

**THE CURRENT REFI BOOM:
CAUSES AND CONSEQUENCES**

Research & Analysis
Office of Thrift Supervision
Washington, DC

INTRODUCTION*

The mortgage refinancing boom in 1992-1993 created a cohort of residential mortgages that have performed extremely well by any measure. As long-term interest rates have declined over the last eight months, refinancing activity has surged once again. As a result, portfolio lenders have been adding refinanced mortgages to their holdings at a steadily increasing rate over the last three quarters. Almost half of the additions to the portfolio holdings tracked by the Mortgage Information Corporation (MIC) in the first quarter of 1998 were refinanced mortgages, having risen from 25 percent in the second quarter of 1997.

In this issue, we examine the current refinancing boom and its likely impact on future mortgage portfolio performance. Many factors affect the decision to refinance, as it represents the exercise of an option to exchange an existing mortgage contract for a new one. The factors include the contractual terms of the current and future mortgages, past and expected movements in interest rates (both long and short), the level of transaction costs, and the length of time it will take to recapture the costs. These factors influence the decision not only as to when to refinance but also as to what type of mortgage to choose.

While some of the factors underlying the current refi boom are similar to those that existed in 1992-1993, others are much different. Consequently, the composition of the current refinanced mortgage cohort and its impact will likely be different from the last refi boom. In this issue of *Mortgage Market Trends*, we explore more fully the similarities and differences between this refi boom and the last one and their implications. First, though, we look at current mortgage market conditions.

CURRENT MORTGAGE MARKET CONDITIONS

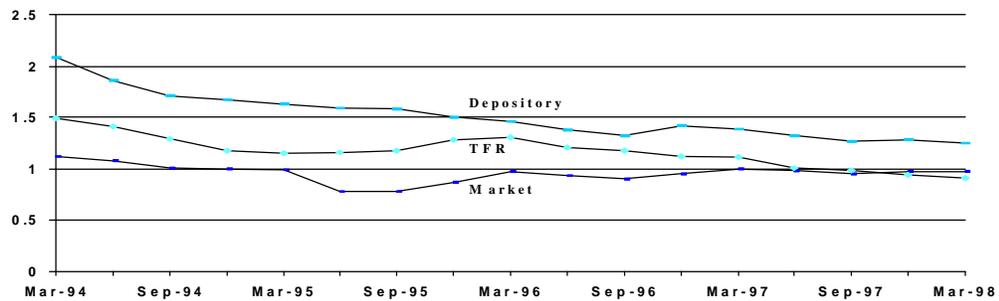
National Delinquency Rates Remain Low

Figure 1 presents a plot of the percentage of seriously delinquent (90 days past-due or in foreclosure) residential mortgages, using both the Mortgage Information Corporation (MIC) and Thrift Financial Report (TFR) data. Since the first issue of the *Mortgage Market Trends*, we have divided the MIC data into two groups: the market, which includes all MIC participants, and a subgroup, depository institutions, which includes only the FDIC-insured MIC participants (a mix of S&Ls and commercial banks). As the trend line in Figure 1 shows, the national delinquency rate has changed little over the last year. However, both the MIC depository and OTS-regulated (TFR) thrift delinquency rates have improved.

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Figure 1 also shows that depositories, as a group, have had a higher delinquency rate than the national average for the entire period. The gap between the depository and the market delinquency rates has diminished substantially since 1993. The thrift industry, in particular, has improved its performance so much over the last few quarters that its delinquency rate is now **below** the MIC national rate (which is dominated by the GSEs' portfolio of conforming mortgages).

Figure 1: Percentage of Seriously Delinquent Mortgages

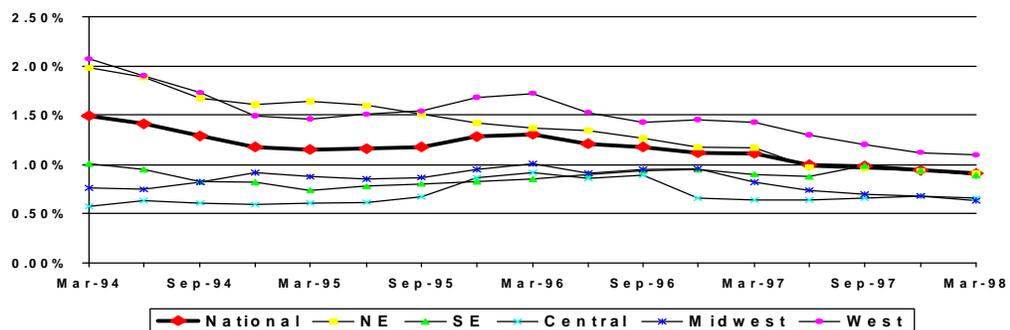


Source: MIC and TFR. The *Market* contains the combined data of the depository and non-depository participants in MIC's Loan Performance System. *Depositories* comprise both bank and thrift MIC participants. The thrift MIC participants are very large institutions located primarily on the East and West coasts. *TFR* represents all OTS-regulated institutions except one that specializes in defaulted mortgages.

Figure 2 shows the regional detail behind the improvement of the overall thrift delinquency rate. The decline in the OTS average delinquency rate is due almost entirely to the improvement on the two coasts -- the West region and especially the Northeast region.

Overall, the California housing market has a disproportionate effect on the thrift industry totals because of the concentration of thrift mortgages in that state. The recent improvement in real estate conditions in the west coast housing markets -- reflected directly in house price changes -- accounts for much of the decline in delinquency rates. According to the Office of Housing Enterprise Oversight (OFHEO) House Price Index, over the last four quarters, home prices have appreciated 7.3 percent in California, among the largest increases in the nation.

