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*The average loan size and the average LTV of non-agency Alt-A loans have increased in the past few years, likely, as a result of agency competition.*

## **The Impact of GSEs on the Alternative-A Sector<sup>10</sup>**

The introduction of automated underwriting (AU) systems<sup>11</sup> has significantly increased the number of loans eligible for GSE purchase. One direction of the GSE's expansion has been the Alternative-A (Alt-A) sector. Because of generally better pricing and lower risk, some lenders prefer to sell eligible Alt-A loans to GSEs, instead of securitizing them through private-label conduits or keeping them in portfolios.

How does this development affect the composition and prepayments of non-agency Alt-A deals? We looked at a number of characteristics of non-agency Alt-A deals to find out if they have undergone any significant changes in the past few years. We found that the average loan size and the average LTV of Alt-A loans have significantly increased. These changes may be a manifestation of increased agency competition.

In our analysis we used the Alt-A deals issued by Residential Accredited Loan, Incorporated (RALI), a shelf registration of the Residential Funding Corporation (RFC) as a proxy for the entire Alt-A market. RALI, which entered the Alt-A securitization business in 1995, has been one of the most committed Alt-A issuers. It generally issues about 15 Alt-A deals per year. In addition, RFC uses the RALI shelf exclusively to securitize Alt-A loans. RALI deals generally do not contain (or contain very few) traditional prime jumbo loans.

### **Effect on the Volume of Non-Agency Alt-A Issuance**

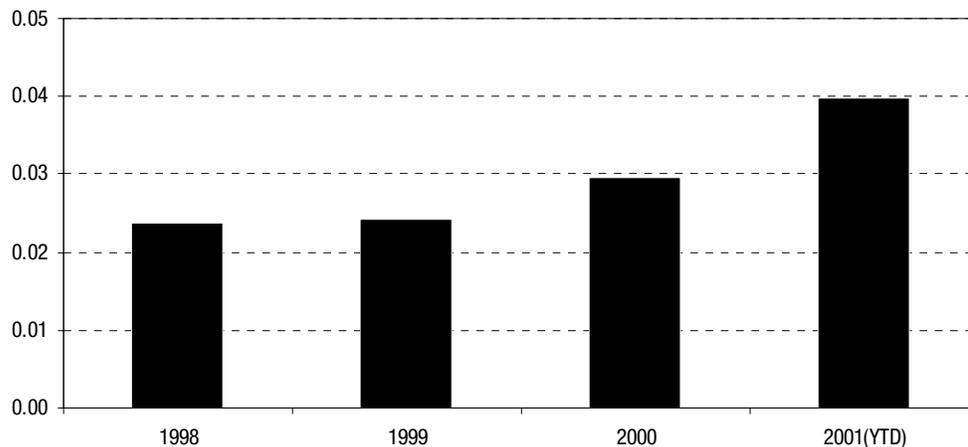
Despite perceptions to the contrary, non-agency Alt-A issuance has not declined, at least not as a percentage of the agency market. Figure 37 shows the ratio of non-agency Alt-A issuance to agency issuance.<sup>12</sup> The growth of the share of non-agency Alt-A issuance despite rising GSE involvement is probably a result of a combination of several factors. One possibility is that fewer unsecuritized Alt-A loans are being kept in private portfolios than in the past. Other explanations may be that the underwriting standards have expanded, or that the popularity of Alt-A mortgages has increased.

<sup>10</sup> The author would like to thank Robert Young for his help in writing this article.

<sup>11</sup> See "An Update on the Evolution of the Mortgage Origination Process," *Bond Market Roundup: Strategy*, June 1, 2001.

<sup>12</sup> Agency issuance includes Ginnie Mae.

