

**Residential Mortgage  
Special Report****Option ARMs: It's Later Than It  
Seems****Analysts**

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**Related Research**

- *Option ARM Risks and Criteria*, Oct. 4, 2006
- *40-, 45-, and 50-Year Mortgages: Option ARMs, Hybrid ARMs, and FRMs*, Oct. 4, 2006
- *Basis Risk In U.S. RMBS Transactions: MTA Versus USD LIBOR*, Feb. 23, 2007
- *Drivers of 2006–2007 Alt-A Collateral Performance*, May 7, 2008

**Summary**

Pay-option adjustable-rate mortgages, better known as option ARMs, face dramatically increasing defaults in the coming year and beyond. Option ARMs allow the borrower to make a low monthly minimum payment, typically for five years. The difference between this minimum payment and the full payment is added to the mortgage balance. At the five-year mark, the loan terms recast and the mortgage payment is increased to ensure full amortization of the loan by maturity. The payment increase could potentially be very high, depending on interest rates and the terms of the loan. While the large volume of option ARMs originated in the past few years are still only one to three years old, another feature of these loans, the negative amortization (NegAm) cap, can cause recast to occur much earlier. The NegAm cap is reached when the balance of the mortgage grows by more than a certain percentage, typically 110%–125% of the original balance. Of the \$200 billion of option ARMs outstanding, Fitch Ratings expects roughly \$29 billion to recast by the end of 2009 and an additional \$67 billion to recast in 2010. The potential average payment increase on this recasting population is 63%, representing on average an additional \$1,053 due each month on top of the current average payment of \$1,672. Data suggest that these large payment increases could cause delinquencies to more than double after recast. When combined with the continued deteriorating outlook for home prices and lack of refinancing opportunities, this payment shock represents a significant cause for concern for investors in option ARM RMBS.

Although recent declines in the 12-month Treasury average (MTA), which is the index used for calculating interest for most option ARMs, have partially mitigated some risks, a large number of outstanding option ARMs will still reach their recasts before the end of the five-year period following origination. While recent vintage option ARMs are not expected to hit the NegAm balance caps before the five-year recast, many of the 2005 and 2006 vintage loans, especially those with 40-year amortization terms and 110% balance cap limits, are expected to recast beginning in the second half of 2008.

The combined impact of negative amortization, declining home prices, and restricted availability of mortgage credit may leave many option ARM borrowers unable to afford their homes. Moreover, increased defaults are likely to exert more downward pressure on home prices. Also, because of their use as an affordability product, particularly the 40-year term loans, option ARM defaults are likely to spread into higher priced neighborhoods, as many borrowers leveraged the very low minimum monthly payment (MMP) to buy more expensive homes.

Fitch's rating criteria and base case loss expectations have for several years reflected the substantial risk of a large payment shock associated with the option ARM product. Fitch has always analyzed option ARM loans as an Alt-A product even though they were being widely marketed as prime. Fitch also accounted for the higher likelihood of default and loss due to the negative amortization feature. Hence, Fitch's base case or 'B' loss expectation for option ARM pools was often higher than deals' credit enhancements as a result of its more stringent assumptions and view of the product's risks. As a result, Fitch only rated approximately 5% of option ARM RMBS since 2004.

## Background

Option ARMs have been offered to borrowers since the 1980s, but they have become more common during the recent years of increasing home price appreciation and offer much more generous terms than what was historically available. According to data from LoanPerformance, option ARMs as a percentage of total ARM loan volume in nonsubprime, non-agency securitizations rose from 12% in 2004 to 32% in 2005 and 42% in 2006 before leveling off at 40% in 2007.

Over the same period, there was a significant expansion in 40-year term option ARM originations. In 2004, 40-year products accounted for only 4% of the option ARM volume; by 2007, this number had grown to 38%. Longer term loans gained popularity because their lower initial payments facilitated affordability among first-time homebuyers, provided a low-cost refinancing option, and offered borrowers an alternative to other affordability products available at the time. Another product that emerged over the past two years was hybrid option ARMs. Hybrid option ARMs combine the features of traditional option ARMs with hybrid ARMs and have accounted for only 10% of the overall option ARM originations. Hybrid option ARMs generally have higher minimum interest rate and/or monthly payment that is fixed for a period of time, making it a safer alternative to regular option ARMs.