Figure 2: OTS Regional Delinquency Rates



Serious Delinquencies Vary by Location and Product Type

In March 1998, the states with the highest rates of seriously delinquent loans (by dollar value) were Maryland (1.69%), Hawaii (1.67%), New Jersey (1.60%), District of Columbia (1.56%), and New York (1.55%). The national average was 0.97%. California's rate improved from 1.19% in December to 1.16% in March. The delinquency rate in Hawaii showed one of the sharpest increases, up from 1.54% in the December, reflecting the deterioration in home prices in that market. Over the last four quarters, Hawaiian home prices have fallen 1.9%, according to OFHEO House Price Index, the only state to show a decline in prices over that period. Over the last five years, Hawaiian home prices have decline by 9.8%, the worst (and only decline) in the country.

In individual markets, Riverside, California, leads the nation with a seriously delinquent rate of 2.83%, followed by Memphis, Tennessee (2.4%), and Scranton, Pennsylvania (2.16%). Among major markets, Miami (1.82%) and Los Angeles (1.66%) are both in the top ten in terms of delinquency rates.

Table 1: Seriously Delinquent Rates, as of March 1998

	Home Purchase	Refinancing
Conventional	0.90%	0.47%
15-Yr Fixed	0.54	0.15
30-Yr Fixed	0.88	0.57
Adjustable Rate	1.33	1.18
T-Bill	1.29	1.10
COFI	1.27	1.28
Government	3.94	2.56
FHA	4.14	2.33
VA	3.55	2.85
All Loans	1.46%	0.56%
Source: Market Pulse, 3/98, MIC		

Table 1 shows the seriously delinquent rates for different product types based on whether the mortgages were for purchase or for refinancing. Refinanced mortgages perform much better than home purchase mortgages in almost all cases. The one exception is COFI ARMs, where the refinanced mortgages have a slightly higher delinquency rate than COFI ARM home purchase loans.

Market Share Data

Table 2 reports data on mortgage loan originations from HUD's *Survey of Mortgage Lending Activity (SMLA)*. The third quarter 1997 data are the most recent available. In the third quarter of 1997, the thrift industry's (Savings Banks and Savings

Table 2: Mortgage Market Shares

(\$ in millions)									
Year	CB	Share	SB	Share	S&L	Share	MC	Share	Total
1996 Q1	\$43166	22.2%	\$6766	3.5%	\$28394	14.6%	\$114557	59.0%	\$194196
Q2	45927	22.0%	9120	4.4%	35064	16.8%	117583	56.2%	209140
Q3	42327	22.2%	9979	5.2%	30362	15.9%	106637	55.9%	190722
Q4	47128	24.6%	8036	4.2%	27895	14.6%	106962	55.9%	191271
1997 Q1	48116	28.0%	5651	3.3%	25015	14.6%	91819	53.4%	171787
Q2	53150	26.8%	6286	3.3%	34411	17.3%	103294	52.0%	196910
Q3	52667	23.7%	5210	2.3%	34518	15.6%	128126	57.7%	221888

Source: *Survey of Mortgage Lending Activity*, HUD

CB, Commercial Banks; SB, Savings Banks; S&L, OTS thrifts; MC, Mortgage Companies

Associations) market share of single-family residential mortgages fell back from 20.7% in the second quarter to 17.9%. Commercial banks also declined in market share, falling to 23.7% in the third quarter from 26.8% in the second quarter. The market share for mortgage banks rose to 57.7% from 52% in the second quarter.

FHA Developments

At the end of March 1998, FHA loans represented 7.93% of the total loans held, slightly more than that at the end of 1997 (7.71%). Four years earlier, FHA loans represented just 2.89% of their total.

Table 3: Performance by Loan Type

	(Percent of Mortgages Seriously Delinquent)				
	First Quarter				
	1994	1995	1996	1997	1998
Conventional	1.07	0.91	0.83	0.77	0.66
Gov't-Backed	2.12	2.51	2.82	3.06	3.24
Ratio	1.98	2.76	3.40	3.97	4.91

The rapid growth in FHA loan originations, especially ARM originations, has been the result of several factors, including expanded outreach efforts, a reduction in the guarantee fee, rising loan limits, and changed underwriting standards. This growth has not been without its costs, however. Table 3 shows the performance for conventional and government-backed mortgages in the first quarter of each year. The increase in the ratio of the government-backed seriously delinquent rate to that of the conventional mortgages illustrates the serious deterioration in their relative performance over the last 5 years. As the table shows, the performance of government-backed mortgages has deteriorated so much that government-backed mortgages are now in serious delinquency at a rate almost five times more than conventional mortgages. Five years ago, the ratio was less than two times. Note that while the performance of government-backed mortgages has deteriorated, the performance of conventional mortgages has improved.