**Figure 37. Ratio of Alt-A Issuance to Agency Market Issuance, 1998–2001YTD**

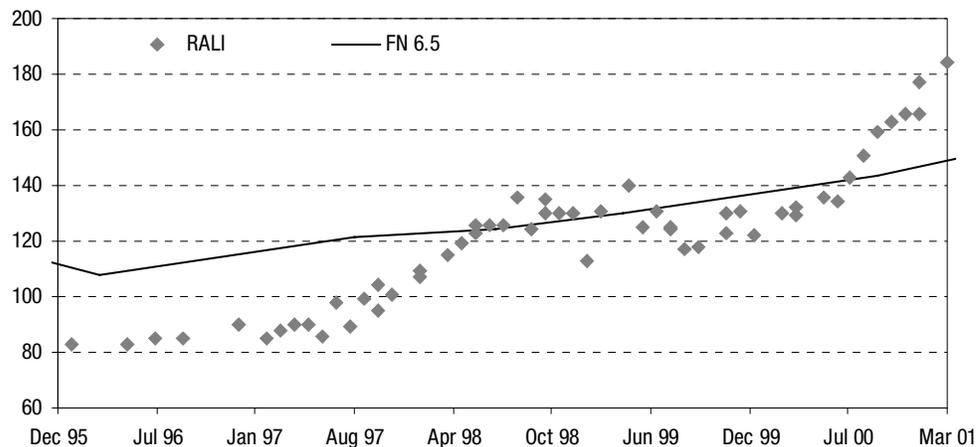


Sources: *Inside MBS & ABS* and Salomon Smith Barney.

**Effect on Average Loan Size**

Figure 38 shows the average size versus origination date for selected RALI deals.<sup>13</sup> As the figure shows, the average original loan size in RALI deals has increased by almost 125% since 1995. The average loan size for agency loans did not grow nearly that fast. By comparison, the average original loan size of Fannie Mae 6.5s increased by only about 30%.

**Figure 38. Selected RALI Deals — Average Original Loan Size, Aug 95–Jun 01**



Sources: Bloomberg and Salomon Smith Barney.

The GSEs’ involvement in the Alt-A market is the most likely reason for the large increase in the average loan size of Alt-A deals. Because loans with balances below the conforming limit (currently \$275,000) are often securitized through GSE channels, the fraction of jumbo loans in private-label Alt-A deals may grow. The data in Figure 39, which shows a percentage of jumbo Alt-A loans in selected RALI

<sup>13</sup> Average loan size is computed using loans that were outstanding in June 2001.

deals, support this conclusion.<sup>14</sup> Deals originated in 2001 clearly have a higher percentage of jumbo loans than those originated earlier.

**Figure 39. Selected RALI Deals — Percentage of Jumbo Loans**

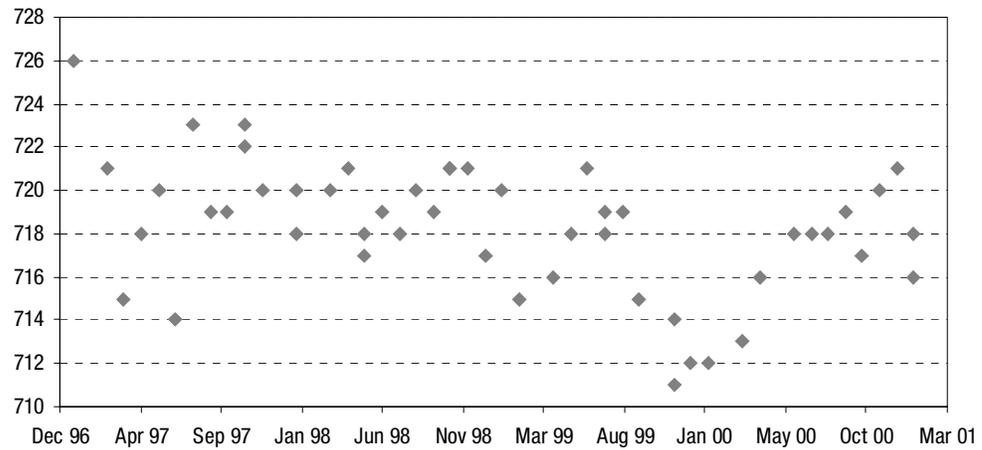
Deal	Jumbo Pct.	Deal	Jumbo Pct.	Deal	Jumbo Pct.
RALI99.QS1	26%	RALI00.QS1	32%	RALI01.QS1	43%
RALI99.QS6	31	RALI00.QS7	37	RALI01.QS2	45

Sources: Salomon Smith Barney and Bloomberg.