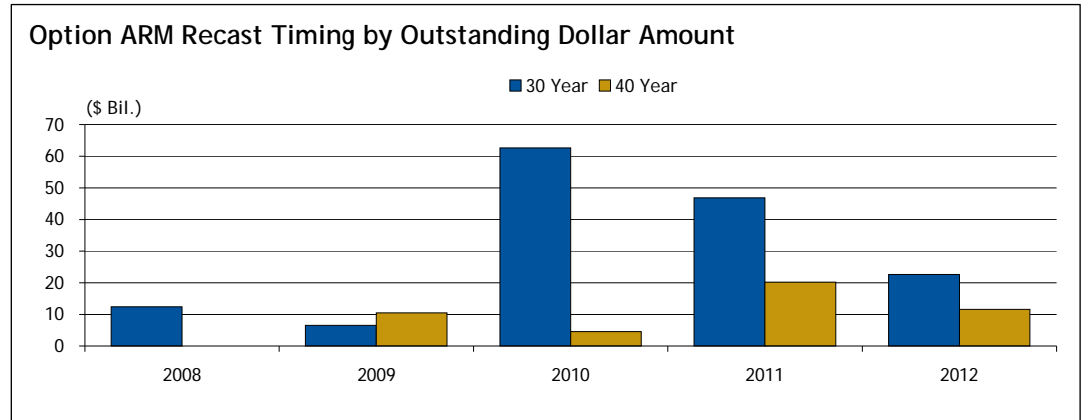
In June 2005, Fitch released its rating criteria for option ARMs and identified certain features that determined the amount and timing of when the loan would recast into a fully amortizing ARM. Fitch had observed that the index and initial teaser rate affected the magnitude of the payment increase and the likelihood of reaching the balance cap limit. The balance cap limit determined the timing of an early recast. Fitch also analyzed the impact of the 40-year term for option ARMs in a special report on 40-year mortgage products. The report highlighted the risk of early recast and larger payment increases associated with the longer loan term. *(For more information, see Fitch Research on "Option ARM Risks and Criteria," updated on Oct. 4, 2006, and "40-, 45-, and 50-Year Mortgages: Option ARMs, Hybrid ARMs, and FRMs," dated Oct. 4, 2006, available on Fitch's web site at [www.fitchratings.com](http://www.fitchratings.com)).*

Recently, Fitch examined the product features of option ARMs originated in 2004–2007 to determine which vintages were likely to recast before the five-year anniversary and the size of the payment increase. Given that more than 90% of the loan volume for each of the vintages was made up of loans indexed to MTA, Fitch studied only those loans indexed to MTA and applied the monthly movements in MTA between 2004 and the current age to simulate an average loan's monthly payment and negative amortization schedule. Fitch projected future movements in MTA using its base case interest rate stress assumptions.

Of the \$200 billion of option ARMs outstanding, Fitch expects approximately \$29 billion (or 16% of the total outstanding) to recast by the end of 2009. Of that amount, \$6.6 billion consists of 2004 vintage collateral that will recast at the five-year anniversary in 2009 and \$23 billion consists of 2005 and 2006 collateral that will recast early due to the 110% balance cap limit or the 40-year term. Fitch believes that roughly \$2.7 billion of option ARMs have already hit their recast due to the combination of a 110% balance cap and 40-year term. In 2010, Fitch anticipates that about \$67 billion of loans will recast, \$37 billion of which are 2005 option ARMs that will reach their five-year anniversary and the remaining consisting of 2006 and 2007 loans that will recast early due to the 110% balance limit cap. Absent any sharp, sustained increases in MTA, the majority of loans with higher percentage balance caps and approximately 91% of the 2007 option ARMs are not expected to recast before the end of their five-year period following origination *(see chart, page 3)*.

