Teaser Rates on Interest-Only ARMs: Behavioral Implications \& Price Revelation
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## Appropriate Customers for I-O and Option ARMs

- Corporate executive who expects to be transferred and thus sell her home during initial period
- Law student who will start a high-paying job in a few months
- Entrepreneur with irregular and sometimes large income streams (for Option ARMs)
NOTE: Relative affluence and sophistication


## Average Features of 5/25 Subprime I-O ARMs Originated in 2005

From Fitch Ratings:

Initial rate:
Margin:
5.72\%
2.8\% above 6-month LIBOR
Initial rate cap: $\quad$ 4.73\%
Periodic rate cap:
1.76\%

Lifetime rate cap:
11.11\%

## Payment Shock Potential on a \$350,000 I-O 5/25 ARM, Initial Rate=6.00\%

- Use other Fitch assumptions and assume 6 -month LIBOR in month $61=5.28 \%$ [same as today's rate]
- Monthly payments:

Months 1-60 (based on 6\% rate):
\$1,750.00
Month 61 (rate rises to 8.08\%):
Result: increase of $\$ 969.93$ or $55.42 \%$
Maximum payment (11.11\% lifetime cap):
\$2,719.93

Result: Almost twice initial payment

## Why This Payment Shock Projection

 Is Probably Too Low- It assumes that LIBOR will not rise in the next 5 years (unlikely)
- If the loan were an Option ARM, any negative amortization would boost payments further (and possibly before initial period ends if borrower hits negative amortization cap early)
- These assumptions are based on averages: teaser rates can go lower (and often do on Option ARMs)

FIGURE 6
Number of Adjustable-Rate First Mortgages
Originated in 2004 and 2005, by Initial Interest Rate


## TABLE 11

## Equity Group Percentages

Homes with First Mortgages Originated in 2004-2005 Initial Interest Rate 1.0\% to 2.5\%

| Below $-20 \%$ | $5.2 \%$ |
| :--- | :---: |
| Below $-15 \%$ | $7.3 \%$ |
| Below $-10 \%$ | $10.5 \%$ |
| Below $-5 \%$ | $15.1 \%$ |
| Below $0 \%$ | $21.5 \%\rangle$ |
| Below $5 \%$ | $30.0 \%$ |
| Below $10 \%$ | $40.1 \%$ |
| Below 15\% | $51.3 \%$ |
| Below $20 \%$ | $62.3 \%$ |
| Below $25 \%$ | $72.2 \%$ |
| Below 30\% | $80.4 \%$ |

(Refinancing options: Monthly payment savings at prevailing rates (assuming $\$ 500,000$ loan size)

|  | $\begin{aligned} & 30 \text {-year } \\ & \text { FRM } \\ & \text { at } 5.8 \% \end{aligned}$ | $\begin{gathered} 3 / 1 \\ \text { hybrid } \\ \text { at } 5.02 \% \end{gathered}$ | $3 / 1$ <br> hybrid <br> at 5.17\% | $5 / 1$ <br> hybrid 10 at 5.3\% | $3 / 1$ <br> hybrid 10 <br> at $5.15 \%$ | MTA teaser ARM at 1.5\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Current loan | \$ | \$ | \$ | \$ | \$ | \$ |
| Average 30-year loan Outstanding WAC $=6.00$ | 64 | 308 | 262 | 792 | 854 | 1,272 |
| Average $5 / 1$ hybrid Outstanding WAC $=4.78$ | (317) | (73) | (119) | 411 | 474 | 892 |
| Average $3 / 1$ hybrid Outstanding WAC $=4.21$ | (486) | (242) | (288) | 242 | 304 | 722 |
| Average 5/1 hybrid IO Outstanding WAC $=4.82$ | (925) | (682) | (728) | (198) | (135) | $282$ |
| Average $3 / 1$ hybrid IO Outstanding WAC $=4.62$ | $(1,009)$ | (765) | (811) | (281) | (219) | 200 |

MTA: 12-month Treasury average.
Source: Bear Stearns.

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## Fitch Ratings 2005

" $[\mathrm{M}]$ ost lenders qualify the IO borrower at the smaller IO payment. . . .
"If an IO borrower's DTI [debt-to-income ratio] only reflects the small IO payment, when the monthly payment increases so does the DTI. If the DTIs increase above those ratios required to qualify for a specific loan size, the IO borrower could become financially strapped once the fixed-rate period ends."

## Analysis of Teaser-Rate Loans by

First Amer. Real Estate Solutions/Loan Performance
"The red loans [with initial rates of $0-4 \%$ ] are the most likely to default, since these are the loans where the borrowers are the most extended, face the sharpest reset sensitivity, and have been making artificially low teaser payments hence these people are the most likely to simply abandon their properties and their loans. In the cautious scenario presented here, it is assumed that 90 percent of these loans that have equity difficulty go into default."

