

# Leveraging Bailout Funds with an Old Idea: Shared Appreciation Units

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## Introduction

Conservatives prefer minimal bailouts and no windfall gains for those borrowers and investors who underestimated or failed to understand the risks inherent in financing a home. Liberals prefer to see borrowers stay in their homes, citing exploitation and predatory lending. Both sides may be accommodated with an old idea whose time has come. It was proposed in the mid-1990s by Geltner, Miller and Snavely using a concept called HEITs, or home equity investment trusts.<sup>3</sup> Andrew Caplin had similar ideas using housing partnerships.<sup>4</sup> More recently, Ralph Y. Liu has been promoting the concept of SwapRent, a program that trades appreciation for homeowner assistance.<sup>5</sup>

This old idea, re-framed here, is quite straightforward and can be simply described as trading future home appreciation for a one-time reduction in mortgage principal. It provides an ideal instrument for homeowners who care more about affordability than investment aspects of ownership, and it provides a solution for effective use of government funds. The proceeds from a shared appreciation unit are used to immediately pay a loan balance down to a level that many existing troubled borrowers can handle. Mortgage payments are reduced, not by interest rate reductions although that may also be possible, but rather by paying against a smaller-sized mortgage. The proceeds are a function of three factors: the expected appreciation rate, the discount rate, and the term of the shared appreciation unit (SAM). Initially the government or other non-profits would likely provide the seed money using conservative pricing parameters, that is, based upon a highly achievable appreciation rate and conservative discount rate.<sup>6</sup> The SAMs would be resold to market makers who could package them into local, regional or national pools. Investors in these units are essentially buying zero coupon bonds. Liquidity would only occur by reaching a critical mass, say \$100 billion or so of such units.

There are two ways to set up SAMs. SAMs can be based on net appreciation or simply gross price without regard to current value. Owners with existing equity would not be enticed by gross price sharing and guarantees of SAM units. Owners who are underwater, where the mortgage balance exceeds the current home value, should be willing to use a gross price sharing plan if the

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<sup>3</sup> "We Need a Fourth Asset Class: HEITs" by David Geltner, Norm Miller and Jean Snavely, Real Estate Finance, Vol. 12, No. 2, Summer, 1995.

<sup>4</sup> See "Housing Partnerships: A New Approach to a Market at a Crossroads," by Andrew Caplin, S. Chan, C. Freeman and J. Tracy, MIT Press, 1997.

<sup>5</sup> See [www.swaprent.com](http://www.swaprent.com) or email [info@swaprent.com](mailto:info@swaprent.com).

<sup>6</sup> Profit-oriented groups could also originate SAM units, but this would likely result in less liquid units with greater yield requirements.

total of the SAM proceeds and the reduced value mortgage are not excessive compared to current value. SAM units require personal guarantees that they will be paid, whether the unit is sold or not or refinanced or not. SAMs may be set up with a subordinated lien position depending on the state of issuance.<sup>7</sup> SAMs may also be used to buy actuarial-based annuities; therefore, they are an alternative to RAMs, reverse annuity mortgages.

### **Process and Criteria**

- 1) If using the NET appreciation unit, homeowners must be willing to accept a new and current market value estimation for their home. This could be done using a prescribed set of automated valuation models (AVM) such as First American and Fidelity. Still, facing the facts about current values may be hard for many homeowners who believe they have significant equity in a home when they do not.
- 2) If using a *gross* appreciation unit, the owner can derive greater proceeds but remains underwater longer in terms of the reduced new mortgage plus personal guarantees exceeding their portion of the home value. This will be demonstrated below.
- 3) The SAM unit residual share when paid at termination is based upon gross pricing in either case. That is, the owner handles all selling and transaction costs if they decide to sell. If the owners do not wish to sell the unit when the SAM matures, the home value is based upon the same exact AVM approach.
- 4) The term of the SAM must be long enough to ride well past the current declining price trend so 10 years is anticipated as an ideal term. Shorter terms do not provide enough benefit in terms of SAM proceeds to lower mortgage payments enough. Ideal structures allow reductions in the mortgage payment by 10% or more. There is no reason to presume that values may not go down before they go up. The key is the longer term. As appreciation rates exceed the presumed benchmark, the value of the SAM would increase.
- 5) Hurdle rates for initial seed money would be based upon appreciation rates that are low compared to long-term national home price trends, such as 3%. In this way, it is likely that the government investment would be supportable when resold. The assumed discount rate should exceed that of first lien fixed-rate mortgages by at least 150 basis points or so.
- 6) Capital improvements would be limited during the term or at the option of the homeowner with the approval an administrator.
- 7) Normal maintenance and property insurance would be required and terms defining the requirements need to be imbedded in the SAM contract. These would be similar to those in most RAMs.