**Effect on Average FICO Score**

FICO scores of Alt-A deals have not declined significantly. Figure 40 shows average FICO scores versus origination dates for selected RALI deals.<sup>15</sup>

**Figure 40. Selected RALI Deals — FICO Scores, Dec 96–Mar 01**



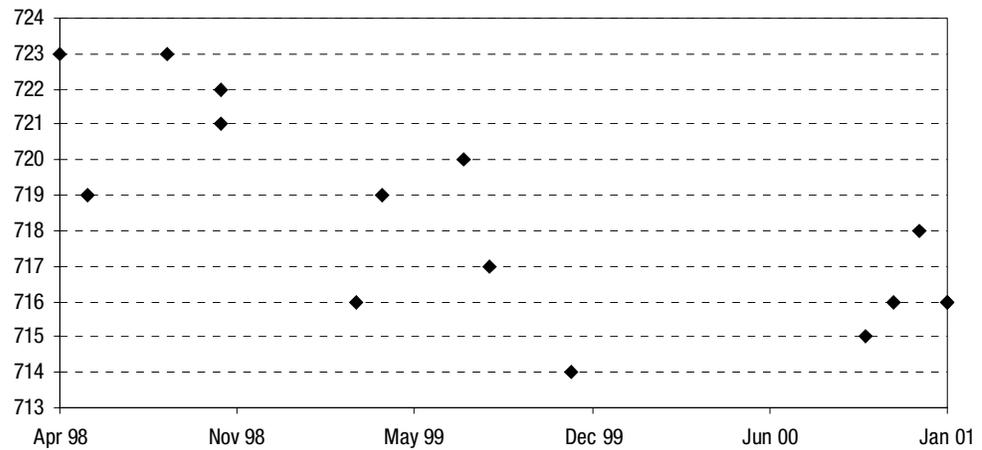
Source: Bloomberg.

Even though the scores seem to be drifting down a bit, the magnitude of the decline is quite small, about one point a year. Critics may argue that larger declines in FICO scores for loans that are below the conforming loan size limit have been concealed by a decline in the share of those loans. This may indeed be the case. However, even for conforming-balance Alt-A loans the decline in FICO scores does not seem significant. Figure 41 shows average FICO scores for conforming-balance collateral groups versus origination dates for selected RALI deals.

<sup>14</sup> In the calculation of the jumbo percentage we used only loans that were outstanding in July 2001. We also took into account changes in the conforming loan size limit, which was \$252,000 in 1999 and 2000 and \$275,000 in 2001.

<sup>15</sup> Average FICO score is computed using loans that were outstanding in June 2001.

**Figure 41. Selected RALI Deals — Weighted-Average FICO Score for Conforming-Balance Collateral Groups, Apr 98–Jan 01**

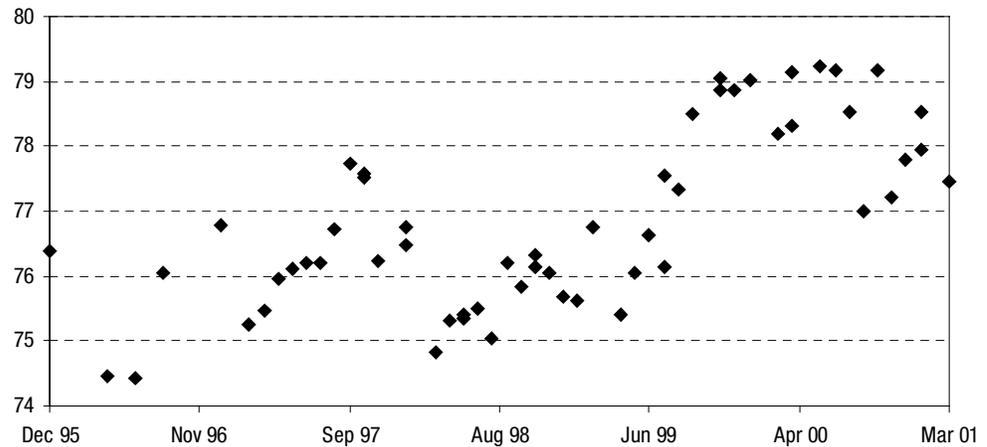


Source: Bloomberg.