FIGURE 6
Number of Adjustable-Rate First Mortgages
Originated in 2004 and 2005, by Initial Interest Rate


## Loss Aversion

## Certain loss now (fixed-rate)

Higher payments now

Gain now; future risk (I-O)
vs. Lower payments now; possible higher future payments

## Hyperbolic Discounting



## Framing

Is the glass . . .


$$
\begin{gathered}
\text { half-full (a gain)? } \\
\text { - or - }
\end{gathered}
$$

half-empty (a loss)?

## Save Thousands of Dollars With a NEG AM Loan

How can I save you thousands of dollars? By lowering your interest rate to:

## $1.25 \%$ RATE WITH 40 YEAR AMORTIZATION

The following chart illustrates the possible savings with this type of loan:

| NEG AM Loan |  | $\mathbf{1 . 2 5 \%}$ | Interest Rate |
| :--- | :--- | :--- | :--- |
| Interest Rate | $\$ 500,000$ | Loan Amount | $\$ 500,000$ |
| Loan Amount | 40 Years | Amortization | 30 Years |
| Amortization | $\$ 1,324$ | Monthly Payment | $\$ 2,997$ |
| Monthly Payment |  |  |  |


| Savings Per Month | $\$ 1,673$ |
| :--- | :--- |
| Savings Per Year | $\$ 20,076$ |

Benefits of a Negative Amortization Loan

- Increased savings and cash flow because of the low monthly payment.
- Easier to get loan approval.
- Qualify for a bigger and better home.
- Choice of 3 payment options each month.
- Reduced doc option (Stated Income).
- A Credit NOT required to qualify.
- Low rateS ( $0.50 \%, 1.0 \%$ or $1.25 \%$ ).
- Pay no points for a purchase and pay nothing for a refinance.
(See Benefits of a NEG AM Loan Page for more detailed information).


## Do You Qualify?

As long as you have a FICO score of 620 or above, you can qualify for a NEG AM loan. A Credit is considered 680 or better. If you have a FIC 620 I do have some Neg Am Loans for you. Please see the Low FICO Score Page. The link is in the Navigation Box to the left.

NEG AM Loans are available for:

- Purchases or Refinances
- Single Family Residences, Condos, Town Homes and Multi-Units
- Owner and Non-Owner Occupied Properties
- Foreign Nationals
- All states including Alaska and Hawaii


## 1 MONTH PAYMENT OPTION ARM (1 MONTH LIBOR INDEX) MORTGAGE PROGRAM DISCLOSURE

This payment option adjustable rate mortgage program disclosure describes the features of the payment option adjustable rate mortgage (ARM) program you are considering. The interest rate and payment amount of your loan are subject to change. Monthly payments may not be enough to cover the interest due, and any difference will be added to your principal balance. Therefore, the principal amount to repay the loan could be greater than the amount originally borrowed. This is known as negative amortization. The loan will have a term of 30 years. Information on other ARM programs is available upon request.

This disclosure is not a contract or commitment to lend. Only your promissory note, security instrument, and other documents will establish your rights under the loan. This disclosure addresses how you will repay the principal and interest on your loan. It does not address any other payments that may be required under the terms of your loan, for example, monthly escrow payments.

## How Your Interest Rate is Calculated

1. Index. The "Index" is the average of interbank offered rates for one month U.S. dollardenominated deposits in the London market ("LIBOR") as published in The Wall Street Journal. The most recent Index figure available as of the first business day of the month immediately preceding the month in which your Interest Rate could change is called the "Current Index." If the Index is no longer available, we will choose a new Index that is based upon comparable information. We will give you notice of this choice.
2. Margin. The "Margin" is the amount added to the Current Index to establish your interest rate. It is expressed in percentage points. Ask us about our current Margin.
3. Interest Rate. Starting with the first interest rate adjustment on your loan, the "Interest Rate" (the interest rate applicable to your loan) will be calculated by adding the Current Index to the Margin. We will then round the result of this addition to the nearest oneeighth of one percentage point ( $0.125 \%$ ). This rounded amount will be your new Interest Rate until the next date on which your Interest Rate could change. Your Initial Interest Rate will be established and disclosed to you prior to closing. Ask us for our current interest rate.

## Your Interest Rate May Be Different

Your "Initial Interest Rate" (the Interest Rate applicable to your loan until the first interest rate adjustment) will be established by us based on market conditions and, as a result, is not necessarily based on the Current Index plus the Margin used to make later adjustments. The Current Index plus the Margin rounded to the nearest one-eighth of one percentage point is called the "Fully Indexed Rate." The amount by which an initial interest rate is more than the Fully Indexed Rate is called a "Premium" and the amount by which an initial interest rate is less than the Fully Indexed Rate is called a "Discount." Because of the Premium or Discount on your
loan, your Interest Rate may not move in the same direction as the Current Index. For example, if your loan has a Discount, your Interest Rate may increase on the first adjustment date, even if the index remains the same or decreases.

