
Fighting Fire with Fire: The limits to knowledge in financial engineering

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Despite the fact that “creative” subprime lending schemes started the current crisis, a number of key proposals from Capitol Hill continue to push the idea that more creativity built upon existing failed ideas, can aid borrowers. There are many reasons to be skeptical of the results. One set of proposals suggests using interest-only loans to fight the unexpected effects of interest-only loans, which raises the risk that the unknown credit characteristics of interest-only loans will just be pushed into the future.

A second set of proposals suggests that the government guarantee borrowers, suggesting that the exercise is costless and the government could even make a profit. The “costless” argument is what led banks and the bond insurers to pile heavily into the guarantee markets, with the consequences now witnessed in today’s markets.

It is important to realize that some set of borrowers cannot afford their payments and will have to move. Hence, while legislators and regulators are unwilling to hear that argument they may better serve the populace by providing affected families a more affordable place to land once they move.

AN INTEREST-ONLY PLAN TO FIGHT THE EFFECTS OF INTEREST-ONLY LOANS?

Sheila Bair proposed in today’s Financial Times using a new five-year stopgap measure to fight foreclosures. Notwithstanding the fact that five years is an ad hoc time period and that foreclosures are perhaps an unavoidable consequence of poor credit decisions – or at least that avoiding foreclosures produces significant moral hazard – the proposal smacks of using interest-only loans to fight the effects of interest-only loans.

What do we already know about interest-only loans? Defaults spike at the beginning of the amortizing period when borrowers move to higher payments. The only way to put off the effect is by moving the borrower into another interest-only loan.

It is tempting to believe that as long as home price appreciation is above the rate of interest (zero, in this case) the collateral appreciates at a higher rate than the loan so this is a good investment. There are two points to realize about this

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claim. First, the lender (even if it is the government) can only be indifferent between full interest earning loans and those with interest-only teaser periods if the *total* net present value of interest in the interest-only arrangement amounts to the same level of earnings as that of the fully interest-earning arrangement. Hence, interest on the interest-only teaser arrangement – once it applies – has to be higher than that on the full interest loan. (There is no free lunch.)

Second, even the scheme proposed by Bair included “fees,” which are a loan cost just like interest. Higher fees would have to be recovered from – you guessed it – home price appreciation to make this a reasonable investment.

It doesn’t matter whether that amortizing period occurs within the existing loan or after refinancing, the problem *is the amortization*. Eventually, therefore, if the goal is homeownership the borrower will have to make much higher payments that actually pay down the loan balance. Cashing out home equity through another interest-only loan will help borrowers who can’t afford the payments on their existing loan continue to make payments on a higher balance interest-only teaser loan, but will not help them achieve the magic goal of amortization that *is* homeownership.

GUARANTEES ARE NOT COSTLESS: JUST ASK THE CREDIT DEFAULT SWAP MARKET AND THE BOND INSURERS

Congress similarly relies on popular fallacies about financial engineering as a basis for their FHA guarantee scheme. Many claim the guarantee is costless to the government and therefore has no budgetary effect. Such a claim reveals a fundamental misunderstanding of finance.

In finance, you can initially price a contract so that it has zero value to either side. The simplest example is futures markets, in which the price of, say, a corn future contract is today’s value of the corn plus the cost of storing the corn until the future delivery date. But, as students of finance know well, only the value of the contract *at inception* is zero. Once corn prices move, one side of the contract gains value and the other loses. Hence, futures markets require the losing side to deposit money each trading day to keep an account of their losses.

When people who can’t afford their loans begin defaulting, or even just continue consuming regardless of their risk (because of the moral hazard of being bailed out), the government’s side of the contract will post losses in the value of the guarantee because the probability of paying on the guarantee is higher. Will the government have to post a cash collateral account to accommodate those losses? I don’t see that in the bill. Nor do I see expected values of the future payouts. I do hope the GAO picks up this reasoning and removes the fallacy of long-term budget neutrality.

One of the biggest problems in today’s markets is valuing credit default guarantees, both among those who have sold the guarantees and those who have bought them to hedge some loss (or speculate). Many issuers of those guarantees, including the major bond insurers, are known to be insolvent but valuations difficulties are allowing regulators to exert forbearance instead of shutting the firms down in the public interest. Needless to say, it may not make sense to build government policy on such shaky foundations.

MANY OF THE TARGETED BORROWERS CAN'T BE HELPED WITHOUT SIGNIFICANT
CASH INFUSIONS

The sobering truth is that many subprime borrowers can't afford their homes. An analysis by T2 Partners LLC in March 2008 showed that to maintain (0% decline) borrowing power among the affected borrowers, interest rates on fully amortizing mortgages would have to drop from about 6.75% to 1.41% or rates on interest only mortgages would have to drop to 4.09%. Note that this analysis assumes a 35% debt-to-income ratio, so rates would have to drop further for less creditworthy borrowers. (The FHA plan is willing to target up to 55% debt-to-income ratio borrowers – deep subprime territory) Additionally, it is extremely important to note that borrowing power can only be maintained if the borrower's leverage goes to roughly 8.6x annual income, which is again hardly prudent.

SUMMARY

The point is that using the most innovative and creative financing instruments, with respect to both mortgage and government finance, is hardly the prescription for fighting a credit crisis arising from the most innovative and creative financing instruments. Instead, it is just a recipe for pushing the effect of the credit crisis further down the road.

True solutions for borrowers are far less politically attractive. Financial education and discipline – both fiscal discipline of borrowers and bank discipline imposed by regulators – are the key. But those will not sell in an election year.