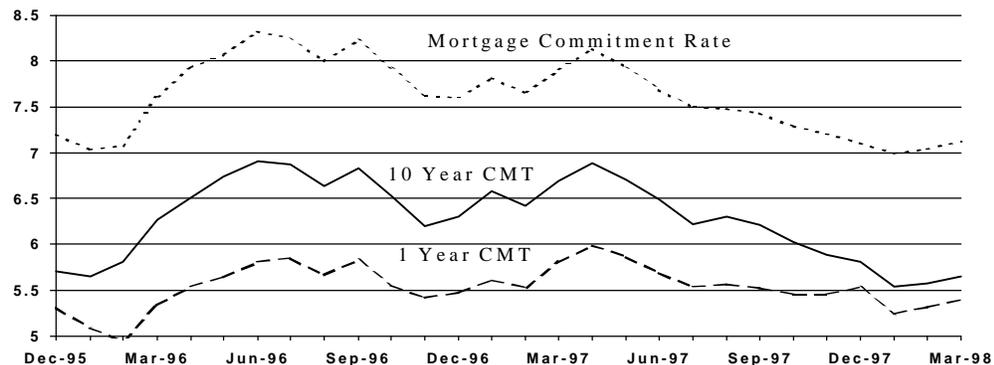
THE CURRENT REFINANCING BOOM

Falling Long-term Interest Rates, Constant Short-term Interest Rates

Figure 3 shows two mortgage-related interest indices and the Freddie Mac commitment rate for thirty-year fixed-rate mortgages, as reported by the Federal Reserve Board of Governors. The one-year constant maturity Treasury (one-year CMT) index, representative of the various indices used to set one-year adjustable mortgages, began 1997 at about 5.5%, and ended the year at almost the same level. It dropped sharply in January, rebounded in February and March, but stayed below its year-end level.

The ten-year constant maturity Treasury (ten-year CMT) index declined steadily from April through January, then mimicking the one-year CMT, rebounded slightly in February and March, ending the first quarter at 5.65%. The index has dropped by more than a hundred basis points from April 1997 to March 1998. The ten-year CMT index tracks the commitment rate for thirty-year fixed rate mortgages, although the spread between them is not constant and has widened of late.

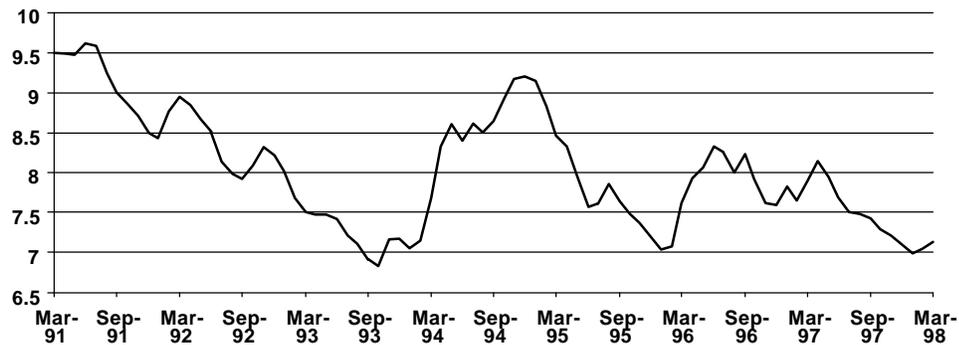
Figure 3: Mortgage Related Interest Rate Indices



This absolute and relative (to the one-year CMT) decline in the ten-year rate has had two effects. First, the decline in the long rate makes a fixed-rate mortgage now relatively more attractive than an adjustable rate mortgage. This should lead to a higher percentage of fixed-rate mortgages among new originations. Second, the lower rate on new fixed-rate mortgages should lead to a higher level of refinancings, as borrowers either replace their existing higher fixed-rate mortgages with lower fixed-rate mortgages or replace adjustable-rate mortgages with fixed-rate ones.

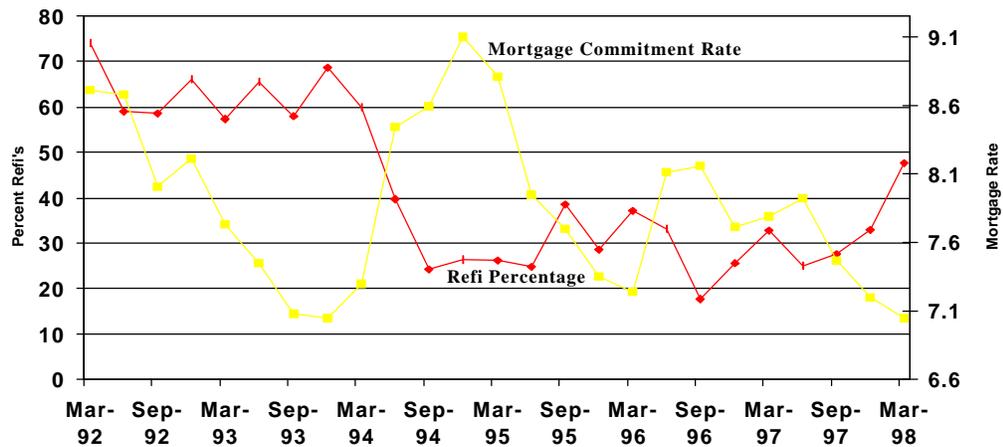
The amount of refinancing is partially determined by the current and recent past levels of interest rates, which affects how many higher rate mortgages are outstanding, and the current rate of change in interest rates. A longer view of the commitment rate on fixed-rate mortgages puts the current levels of mortgage interest rates into this perspective. Figure 4 shows the thirty-year fixed-rate mortgage commitment rate since 1991.

Figure 4: Mortgage Commitment Rate (FHLMC)



While the current rates are lower than they have been in the recent past, they have not fallen as quickly or to the level they reached during the height of the refinancing boom in 1993. Almost a quarter of the mortgage loans now held, according to the MIC data, were originated in 1993, when mortgage rates were as low as or lower than they are now. Thus, a smaller refinancing surge is likely now if mortgage rates do not go much lower.