### **Liquidity and the Secondary Market for SAMs**

SAMs would be sold in increments of \$1,000 or \$10,000 and a single home could sell up to 50% of the net appreciation or slightly less, say 25%, if based on total price sharing. These SAM units could be pooled by metro and would work best if pooled in this manner. Individual home addresses and the number of SAM units would be transparent so that re-valuation estimates and future price forecasts are possible at any time by investors. The secondary market price of the

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<sup>7</sup> In non-recourse states, a SAM could be not treated as a mortgage or there could be problems collecting for the unit holder. This includes states like California, Texas and Florida.

SAM units would depend on two key factors: 1) the future expected appreciation until maturity; and 2) the discount rate required by investors. Although the government or other entities may issue these at par-based on a known assumption of appreciation, say 3%, and a presumed discount rate, say 8%, the market would determine if these are high or low estimates.

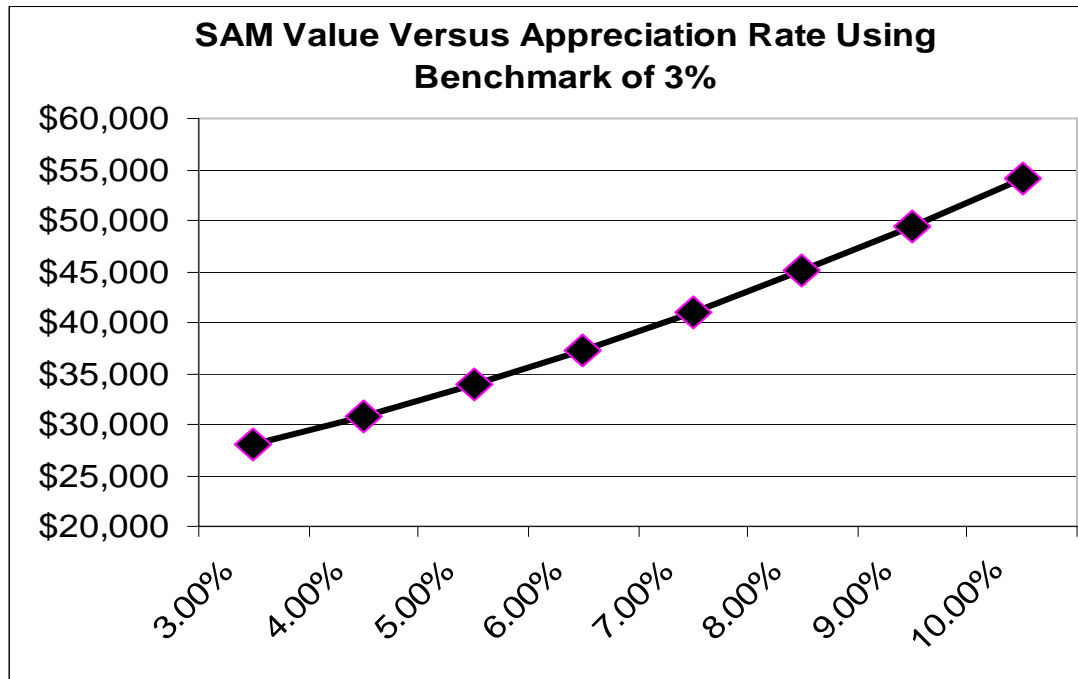
### Net Appreciation Example Calculation