**Effect on Average LTV**

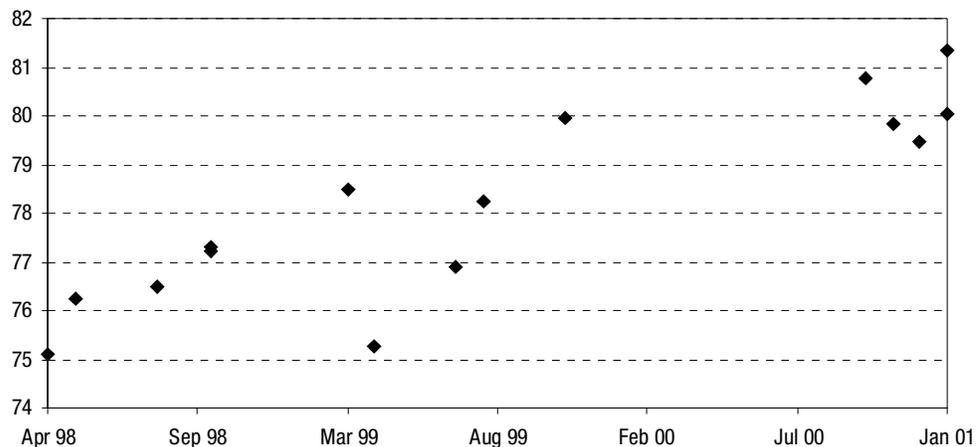
The average original LTV of Alt-A deals began to drift upward in the middle of 1999 (see Figure 42).<sup>16</sup> There could be several reasons for this development, and not all of them are necessarily related to GSE competition. For example, the increase could be a consequence of a smaller percentage of refinancers in non-agency Alt-A deals. However, it is also possible that conforming-balance Alt-A loans with low LTVs are more likely to be eligible for GSE securitization, and as a result, their fraction in non-agency Alt-A pools dwindles. The latter possibility is also supported by the fact that the increase in original LTVs for conforming-balance loans in Alt-A deals is somewhat more pronounced (see Figure 43).

**Figure 42. Selected RALI Deals — Average Original LTVs, Dec 95–Mar 01**



Sources: Salomon Smith Barney and Bloomberg.

<sup>16</sup> These data are in fact an approximation of the original LTVs. It is obtained from amortized LTV as of June 2001 by adjusting for amortization. This approximation does not consider, among other things, the original LTVs of loans that have prepaid.

**Figure 43. Selected RALI Deals — Original LTVs of Conforming-Balance Collateral Groups, Jan 98–Jun 01**

Sources: Bloomberg and Salomon Smith Barney.

### Prepayment Considerations

What is the effect of GSE involvement on non-agency Alt-A prepayments? While the prepayment consequences of the LTV increase and FICO score decline are unclear, the increase in the share of jumbo loans is likely to have a significant impact on non-agency Alt-A prepayments. Figure 44 shows ratios of recent speeds of conforming-balance RALI loans to jumbo RALI loans.<sup>17</sup>

The ratio pattern is similar to that of the agency-jumbo ratios:

- The jumbo Alt-A loans have lower turnover than conforming-balance Alt-A loans.
- The refinancing component of jumbo Alt-A prepayments is significantly stronger than that of conforming-balance Alt-A loans.

The increase in the fraction of jumbo Alt-A loans probably has led to some deterioration in non-agency Alt-A convexity characteristics. However, the loan size increase is only one of the factors influencing non-agency Alt-A prepayments and does not necessarily signify a reduction of the Alt-A convexity *advantage* over prime jumbos or agencies.<sup>18</sup>

<sup>17</sup> In this calculation jumbo loans are loans with balances above \$275,000 for all origination years.

<sup>18</sup> Convexity characteristics of prime jumbo and agency collateral might also have deteriorated. See “Jumbo Prepayment Commentary,” *Bond Market Roundup: Strategy*, June 22, 2001, and “Refinancing Efficiency Increased, But ...,” *Bond Market Roundup: Strategy*, May 18, 2001.

