

Model Specifications for Analyzing and Comparing Reverse Mortgages

To help consumers and their advisors make informed decisions about reverse mortgages, AARP has developed these model specifications for analyzing and comparing reverse mortgage costs and benefits.

The unusual structure of these loans and the variety of features among competing loan products make it difficult for even experienced financial analysts to evaluate the true costs and benefits of reverse mortgages. These model specifications provide a common standard of comparison that takes into account both the unique structure of these loans and the diverse array of loan features that characterize this market.

Comparing Reverse Mortgages

The costs and benefits of any reverse mortgage are highly dependent on three key factors:

- how long a borrower remains living in a home,
- changes in a home's value during that time, and
- the cash advances paid to a borrower during that time.

But neither a borrower's tenure in a home nor future changes in a home's value can be known for certain in advance. Moreover, most borrowers select a reverse mortgage that does not provide a fixed schedule of future cash advances. As a result, the best way to compare reverse mortgages is to project future costs and benefits of different products based on a common set of assumptions about these three factors.

The model specifications define the cost and benefit projections that consumers need to analyze compare reverse mortgage products. They require side-by-side comparisons of these projections, which must be based on the same set of assumptions about tenure in the home, changes in a home's value, and the cash advances provided to the borrower. For any given borrower, the specified costs and benefits must be projected to the future points in time defined in the specifications. The annual average home appreciation rate and cash advances used in making the projections must be the same for each product and prominently disclosed. These requirements ensure true "apples to apples" comparisons.

The Development Process

In January, 2000, under a grant from the U. S. Department of Housing and Urban Development (HUD) to the AARP Foundation, draft specifications were circulated by the Foundation to a variety of interests with specialized technical expertise in reverse mortgage analysis, including Fannie Mae, Mortgage Bankers Association of America, National Reverse Mortgage Lenders Association, U. S. Department of Housing and Urban Development, and experienced reverse mortgage counselors jointly selected by HUD and AARP. A revised draft was re-circulated for additional comment in March, and a final working draft was completed in June of 2000.

The current draft has been updated to reflect market developments and implementation adjustments through March, 2004. To facilitate the continuing development and refinement of the specifications, the AARP Foundation seeks ongoing market-place input to assist it in

- evaluating the practical utility of the consumer information defined by the specifications; and
- modifying the specifications to reflect market changes and improve their utility for consumers.

Inputs & Outputs

The model specifications consist of defined data inputs and outputs. The inputs are the data about individual consumers and their preferences that are needed to generate specified cost and benefit projections. The outputs are the individually-customized, side-by-side cost and benefit projections that consumers may need to make informed choices among reverse mortgage products.

Data Inputs

To generate individually-customized cost and benefit projections, the following data must be obtained from the consumer:

- Homeowner birthdate(s)
- Home value
- Location of home (state and county or zip code)
- Existing debt against the home
- Other initial advance requested by homeowner
- Future payment plan selected by homeowner
 - Creditline only
 - Creditline of \$_____ plus monthly tenure
 - Monthly (term or tenure) advance of \$_____ plus creditline
 - Monthly (term or tenure) advance only

The pattern of future cash advances is a key factor in projecting the costs and benefits of a reverse mortgage. But most borrowers select a creditline, which does not provide a fixed schedule of future advances. Prior to the model specifications, this problem had been solved by assuming a simple, common cash advance pattern for all creditline borrowers, generally, 50% of the available amount at closing, and none thereafter. Although this solution permitted theoretically sound product comparisons, it

- misstated projected costs and benefits for consumers intending to use a creditline in other ways;
- did not permit product comparisons based on a consumer's intended usage pattern; and
- understated the value of growing creditlines

The model specifications offer a new approach. Consumers choosing a creditline can select a specific usage pattern, which is then used to generate all cost and benefit projections. This approach provides more accurate projections, and permits product comparisons based on a consumer's specific choices. To account for the added value of growing creditlines, the specifications assume that all funds remaining in a creditline are withdrawn at loan maturity.

