Average Score = 3	<ul style="list-style-type: none"> <li>• Appraisers are chosen independently and anonymously from production personnel.</li> <li>• A separate appraisal department exists to review appraisals for acceptability.</li> <li>• The appraisal is reviewed primarily within the appraisal unit and handed off to the primary underwriter. The underwriter generally accepts the findings and performs a cursory review of the appraisal in conjunction with the credit aspects of the file.</li> <li>• AVMs are utilized as necessary.</li> <li>• AVMs or BPOs are utilized for reasonableness check before ordering second appraisals to reach value; AVMs are used primarily for QC purposes.</li> <li>• Appraisers are tested for appropriate licensure.</li> <li>• Although escalation procedures exist, the underwriter or loan office has the ability to reorder appraisals in the case where the initial value comes in lower than borrower or lender expectations..</li> </ul>
Weak Score = 5	<ul style="list-style-type: none"> <li>• Appraisals are ordered by production personnel or brokers who may or may not be familiar with the appraiser.</li> <li>• No licensed in-house appraiser to conduct or review appraisals.</li> <li>• In general, AVMs or BPOs are not used to check the reasonableness of the appraisal value pre or post closing.</li> <li>• Appraisers are not routinely tested for appropriate licensure.</li> <li>• Multiple appraisals are ordered when the initial appraisal comes in lower than borrower or lender expectations.</li> <li>• Credit underwriter accepts the appraisal underwriter's findings and generally does not review the appraisal in conjunction with the other aspects of the file.</li> </ul>
Unacceptable Score = 6	<ul style="list-style-type: none"> <li>• Appraisals are ordered by production personnel who routinely do business with certain appraisers.</li> <li>• Numerous missing property valuations.</li> <li>• Use of unlicensed or unqualified appraisers.</li> <li>• No escalation procedure for suspect property valuations.</li> <li>• Multiple appraisals are ordered when the initial appraisal comes in lower than borrower or lender expectations.</li> <li>• Underwriters are unqualified or inexperienced in appraisal review.</li> </ul>

The second part of Moody's property valuation procedures review will incorporate the results of independent third-party loan-level property value reviews conducted for the originator's securitizations for the most relevant, recent past. Appendix 1 provides Moody's assessment criteria for this review.

The accuracy of property valuation is important as it determines the level of borrower equity in the property which is highly correlated to default frequency as well as to loss severity to RMBS investors.

The originator's appraiser selection and management process will be examined. In Moody's opinion, it is important the selection of the appraiser be separated from production personnel, to the extent possible, to reduce the chance of a biased property value. The originator's ability to ensure appropriate and unexpired licensure of their appraisers is also important. Any bias in selecting an appraiser for factors beyond the quality and accuracy of the appraisal will be viewed very negatively.

Moody's will evaluate the rigor of the appraisal review, the level of tolerance for deviation from appraisal requirements before escalation, the comprehensiveness of desk reviews, the quality of on-staff appraisers, and the quality of field reviews. Moody's will examine the rebuttal and second review processes employed when the initial appraisal valuations are not consistent. Moody's will take a negative view of an originator that obtains multiple appraisals to achieve a property value it or the borrower believes to be correct. Moody's considers the use of automated valuation models (AVMs), as well as other valuation tools such as broker price opinions (BPOs), a best practice to substantiate appraisal values in situations where value is suspect.

## Closing/Funding/Post Closing Policy & Procedures

Some of the main factors in our assessment of the originator's closing procedures are in the following table:

Assessment Level	Moody's Qualitative Closing & Funding Procedures Review Selected Criteria
Strong Score = 1	<ul style="list-style-type: none"> <li>• Very low HUD-1 error rates or overcharges.</li> <li>• APR calculations are virtually always accurate.</li> <li>• Virtually all Good Faith Estimates (GFEs) are correct and delivered to borrowers within three days of application.</li> <li>• Disbursement account tracked and reconciled daily.</li> <li>• Best in class timelines for trailing documents.</li> <li>• Rigorous QC process to ensure correct data flows from LOS to servicing system.</li> </ul>
Average Score = 3	<ul style="list-style-type: none"> <li>• Average HUD-1 error rates and overcharges.</li> <li>• APR calculations are generally accurate (95% accurate).</li> <li>• Less than 5% of Good Faith Estimates (GFEs) are incorrect or are delivered to borrowers later than three days of application.</li> <li>• Disbursement account tracked and reconciled monthly.</li> <li>• Average timelines for trailing documents.</li> <li>• A QC process exists to ensure correct data flows from LOS to servicing system.</li> </ul>
Weak Score = 5	<ul style="list-style-type: none"> <li>• High HUD-1 error rates and overcharges.</li> <li>• APR calculations are generally inaccurate (more than 5% inaccurate).</li> <li>• More than 5% of Good Faith Estimates (GFEs) are incorrect or are delivered to borrowers later than three days of application.</li> <li>• Disbursement account is not tracked and reconciled for long periods.</li> <li>• Long timelines for trailing documents.</li> <li>• No QC process to ensure correct data flows from LOS to servicing system.</li> </ul>
Unacceptable Score = 6	<ul style="list-style-type: none"> <li>• Numerous Missing HUD-1's.</li> <li>• GFEs are missing, incorrect or delivered to the borrower later than three days of application more than 10% of the time.</li> <li>• Numerous unreconciled accounts.</li> <li>• Trailing documents not tracked.</li> </ul>