*From a prepayment perspective, the increase in the share of jumbo loans is probably the most important change in the non-agency Alt-A sector in recent years.*

**Figure 44. RALI Loans — Ratio of Speeds of Conforming Balance Alt-As to Jumbo Alt-As, as of Jul 01<sup>a</sup>**

Coupon	Orig. Yr.	3 Month	6 Month	1 Year	Jun	May	Apr	Mar	Feb	Jan	Dec
6.5	All	3.59	1.47	1.05	0.65	24.11	32.50	1.07	0.05	3.00	0.60
7.0	1999	1.84	1.75	1.64	1.69	1.47	2.64	3.09	1.80	0.43	0.72
7.0	1998	0.95	1.15	1.35	1.05	0.74	1.21	1.16	2.15	6.67	2.76
7.0	All	1.26	1.38	1.52	1.29	1.01	1.66	1.42	2.03	1.80	1.60
7.5	2001				0.56						
7.5	1999	1.12	0.97	0.86	0.97	1.16	1.32	0.69	1.27	0.63	0.37
7.5	1998	0.92	1.04	1.04	1.13	0.85	0.82	1.48	1.00	2.94	1.91
7.5	1997	2.25	1.74	1.27	1.44	3.36	2.78	0.89	45.33	0.71	0.30
7.5	All	1.08	1.08	1.01	1.25	1.00	1.00	1.07	1.15	1.10	0.86
8.0	2001	0.54			0.50	0.75	0.37	0.67			
8.0	2000	0.80	0.80	0.73	0.97	0.86	0.55	0.80	0.92	0.63	2.09
8.0	1999	0.63	0.70	0.77	0.58	0.59	0.75	0.99	1.03	0.66	0.65
8.0	1998	0.86	0.91	0.92	0.87	0.79	0.96	1.37	1.00	0.57	0.70
8.0	1997	0.93	1.05	1.11	1.31	0.85	0.76	2.83	1.13	0.87	1.86
8.0	All	0.78	0.82	0.87	0.80	0.75	0.78	1.07	0.94	0.67	0.86
8.5	2001	0.57			0.36	0.60	0.84	0.19			
8.5	2000	0.71	0.71	0.65	0.71	0.72	0.70	0.88	0.72	0.50	0.66
8.5	1999	0.70	0.77	0.74	0.67	0.68	0.76	0.83	0.89	2.51	0.71
8.5	1998	0.86	1.03	0.97	0.71	0.88	1.19	3.96	1.21	0.95	0.67
8.5	1997	0.78	0.78	0.81	0.70	1.33	0.57	1.15	0.54	1.07	20.00
8.5	All	0.68	0.71	0.72	0.66	0.68	0.68	0.84	0.73	0.87	0.85
9.0	2000	0.77	0.75	0.65	0.86	0.79	0.69	0.69	0.87	0.67	0.60
9.0	1999	0.97	0.81	0.73	2.00	1.19	0.56	0.66	0.45	1.07	2.66
9.0	All	0.74	0.70	0.64	0.99	0.75	0.60	0.62	0.67	0.65	0.68
9.5	2000	0.60	0.58	0.47	0.63	0.64	0.54	0.57	0.55	0.56	0.41
9.5	All	0.61	0.58	0.48	0.63	0.67	0.53	0.59	0.55	0.51	0.46

<sup>a</sup> We create Alt-A vintages by aggregating loans from different deals by origination year and 50bp coupon buckets. Thus, for example, 8.5s of 2000 refers to all 2000-originated loans with a coupon between 8.5% and 9% and 8s of 1999 are all 1999-originated loans with coupons between 8% and 8.5%. Source: Salomon Smith Barney.