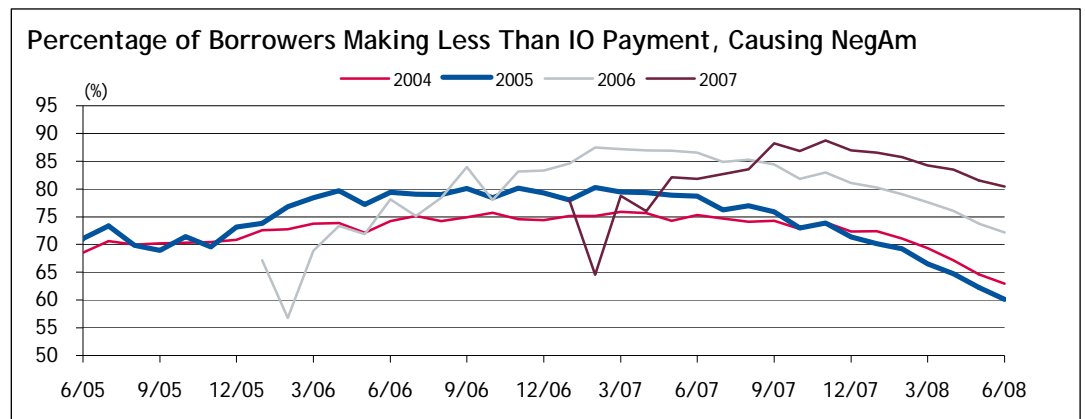
The modest rise and subsequent decline in MTA since 2004 slowed the pace of negative amortization and limited the amount of loans recasting early. Fitch expects early recasts to occur for about \$53 billion of the outstanding collateral. The low rate environment also mitigates the size of the payment increase borrowers will face at recast for the

option ARMs with 30-year terms, which Fitch estimates to be about \$700–\$1,400, or about 58% higher on average. In contrast, the payment increase for the 40-year loans is expected to range from \$1,300–\$2,200, approximately 102% higher on average than the MMP. While many guidelines called for the fully indexed principal and interest payment to be used for qualifying the borrower, many loans were underwritten to a stated income program, raising doubt as to the borrowers' ability to repay the recast amount.



## Option ARM Repayment Features

Option ARM borrowers typically have four payment options to choose from on a monthly basis: MMP, an interest-only payment; a 30- or 40-year fully amortizing principal and interest (P&I) amount; or a 15-year P&I payment. Under the terms of the note, the borrower is only obligated to make the MMP. Each year, the MMP is adjusted to a fully indexed payment; however, the annual payment increase is capped at 7.5% of the prior year's MMP amount. According to data from LoanPerformance, the percentage of borrowers who have elected to make an MMP over the past 24 months has been well above 65% and reaching greater than 85% for 2006 and 2007 vintages. The chart below shows the percentage of option ARM borrowers and the period over which they are negatively amortizing. Additionally, data suggest higher NegAm rates for the 40-year loan cohort, as they are a more adversely selected group and therefore likely to recast earlier. *(For more information on payment options, negative amortization features, and risk factors, see Fitch Research on "Option ARM Risks and Criteria," dated Oct. 4, 2006, available on Fitch's web site at [www.fitchratings.com](http://www.fitchratings.com).)*



The loan is recast every five years; the MMP is computed at the current fully indexed interest rate and a principal amount sufficient to amortize the loan over the remaining term. The loan may be recast earlier than the fifth anniversary if the balance cap limit is reached. When the loan is recast either at the five-year anniversary or when the balance cap is reached, the MMP is not subject to the 7.5% payment cap. The current value of the property and current combined loan-to-value ratio has no impact on the option ARM recast; the principal balance growth is a function of the initial teaser rate, index, balance cap limit, loan term, and interest rate movements, as well as the borrower's payment choice.

The balance cap limits are generally equal to 110%, 115%, or 125% of the original loan amount. The table below shows the distribution by balance cap, payment increase, and estimated time to recast by vintage year for outstanding 30-year option ARM collateral.