Comprehensive closing and funding policies ensure that closing conditions and instructions for a mortgage loan closing are well-defined and complied with on or before loan settlement. Moody's considers a pre-closing call to the borrower to confirm the details of the transaction, including fees and other costs, and to re-confirm the intended occupancy, income and employment status of the borrower as best practice. A confirmation call of this nature is considered particularly vital for brokered loans. Moody's will review the ability of the originator to control receipt and disbursement of appropriate funds required by the terms of the closing instructions. Moody's recognizes that many originators utilize third-party vendors to obtain and clear titles and record new liens. These services often are engaged to effect loan closings and funds disbursement. Moody's will conduct a performance review of the originator's third-party settlement service vendor(s) as a part of the originator assessment.

Post closing procedures should result in clear title and lien perfection to the originator. The effectiveness of post-closing functions including tracking and final receipt of trailing documentation, such as the recorded mortgage or deed of trust, title policy and interim securitization trust assignments, will be reviewed by Moody's. In addition, quality control pertaining to the accuracy of the data transferred from the loan origination function to the servicing function will be assessed.

### Third Party Origination (TPO) Management

Moody's will attribute significantly more weight to TPO management relative to the other subcomponents of originator ability when assessing aggregators.

<b>Assessment Level</b>	<b>Moody's Qualitative Third Party Originator (TPO) Management Review: Selected Criteria</b>
Strong Score = 1	<ul style="list-style-type: none"> <li>• Rigorous process with high standards for broker/correspondent approval.</li> <li>• Robust TPO loan performance monitoring and reporting.</li> <li>• Correspondent business is on a flow or non-delegated underwriting basis.</li> <li>• Proactive use and reaction to anti-fraud software tools.</li> <li>• Pre-closing borrower verification call for broker loans.</li> <li>• Evidence of routine, proactive management of underperforming TPOs.</li> </ul>
Average Score = 3	<ul style="list-style-type: none"> <li>• Standard approval process for brokers and correspondents.</li> <li>• Less than 50% of correspondent business is on a flow or non-delegated underwriting basis; solid sampling techniques are used to monitor bulk / delegated correspondents.</li> <li>• Use and reaction to anti-fraud software tools.</li> <li>• Pre-closing borrower verification call for some broker loans.</li> <li>• Management of underperforming TPOs results in suspensions for offending brokers/correspondents.</li> </ul>
Weak Score = 5	<ul style="list-style-type: none"> <li>• Lax process with high standards for broker/correspondent approval.</li> <li>• Correspondent business is 100% based on a delegated and/or bulk basis.</li> <li>• Limited or no use of anti-fraud software tools.</li> <li>• No pre-closing borrower verification call for broker loans.</li> <li>• No or very limited action taken against underperforming TPOs.</li> </ul>
Unacceptable Score = 6	<ul style="list-style-type: none"> <li>• No broker approval process or tracking.</li> <li>• No correspondent approval process or tracking.</li> <li>• Unfamiliar with anti-fraud software tools.</li> </ul>

Moody's will analyze the controls utilized by an originator to manage loan origination from brokers and correspondents. For bulk sellers and delegated correspondent loan originators, Moody's will expect regular quality control reviews to be undertaken by the originator consisting of statistically valid random samples in addition to adverse selection samples. This testing should establish that the TPO's underwriting and appraisal guidelines are in accordance with the originator's guidelines and policies for such third-party loan origination. Moody's will endeavor to review a sample of some of the whole loan purchase agreements, with particular focus on the representation and warranties, between the originator and its TPO. Proactive suspension of brokers and correspondents that consistently violate an originator's guidelines or requirements will be viewed positively by Moody's.

In addition, use of anti-fraud software will be viewed favorably if it is apparent that procedures are in place to act upon the findings in such a way that high-risk brokers and correspondents are removed from the originator's approved seller/broker list. Evidence of pre-closing calls to borrowers acquired via brokers to verify income, employment, occupancy and specific loan terms will be a considered an industry best practice by Moody's.

### **Credit Risk Management**

The table below provides key factors in our assessment of the originator's credit risk management practices.