**Figure 45. Selected Mortgage Sectors — Historical Total Returns, Jul 01 (Dollars in Millions)**

	Market Outstanding Jul (Mils.)	Total Return				Duration-Adjusted Return Advantage Over Treasuries <sup>a</sup>			
		1Q	2Q	Jul	YTD	1Q	2Q	Jul	YTD
Mortgage Index	<b>2,156,610</b>	<b>2.78%</b>	<b>0.87%</b>	<b>1.86%</b>	<b>5.60%</b>	<b>0.36%</b>	<b>0.44%</b>	<b>0.10%</b>	<b>0.93%</b>
Discount Issues	\$958,695	2.82%	0.30%	2.30%	5.51%	0.34%	0.36%	0.18%	0.91%
Premium Issues	1,197,916	2.73	1.10	1.51	5.43	0.34	0.51	0.04	0.91
30-Year Issues	\$1,827,154	2.76%	0.91%	1.85%	5.62%	0.38%	0.51%	0.04%	0.91%
15-Year Issues	329,457	2.85	0.60	1.92	5.45	0.26	0.03	0.33	0.64
GNMA Issues	\$483,724	2.69%	1.23%	1.81%	5.83%	0.33%	0.85%	0.33%	0.64%
Conventional Issues	836,644	2.81	0.76	1.88	5.53	0.37	0.32	0.12	0.83
New Issues	\$553,237	2.50%	1.19%	1.64%	5.42%	0.20%	0.46%	-0.09%	0.60%
Moderately-Seasoned Issues	970,639	2.84	0.72	2.01	5.66	0.42	0.49	0.12	1.07
Seasoned Issues	473,802	2.93	0.85	1.88	5.76	0.45	0.39	0.21	1.09
Super-Seasoned Issues	158,932	2.79	0.92	1.69	5.49	0.19	0.15	0.30	0.66
Agency Debt (Provided for Comparison)									
– Index	\$659,791	2.83%	0.10%	2.33%	5.33%	0.42%	0.33%	0.19%	0.97%
– 1–3 Yr	244,242	2.60	1.29	1.25	5.22	0.06	0.24	0.08	0.40
– 3–7 Yr	174,755	3.23	0.43	2.20	5.96	0.32	0.25	0.17	0.76
– 7–10 Yr	145,138	3.55	-0.87	3.26	5.98	1.08	0.46	0.45	2.05
– 10-plus Yr	95,655	1.46	-1.58	3.91	3.75	0.37	0.42	0.08	0.91
Change in Two-Year Treasury Yield						-0.92%	0.05%	-0.45%	-1.32%
Change in Ten-Year Treasury Yield						-0.19	0.48	-0.36	-0.07
Change in 1x10 Swaption Imp. Vol.						1.55	-1.70	1.10	0.95
Change in 5x10 Swaption Imp. Vol.						-0.35	-0.20	1.60	1.05

<sup>a</sup> Duration-adjusted return advantages were calculated by comparing the returns of pass-throughs to those of partial-duration-matched portfolios of on-the-run Treasuries. The Treasury portfolios were rebalanced monthly.

Source: Salomon Smith Barney.

Within the mortgage sector, trends that had persisted over previous months reversed. In contrast to their second-quarter performances, Ginnie Maes slightly underperformed conventionals, 30-year pass-throughs did worse than their 15-year counterparts, and premium-coupon mortgages lagged discounts. Rising implied volatility and a steeper curve were likely factors that contributed to weaker Ginnie Mae and 30-year pass-through performance. As an aside, we should mention that going forward Ginnie Maes are expected to perform well if they are, indeed, included in the Fed buyback program. Sectors with longer spread durations benefited from overall spread tightening. For example, discounts outpaced premiums by 14bp. Low mortgage rates and the possibility of further faster-than-expected refinancing-related prepayments seemed to have a significant impact on new issues. New issues constituted the only mortgage subsector with a negative duration-adjusted return advantage, -9bp. In comparison, seasoned and super-seasoned bonds outperformed (21bp and 30bp, respectively). These issues have recently prepaid closer to market expectations. Figure 46 shows the breakdown of MBS performance by program, coupon, and origination year.