Consumers choosing a creditline can select a usage pattern based on the following options:

- \$ _____ per month
- \$ _____ per year
- specific draws at specified times, e. g.,
 - \$ _____ drawn _____ years after closing
 - \$ _____ drawn _____ years after closing
 - \$ _____ drawn _____ years after closing
- no use

A consumer may intend to withdraw a given amount on a regular basis, for example, the annual or monthly growth from a growing creditline. Or, a consumer may expect to withdraw \$5,000 for a roof repair a year after closing, \$5,000 on a furnace upgrade three years after closing, and \$15,000 on an automobile six years after closing. Or, a consumer may want to see how a supplemental creditline would grow without specified draws.

The model specifications require that all cost and benefit projections must be based on the creditline usage pattern selected by the consumer. As counselors and lenders gain experience with them, the specified creditline usage options will be modified as needed to reflect consumer choices.

Data Outputs

The model specifications define the individually-customized, side-by-side cost and benefit projections that consumers may need to make informed choices in this market. These projections are defined and described in the following documents:

- **Reverse Mortgage Comparisons** – This 1-page table provides the format for a side-by-side comparison of reverse mortgage options.
- **Understanding Reverse Mortgage Comparisons** – This 2-page document explains the information provided in the Reverse Mortgage Comparisons table. Consumers receiving this table should also receive a copy of this document.
- **Technical Specifications** – This 2-page document provides technical details on generating the specified cost and benefit projections. Its purpose is to guide software developers and provide technical details to consumers or financial professionals who request them.

Discussion

This section discusses the cost and benefit projections described in “Understanding Reverse Mortgage Comparisons” and defined in “Technical Specifications.”

- The “Total Cash Advances” projection is the total of all the cash advances a borrower receives up to loan maturity. It does not include the final withdrawal of any remaining creditline at maturity or the present value of any remaining annuity benefits at maturity. These remaining amounts are included in the “Cash Remaining” projection.

The “Total Cash Advances” projection does not take into account the time value of money. But that is less of a shortcoming than it may appear to be because the side-by-side figures always compare identical cash advance patterns. So a stream of monthly advances, for example, would not be compared to a single lump sum of cash.

- The “Cash Remaining” projection equals the amount of cash that would be available to borrowers or their heirs at loan maturity. It includes the final withdrawal of any remaining creditline, the present value of any remaining annuity benefits, and any equity remaining when the total amount owed, which includes the final creditline draw, is subtracted from the home’s net sale value.

Each “Cash Remaining” cell also includes a figure in parenthesis that equals the final creditline draw. This is the projected amount of cash that would remain available to a borrower in creditline funds at maturity. (Remaining creditline figures could also be presented on an every-year basis in a separate creditline comparison table.) Taken together, the “Cash Advances” and “Cash Remaining” projections provide a measure of the total amount of cash that would be generated by home equity.

- The “Net Cost” projection equals the total dollar amount consumers would owe in the future MINUS the total of a) all the cash advances they receive up to loan maturity (i. e., “Total Cash Advances”), b) the final withdrawal of any remaining creditline, and c) the present value of any remaining annuity benefits. This projection shows consumers what portion of their total debt exceeds the cash they receive from the transaction. This simple dollar measure of net cost may be especially important for consumers for whom a total cost rate means little. It also would show consumers that in some cases they could end up getting more cash than they would owe.
- The “Total Annual Rate” projection is based on the Total Annual Loan Cost (TALC) rate defined in Regulation Z. But the methodology differs in five ways.
 - First, the TALC’s fixed 2-year initial maturity date is replaced with one that is proportional to the borrower’s specific life expectancy. This reflects the reality that high earlier costs continue longer for younger borrowers and occur sooner for older borrowers.
 - The second change improves the accuracy of TALC rates by accounting for the added value of a growing creditline and any annuity benefits remaining at or after maturity.
 - The third change requires monthly compounding of all loan balances (rather than the annual compounding required in some cases by TALC regulations) because reverse mortgages are actually compounded on a monthly basis.
 - The fourth change involves treating repair and 1st-year expense set-asides as initial disbursements (rather than 50% of those amounts) to more closely approximate actual loan balances.
 - The fifth change involves the interest rates used to project HECM creditline growth and loan balance growth on all reverse mortgages. TALC regulations assume that the rates in effect at closing, which are based on a short-term index (e. g., the 1-year Treasury rate) never change. HUD projections assume that HECM loan balances and creditlines will grow at an “expected” rate based on a long-term index (the 10-year Treasury rate). While the TALC assumption may

tend to understate loan balance and creditline growth, the HUD assumption may tend to overstate both.