<b>Assessment Level</b>	<b>Moody's Qualitative Credit Risk Management Review Selected Criteria</b>
Strong Score = 1	<ul style="list-style-type: none"> <li>• Highly sophisticated systems.</li> <li>• Efficient feedback loop to the business/credit policy group; feedback is the primary driver of credit policy/ program parameter changes.</li> <li>• Experienced financial personnel and trained statistical personnel.</li> </ul>
Average Score = 3	<ul style="list-style-type: none"> <li>• Average risk management systems or completely outsourced function.</li> <li>• Feedback loop to the business/credit policy group exists but is not primary driver of credit policy/ product parameter changes.</li> <li>• Experienced financial and statistical personnel.</li> </ul>
Weak Score = 5	<ul style="list-style-type: none"> <li>• No risk management system.</li> <li>• Originator learns of loan performance from external sources.</li> </ul>
Unacceptable Score = 6	<ul style="list-style-type: none"> <li>• No track record of performance.</li> </ul>

Moody's considers the depth and quality of ongoing credit risk management an important aspect of an originator assessment. Originators that proactively undertake in-depth analyses of loan product performance and alter origination practices in a timely manner to effectively manage loan performance will be viewed positively by Moody's. Moody's will review the originator's credit risk management platform and staffing. We will seek to identify the feedback mechanisms in place to effect underwriting guideline changes initiated by the credit risk management team. A demonstrated ability to quickly react to changing market conditions or correct strategic errors is viewed favorably by Moody's.

**Originator Stability:**

The third major component, generally comprising 30% of Moody's originator assessment, will be a review of the factors that shape the operational and financial stability of an originator. This includes a review of several sub-components including:

- 1) *financial strength* - an originator that has a strong financial foundation is better able to compete for quality market share and adapt to changing conditions;
- 2) *quality control and audit functions* - an originator's ability to control the quality of its loan origination through adherence to established operational checks and balances;
- 3) *regulatory & legal compliance and oversight* - the manner in which an originator establishes systems for and complies with industry-related legislation;
- 4) *management strength & staff quality* - evaluation of the adequacy of personnel at all levels of an originator's operation; and
- 5) *technology* - an assessment of the state of an originator's technology to efficiently operate and control its loan production

**Financial Strength**

The table below indicates our criteria for assessing a rated originator's financial stability:

Assessment Level	Moody's Financial Stability Review: Selected Criteria
Strong Score = 1	<ul style="list-style-type: none"> <li>• Rated Aa or higher</li> </ul>
Average Score = 3	<ul style="list-style-type: none"> <li>• Rated Baa or higher</li> </ul>
Weak Score = 5	<ul style="list-style-type: none"> <li>• Rated Caa2 or higher</li> </ul>
Unacceptable Score = 6	<ul style="list-style-type: none"> <li>• Rated below Caa2</li> <li>• Unable to obtain audited financial reports</li> </ul>

For non-rated originators, Moody's will review the originator's funding sources, profitability and capital adequacy. Key financial metrics that Moody's will review include but are not limited to: net income, equity and preferred capital amounts, leverage, and short and long term funding options. In addition, Moody's will evaluate the types and sustainability of revenues, such as, gain-on-sale, interest income, or other revenue drivers that contribute to originator profitability.

The financial strength and strategic positioning of the originator (or its parent corporation where the originator is an integrated, operating subsidiary within a holding company structure), has a strong influence on Moody's view of an originator's stability. An originator with strong financial resources will be able to compete and adapt to changes in the market as circumstances warrant.

**Quality Control and Audit Functions**

The table below presents our general criteria for assessing an originator's quality control and audit functions:

Assessment Level	Moody's Quality Control & Audit Review Selected Criteria
Strong Score = 1	<ul style="list-style-type: none"> <li>• External Audits reveal low level of violations relative to peers.</li> <li>• Line functions actively engage and work with the QC teams.</li> <li>• Internal audit is a robust, formal and independent process reporting directly to senior management and the board of directors.</li> <li>• Strong feedback loop among management, training, credit policy, QC and the audit team.</li> <li>• Sampling methods are conservative and generally go beyond the minimum requirements to statistically expose defects.</li> </ul>
Average Score = 3	<ul style="list-style-type: none"> <li>• External audits reveal an average level of violations relative to peers.</li> <li>• Active dialogue between the line functions and the QC teams; initiation of contact generally is made by the QC team to the line function.</li> <li>• Internal audit is a formal and somewhat independent process reporting to management.</li> <li>• Feedback loop exists among management, training, credit policy, QC and the audit team with varying levels of intensity.</li> <li>• Sampling methods for internal audit/QC are holistic and robust enough to uncover defects.</li> </ul>
Weak Score = 5	<ul style="list-style-type: none"> <li>• External Audits reveal low level of violations.</li> <li>• Weak or no active dialogue between the line functions and the QC teams.</li> <li>• Internal audit is not independent or non-existent.</li> <li>• No feedback loop among management, training, credit policy, QC and the audit team.</li> <li>• Sampling methods do not exist or do not expose defects.</li> </ul>
Unacceptable Score = 6	<ul style="list-style-type: none"> <li>• No audits performed.</li> <li>• No QC performed.</li> </ul>

Quality control (QC) and internal audits are very important factors in a Moody's originator assessment. Moody's will analyze how well an originator's quality control processes are integrated into each functional area. Strong QC processes should include an active dialogue between the line functions and the QC teams. Internal audit should be a robust, formal process that is independent and has separate reporting lines to senior management as well as the originator's board of directors.