**Figure 46. Selected Mortgage Securities — Historical Total Returns, Jul 01**

	Mkt. Value Outstanding Jul (Mils)	Historical Total Return				Duration-Adjusted Return Advantage Over Treasuries <sup>a</sup>			
		1Q	2Q	Jul	YTD	1Q	2Q	Jul	YTD
FNMA 30-Yr-6.0%-1999	\$31,011	2.60%	0.18%	2.43%	5.29%	0.17%	0.52%	0.07%	0.80%
FNMA 30-Yr-6.0%-1998	45,760	2.67	0.19	2.43	5.36	0.23	0.48	0.11	0.86
FNMA 30-Yr-6.0%-1993	2,862	2.63	-0.15	2.48	5.02	0.14	0.00	0.33	0.48
FNMA 30-Yr-6.5%-1999	\$62,193	2.90%	0.47%	2.22%	5.68%	0.46%	0.37%	0.14%	1.00%
FNMA 30-Yr-6.5%-1998	91,144	2.86	0.48	2.21	5.64	0.41	0.32	0.18	0.94
FNMA 30-Yr-6.5%-1993	15,700	3.02	0.32	2.32	5.75	0.52	0.10	0.38	1.03
FNMA 30-Yr-7.0%-2000	\$28,013	2.87%	0.90%	1.81%	5.68%	0.52%	0.41%	0.12%	1.07%
FNMA 30-Yr-7.0%-1998	30,315	2.85	0.89	1.85	5.69	0.44	0.38	0.16	1.00
FNMA 30-Yr-7.0%-1993	21,616	2.96	0.86	1.79%	5.69%	0.49	0.23	0.16%	0.92%
FNMA 30-Yr-7.5%-2000	\$55,620	2.37%	1.25%	1.29%	4.98%	0.09%	0.50%	-0.06%	0.54%
FNMA 30-Yr-7.5%-1997	13,029	2.61	1.34	1.33	5.38	0.26	0.51	0.00	0.80
FNMA 30-Yr-7.5%-1992	7,397	2.59	1.39	1.44	5.52	0.17	0.54	0.10	0.85
FNMA 30-Yr-8.0%-2000	\$28,534	2.47%	2.09%	0.98%	4.46%	0.20%	1.10%	-0.19%	0.07%
FNMA 30-Yr-8.0%-1997	2,994	2.79	1.61	1.02	5.52	0.42	0.74	-0.21	0.98
FNMA 30-Yr-8.0%-1992	6,555	3.05	1.60	1.04	5.78	0.62	0.69	-0.21	1.14
FNMA 30-Yr-8.5%-2000	\$6.645	2.53%	1.97%	0.28%	4.84%	0.34%	0.86%	-0.67%	0.52%
FNMA 30-Yr-8.5%-1992	2,061	3.73	2.35	0.31	6.50	1.26	1.46	-0.88	1.89
FNMA 30-Yr-9.0%-1991	\$1,309	4.26%	2.72%	0.32%	7.44%	1.74%	1.86%	-0.91%	2.77%
GNMA 30-Yr-6.0%-1999	\$9,420	2.82%	0.28%	2.57%	5.75%	0.47%	0.84%	0.03%	1.40%
GNMA 30-Yr-6.0%-1998	10,132	2.82	0.29	2.57	5.77	0.47	0.80	0.08	1.42
GNMA 30-Yr-6.0%-1993	1,411	2.79	0.17	2.55	5.59	0.36	0.53	0.27	1.20
GNMA 30-Yr-6.5%-1999	\$26,276	2.88%	0.62%	2.33%	5.94%	0.50%	0.70%	0.13%	1.38%
GNMA 30-Yr-6.5%-1998	31,543	2.91	0.66	2.32	5.99	0.52	0.70	0.16	1.44
GNMA 30-Yr-6.5%-1993	7,803	2.92	0.72	2.30	6.04	0.46	0.70	0.25	1.47
GNMA 30-Yr-7.0%-1999	\$19,437	2.93%	1.02%	2.00%	6.05%	0.57%	0.64%	0.20%	1.46%
GNMA 30-Yr-7.0%-1998	25,358	2.91	1.00	1.98	6.00	0.55	0.59	0.23	1.42
GNMA 30-Yr-7.0%-1993	17,031	2.93	1.07	1.98	6.08	0.50	0.64	0.24	1.44
GNMA 30-Yr-7.5%-2000	\$13,282	2.55%	1.56%	1.37%	5.58%	0.24%	0.95%	-0.12%	1.11%
