



The basic appraisal resale formula allows for 25% of the market appreciation to be transferred to the seller.  $R = P + 0.25 * (M2 - M1)$

For example, let's say that I purchase my land-trusted house for  $P = \$42k$  even though the market value is assessed as  $M1 = \$50k$ . Later, I want to sell the house. Its market value is assessed as  $M2 = \$90k$ . Plugging these values into the basic formula, I am allowed to sell the house for  $R = \$52k$ .

I would like us to adopt four modifications to this basic formula for our use.

### 1. Maximum

First, as suggested by Kate at the last meeting, I would like an upper limit on resale value. Note that there is no upper limit intrinsic to the basic appraisal-based formula. The simplest implementation would be something like a maximum increase of 5% annually.  $R_{max} = P * 1.05^n$ , with  $n = (\text{years owned})$ .

Let's say  $n = 2$  in the example above, then  $R_{max} = \$46.3k$ . Since  $R_{max} < R$ , I could sell for just  $\$46.3k$ . With a longer period of time, if  $n = 10$  for example,  $R_{max} = \$68.4k$ , ( $R_{max} > R$ ) so the main formula would remain in effect, and I could sell the house for the same  $R = \$52k$  of the basic example.

### 2. Vesting of appreciation allowance.

As suggested by Joe, we can build in an incentive for longer occupancy (or a disincentive for "flipping"), by requiring the 25% transfer of appreciated value to vest over some amount of time, like 5% a year over 5 years. The resale formula would be modified to be  $R = P + Q * (M2 - M1)$ , where  $Q = 0$  before 1 year,  $Q = 0.05$  after 1 year but before 2 years,  $Q = 0.10$  after 2 years but before 3 years,  $Q = 0.15$  after 3 years,  $Q = 0.20$  after 4 years, and  $Q = 0.25$  after 5 years.

Suppose we use vesting of the appreciation allowance. Consider how the basic example is modified in the case that only 2 years have passed. Then  $Q = 0.10$ , and  $R = \$46k$ , rather than  $\$52k$  without any vesting limit on the appreciation allowance.

### 3. Incentives for upgrades.

I suggest we allow the option to "subsidize" specific one-time upgrades for qualifying properties by allowing a fixed increment of the base cost  $P$  in the resale formula. Upgrades we may decide to incentivize could include the addition of a first-floor half bathroom, a more durable roof (metal rather than asphalt), or solar panels. This subsidy/incentive amount  $S$  would be additional to the 25% of increased market value allowed by the base resale formula. The modified resale formula would then be

$$R = (P + S) + Q * (M2 - M1)$$

As an example, suppose that we decide to incentivize the addition of first-floor half-bathrooms by increasing the resale value by  $S = \$2k$ . In our example, if I have added a half-bathroom to my house in the time between when I buy it and when I sell it, and if I am fully vested as per modification (2), then my allowed resale amount will be  $R = \$54k$  rather than  $R = \$52k$ .

### 4. Incentives for upkeep and maintenance

Since we will be defining the rubric for the assessment report, we can request that the assessor provide a theoretical estimate (T) for the market value of an identical property in "good" condition, for comparison to the provided estimate (M) of market value. This information will allow us to quantify the "condition" of a property and incorporate that information into our resale formula. I suggest to define the condition (C) at time of sale as a ratio of the estimated market value to the theoretical market value in good condition:

$$C = M / T$$

C can be less than 1 if the house is in poor condition (needs work: maybe a new roof, new furnace, new paint) or it can be greater than 1 if the house is in excellent condition (all depreciating items recently replaced!).

There will be a value of C both for purchase (C1) and for sale (C2), and I suggest that we incorporate these values into the resale formula by multiplying the purchase value (P) by the ratio (C2/C1).

Incorporating all of these modifications, the resale formula would be:

$$R = (P*(C2/C1) + S) + Q * (M2-M1)$$

Let's extend our example to this case by supposing my house needed work (C1=0.80) when I purchased it for \$42k, I fix it up to excellent condition (C2=1.10) and sell it in under a year, but I don't add any incentivized improvements like a first-floor half-bathroom. My vested allowance of appreciation is 0 since it has been less than a year, but I can still sell the house for P multiplied by (1.1/0.8) = 1.375, or 37.5% more than the purchase price, or \$57.75k. In a more extreme case, let's suppose a land-trusted house is in extremely poor condition and needs a lot of work, and sells for \$10k, the same price it is worth on the open market, but would be worth \$40k in good condition. If I buy the house, fix it up, and sell it within the year, I would be able to sell it for \$40k. By the same turn, if I let my house deteriorate, it will diminish the allowed resale amount. Let's consider our base example again, and suppose I buy the house in good condition (C1=1.0) for \$42k even though its market value is \$50k. Ten years later, the market value is \$90k even though the house needs some work (C2=0.8). The resale value would then be \$43.6k instead of the \$52k if the house were in the same condition as when I bought it.

To summarize, I suggest our resale formula to be:

$$R = [\text{the lesser of} \\ \text{a) } P * (1.05)^n, \\ \text{b) } P * (C2/C1) + S + Q*(M2-M1) \\ ]$$

where

(P) is the purchase price,  
 (n) is the number of years occupying the home since purchase,  
 (M1) and (M2) are the assessed market value of the home at purchase and resale,  
 (Q) is the lesser of 0.05\*n or 0.25,  
 (S) is the subsidy amount of incentivized improvements, and  
 (C1) and (C2) represent the condition of the home at purchase and at resale, quantified by C = M/T, the contemporaneous ratio of the assessed market value to the theoretical market value in good condition.

Sincerely,

Burt