The process of utilizing the QC and audit findings to develop improved processes, policies and procedures will be examined along with the effectiveness of the feedback loop among management, training, credit policy, QC and the audit team.

As part of its assessment of internal controls, Moody's will evaluate the extent to which QC and audits focus on risks present in individual functions within the origination platform, such as sales and marketing, loan processing, underwriting, appraisal, closing and post-closing. Quality control procedures should include testing adherence to internal procedures as well as regulatory and legal compliance required for each function. The level of testing and type of sampling, the timely reporting of results and the actions taken to systematically improve processes will be considered in our analysis. Moody's opinion of the value of the quality control process will vary depending upon the degree to which the findings trigger changes in policies and procedures.

Moody's also will analyze the documented results of external party reviews (on site if necessary). This documentation includes items such as regulatory reviews provided by entities such as the Office of the Comptroller of the Currency, the Office of Thrift Supervision and entities within the Federal Home Loan Bank system, among others. Moody's also reviews the results of the originator or the parent corporation's compliance with Sarbanes-Oxley.

### **Regulatory & Legal Compliance & Oversight**

This component will be analyzed in two parts. The first part will be based on Moody's qualitative review. Some the factors we will assess are shown in the table below:



Assessment Level	Moody's Legal & Regulatory Compliance Review Selected Criteria
Strong Score = 1	<ul style="list-style-type: none"> <li>• Originator has no past and pending litigation or regulatory actions that would result or have resulted in settlements of more than \$250,000.</li> <li>• Legal/regulatory compliance staff primarily drives and manages the loan origination system (LOS) updates.</li> <li>• Regulatory requirements programmed, tested and implemented by compliance staff before a statute's effective date.</li> <li>• Staff receives extensive compliance training and testing.</li> <li>• LOS contains compliance rules that cannot be circumvented by employees at any level.</li> <li>• On site, expert mortgage and real estate legal counsel utilize outside counsel and manage formal communication process with line managers.</li> </ul>
Average Score = 3	<ul style="list-style-type: none"> <li>• Originator has no past and pending litigation or regulatory actions that would result or have resulted in settlements of more than \$1,000,000.</li> <li>• Legal/regulatory compliance staff drives and manages LOS updates in conjunction with the business lines.</li> <li>• Regulatory requirements usually are programmed, tested and implemented by compliance staff before a statute's effective date but sometimes miss deadlines.</li> <li>• Staff receives periodic compliance training and testing.</li> <li>• LOS contains compliance rules that cannot be circumvented by managers.</li> <li>• Minimal in-house mortgage/ real estate legal counsel with some use of external counsel. Solid but informal communication process with line managers.</li> </ul>
Weak Score = 5	<ul style="list-style-type: none"> <li>• Originator as has numerous past and pending litigation or regulatory actions that have or will result significant monetary settlements.</li> <li>• LOS does not contain or contains insufficient compliance rules.</li> <li>• Staff can override or work around system rules.</li> <li>• LOS is modified after external audits or litigations reveal deficiency.</li> <li>• No on-site, expert mortgage and real estate legal counsel. Informal, if any, communication between business lines and regulatory compliance staff.</li> </ul>
Unacceptable Score = 6	<ul style="list-style-type: none"> <li>• Numerous looming litigation and /or regulatory action that will result in bankruptcy of the company.</li> <li>• Not familiar with regulations and statutes pertaining to mortgage lending.</li> <li>• No legal counsel.</li> </ul>

The second part of the regulatory and legal compliance review will be based on the loan level results of internal audits results, regulator audit results and third party pre-securitization sample reviews for the most recent, relevant period. The assessment criteria for the third party pre-securitization review results can be found in Appendix I.

Non-compliance with federal, state and local laws can result in significant losses. Moody's legal and regulatory compliance review will seek to gauge the ability of the originator to mitigate legal and regulatory risk by preventing loans that are out of compliance with local, state and federal statutes from being originated and subsequently securitized.

Best practice compliance procedures are those in which lenders have loan origination systems that programmatically ensure, from the time of application through closing, that only allowable fees and rates are charged. The origination system also should have the capability to automatically produce any required disclosures. Effective regulatory compliance procedures should be used consistently and not be easily circumvented.