Ask us about our current interest rate and the amount of any Premium or Discount. If you choose an interest rate commitment option that provides for a floating rate, your Initial Interest Rate at closing may be different than the interest rate in effect at the time you apply for your loan. The amount of the Premium or Discount may change as a result.

## How Your Interest Rate Can Be Adjusted

1. Calculation of the Interest Rate Adjustment. The first adjustment to your Interest Rate will occur in approximately 1 month on the due date of your first monthly payment. After that, your Interest Rate will be scheduled to change on the same date every month. Each date on which you Interest Rate is scheduled to change is called an "Interest Rate Change Date." The Index used to calculate your new Interest Rate is the one that was in effect on the first business day in the month before the month of the applicable Interest Rate Change Date. You Interest Rate will be determined by adding the Current Index to the Margin and rounding the total to the nearest one-eighth of one percentage point. The Interest Rate may change monthly, but the monthly payment is recalculated as described below.
2. Interest Rate Caps. Over the term of the loan, your Interest Rate cannot be greater than $9.95 \%$.

## How Your Payment is Calculated

1. Amount of Payment. Your initial monthly payment will be based on the Initial Interest Rate. Beginning with the $13^{\text {th }}$ payment in the loan documents and every 12 months thereafter (the "Payment Change Date"), we will calculate the amount of the monthly payment that would be sufficient to repay the umpaid principal balance in full by the maturity date in substantially equal payments at the interest rate in effect during the month preceding the payment change date. This payment is called the "Full Payment." Except as otherwise provided in the loan documents, your "Limited Payment" will be the payment amount for the month preceding the payment change date increased by no more than $7.5 \%$ of such payment ("Payment Cap"). Your new "Minimum Payment" will be the lesser of the Limited Payment and the Full Payment. You also have the option to pay the Full Payment for your new monthly payment. If you pay less than the Full Payment, then the payment may not be enough to cover the interest due, and any difference will be added to your principal balance. This means the balance of your loan could increase. This is known as "negative amortization." During the loan term, we may provide you with other monthly payment options that are greater than the Minimum Payment, such as interest only payments, fully amortizing payments or 15 year amortized payments ("Payment Options"). Please ask us about these Payment Options.

## How Your Payment Can Change

1. New Payment Amount. Your monthly payment every year can increase or decrease substantially based on changes in the interest rate. At every $5^{\text {th }}$ Payment Change Date the Minimum Payment will be the Full Payment until the next Payment Change Date.
2. Notice of Adjustment. You will be notified in writing at least 30 days before the due date of a payment at a new amount. The notice will include information about the interest rate, payment amount and loan balance.
3. Maximum Increase in Principal Amount. The maximum principal amount of your loan can never exceed $115 \%$ ( $110 \%$ in New York) of the original amount borrowed. If your principal amount rises to this point, your monthly payment may change more frequently than annually and the payment change will not be limited by the $7.5 \%$ Payment Cap. The new Minimum Payment will be set each Payment Change Date thereafter and will be in an amount that would be sufficient to pay off the unpaid principal balance over the remaining life of the loan at the current interent rate.
4. Maximum Rate and Payment Examples. For example, on a $\$ 10,00030$ year loan with an initial interest rate of $1.0 \%^{*}$ (which is discounted by 5.87 Se, based on the index for March 2006 of $4.823 \%$ plus a margin of $2.00 \%$ ), the maximum amount that the interest rate can rise under this program is to $9.95 \%$. We assume the interest rate will increase to the maximum rate as rapidly as possible. Because of the $7.5 \%$ payment cap, the monthly payment would rise from an imitial payment of $\$ 32.16$ to a payment of $\$ 34.57$ in the 13 th month and $\$ 37.16$ in the $25^{\text {th }}$ month. As a result of the negative amortization, the maximum principal of $\$ 11,500$ would be reached at the $30^{\text {th }}$ payment. The new fully amortizing principal and interest payment would be $\$ 101.70$ starting with the $30^{\text {tit }}$ payment. To see what your payment might be based upon this example, divide your mortgage amount by $\$ 10,000$; then multiply the monthly payment by that amount. (For example, the initial monthly payment for a mortgage amount of $\$ 100,000$ would be: $\$ 100,000$ divided by $\$ 10,000=10 ; 10 \times \$ 32.16=\$ 321.60$.)
*This is an interest rate that was in effect in March 2006.

You hereby acknowledge receipt of this mortgage program disclosure and a copy of the Consumer Handbook on Adjustable Rate Mortgages on the date(s) indicated below.

## Policy Implications

- Problems with disclosure: Do consumers get the information they need to easily evaluate these loans?
- Counseling/education:
- Are these products too complex and risky for unsophisticated \& financially stretched borrowers?
- Are cognitive biases too deep-seated to make counseling effective?
- Is society willing to pay for effective \& independent counseling?
- Underwriting standards: Has underwriting become too lax and, if yes, what should we do?