GNMA 30-Yr-7.5%-1997	8,838	2.53	1.68	1.37	5.68	0.20	1.01	-0.05	1.20
GNMA 30-Yr-7.5%-1993	8,911	2.72	1.66	1.35	5.84	0.33	0.97	-0.07	1.28
GNMA 30-Yr-8.0%-2000	\$18,105	2.13%	1.56%	1.08%	4.84%	-0.15%	0.84%	-0.25%	0.45%
GNMA 30-Yr-8.0%-1997	4,638	2.49	1.95	1.16	5.69	0.13	1.32	-0.25	1.24
GNMA 30-Yr-8.0%-1992	4,797	2.71	2.08	1.36	6.27	0.31	1.30	0.06	1.74
GNMA 30-Yr-8.0%-1987	2,723	2.73	1.93	1.50	6.29	0.23	1.37	0.00	1.67
GNMA 30-Yr-8.5%-2000	\$6,100	1.99%	1.90%	0.72%	4.67%	-0.19%	0.92%	-0.30%	0.44%
GNMA 30-Yr-8.5%-1997	753	2.41	2.55	0.80	5.86	0.02	1.93	-0.58	1.42
GNMA 30-Yr-8.5%-1992	1,069	2.62	2.50	0.83	6.06	0.19	1.76	-0.46	1.54
GNMA 30-Yr-8.5%-1987	1,490	2.71	2.47	1.04	6.34	0.21	1.86	-0.38	1.75
GNMA 30-Yr-9.0%-2000	\$1,416	2.05%	1.97%	0.56%	4.64%	-0.17%	0.89%	-0.41%	0.31%
GNMA 30-Yr-9.0%-1991	1,299	2.79	3.16	0.69	6.77	0.32	2.39	-0.56	2.22
GNMA 30-Yr-9.0%-1986	3,416	2.76	2.84	0.47	6.18	0.25	2.06	-0.83	1.53
FNMA 15-Yr-5.5%-1999	\$6,612	2.59%	-0.01%	2.41%	5.05%	-0.06%	0.05%	0.43%	0.44%
FNMA 15-Yr-5.5%-1998	8,881	2.68	0.00	2.66	5.41	0.03	0.02	0.72	0.79
FNMA 15-Yr-6.0%-1999	\$15,040	2.94%	0.23%	2.15%	5.40%	0.32%	0.02%	0.32%	0.69%
FNMA 15-Yr-6.0%-1998	22,215	3.03	0.23	2.32	5.67	0.40	-0.06	0.55	0.92
FNMA 15-Yr-6.0%-1993	6,254	2.62	0.22	2.35	5.26	-0.07	-0.44	0.94	0.44
FNMA 15-Yr-6.5%-1999	\$7,540	3.03%	0.66%	1.86%	5.64%	0.47%	0.13%	0.25%	0.87%
FNMA 15-Yr-6.5%-1998	13,189	3.09	0.64	1.92	5.74	0.51	0.07	0.35	0.96
FNMA 15-Yr-6.5%-1993	8,302	2.89	0.59	1.79	5.34	0.22	-0.19	0.46	0.50
FNMA 15-Yr-7.0%-2000	\$5,641	2.82%	1.05%	1.45%	5.41%	0.35%	0.19%	0.10%	0.65%
FNMA 15-Yr-7.0%-1997	3,381	2.80	1.07	1.44	5.39	0.30	0.15	0.14	0.61
FNMA 15-Yr-7.0%-1992	3,518	2.75	1.02	1.41	4.87	0.13	0.10	0.20	0.45
FNMA 15-Yr-7.5%-2000	\$5,449	2.43%	1.26%	1.11%	4.87%	0.05%	0.10%	0.05%	0.21%
FNMA 15-Yr-7.5%-1997	919	2.48	1.40	1.17	5.12	0.01	0.43	-0.04	0.41
FNMA 15-Yr-7.5%-1992	2,680	2.60	1.39	1.13	5.20	0.01	0.38	0.00	0.40
GNMA 15-Yr-6.5%-1998	\$1,312	3.08%	0.56%	1.77%	5.49%	0.50%	0.16%	0.08%	0.76%
GNMA 15-Yr-6.5%-1993	1,557	2.92	0.48	1.72	5.19	0.22	-0.19	0.31	0.34

<sup>a</sup> Duration-adjusted return advantages were calculated by comparing the returns of pass-throughs to those of partial-duration-matched portfolios of on-the-run Treasuries. The Treasury portfolios were rebalanced monthly. Source: Salomon Smith Barney.