### **Management Strength and Staff Quality**

The table below indicates our general criteria for assessing management, staffing and training:

Assessment Level	Moody's Management Strength and Staff Quality Review Selected Criteria
Strong Score = 1	<ul style="list-style-type: none"> <li>• Best in class turnover.</li> <li>• Code of Ethics or similar document is acknowledged and enforced.</li> <li>• Separate and distinct training team.</li> <li>• Best-in-class training for product knowledge, regulatory compliance and special training specifically related to the employees position.</li> <li>• Strong RFP process with high service level standards for all 3rd party vendors.</li> </ul>
Average Score = 3	<ul style="list-style-type: none"> <li>• Average turnover relative to peers.</li> <li>• Code of Ethic exists and is distributed upon employment.</li> <li>• Small training team, training primarily conducted by line managers.</li> <li>• Periodic training and testing of employees for product knowledge. Regulatory compliance is conducted as needed.</li> <li>• RFP process exists. Service standards are set for all 3rd party vendors.</li> </ul>
Weak Score = 5	<ul style="list-style-type: none"> <li>• High turnover relative to peers.</li> <li>• No Code of Ethics exists.</li> <li>• No separate training team.</li> <li>• Sporadic training by line managers.</li> <li>• No RFP process or low / ambiguous service level standards for 3rd party vendors.</li> </ul>
Unacceptable Score = 6	<ul style="list-style-type: none"> <li>• Unable to track turnover rate.</li> <li>• No training provided to staff.</li> <li>• Outsourced functions are not under contract; 3rd party performance is not tracked.</li> </ul>

Moody's believes that the originator's investment in personnel at both the managerial and staff levels is critical to the quality and stability of its operations. Moody's will analyze the sufficiency of staffing at all levels and the levels of experience and expertise in relation to job functions. Moody's also will review the adequacy of technology support related to origination staff functions. In its assessment of management capabilities, Moody's will focus on management's ability to respond to market changes, such as its aptitude for efficiently allocating or reallocating resources during periods of volume growth and contraction. Moody's also will assess management's ability to maintain a consistent level of oversight and controls as product types ebb and flow over time.

To assess management's ability to compensate (by performance measures), retain and motivate staff, Moody's will examine the annual level of voluntary and involuntary turnover in the originator's operations. Specifically, Moody's considers high turnover levels or turnover concentrated within particular functions an indication of potential operational deficiencies. Moody's will review and evaluate the scope and frequency of the training received by both new hires and existing staff.

To the extent an originator out-sources functions to vendors such as title work for review and clearance and lien perfection, contract underwriting, information and telecommunication technology, and others, Moody's will endeavor to review the contractual arrangements, track record, and originator audit processes to affirm such arrangements are effective and do not impose undue risk on an originator from operational or compliance perspectives.

### **Technology**

The final component of Moody's originator assessment will examine the systems and information technology utilized by the originator. The following table presents some of the key criteria Moody's will use in its assessment:

Assessment Level	Moody's Originator Technology Review: Selected Criteria
Strong Score = 1	<ul style="list-style-type: none"> <li>• Minimal ability to manipulate data or circumvent system rules.</li> <li>• Formal change process that <ul style="list-style-type: none"> <li>– prioritizes system changes;</li> <li>– elevates regulatory compliance items;</li> <li>– thoroughly tests for before major changes are rolled out.</li> </ul> </li> <li>• Ability to deliver all required data to Moody's.</li> <li>• Field tested disaster recovery plan.</li> </ul>
Average Score = 3	<ul style="list-style-type: none"> <li>• System covers most business and regulatory compliance rules, however, some manual processes are necessary to ensure compliance.</li> <li>• Formal change process that tests for before major changes are rolled out.</li> <li>• With minor exception, has the ability to deliver most of the required data to Moody's.</li> <li>• Written disaster recovery plan.</li> </ul>
Weak Score = 5	<ul style="list-style-type: none"> <li>• Staff has the ability to manipulate data or circumvent system rules.</li> <li>• No formal change process</li> <li>• Little or no testing before major changes are rolled out.</li> <li>• Cannot deliver key fields required to Moody's.</li> <li>• No disaster recovery plan.</li> </ul>
Unacceptable Score = 6	<ul style="list-style-type: none"> <li>• Limited or no system support.</li> <li>• Cannot deliver required data to Moody's for ratings analysis.</li> <li>• Does not recognize the need for a disaster recovery plan.</li> </ul>

As part of its assessment of an originator's technological capabilities, Moody's will review the systems utilized by the originator to control and enhance its processes. Moody's will analyze the ability of the originator to minimize manual data manipulation outside of the loan origination system as an industry best practice. An example of a strong approach to technology by an originator is the integration of information technology requirements into business planning such that systems within the originator's operations possess robust functionality to meet changing loan products, underwriting guidelines and regulatory compliance demands on a timely basis. Moody's will take a favorable view of originators that establish a process framework to allow for the adequate testing of system changes well in advance of full implementation. The quality of back-up arrangements also is an important consideration in the assessment of technology adequacy. The ability of an originator to capture and transmit key data required by Moody's to rate and monitor RMBS transactions will be considered in our assessment.