Figure 5: Refinancing mortgages as percent of total quarterly additions to portfolio holdings and the FHLMC commitment rate.



(Source: FHLMC and MIC)

Figure 5 shows the relationship between movements in mortgage rates and the amount of refinancing activity. During the first quarter of 1998, almost half of the mortgages added to portfolio holdings were refinanced loans. During the refi boom of 1992-1993, between sixty and seventy percent of the portfolio additions were refinanced loans. It seems unlikely that the current refi boom will result in the same percentage additions as the previous one for several reasons. First, the overhang of high interest rate mortgages is less due to the large number of loans that were refinanced less than five years ago. According to MIC, over fifty percent (52.8%) of mortgages now have rates between 7 and 8 percent. This contrasts sharply with the level in March 1993, when just twenty percent of

mortgages fell in that range. Second, interest rates have not dropped as fast or as far as in 1992-1993. Third, the level of activity in home purchase mortgages is surging as well. For example, housing starts are now near a decade-high level, consistently running above 1.5 millions units over the last six months.

Declining ARM Share

The Federal Housing Finance Board conducts its *Mortgage Interest Rate Survey (MIRS)* monthly among mortgage lenders on the interest rates and terms of their recently closed conventional (non-government-backed) mortgages. Table 4 reports the survey results for the months ending each quarter over the last eighteen months.

Table 4: Mortgage Rates and Terms
(Conventional Home Purchase Mortgages)

	Effective Rate	(In percent)				% Arms
		Percent of Loans by LTV Class				
		< 70%	70-80	80-90	> 90%	
S&Ls						
Dec-96	7.16	21	46	16	17	52
Mar-97	7.34	21	47	16	16	46
Jun-97	7.33	22	45	16	17	56
Sep-97	7.12	21	49	15	15	53
Dec-97	7.05	25	48	13	14	45
Mar-98	6.96	24	46	14	16	36
Commercial Banks						
Dec-96	7.65	22	28	20	30	32
Mar-97	7.77	20	39	19	22	31
Jun-97	7.86	21	38	18	22	21
Sep-97	7.59	22	37	17	24	16
Dec-97	7.46	18	32	16	35	9
Mar-98	7.22	15	34	16	36	9
Mortgage Companies						
Dec-96	7.76	21	36	16	27	15
Mar-97	7.92	19	34	17	30	14
Jun-97	8.03	18	36	17	28	16
Sep-97	7.77	19	36	18	27	13
Dec-97	7.51	19	36	17	27	8
Mar-98	7.28	20	37	17	27	6

Source: Mortgage Interest Rate Survey, Federal Housing Finance Board

Table 4 shows that, for all three lender groups, effective mortgage interest rates (which include the amortization of initial fees and charges over a ten-year period) have declined sharply since the end of June 1997. For S&Ls, the current average is 6.96%, for commercial banks, 7.22%, and for mortgage companies, 7.51%. The average effective interest rate was substantially lower for S&Ls than that for commercial banks and mortgage companies in every month surveyed.

The data in Table 4 also show the impact of the flattening yield curve over the last two quarters. S&Ls have traditionally originated a higher proportion of ARMs than either commercial banks or mortgage banks, and this pattern persists.

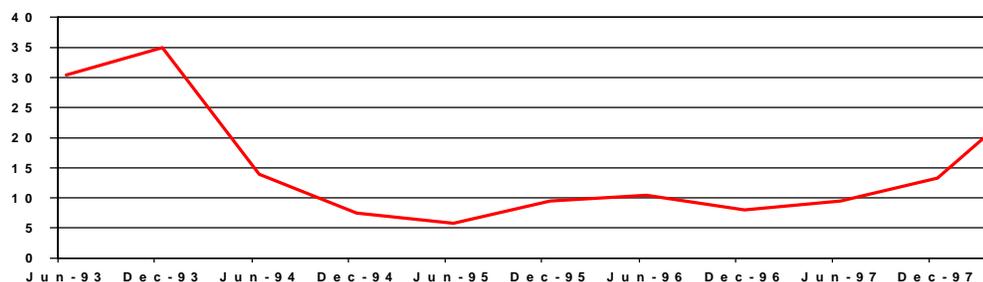
However, while more than half of S&Ls's originations are typically ARMs, by March 1998, the percentage had fallen to just 36%. At commercial banks and mortgage companies, the decline in ARM originations has been even more dramatic. Only 9% of the commercial banks' and 8% of the mortgage companies' originations were adjustable rate.

The distribution of originations by loan-to-value ratios can also create differences in the effective interest rates between S&Ls and commercial banks and mortgage companies. Over the last year and a half, S&Ls have continued to originate a much smaller percentage of their loans in the highest LTV category (greater than 90% LTV ratio) than the two others. In March 1998, the percentage of high LTV-ratio mortgage originations was only 16% for S&Ls versus 36% for commercial banks, and 27% for mortgage companies. Higher LTV-ratio loans are riskier and should carry a higher rate and/or more fees and charges than lower LTV-ratio loans. For S&Ls, 70% of the originations have LTVs of less than 80%. The corresponding percentage for commercial banks is 49% and 57% for mortgage banks.