The model specifications require two separate loan projections: one based on the initial interest rate, and another based on an “expected” interest rate. By showing consumers the same projections using two different rates, loan officers and counselors can drive home the point that future loan balances and HECM creditline amounts depend on future interest rate changes. They can also suggest a possible range of outcomes based on the different interest rate assumptions.

The expected rate specified in projecting HECM creditlines and loan balances is the expected rate defined in the HECM program. For other loans, the expected rate equals the loan’s initial rate plus the difference between the HECM initial and expected rates.

All printouts should clearly state whether the initial or the expected rate was used to generate loan projections. Individual loan printouts should also state the specific interest rate. This clear labeling will make it easier for consumers to understand the printouts.

Missing from these specifications are some of the other changes that could be made in TALC methodology such as accounting for single male and joint life expectancies. The main advantage of forgoing this change is that it significantly simplifies the specifications. The main disadvantage is that it makes the measure less accurate. But it is no less accurate than the TALC disclosure in this regard, and it does not skew the comparisons, as the rates for each product are generated by the same methodology.

Conclusion

A main purpose of these specifications is to define the comparative product information that reverse mortgage lenders offering multiple products should be able to generate. While consumers vary in the amount and complexity of information they can understand and need, lenders should be able to satisfy the information requirements of the most sophisticated consumers, expert professional advisors, and rigorous financial analysts. On the other hand, these comparisons do not replace the need for detailed single-loan schedules that provide the information in these specifications on a year by year basis.

These specifications establish a standard for generating and presenting comparative product information. But they are not static. As reverse mortgage counselors and loan officers interact with consumers, we will learn how the specifications can be improved in method and presentation. As new products and features emerge, the specifications will also need to be updated to keep pace with market developments. So please help us improve and update these specifications. Please submit your comments, questions, or suggestions to Ken Scholen at scholen@aol.com or 651-222-6775.

Reverse Mortgage Comparisons

based on ___% assumed annual average home appreciation
and creditline draws of _____

(Plan A)	(Plan B)	(Plan C)
-----------------	-----------------	-----------------

CASH ADVANCES

Cash at Closing			
Creditline			
---Growth (yrs)			
Monthly Advance			
---Advance Type			

After ___ years (home value = \$)

Total Cash Advances			
Net Cost			
Cash Remaining**	()	()	()
Total Annual Rate			

After ___ years (home value = \$)

Total Cash Advances			
Net Cost			
Cash Remaining**	()	()	()
Total Annual Rate			

After ___ years* (home value = \$)

Total Cash Advances			
Net Cost			
Cash Remaining**	()	()	()
Total Annual Rate			

After ___ years (home value = \$)

Total Cash Advances			
Net Cost			
Cash Remaining**	()	()	()
Total Annual Rate			

After ___ years (home value = \$)

Total Cash Advances			
Net Cost			
Cash Remaining**	()	()	()
Total Annual Rate			

*the median remaining life expectancy for someone your age
 **the figure in parenthesis equals the amount remaining in a creditline;
 for more details, see the attached "Understanding Reverse Mortgage Comparisons"

Understanding Reverse Mortgage Comparisons

“Reverse Mortgage Comparisons” show you how the reverse mortgage plans listed in the top row of the table compare on a side-by-side, “apples-to-apples” basis. The figures for each loan are based on the same set of assumptions about future interest rates, home values, cash advances, and life expectancy. The comparisons are not an offer to make you a loan, do not qualify you to obtain a loan, and are not an official loan disclosure.

The **CASH ADVANCES** section shows the cash benefits you could get from each reverse mortgage plan. These figures are in addition to any cash advances you may use to pay loan fees or closing costs. “NR” means you did not request a cash advance of a particular type.

Cash at Closing is the total amount of cash you are requesting to be paid to you at the beginning of the loan. It includes any funds you may be using to pay off any existing debt against your home. It does not include any funds used to pay loan costs.

Creditline is the total dollar amount of the creditline account you are requesting.

---Growth Rate is the rate at which the unused funds remaining in the creditline grow larger. HECM creditlines keep growing until you withdraw all remaining funds. “NA” means that a creditline does not grow.

Monthly Advance is the fixed dollar amount you are requesting to be paid to you each month.