## APPENDIX I

### Independent 3rd Party Pre-Securitization Review (TPR) Results<sup>7</sup>

Moody's assessment of an originator's underwriting policies and procedures, property valuation policies and procedures and legal and regulatory compliance are comprised of two parts. The first part, the qualitative review, was presented earlier in this special report. For the second part, Moody's will utilize the aggregated component review<sup>8</sup> results of the TPRs for an originator's past 18 months of securitization to attain more insight into the originator's ability to comply with its own policies and procedures.<sup>9</sup>

During the course of a TPR, the TPR firm will assign an event grade for each loan reviewed. Loans receiving event grades A and B are deemed to have materially met underwriting guidelines, the ability and willingness of the borrower to repay the loan has been established, the property value as stated is supported and the loan complies with all applicable laws and regulations. Event grade C<sup>10</sup> indicates that one or more of the factors mentioned above have been deemed materially deficient by the TPR firm.

Table A reflects the range of event grade C loans an originator may experience for any of the component TPRs and the associated assessment Moody's will assign based on the TPR findings.

Table A

Assessment Level	3rd Party Pre-Securitization Loan-Level Results:	
	Prime	Non-Prime
Strong Score = 1	Grade C <= 1.0%	Grade C <= 2.5%
Above Average Score = 2	Grade C <=2.5%	Grade C <=5.0%
Average Score = 3	Grade C <=5.0%	Grade C <=7.5%
Below Average Score = 4	Grade C <= 7.5%	Grade C <= 15.0%
Weak Score = 5	Grade C <= 15.0%	Grade C <= 30.0%
Unacceptable Score = 6	Grade C > 15.0	Grade C > 30.0%

7 Refer to "Moody's Criteria for Evaluating Independent Third-Party Loan Level Reviews for U.S. Residential Mortgage Backed Securities (RMBS)", Moody's Structure Finance, 11/24/08

8 Component TPRs are comprised of a credit review, property valuation review and regulatory compliance review.

9 When Moody's is unable to obtain sufficient pre-securitization review results for an originator's past securitizations, we may request that a third-party loan-level review be conducted which is unaffiliated with any particular securitization or find an alternative method.

10 An event grade D indicates a key document or file was missing during the TPR. Event grade D's will be included as deficient loans for purposes of Moody's assessment.

## EXHIBIT A

### Quarterly Reporting Package

1. Mortgage Bankers' Financial Reporting Form (attached)
  - a. Moody's requests that Schedule A-060 (Loans Originated for Sale / Held for Investment) should Modified to break down the "Other - Fixed/ARM" further to reflect Alt-A, Subprime and Other.
  - b. **[www.efanniemae.com/sf/formsdocs/forms/pdf/contractualobligs/1002eff100108.pdf](http://www.efanniemae.com/sf/formsdocs/forms/pdf/contractualobligs/1002eff100108.pdf)**
2. Underwriting Guidelines
  - a. Initially, Moody's will need a complete set of underwriting guides and guidelines: thereafter, changes should be communicated quarterly.
  - b. Exception loans % for the quarter
3. Audit Results - to be reviewed on site if necessary
  - a. Internal QC audits
    - i. u/w
    - ii. appraisal
    - iii. title/lien perfection
    - iv. 4506 reviews
    - v. TIL-A compliance
    - vi. High cost compliance
4. External Audit Reports- to be reviewed on site if necessary
  - a. Any State/Fed/ other oversight reviews
  - b. FCRA
  - c. HMDA
  - d. High Cost
  - e. Results of any regulatory audit should be reported quarterly
5. Process Flow Diagrams - Initial baseline than submit changes thereafter
  - a. Lead generation
  - b. Sales/ application taking
  - c. Processing
  - d. Appraisal ordering
  - e. Underwriting
  - f. Title Clearance
  - g. Funding
  - h. Lien perfection
6. Major IT changes
  - a. LOS
  - b. Delivery systems
  - c. Servicing systems (if applicable)
  - d. Status (commencement, in process, implemented)
7. Training program schedule
  - a. Topic
  - b. Attendees
  - c. Facilitator

## **ANNEX:**

### **Updated Criteria For Moody's Enhanced Approach To Originator Assessments In U.S. RMBS For Seasoned Loans<sup>1</sup>**

Actual payment histories and other updated loan data will provide Moody's with pertinent and more relevant data needed for credit analysis which cannot otherwise be obtained from defunct originators or by reviewing outdated practices of originators that are still operating. Therefore, all of the original originator assessment criteria are not applicable for seasoned or non-performing loans. Instead, Moody's will look to obtain the following data (in addition to our standard data set) in order to gauge the loan quality:

#### **i. Pay history** of the loan

##### 1. Seasoned loans

- a. All available history should be provided.
- b. A minimum of 12 months pay history is necessary to be eligible for an investment grade rating.
- c. Moody's may consider seasoned loans with less than 12 month payment history however the pool will most likely not be eligible for an investment grade rating. The highest rating achievable will depend on the payment history available.
- d. For option ARMs, in conjunction with the pay string history, the payment type should be provided for each payment<sup>2</sup>

##### 2. Non-Performing Loans

- a. Lower of 12 months or life of loan

##### 3. Real Estate Owned Properties ("REO")

- a. No pay histories required since no loan exists

#### **ii. Updated property values** (required for Seasoned, Non-performing loans and REO)

1. Automated Valuation Model ("AVM"), Broker Price Opinion ("BPO") or full or short form appraisals are acceptable
2. If AVM model(s) is used Moody's will analyze:
  - a. frequency and method of updating the database supporting the AVM's valuation results
  - b. confidence level of output, if provided by the AVM model
  - c. depth of data by geographical location
3. AVM values should be validated by an independent third party using a random sample of BPOs or full appraisals<sup>3</sup>.
4. Date of updated property value to be provided to Moody's
  - a. Updated property value should be no older than 120 days upon submission to Moody's
    1. Moody's will apply the most recent Moody's Economy.Com ("MEDC") HPI change (at the Metropolitan Statistical Area ("MSA") level) from date of updated property value.
    2. If updated property value is greater than 120 days old upon receipt by Moody's or if no updated value is supplied, Moody's will apply the MEDC index and, at a minimum, an additional 10% reduction in property value provided.

<sup>1</sup> For purposes of this document a seasoned loan is defined as a currently performing loan that is at least 18 months from its first scheduled payment date. Generally all loans in the pool must be seasoned to be eligible for the annexed criteria, however, non-performing loans less than 18 months seasoned that are included in seasoned pools will be eligible for the seasoned loan criteria as well.

<sup>2</sup> Reportable payment types are: "minimum payment", "I/O payment" or "fully amortizing payment".

<sup>3</sup> Refer to "Moody's Criteria for Evaluating Independent Third-Party Loan Level Reviews for U.S. Residential Mortgage Backed Securities (RMBS) - Annex" dated 9/22/09.

### iii. Updated FICO scores

1. Single credit repository FICO is acceptable
2. Date of updated FICO
  - a. R&W that updated FICO is no older than 120 days at time of submission to Moody's
3. If available, the history of FICO scores and corresponding dates should be provided

### iv. Updated occupancy

1. Data tape should provide city, state and zip code of the mailing address for each loan in addition to the city, state and zip code of the subject property address
2. If the mailing address, city, state and zip code are not provided, all properties will be presumed to be investor properties

### v. Modification information (provided at loan level)

1. Date of last modification
2. Number of modifications
3. Type of modification
4. DTI at modification
5. CLTV at time of modification
6. Pre-mod UPB
7. Post-mod UPB
8. Pre-mod monthly P&I
9. Post-mod monthly P&I
10. Modification Terms (maturity, loan type, rate, etc)

### vi. Other Additional Data

1. Any other loan level information available to the sponsor<sup>4</sup> should be provided to Moody's, including but not limited to
  - a. Reserves at time of closing
  - b. Job title and industry of borrower(s)

<sup>4</sup> Sponsor refers to the issuer, banker, originator or any party supplying data to Moody's for credit evaluation

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## Subprime Originator Factors

Date: 11/07/2007

Committee Members:

Analysts:



Committee Outcome:

Data	Count	Surv E(L)	Current M3 Meth w/o Orig Factors	Str Line EL	Str Line/curre nt Meth	Str line/Surv E(L)	Current Originator factor	Formula	Committed
Accredited	3	7.4%	8.6%	9.0%	4.0%	21.1%	5.0%	-1.0%	2.5%
Aegis	2	9.4%	10.0%	12.2%	22.3%	29.9%	5.0%	17.3%	17.5%
Ameriquest	8	10.5%	9.7%	12.3%	27.3%	16.9%	0.0%	22.3%	22.5%
BNC	2	11.9%	11.5%	14.0%	21.7%	18.0%	10.0%	16.7%	17.5%
Countrywide	14	9.1%	8.7%	10.6%	21.9%	16.7%	0.0%	16.9%	12.5%-15%
DBASAP	4	11.5%	11.1%	14.2%	28.2%	23.2%	10.0%	23.2%	25.0%
Delta Funding	4	8.2%	7.5%	9.6%	26.7%	16.6%	0.0%	21.7%	20.0%
Encore	3	9.1%	9.5%	9.5%	-0.7%	3.6%	5.0%	4.3%	5.0%
<b>EquiFirst Corporation</b>	5	10.7%	9.4%	9.6%	1.9%	-10.4%	0.0%	-3.1%	<b>0.0%</b>
Fieldstone	2	14.0%	11.6%	16.1%	38.3%	15.1%	5.0%	25.0%	25.0%
First Franklin	11	9.9%	10.4%	12.1%	16.1%	22.7%	0.0%	11.1%	10.0%
fremont	15	12.9%	11.6%	13.4%	16.0%	4.1%	10.0%	11.0%	15.0%
<b>JPMorgan Chase Bank, NA</b>	1	5.7%	8.7%	6.3%	-27.6%	10.1%	-5.0%	-10.0%	<b>-10.0%</b>
Long Beach	6	11.9%	10.4%	15.1%	45.1%	27.2%	10.0%	25.0%	25.0%
<b>Nationstar</b>	3	7.1%	7.5%	6.9%	-7.1%	-2.3%	2.5%	-2.1%	<b>0.0%</b>
New Century	18	11.1%	10.2%	12.4%	20.9%	11.9%	12.0%	15.9%	15.0%
<b>Novastar</b>	6	6.5%	11.0%	11.9%	7.8%	83.2%	5.0%	2.8%	<b>5.0%</b>
Option One	12	10.4%	10.3%	10.5%	2.0%	0.7%	5.0%	-3.0%	5.0%
People's Choice	2	11.1%	10.3%	11.4%	10.8%	2.5%	10.0%	5.8%	15.0%
Popular	3	8.4%	9.6%	9.1%	-4.8%	8.7%	0.0%	0.2%	0.0%
RFC	7	10.5%	8.1%	11.4%	41.0%	8.8%	0.0%	25.0%	25.0%
Saxon	2	7.3%	7.7%	7.4%	-4.3%	1.6%	0.0%	0.7%	0.0%
<b>Wells Fargo</b>	7	6.8%	8.3%	7.2%	-13.5%	5.3%	0.0%	-8.5%	<b>-5.0%</b>
WMC	10	12.4%	12.4%	15.8%	27.2%	27.5%	12.5%	22.2%	22.5%
<b>Totals/Average</b>	<b>150</b>	<b>10.2%</b>	<b>10.0%</b>	<b>11.7%</b>	<b>16.95%</b>	<b>14.4%</b>	<b>4.3%</b>		<b>11.20%</b>

- Countrywide to be further reviewed for 2007 transactions



**Background:**

Originator factors to apply to subprime M3 levels are needed to account for risk factors due to originations quality that are not captured by M3. An analysis of 2006 vintage subprime pools was performed to quantify what the originator factors should be for most subprime originators, by origination volume.

**Rationale:**

2006 vintage transactions were used as the base for developing originator factors, as the performance as of late has departed materially from historical trends and is expected to be much more representative of performance in the near future. Only 100% originator concentration deals were focused upon

To come up with our originator factors, we compared current methodology expected loss to a Straight-line expected loss, and determined the variance to be due to differences that would be accounted for by an originator factor.

Current Expected Loss:

Current expected loss was derived by using the “all-in” loss coverage levels from M3 today and applying an additional adjustment to calibrate for additional risks.

The “all-in” loss coverage levels from M3 today were determined by taking M3 levels, and applying the following adjustments to account for expanded data adjustments:

Alt-B % of Pool:	-15%
Alt-C % of Pool:	-7.5%
Purchase % of Pool:	25% * 50% (assumes 35% of purchase is FTHB)
Stated Doc % of Pool:	40% * 60% (assumes 50% of stated is salaried)
Delinquency (entire pool):	5%
Seasoning:	Standard seasoning adjustment
MI benefit:	No MI benefit applied

The additional adjustment that was made to the M3 levels is based on the quarter in which the deal closed. The chart below provides the hits by quarter:

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Adjustment	80.00%	100.00%	120.00%	130.00%

In addition, it was assumed to increase all-in levels by 15% to account for recent increase in FRM/ARM levels (10% and 5% respectively) and M3 results (5%)

Straight Line Expected Loss:

Straight Line expected losses were determined by forecasting losses by the straight line method, with the following roll rates and severity for the delinquent loans:

30-59 DPD	60-89 DPD	90+ DPD	FC	REO	Severity (no LPMI)
20%	50%	75%	95%	100%	45%

Voluntary CPR rates of **10%** were used. No MI benefit was assumed

**Straight Line Loss Formula**

$$E(L) = \frac{\text{Cum Loss} + \text{Pipeline Loss}}{1 - \text{Adjusted Pool Factor}}$$

$$\text{Adjusted PF} = \text{PF} - 30 + \text{DQ} - \text{CPR} * \text{PF}$$