Prepayments Accelerating

As Figure 3 showed, the difference between the one-year and the ten-year constant maturity Treasury interest rates have narrowed considerably. In addition, as Figure 4 shows, long term mortgage commitment rates are approached the low levels reached in 1993 at the peak of the previous refinancing boom. As Figure 6 shows, the three-month Conditional Prepayment Rate in March 1998 (20.24%) was at its highest level since June 1994. The CPR has become the industry standard for quantifying prepayment activity and assumes that a constant fraction of the remaining principal is prepaid. Accordingly, the three-month CPR measures prepayments "conditional" on the previous quarter's remaining balance. Unexpectedly high levels of prepayments lower the value of servicing rights and portfolio holdings, as either mortgages are lost to other lenders or are replaced with ones with lower contract rates.

Figure 6: Three-Month Conditional Prepayment Rate

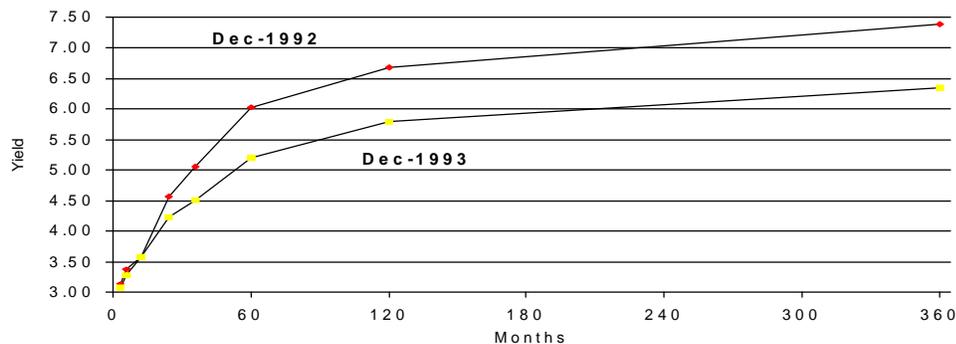


(Source: *Market Pulse*, 3/98, MIC)

Comparison of 1992-93 and Current Refi Booms

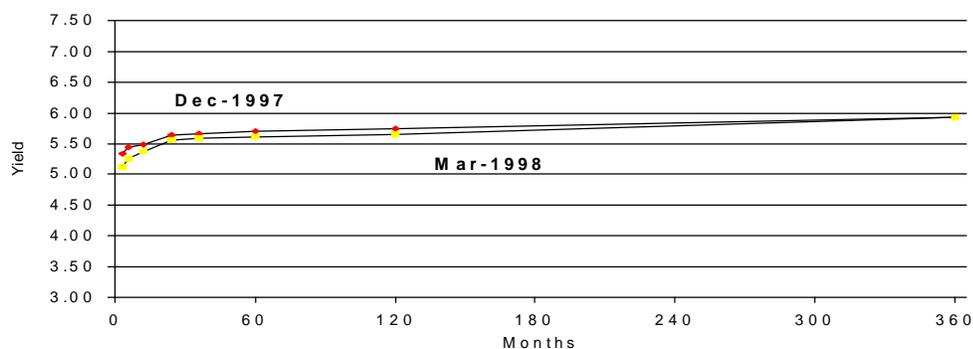
Figure 7 presents plots of U. S. Treasury yield curves for year-end 1992 and year-end 1993. Both yield curves are steeply sloped, particularly in the shorter-term maturity segments. To provide a comparison, Figure 8 presents plots of the U. S. Treasury yield curves for year-end 1997 and March 1998. In sharp contrast to the 1992-93 period, these yield curves are extremely flat. Differences in both the level and slope of the yield curves in both refi periods account for the dramatically different refinancing activity exhibited by mortgagors.

Figure 7: U.S. Treasury Yield Curves, Dec. 1992 and Dec. 1993



In the period 1992-93, refinancing activity was characterized largely by substituting 15-year fixed rate mortgages and adjustable rate mortgages for 30-year fixed rate mortgages. This made sense given the very low rates on ARMs and the lower rate on 15-year fixed rate mortgages compared to 30-year fixed rate mortgages. This shift had a favorable credit risk effect. As reported in a previous issue of *Mortgage Market Trends* and shown in Table 1 (page 3), the delinquency rate for 15-year fixed rate mortgages is substantially lower than that for 30-year fixed rate mortgages. Because most of the refinancing activity during the 1992-93 period involved converting 30-year to 15-year fixed rate mortgages, mortgages originated in both 1992 and 1993 have turned out to have the lowest overall default rates.

Figure 8: U.S. Treasury Yield Curves, Dec. 1997 and Mar. 1998



In the current period, however, mortgagors are doing just the opposite in terms of their refinancing activity. They are substituting 30-year fixed rate mortgages

for ARMs and shorter-term fixed rate mortgages in order to take advantage of the historically low rates on 30-year mortgages and to protect themselves against future interest rate increases. As such, the credit risk effects appear to be less positive. While the shift from ARMs to fixed rate mortgages would tend to reduce future delinquencies, the decline in 15-year relative to 30-year fixed rate mortgages would have the opposite effect.

To provide a sense of the difference in the levels of mortgage contractual interest rates between the 1992-93 and current periods, Tables 5 and 6 report median coupons, i.e., weighted average coupons or WACs, for fixed rate mortgages and adjustable rate mortgages, respectively. These data are taken from Schedule CMR (Consolidated Maturity Rate) filed by thrifts with OTS. Schedule CMR is part of the Thrift Financial Report used by OTS to collect financial information from thrifts. Because OTS began collecting CMR data in March 1993, the tables only report data for the 1992-93 refi boom from March 1993 onward.

