Systems Behavioral Research
238 Irving Terrace
Buffalo, NY 14223

October 13, 2014

Federal Housing Finance Agency
Office of Strategic Initiatives
400 7th Street, SW
Washington, DC 20024

Ladies and Gentlemen,

In response to the "Request for Input: Proposed Single Security Structure," we'd like to bring a system behavioral perspective, though as outside scientific consultants, we can't address the effect on the industry or the implementation.

"1. What key factors regarding TBA eligibility status should be considered in the design of and transition to a Single Security?"

One of the key common features from the current market, namely the "General loan requirements such as ... non-delinquent status," is too stringent. The goal is to preserve eligibility. If imperfections are adequately disclosed, there's no reason they shouldn't be allowed. The requirement should rather demand disclosure, as markets without transparency can collapse (1).

In fact, never was a market more in need of transparency and quality grading than the TBA forward market. The premium associated with TBA eligibility was estimated to be 10 to 25 basis points in 2009-2010, with higher spreads in times of market stress—up to 65 bp in March 2008 (2). But there was no secondary market at all for super-conforming mortgages at that time so it's reasonable to put the potential economic benefit of a transparent, quality-graded, all-inclusive forward market as the entire mortgage backed securities market, if taxpayer guarantees are removed. This is not speculative: The unguaranteed part of the market disappeared in 2008.

Another disturbing phenomenon which is also not speculative because it occurred in 2008 concerns payment behavior on individual mortgages. We were able to extract a "borrower's remorse" behavioral signature from a sample of a few hundred jumbo 1st lien ARM loans, including only 12 months of history up to June, 2008, that seems to identify borrowers who were attempting strategic default on their resetting ARMs. Because the sample was of jumbo

loans, presumably to well-informed high net-worth borrowers, this behavior says something about the property market as well as the general economy. (We don't include this behavioral signature in these comments because it's highly technical, easily misunderstood, and uncorroborated because the science is so new. Also, there's been no follow-up study of this characteristic behavior—not on subsequent loan performance, not on how it correlates with other borrower data, and not even on how prevalent it is.)

This attempted strategic default behavior may occur in the coming wave of adjustable 2nd lien HELOC resets (http://www.marketwatch.com/story/the-bill-for-home-equity-lines-is-coming-due-2014-03-26). It may also occur in fixed-rate loans at the next downturn in the housing market, or it may occur on some seemingly modest policy change that affects mortgage payment behavior.

Delinquencies must be allowed in the Single Security, because they will certainly occur. Disallowing them in a forward market prevents that market from effectively transferring risk in any downturn.

"2. What issues should be considered in seeking to ensure broad market liquidity for the legacy securities?"

Troublesome details could undermine the transparency needed to improve broad market liquidity, like this one from the Freddie Mac Single Family Loan-level Dataset user guide:

"Note that Loan Sequence Numbers in the Dataset do not correspond to Loan Sequence Numbers found in existing Freddie Mac participation certificate (PC) disclosures."

Loan payment behavior must be quantifiable and also verifiable to ensure liquidity in any forward market. Summary statistics beyond the six criteria already agreed on should be included in all deals, and should be easily verifiable (to within a reasonable tolerance) from loan keys to available databases.

One summary statistic that might adequately disclose loan delinquency behavior in the current month: The percentage of loans with decreasing delinquency status plus one-half the percentage of loans with unchanged delinquency status. Economists will recognize this as a "loan pool performance diffusion index" of the security in question, where 50 is maintaining the status quo of loan pool performance. Notice that this disclosure might allow loans with imperfect payment histories to be included in securities traded on a forward market, without needing to be immediately repurchased, substituted, or removed.

Delinquency status history in a loan-level dataset could also be used to identify borrowers who have probably attempted strategic default. The percentage of loans scoring above some likelihood for the "borrower's remorse" behavior, weighted by unpaid balance, could be included in deal specs as well. Such a summary statistic might disclose knowable unsustainability in the loan pool, regardless of the relative likelihood that a "borrower's remorse" loan may end in prepayment or default.

By including such summary behavioral statistics, a forward market could proceed with better disclosure. All necessary behavioral information is contained in the loan delinquency history, so deal specs could be verified at notification time with mere computation using loan keys provided to available databases. Further behavioral research would lead to valuation models and improved operation of MBS forward markets in times of stress.

Loan behavioral disclosure could be part of a transparent, quality-graded, all-inclusive forward market that allows transfer of risk in a downturn without taxpayer or central bank involvement. We look forward to working with anyone interested in using behavioral research to help rate this market that has shown itself to be flawed.

Sincerely,

Albert T. Galick, Ph.D.

(1) The Market for "Lemons": Quality Uncertainty and the Market Mechanism,George A. Akerlof, The Quarterly Journal of Economics, Vol. 84, No. 3. (Aug., 1970), pp. 488-500.

(2) TBA Trading and Liquidity in the Agency MBS Market, James Vickery and Joshua Wright, FRBNY Economic Policy Review / May 2013.