### 30-Year Term Products

Vintage	Cap (%)	Original Balance (\$ Mil.)	Outstanding Balance (\$ Mil.)	WA Teaser (%)	WA Margin (%)	Average Loan Balance (\$)	Estimated Months to Recast	Estimated Payment Shock	
								(%)	(\$)
2004	110	9,919	1,712	1.34	3.02	304,700	13	51.5	707
	115	7,497	1,661	1.47	2.69	333,761	5	40.9	626
	125	12,912	3,149	1.42	2.52	483,716	12	38.4	846
2005	110	29,703	12,411	1.25	3.10	340,677	3	56.8	801
	115	66,573	27,974	1.25	3.00	362,257	24	61.5	991
	125	22,477	8,031	1.27	2.42	550,238	22	47.4	1,164
2006	110	38,290	26,600	1.59	3.23	381,832	28	58.1	1,036
	115	61,858	42,498	1.93	3.31	375,892	34	60.5	1,112
	125	7,284	4,384	1.53	3.05	418,953	34	65.7	1,273
2007	110	6,990	5,938	1.79	3.25	423,731	43	67.0	1,362
	115	18,557	15,100	2.59	3.30	398,684	43	46.8	996
	125	1,829	1,542	1.36	3.62	358,703	43	90.1	1,460

The table below shows the recast and payment increase by loan balance cap and vintage for 40-year option ARMs. Based on an earlier analysis by Fitch, 40-year option ARMs incur higher payment increases and reach the NegAm cap sooner than 30-year option ARMs, all else being equal. The 40-year option ARMs have similarly low teaser rates, but they have lower initial payments relative to the 30-year option ARMs due to the longer amortization term. This "double-teaser" feature of 40-year option ARMs exposes the borrower to more payment shock risk and faster negative amortization.

### 40-Year Term Products

Vintage	Cap (%)	Original Balance (\$ Mil.)	Outstanding Balance (\$ Mil.)	WA Teaser (%)	WA Margin (%)	Average Loan Balance (\$)	Estimated Months to Recast	Estimated Payment Shock	
								(%)	(\$)
2004	110	724	146	1.45	3.20	370,377	(10) <sup>a</sup>	147.7	1,867
	115	3	2	1.13	3.25	347,880	1	138.4	1,550
	125	564	141	1.89	2.55	528,641	13	65.3	1,369
2005	110	5,671	2,598	1.35	3.27	390,354	(8) <sup>a</sup>	166.2	2,021
	115	889	551	1.18	3.26	359,141	10	110.6	1,290
	125	2,534	1,215	1.54	2.55	565,982	24	87.4	1,844
2006	110	13,121	9,791	1.78	3.22	427,796	8	92.7	1,335
	115	19,128	14,696	2.34	3.39	417,170	36	91.2	1,631
	125	7,722	5,527	1.48	3.25	436,353	36	124.5	2,006
2007	110	3,709	3,288	1.77	3.29	461,878	27	107.4	1,791
	115	9,383	8,443	2.76	3.35	441,057	44	78.9	1,600
	125	3,534	3,145	1.40	3.80	395,791	43	153.8	2,212

<sup>a</sup>Parentheses indicate months in the past.

## Performance Expectations

Similar to other Alt-A loans, option ARMs have a large percentage of loans underwritten to stated income documentation. Only 17% of the loans from 2004–2007 vintages were underwritten with full documentation. Additionally, many option ARMs from 2005–2007 vintages were originated with simultaneous second liens, demonstrating low or non-existent borrower equity in the homes. The two tables below offer a current performance snapshot of outstanding securitized option ARMs originated since 2004, broken out by 30- and 40-year amortization terms.

### Delinquency Status of Outstanding Option ARMs from LoanPerformance — 30-Year Term

(%)

Vintage	% of Vintage Outstanding	C	30 Days	60 Days	90+ Days	F	R	Total 90+ Days/F/R
2004	21.4	84.3	4.4	2.1	3.1	4.3	1.7	9.1
2005	40.7	76.7	4.9	3.1	5.7	6.8	2.8	15.3
2006	68.3	71.6	5.9	3.7	6.6	8.6	3.6	18.8
2007	82.3	78.1	5.6	3.2	4.7	6.6	1.8	13.1

C – Current. F – Foreclosure. R – Real estate owned. Note: Numbers may not add due to rounding.