Table 5: Median of Fixed WACs for All Coupons
(1992-93 Refi Boom and 1997-98 Refi Boom)

	1992 - 1993				1997 - 1998	
	Mar-93	Jun-93	Sep-93	Dec-93	Dec-97	Mar-98
30-Year Mortgages	9.17	9.05	8.94	8.80	8.27	8.16
15-Year Mortgages	9.00	8.75	8.49	8.26	7.91	7.80
Balloon Mortgages	8.87	8.69	8.50	8.34	7.91	7.80

Table 5 shows that the median WACs on fixed rate mortgages for all maturities were substantially higher during the 1992-93 refi boom. This same result generally holds for both current CMT and COFI adjustable rate mortgages, at least those with relatively long reset frequencies. For ARMs with short reset frequencies, the WACs tend to be higher for the 1997-98 refi boom than the 1993 period (the teaser rates more directly reflect market prevailing conditions).

Table 6: Median of ARM WACs for All Coupons
(1992-93 Refi Boom and 1997-98 Refi Boom)

	Current Market Index ARMs by Coupon Reset Frequency			Lagging Market Index ARMs by Coupon Reset Frequency	
	6 Mo or Less	7 Mo to 2 Yrs	2 + Yrs to 5 Yrs	1 Month	2 Mo to 5 Yrs
199303 Teaser	6.12	6.12	8.38	6.66	7.08
Non-Teaser	7.08	6.97	8.98	6.32	7.93
199306 Teaser	5.83	5.73	8.00	5.89	6.71
Non-Teaser	6.91	6.70	8.68	6.06	7.71
199309 Teaser	5.50	5.50	7.74	5.64	6.41
Non-Teaser	6.69	6.48	8.43	5.88	7.38
199312 Teaser	5.37	5.36	7.29	5.27	6.17
Non-Teaser	6.58	6.39	8.16	5.70	7.20
199712 Teaser	6.75	6.62	7.39	5.26	6.76
Non-Teaser	7.91	7.95	7.8	6.44	7.49
199803 Teaser	6.89	6.62	7.37	5.02	6.75
Non-Teaser	7.89	7.91	7.73	6.43	7.48

The two vastly different patterns in refinancing activity have very different implications for the credit and interest rate risk of thrifts and other mortgage lenders. For example, one important adverse effect of the current type of refinancing activity on thrifts is that it may raise the interest rate risk for the industry if thrifts' portfolios have fewer ARMs and more FRMs. There may be a tradeoff, however, between interest rate risk and credit risk. The potential interest rate risk increase (due an increase in asset duration) may be offset by a decrease in credit risk associated with the much lower default rates on 30-year fixed rate mortgages, although the gain in lower credit risk may be smaller than achieved during the 1992-93 refi boom.

To explore in more detail the different effects of the 1992-93 and current refi booms on thrifts, we estimated simple regression models using key variables from the OTS Net Portfolio Value (NPV) Model. Net Portfolio Value is defined as the market value of assets less the market value of liabilities (including the net value of off-balance sheet contracts).

We used a panel data set of approximately 450 thrifts from March 1993 through March 1998 to estimate the regressions. A panel data set only includes those thrifts that were in existence over the entire sample period. Separate regressions were estimated for interest rate sensitivity and asset duration. The interest rate sensitivity measure used in the regressions was taken from the NPV Model; it gauges the magnitude of loss in economic value from a 200 basis point adverse movement in interest rates. We included several variables in the regressions to control for thrift size, regional location, the spread between the three-month Treasury bill rate and ten-year Treasury bond rate (i.e., a measure of slope of the yield curve), and separate dummy variables for the 1992-93 and current refi booms.

The regression results provide empirical support for a couple of the assertions made above. First, the 1992-93 refi boom was associated with a statistically significant decrease in thrift interest rate sensitivity, while the current refi boom has resulted in a significant increase. This is consistent with the movement into ARMs and shorter-term fixed rate mortgages in 1992-93, and the movement back into 30-year fixed rate mortgages now. Second, there was a significant decrease in thrift asset duration in the 1992-93 period, and an increase, though insignificant, in asset duration in the current refi boom. Again, these results are consistent with the pattern of refinancing activity in the two refi boom periods.

CONCLUSION

The effects of the 1992-93 and 1997-98 refi booms on thrifts have been much different. Both credit risk and interest rate risk fell substantially during the 1992-93 refi boom. This occurred because the dramatic fall in interest rates reduced asset duration and prompted homeowners to switch into mortgage products characterized by much lower default rates. As a result, the overall effect on thrifts was

positive. In contrast, the net effect of the current refi boom is harder to determine. Interest rate risk has definitely increased, but the ultimate effect on credit risk of the movement towards 30-year fixed rate mortgages will not be known until the current refi boom ends.