---Advance Type is the type of monthly advance you are requesting: “tenure” means advances for as long as you live in your home; “term (yrs)” means loan advances for a specific number of years, which appears in parenthesis.

Loan Projections The rest of the table shows what would happen if the loan were to end at various future times. All of the figures are **estimates** based on an assumed interest rate, estimated loan costs, your current age(s), your life expectancy, your home’s current value, and the assumed rate at which your home’s value will grow. **All assumptions are subject to change.**

The assumed interest rate is either the initial rate charged on the loan, or an “expected” rate. The expected rate equals the initial rate plus the adjustment used in the federally-insured Home Equity Conversion Mortgage (HECM) program to estimate what the adjustable rate on the loan might be over a 10-year period. The adjustment equals the current 10-year Treasury rate minus the current 1-year Treasury rate. The expected rate is generally greater than the initial rate, so it results in larger loan balances on all reverse mortgages, and larger creditlines in the HECM program.

“After years” is the number of years after the loan begins. The middle number with an asterisk (*) is the “median” remaining life expectancy for someone your age, as defined in the Truth-in-Lending Act. About half the persons your age will live more than this many years, and about half will live less. The other years listed equal 20%, 60%, 140%, and 180% of this life expectancy. If there is more than one homeowner, the years are based on the youngest owner. **(OVER)**

Home Appreciation The annual rate at which your home's value grows is called its "appreciation" rate. The median rate used in Truth-in-Lending disclosures is 4%. You can find the actual rates for your state over the past year, 5 years, and since 1980 at www.ofheo.gov. The assumed rate used in the table appears just above it. This rate can be set at anywhere from 0% to 8%.

TOTAL CASH ADVANCES is the total of all the cash advances you would receive up to the end of the loan, including the creditline draws that are described just above the table. "Total Cash Advances" does not include any amount remaining in a creditline at the end of the loan. This amount is included in "**CASH REMAINING**."

CASH REMAINING is the total amount of cash that would be available to you or your heirs at the end of the loan. It includes any amount remaining in a creditline at that time, and any equity left over after the loan is repaid. This figure assumes that 7% of your home's future value will be used to pay a sales commission to a realtor.

NET COST is the total dollar amount that you would owe at the end of the loan, including the final creditline draw, minus your "**TOTAL CASH ADVANCES**" and any final creditline draw. (This number could be negative if the total amount of cash you receive is greater than the total amount you would owe.)

TOTAL ANNUAL RATE is the total annual average cost expressed as a single rate. It is similar to the Total Annual Loan Cost (TALC) defined in Truth-in-Lending law except that it is based on the five future dates explained above, the creditline draws described above the table, a final withdrawal of all creditline funds, the use at closing of any funds set aside to pay for repairs and 1st-year taxes and insurance, monthly compounding of interest, and an interest rate that equals either the initial rate charged on the loan or an "expected" rate (see "Loan Projections" on previous page).

SUMMARY: When you add Total Cash Advances, Cash Remaining, and Net Cost for any plan and year, the total equals 93% of the home's value at that time, assuming it has appreciated at the rate stated above the table, and the cost of selling the home equals 7% of that value.

EXAMPLE: A 75-year-old woman living in a \$200,000 home is considering a \$124,000 creditline that initially grows larger at 3.3% per year. She plans to withdraw about \$8,000 from it each year. At her remaining life expectancy (12 years), her home will be worth \$320,206 if it appreciates at 4% per year. If the home is sold at this point and the realtor's selling commission equals 7% of its value, the net sale proceeds would be \$297,792.

By then, she will have withdrawn \$96,000 from the creditline (at \$8,000 per year), but would have \$160,759 in remaining cash, with net loan costs of \$41,033. Added together, these three figures equal \$297,792, which is 93% of the home's future value. So these three figures show how much of her home's future net value (\$297,792) would

- be paid to her during the loan (\$96,000),
- remain for her or her heirs at the end of the loan (\$160,759), and
- be paid in loan costs (\$41,033).