### Delinquency Status of Outstanding Option ARMs from LoanPerformance — 40-Year Term

(%)

Vintage	% of Vintage Outstanding	C	30 Days	60 Days	90+ Days	F	R	Total 90+ Days/F/R
2004	22.2	75.9	3.0	2.6	6.8	8.0	3.6	18.5
2005	47.9	67.4	5.1	3.7	8.7	11.1	4.1	23.8
2006	75.0	74.8	5.3	3.5	5.7	7.6	3.2	16.4
2007	89.3	81.8	4.7	2.8	3.5	5.7	1.5	10.7

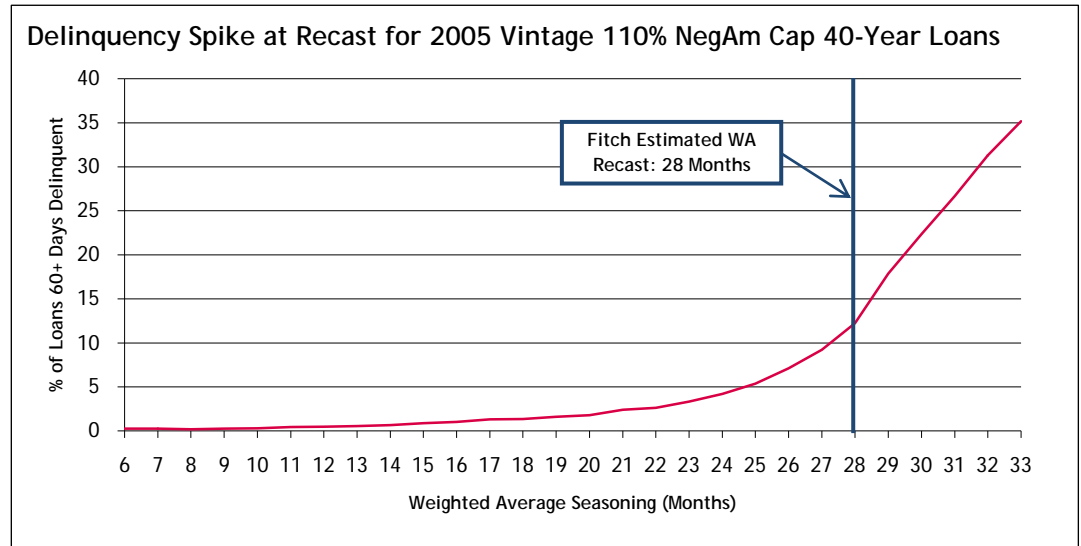
C – Current. F – Foreclosure. R – Real estate owned. Note: Numbers may not add due to rounding.

The high delinquency rates are primarily attributable to the high risk layering of collateral, together with a steep decline in home prices and the recent sharp contraction in the non-agency mortgage origination and securitization markets, making it very difficult for a borrower to refinance. The current severe environment has left borrowers with few alternatives to foreclosure. Fitch considers this to be significant cause for concern, given the difficulties of refinancing in the current marketplace and the magnitude of the potential payment shocks. Borrowers who used the low MMP option to extend themselves into larger houses could easily be overwhelmed by the higher mortgage costs. While the high observed delinquency and default rates before recast are likely due to the high risk attributes associated with the simultaneous second liens and stated income underwriting, Fitch anticipates performance to deteriorate further as the 2004 and 2005 vintages begin to recast over the next 18 months and borrowers are faced with a sizable payment increase. Data suggest that this will likely cause delinquencies to more than double after recast. This is most evidenced by the performance trends exhibited by loans that have recently recast into the fully indexed P&I payment. Fitch's expected losses for recent vintages range from the upper teens to mid-20s, depending on the collateral quality of the underlying loans.

Based on an analysis of the 2005 40-year option ARM collateral, Fitch estimates that those loans with a 110% balance cap limit recast 28 months after origination. The 60-day-or-more delinquency trends of the cohort corroborates Fitch's estimate, as shown in the chart on page 6. As the loans approach the 28-month seasoning mark, delinquencies begin

to rise, and they sharply increase thereafter. Given the large payment increase faced by these borrowers and the lack of refinancing options, Fitch expects the remaining option ARM collateral to exhibit the same performance trends at recast.

Since the recast estimate is based on weighted averages, loans may recast sooner or later, depending on the teaser rate and margins. Also, while the payment shock for this cohort is estimated to be 166%, Fitch believes that borrowers faced with just a 50% payment increase are at a similar risk of default.



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