To the Agency: OCC
From: David A. Levine
Docket number: OCC-2011-0002
Date: May 9, 2011
Re: Credit Risk Retention

My comment will consist of three main parts: (1) A very short comment on the rules for
"qualified" mortgages, (2) a longer comment on why the 5% retention requirement as it
applies to non-qualifying mortgages would not have spared us from the subprime crisis
and (3) concluding remarks.

On the Rules Governing Qualifying Residential Mortgages

The requirements for attaining "qualifying" status are excellent. The only reason I
mention the issue is that I'm certain that you will be besieged by comments proposing
that you soften the rules. Don't. What your are doing (in essence) is reverting to the
typical standards that prevailed prior to the 1980s – when the only housing bubbles were
localized and contained because they were mostly the result of population shifts (and
related surges in property values) rather than irresponsible housing finance. That was the
way it should be: You don't want mortgage financing arrangements to *promote* bubbles.

On the Rules Governing the Retention Requirement for Securitization of Non-Qualifying Mortgages

The most ineffective and irrelevant provision of the entire Dodd-Frank bill was this one.
It reflects either an ignorance of industry practice or a successful effort by industry to
resist *any* tightening of standards. Indeed proposals that would allow the 5% retention
requirement to be met by "vertical" slices (in which the issuer would retain 5% of each
tranche) or "L-shaped" risk retention (in which the issuer would retain 2.5% in "vertical"
slices and 2.5% in "horizontal" slices) entail *less* risk retention on the part of issuers than
was the norm during the heyday of subprime issuance. Indeed, the 5% "horizontal"
requirement is very similar to the retention that was the norm in the years up to the
collapse of the subprime market. There was, of course, no mandated minimum but the
issuers retained between 4% and 5% of (horizontal) risk in the vast majority of deals.

The reasons issuers chose to retain close to 5% of the typical subprime deal was twofold:
(1) by promising to absorb the first 5% of losses it facilitated high credit ratings for the
tranches sold to the public and (2) it was immensely profitable to do so. To see why this
was true, one needs to look at a typical subprime structure. I have provided a diagram on
the next page that is very characteristic of the $1.4 trillion in subprime securities that
were issued between 2004 and 2006. The only difference is that I have reduced the
number of tranches in order to simplify the diagram.[1]

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[1] It was not uncommon for a structure to be broken down as follows (to give just one possibility): five
AAA tranches (each paying a slightly different interest rate), four AAs, three As, two BBBs, and one
BBB-, as well as three to five subordinated tranches. In the diagram on the next page I pretend there
is only one tranche for each rating category and show a typical melded interest rate.

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│                                 │
│              AAA                │
│                                 │
│          $800 million           │
│                                 │
│          18 basis points        │
│            over LIBOR           │
│                                 │
│                                 │
│                                 │
├─────────────────────────────────┤
│              AA                 │
│    $100 million at 32 over LIBOR │
├─────────────────────────────────┤
│   A   $50 million at 54 over LIBOR │
├─────────────────────────────────┤
│  BBB   $40 million at 154 over LIBOR │
├─────────────────────────────────┤
│  BBB-   $10 million at 267 over LIBOR │
├─────────────────────────────────┤
│ Subordinated -- $50 million gets residual │
└─────────────────────────────────┘
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Here we have a securitization based on underlying mortgages with a face value of $1.05 billion with publicly-sold tranches totaling $1 billion. In this example the horizontal retention is 4.76% ($50 million divided by $1.05 billion). Moreover, while the lowest-rated publicly-sold tranche (the BBB-) pays a fairly hefty 2.67% over LIBOR (which, incidentally, was a pretty high interest rate at the time compared to the yields on a typical BBB- bond), the melded interest rate for all of the publicly-sold tranches was a very modest 0.29% over LIBOR. (To more decimal places it works out to 0.2913%.) The reason, of course, was that 80% of the securities issued to the public paid just 0.18% over LIBOR and this was 80 times the size of the buyers who received +2.67%.

Profitable Structure (for the Issuer)

This represented a spectacularly profitable enterprise for the issuers because the subprime mortgages themselves were typically paying 300-400 basis points over LIBOR. Consider this arithmetic on a deal where the net yield on the underlying mortgages (allowing for servicing costs) was 300 basis points over LIBOR.

- $1,050 million in mortgages produce LIBOR plus 3% or $31.5 million (annual rate)

- $1,000 million in security holders receive LIBOR plus 0.2913% or $2.913 million (annual rate)

- The issuer of the securities gets to keep the difference: $31.5 million minus $2.913 million produces net income of $28.587 million (annualized) on invested capital of $50 million, or an annual rate of return that exceeds 57%.

- I can add that most deals produced a *higher* rate of return (from net interest) for the issuer than I just described and, in addition, the issuer would earn one-shot underwriting fees – except that those "one-shot" fees pretty much recurred every two years because subprime mortgages were typically refinanced every two years.