Key Inputs							
8.00%	<b>Discount Rate on Shared Appreciation Unit</b>						
3.00%	<b>Appreciation Rate</b>		The owner still puts down the same equity as before—				
10	<b>Term Year</b>		in this case \$40,000 or 20%,				
\$160,000	<b>Initial Mortgage before Buy Down</b>		but the mortgage is smaller.				
6.00%	<b>Mortgage Rate</b>						
\$200,000	<b>Initial Home Value</b>						
80%	<b>Current LTV</b>						
(\$959.28)	<b>Current Payment</b>						
(\$863.77)	<b>Adjusted Payment</b>						
10%	<b>Percentage Decrease in Payment</b>						
\$4,584	<b>Reduction in Household Income Required</b>						
					<b>Unit</b>	<b>NET</b>	
					<b>Investor</b>	<b>Investor</b>	<b>Net to Homeowner</b>
					<b>PV of Share</b>	<b>Actual Share</b>	<b>Before brokerage</b>
					<b>at</b>		<b>costs</b>
					<b>50.00%</b>		
Year	<b>Home Value</b>	<b>Mortgage Balance</b>	<b>Adjusted Mortgage</b>	<b>New LTV</b>			
0	\$200,000	160,000	144,070	72.04%	\$0.00	\$0	\$55,930
1	\$206,000	158,035	142,301	69.08%	\$2,777.78	\$3,000	\$60,699
2	\$212,180	155,949	140,423	66.18%	\$5,221.19	\$6,090	\$65,667
3	\$218,545	153,735	138,428	63.34%	\$7,360.97	\$9,273	\$70,844
4	\$225,102	151,383	136,311	60.56%	\$9,225.27	\$12,551	\$76,240
5	\$231,855	148,887	134,063	57.82%	\$10,839.93	\$15,927	\$81,864
6	\$238,810	146,237	131,677	55.14%	\$12,228.59	\$19,405	\$87,728
7	\$245,975	143,423	129,143	52.50%	\$13,412.92	\$22,987	\$93,844
8	\$253,354	140,436	126,454	49.91%	\$14,412.76	\$26,677	\$100,223
9	\$260,955	137,264	123,598	47.36%	\$15,246.25	\$30,477	\$106,879
10	\$268,783	133,897	120,566	44.86%	\$15,929.98	\$34,392	\$113,826

## Gross Price Share Example Calculation

Key Inputs					Unit Investor	Investor	Equity Net to Homeowner Before Brokerage Costs
8.00%	Discount Rate on Shared Appreciation Unit						
3.00%	Appreciation Rate						
10	Term Year						
\$200,000	Current Mortgage before Buy Down						
6.50%	Mortgage Rate						
\$180,000	Current Home Value						
111%	Current LTV						
(\$1,264.14)	Current Payment						
(\$1,087.08)	Adjusted Payment						
14%	Percentage Decrease in Payment						
\$8,499	Reduction in Household Income Required						
					PV of Share at	Actual Share	
					25.00%		
Year	Home Value	Mortgage Balance	Adjusted Mortgage	New LTV			
0	\$180,000	\$200,000	\$171,988	95.55%	\$45,000	\$45,000	(\$36,988)
1	\$185,400	\$197,765	\$170,065	91.73%	\$42,917	\$46,350	(\$31,015)
2	\$190,962	\$195,379	\$168,014	87.98%	\$40,930	\$47,741	(\$24,793)
3	\$196,691	\$192,834	\$165,826	84.31%	\$39,035	\$49,173	(\$18,308)
4	\$202,592	\$190,119	\$163,491	80.70%	\$37,228	\$50,648	(\$11,547)
5	\$208,669	\$187,222	\$160,999	77.16%	\$35,504	\$52,167	(\$4,497)
6	\$214,929	\$184,131	\$158,341	73.67%	\$33,860	\$53,732	\$2,856
7	\$221,377	\$180,832	\$155,505	70.24%	\$32,293	\$55,344	\$10,528
8	\$228,019	\$177,313	\$152,479	66.87%	\$30,798	\$57,005	\$18,535
9	\$234,859	\$173,559	\$149,250	63.55%	\$29,372	\$58,715	\$26,895
10	\$241,905	\$169,552	\$145,805	60.27%	\$28,012	\$60,476	\$35,624

## Sensitivity of SAM Value to the Appreciation Rate Assumption



Above we observe the possible resale pricing starting with an assumed long-term average of 3% per year over 10 years. If the metro market suggested a 4% appreciation rate over this term, the unit could be sold for a premium of almost 10% and the proceeds used to continue the process. With a reasonable appreciation benchmark assumed by the seller of the unit these units may even be attractive for profit-oriented funds as an alternative to distressed asset purchase, which displaces homeowners and results in greater losses on all sides (moving and extra transaction costs) except for those receiving transaction fees.

### Conclusions

There is a market solution that is equitable for those borrowers squeezed by mortgage resets or under water with respect to home values where they can keep the home, avoid foreclosure and avoid the large transaction costs of moving. It is based on a Shared Appreciation Unit and it works for those borrowers willing to trade off some price appreciation for greater current affordability. When the housing market appeared to be the best investment for those optimistically stretching their financial limits such units would have found few sellers. But today may be the ideal time to initiate such units and the costs to restructure loans is far less than the costs to foreclose and displace borrowers able to qualify.

## References

Caplin, Andrew, S. Chan, C. Freeman and J. Tracy “**Housing Partnerships: A New Approach to a Market at a Crossroads**” MIT Press, 1997.

Geltner, David, Norm Miller and Jean Snavely “**We Need a Fourth Asset Class: HEITs**”, Real Estate Finance, Vol. 12, No. 2, Summer, 1995.