Mortgage Market Trends

Volume 2 Issue 2

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Data Appendix

National and Regional Trends in Mortgage Delinquency Rates

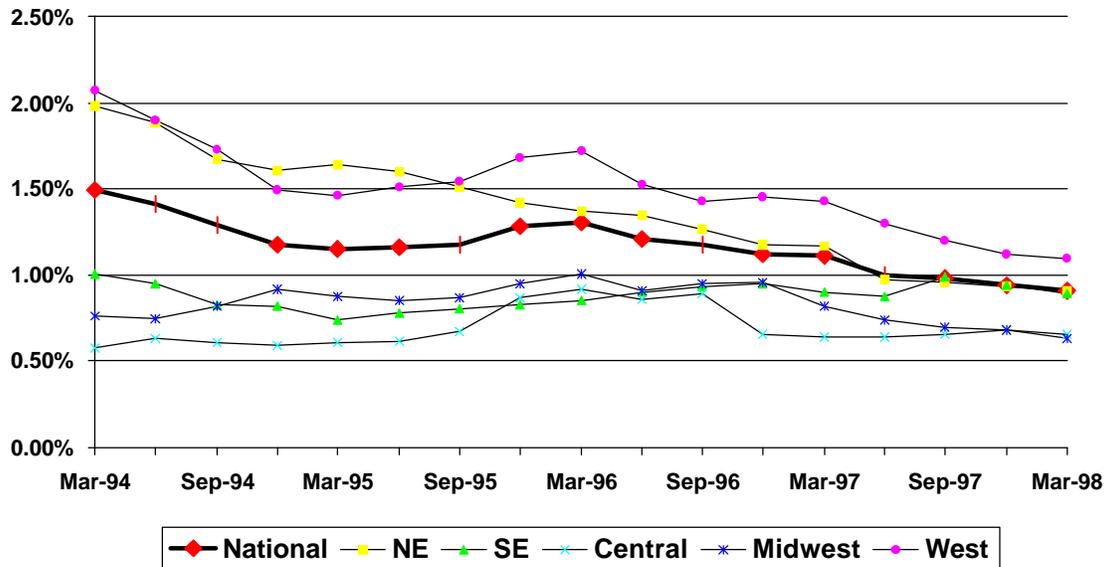
as of March 31, 1998

Regional and State Analysis

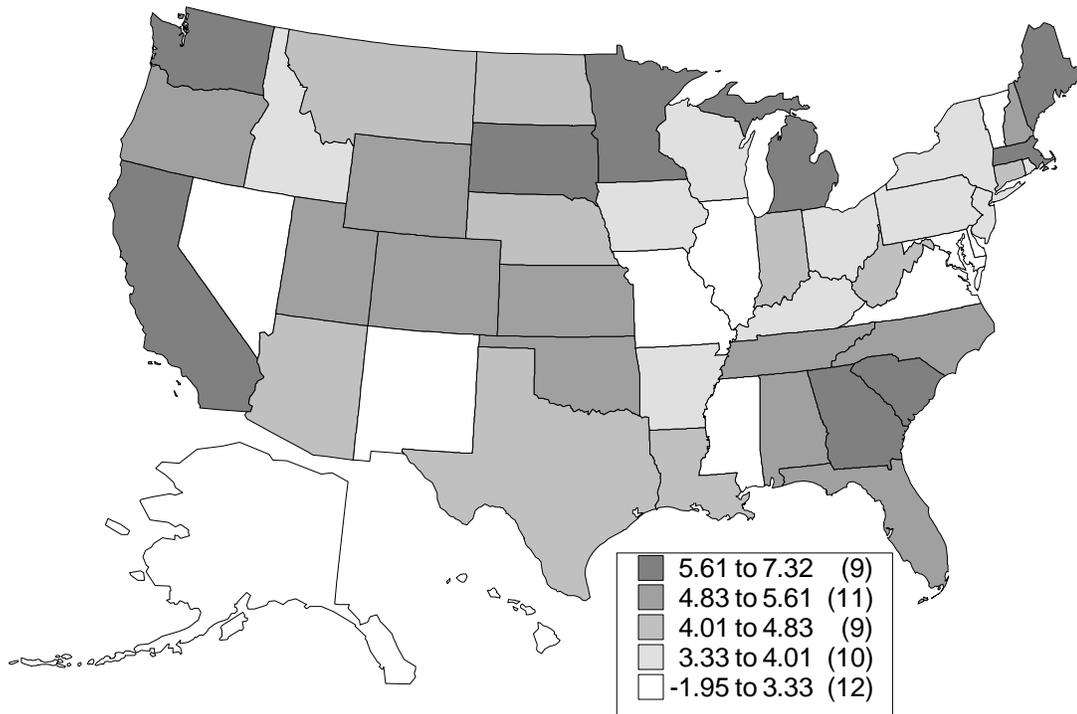
Seriously Delinquent & Home Price Appreciation Rates as of 3/31/98
(Based on \$)