Technical Specifications for Reverse Mortgage Comparisons

Cash at Closing	total of initial debt payoff plus initial advance requested by consumer; does not include funds that finance loan costs or that purchase an annuity
Creditline	total dollar amount of initial creditline as requested by consumer; "NR" if none requested
---Growth (Yrs)	initial annual compounded rate with duration of growth in parenthesis; for example, "5% (5)" = 5% for five years, "7.5% (K)" = 7.5% for tenure in the home; "NA" = not available
Monthly Advance	dollar amount of monthly advance as requested by consumer; "NR" if none requested
---Advance Type	type of monthly advance selected by consumer: "tenure," "term (yrs)," "life+H" = loan + life annuity with refund or period certain payments to heirs, "life-H" = loan + life annuity with no benefits to heirs.
(Total Amount Owed)	<p>This figure does not appear in the comparisons, but is used to generate Cash Remaining, Net Cost, and Total Annual Rate. It equals the total amount owed by the borrower at loan maturity as calculated in TALC projections, with the following differences:</p> <ul style="list-style-type: none"> a) It assumes the creditline draws specified by the consumer <u>plus</u> the withdrawal of all remaining creditline funds at loan maturity; b) maturity dates as defined in "years after closing" below; c) monthly compounding of all loan projections; d) repair and 1st-year expenses set-asides are assumed to be disbursed at closing; and e) two different interest rates for two separate projections: <ul style="list-style-type: none"> 1) the initial interest rate charged on the loan (as required in TALC calculations), and 2) an "expected" interest rate which, for projecting HECM loan balances and creditlines equals the HECM expected rate, and for projecting other loan balances equals the loan's initial interest rate plus the 10-year Treasury rate minus the 1-year Treasury rate.

<p>Years after closing</p>	<p>assumed maturity dates are as prescribed for TALC rates (Reg Z, Appendix L to Part 226) except</p> <p>a) “years after closing” means full years following closing, e. g., 5 years after closing equals the first day of the 6th year of the loan</p> <p>b) there are <u>five</u> maturity dates; they equal the median life expectancy in column 2 of Appendix L to Part 226 multiplied by .2, .6, 1.0, 1.4, and 1.8, and rounded to nearest whole year</p>
<p>TOTAL CASH ADVANCES</p>	<p>as selected by the consumer, equals the total of the following:</p> <p>a) initial debt payoff and any additional initial advance, but not including any funds used to pay closing costs or loan fees, or to purchase an annuity</p> <p>b) all monthly loan or annuity advances up to maturity</p> <p>c) the creditline draws specified by the consumer, but not including a final draw of any amount remaining in a creditline at loan maturity</p> <p>Note: for projecting HECM creditline growth, use the initial interest rate for the initial rate projections, and the HECM expected rate for the expected rate projections</p>
<p>CASH REMAINING</p>	<p>at loan maturity, the total of the following:</p> <p>a) the final withdrawal of any amount remaining in a creditline</p> <p>b) 93% of the home’s value at maturity (or any lesser percent required by the transaction documents) <u>minus</u> “Total Amount Owed,” which includes the final withdrawal of any amount remaining in a creditline</p> <p>c) the present value of any ongoing annuity benefits based on a defined period certain or the consumer’s remaining life expectancy at that time (see Regulation Z, Part 26, Appendix L, column 2), discounted at the initial loan rate, or the present value of any death benefit or refund</p>
<p>NET COST</p>	<p>“Total Amount Owed,” including the final creditline draw, <u>minus</u> the total of the following:</p> <p>a) “Total Cash Advances,”</p> <p>b) the final creditline draw, and</p> <p>c) item c) under “CASH REMAINING.”</p> <p>Note: “NET COST” may be a negative number.</p>

TOTAL ANNUAL RATE	TALC rates (cf. Reg Z), with the following differences: <ul style="list-style-type: none">a) maturity dates as defined in “years after closing” aboveb) benefits include creditline draws specified by the consumer plus withdrawal of all remaining creditline funds at maturityc) benefits include item c) under “CASH REMAINING”d) monthly compounding of all loan projectionse) repair and 1st-year expenses set-asides are assumed to be disbursed at closingf) two different interest rates for two separate projections:<ul style="list-style-type: none">1) the initial interest rate charged on the loan (as required in TALC calculations), and2) an “expected” interest rate which, for projecting HECM loan balances and creditlines equals the HECM expected rate, and for projecting other loan balances equals the loan’s initial interest rate plus the 10-year Treasury rate minus the 1-year Treasury rate.
--------------------------	--