In case 57% seems high, I would point out that given that the financial institutions issuing these securities generally had capital requirements below 5%, the *return on equity* from this activity was almost incalculably high.

(False) Sense of Security (for the Purchaser)

With the benefit of hindsight, it seems obvious that the buyers were hoodwinked into buying *subprime* paper at a mere 29 basis points over LIBOR. Why did they do that? The answer is that the "protection" offered by the subordinated tranches (4.76% of the total mortgage pool in the above example) seemed to be enough. On the surface, this may not seem so much (and that is obvious now) but here's how the reasoning went:

1) Delinquency rates on subprimes had historically averaged around 15% and, perhaps one-third of those loans actually defaulted (some borrowers would resume making regular monthly payments and, in many cases, the houses were simply sold) and loss ratios typical ran about 30%. 15% x one-third x 30% = 1.5% which was a small fraction of the 4.76% in protection provided by the subordinated tranches.

2) Even if we assumed unprecedentedly poor results (on all three dimensions) it was not so easy to get to 4.76% in losses. For example, if we assume (a) 25% delinquencies of which (b) two-fifths go into default and (c) loss ratios that

average 35%, we get "only" to 3.5% in total losses. AND, there existed a substantial *additional* layer of protection – namely…

3) Losses were to be first absorbed by the excess interest (noted in the previous section) that was being allocated to the subordinated tranches. So, for example, using the relationships shown above ($28.587 million excess interest on a $1,050 million deal) provided an additional 2.72% of protection *per year.* This meant that if losses ran at that level (which would be a very bad result from an historical perspective), the subordinated tranche holders would not lose *any* of their capital – all they would suffer was a failure to earn the 57% annual rate of return that they were earning before things turned sour.

Put another way, even at a 35% delinquency rate and assuming 45% of delinquent loans default and presuming 40% loss rates on defaults, losses would total "only" 6.3%. This would wipe out the excess interest earned by the subordinated and about three-fourths of their principal as well, but would not impair even the BBB- tranche holders, let alone owners of higher-rated tranches.

In Conclusion: With An Afterword on Profitability

The subprime mortgage business was *so profitable* that even though there were substantial losses incurred by originators, packagers, securitizers, sales-people, and others in the final year or two of the episode, it was so remarkably lucrative for the decade before the bubble burst, that *even with the losses suffered at the end,* it turned out to be a very profitable (lifetime) experience (net) for the participants. Whether we are talking about traders, that AIG unit in London (destroyed the company but made many employees rich) or banks that did well (Goldman) or not so well (Citi), it was, on balance, beneficial for almost all of the participants – save those who entered the business at the very end.

Of course, along the way, it was very destructive to the economy.

After the fact, it is easy to see that (a) the unprecedented house-price inflation supported this market from (about) 2000 to 2006, and (b) set us up for a house-price deflation that was nothing like any in history[2] which (c) took delinquency rates, default rates and loss ratios into territory that had never been seen before. The point, then, is to create regulations that will prevent a recurrence.

It is clear, with the benefit of hindsight, that even an 8% or 10% retention requirement would not have protected the purchasers of subprime mortgages. The reason, at a 10% retention requirement, the structure outlined above would've resulted in a 27%+ rate of return for the subordinated tranche holder.

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[2] House prices fell by a very large amount during the Great Depression but the general cost of living fell by a similar amount and so "inflation-adjusted" house prices did not change much. Since the peak in April 2005, the Case-Shiller (20 Metro) index is down 31.4% and adjusted for inflation it has dropped 38.5%. This is probably 30% or more worse than what occurred during the Depression.

In the "old days" – i.e., back when subprime mortgages *couldn't be securitized,* because there was no market for them, the retention requirement was effectively 100%. As a result, very few such loans were ever made[3] and there were no bubbles associated with this type of activity.

I genuinely believe that a 100% retention requirement for non-qualifying mortgages would be the right thing to do but recognizing that most people would consider this unduly restrictive, I would point out that even a 20% (horizontal) requirement would (in the example above) allow issuers to make a very substantial profit.

Adjusting the numbers from the section called "Profitable Structure" (top of page 3) for a 20% subordinated tranche the issuer would earn net interest of $29.053 million on an investment of $210 million or a rate of return of 13.8%. This may not sound that high, but this assumes that the issuer does not use leverage at all – a totally unrealistic assumption for banks even in the more "prudent" era we have (hopefully) entered. This should be plenty enough encouragement to provide subprime financing when and if (and *only when and if*) such financing makes sense.

It seems to me that if it does not make sense for the issuer in such cases, it does not make sense for anyone.

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[3] Most mortgages that would fit the modern definition of "subprime" were of two kinds: (1) Loans that had originally been prime but became subprime because the borrower lost his or her job or (2) So-called "loans to facilitate" which were loans made under concessionary terms (without the usual requirements) to help financial institutions move foreclosed properties off their balance sheets.