	MIC SD		TFR SD	Home Price Appreciation	
	Market	Depositories		1-Year	5-Year
National	0.97	1.25	0.91	4.7	18.1
Northeast	1.24	1.64	0.91		
Connecticut	1.18	1.40	0.77	4.8	3.4
Delaware	0.91	1.18	0.77	2.9	6.4
Maine	0.81	1.47	0.96	5.8	8.8
Massachusetts	0.66	0.85	0.47	6.0	17.2
New Hampshire	0.55	0.74	0.47	5.2	11.2
New Jersey	1.60	2.03	1.43	4.0	8.7
New York	1.55	1.80	0.85	3.6	6.1
Pennsylvania	1.10	1.57	0.85	3.4	10.2
Rhode Island	0.82	1.15	1.84	4.0	3.8
Vermont	0.52	1.00	1.90	2.1	5.7
West Virginia	0.34	0.77	0.87	4.6	25.8
Southeast	1.10	1.47	0.90		
Alabama	0.63	1.27	1.01	5.4	25.6
DC	1.56	1.63	1.80	2.3	3.6
Florida	1.32	1.60	0.64	5.0	18.1
Georgia	0.85	1.16	0.74	6.2	25.1
Maryland	1.69	2.18	1.95	3.3	7.7
North Carolina	0.76	0.97	0.50	5.3	28.2
Puerto Rico	0.98	1.48	5.99	*	*
South Carolina	0.90	1.05	0.46	5.8	23.7
Virginia	0.92	1.16	0.89	3.0	10.4
Central	0.63	1.15	0.65		
Illinois	0.87	1.29	0.73	3.0	21.0
Indiana	0.63	1.18	0.81	4.4	28.0
Kentucky	0.40	0.86	0.70	3.4	28.4
Michigan	0.26	0.55	0.79	5.7	38.1
Ohio	0.59	1.15	0.56	3.9	27.8
Tennessee	1.14	1.74	0.51	5.5	31.9
Wisconsin	0.29	0.61	0.30	3.6	33.9
Midwest	0.64	0.88	0.64		
Arkansas	1.07	1.91	0.57	3.4	26.8
Colorado	0.38	0.49	0.21	5.5	48.0
Iowa	0.27	0.43	0.77	3.6	29.7
Kansas	0.52	0.78	0.29	4.8	29.5
Louisiana	1.05	1.74	0.31	4.8	31.8
Minnesota	0.41	0.51	0.27	5.6	28.8
Mississippi	0.86	2.32	1.07	2.9	26.0
Missouri	0.48	0.71	0.46	3.1	23.7
Nebraska	0.26	0.41	0.67	4.7	32.9
New Mexico	0.69	0.89	0.89	2.6	32.4
North Dakota	0.47	0.59	0.43	4.1	28.8
Oklahoma	0.80	1.26	0.52	5.0	24.1
South Dakota	0.46	0.57	0.60	6.7	33.6
Texas	0.85	1.11	0.88	4.6	15.3
West	1.03	1.20	1.10		
Alaska	0.39	0.86	0.10	2.8	21.3
Arizona	0.61	0.76	0.36	4.3	30.3
California	1.16	1.28	1.15	7.3	0.5
Hawaii	1.67	2.30	1.71	-1.9	-9.8
Idaho	0.68	0.85	0.19	3.4	33.7
Montana	0.64	0.89	0.62	4.2	39.8
Nevada	1.09	1.31	-	3.2	16.9
Oregon	0.35	0.38	0.55	5.2	51.4
Utah	0.62	0.93	0.82	5.0	68.4
Washington	0.61	0.71	0.31	6.0	24.6
Wyoming	0.39	0.49	0.20	5.4	40.6

OTS Regions Seriously Delinquent Mortgages (%) Based on Thrift TFR Data by Location of Headquarters

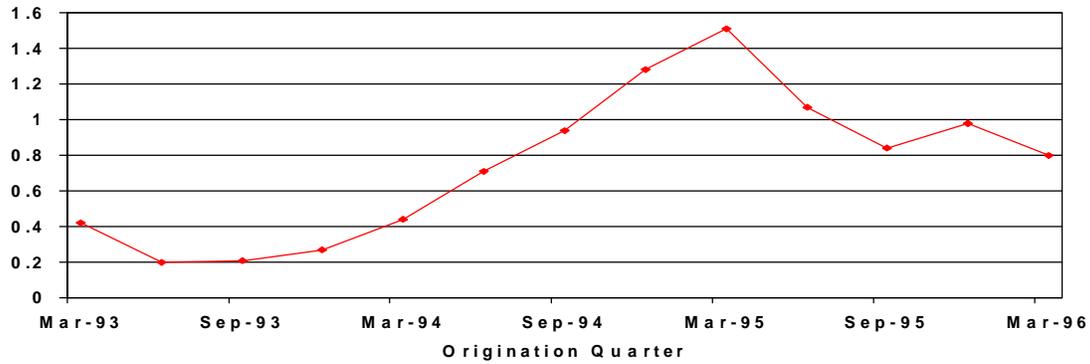


Percent Home Price Appreciation 1997Q1 to 1998Q1 (Source: OFHEO Resale Database)



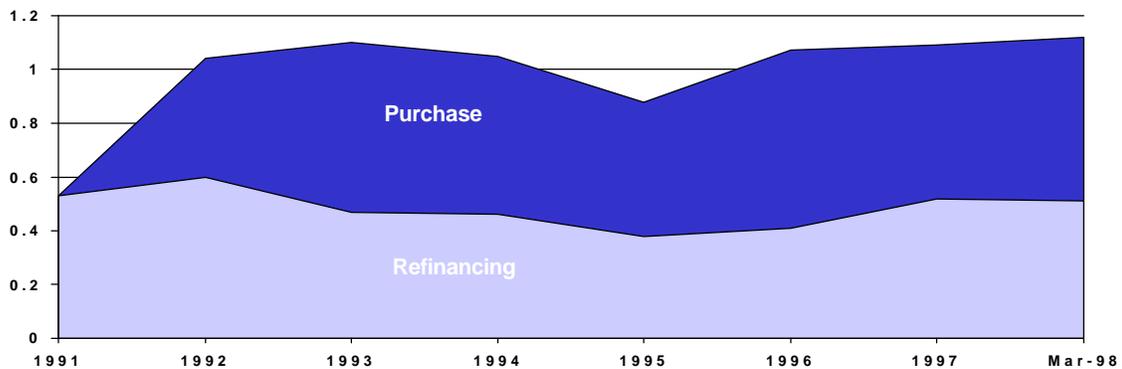
National Cohort Performance by Quarter of Origination

Percent Seriously Delinquent after 24 Months
(Source: MIC)



Home Purchase Vs. Refinancing Mortgages

(Source: MIC, Percent Seriously Delinquent)



Fixed Vs. Variable Rate Mortgages

(Source: MIC, Percent Seriously Delinquent)

