

# The New Hurdle To Home Ownership

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*How Loan Level Pricing Changes the Cost of and the Access to Mortgage Credit*

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## EXECUTIVE SUMMARY

The “Loan Level Pricing Adjustments” (“LLPA”) change both the cost and the accessibility of mortgage loans for consumers. Although relatively unknown, it is contributing to the ongoing weakness in housing prices. It makes it harder for American families to buy and sell homes.

Since it moves many loans to FHA, it does little to relieve the risks associated with mortgage lending that is placed upon American taxpayers. The LLPA creates another hurdle for underserved borrowers. For many, this new obstacle comes much closer to putting their prospects out of reach.

*The LLPA has the effect of moving more loans to FHA.* Borrowers get FHA loans because they do not have the down payment to get a conventional loan. Unfortunately, FHA premiums make these loans more costly. Borrowers experience a trade-off between access and price when they go to FHA. Given that the GSEs treat these loans as higher-risk, the benefit of moving more to FHA is experienced by the GSEs but not by taxpayers.

Loan-to-value requirements in the LLPA play a large role in the transfer of loans to FHA. Most borrowers that can put more than 15 percent down have a good chance of getting a conventional loan. In the Virginia and North Carolina dataset, 51.3 percent of mortgages were made with an LTV that was greater than 80 percent.

*The LLPA creates a disparate impact upon protected classes.* Lines of race mirror distinctions in wealth. With the implicit decision to raise down payments and to put more

skepticism on loans made to borrowers with lower credit scores, the GSEs create a policy that harms protected classes.

- Minority borrowers have less wealth. With the LLPA, they will increasingly become segregated with the FHA program.
- Loans originated in minority areas are more likely to be denied for delivery to the GSEs, whereas loans in predominately white areas are more likely to be deliverable but with a fee.
- Reduces accessibility to conventional loans in majority-minority zip codes.

*The LLPA ignores the utility of private mortgage insurance.* If the LLPA did not close the doors to a conventional loan for so many borrowers, then FHA would guarantee fewer loans. The GSEs could re-orient this trend by taking a more favorable view to mortgage insurance. Currently, the LLPA factors gross loan-to-value using mortgage insurance premiums as an additional loan amount.

For a long time, PMI has provided a guarantee against non-performance of loans. It was most significant for lower-income borrowers. Those borrowers are disproportionately represented by higher LTVs.

*The rules increase borrowing costs for loans made to investors.* When families can't buy, they need to rent. There is an identified need among policy makers that our country needs to finance more rental housing. The LLPA punishes investors that want to put capital into rental housing, and by doing so, it thwarts opportunities for our economy to adjust to new housing needs.

## THE NEW HURDLE TO HOME OWNERSHIP

It is as if a collective storm, coming from many different sources, has conspired to put a home mortgage further and further from the reach of the low-to-moderate income family. On the one hand, the GSEs are pursuing a policy that forces future borrowers to pay for the non-performance of loans made in the recent past. The main driver is their decision to reduce how many high loan-to-value mortgages that they purchase. Coupled with additional restrictions on loans in “declining” MSAs and a pullback in making loans to some borrowers mean that many families will have to save for years in order to buy a home.

The GSEs are not acting alone. Indeed, their actions seem to move in lockstep with other government initiatives. The FDIC and the Federal Reserve have argued for new rules, intended to spur banks to retain risk in their mortgage loans, which will further distance moderate wealth families from meeting underwriting requirements. The FDIC wants to exempt loans from risk retention under the Qualified Residential Mortgage rule only when they have a down payment of at least twenty percent. The Obama administration has set a lower target – just 10 percent – but both will further reduce the appetite for banks to make loans. A recent study, which combined research on home costs and savings rates, found that the average American family will need ten years to save enough to buy a home if the QRM sets risk-retention rules at ten percent. (CRL, 2011)

Mortgage insurers have changed their rules, too. In the last few years, some mortgage insurance companies have developed risk-based

pricing schedules that deliberately push higher-risk borrowers to FHA. In some instances, the price difference can be as high as 150 basis points between high credit score and low credit score households, after controlling for loan-to-value. Minorities are the group most likely to pay more to insure their loans in a risk-based pricing system (Genworth, 2011). At 85 LTV, more than 47 percent of African-American borrowers and 39 percent of Latino borrowers experience an increase in PMI price.

FHA is also a moving target. For some time, the price of FHA mortgage insurance and that willingness on the part of FHA to guarantee high LTV loans has meant that FHA’s participation in the mortgage insurance market soared. Since April, though, higher FHA pricing most likely means that their guarantees can serve fewer borrowers. Some of those borrowers will be able to get insurance from a private mortgage insurance company that cross-subsidizes its pricing. In effect, such firms lower the price for high-risk consumers and increase it for low-risk borrowers (see Chart 2.1, Chart 2.2). The cross-subsidized price approaches push out the horizon of suitable borrowers. Overall, more people can find a suitable mortgage insurance product and so home ownership, home sales, and home prices all go up. Still, the cross-subsidizing PMI firms are not lowering their rates. Everyone will pay as much or more as before. Since even the PMI companies shy away from the highest LTV loans, many people will no longer be able to secure loans.

## HOW THE SYSTEM WORKS

It is unlikely that consumers know or understand how they are paying for charges in the LLPA. The LLPA fees are paid by lenders. Naturally, the lenders pass those costs along to borrowers. The end costs are experienced by borrowers. Lenders pass on LLPA fees through an opaque set of charges that are wrapped up in a combination of higher closing costs and higher interest rates.

*The LLPA creates three pathways for any loan*

The LLPA's treatment of mortgage loans varies. Requiring a fee is not the only possibility. The GSEs can accept the loan without any additional fees, they can choose to accept the loan but require additional fees as a contingency for doing so, or the GSEs reject the loan for delivery. Lenders are under no obligation to sell a deliverable loan to the GSEs. In many instances, a loan is packaged for FHA even though it meets the standards for delivery.

The criteria in the LLPA matrix state that discrete characteristics of loan terms, of borrowers, or of property types trigger fees. There are eight factors in how the LLPA calculates its delivery costs:

- Credit Score
- Property Type (single-family, multi-family, condominium, manufactured home, co-op)
- Occupancy (owner occupant, vacation home, or investor-owner).
- Structure and Position of Loan
- Loan-to-Value
- Loan Term: (15 years, 20 years, 30 years, more than 30 years)
- Loan Type (ARM or fixed)
- MSA: In declining areas, an additional 50 basis point fee is added to the delivery charge.

The following groups will find that they must pay more for a mortgage, or find that they will no longer be able to buy a home:

- Borrowers with credit scores below 700. Most borrowers with scores below 680 turn to FHA.
- Loans made for 1-4 unit multifamily properties, manufactured homes, condominiums, or cooperatively loan real estate (mainly land trusts).
- Loans originated through mortgage brokers
- Loans in areas where home values are declining
- Investors

Delivery fees generally range between 25 and 200 basis points, although they can easily be much higher. Lenders know the expectations for delivery. It seems likely that few loans are actually denied in practice. Lenders with any savvy move applications over to a guaranteed-loan program. The process is not entirely seamless, of course, because not every lender participates in FHA. Recently, HUD authorized FHA to charge annual premiums on the outstanding loan balance of as much as 1.55 percent.

When loans bear multiple high-risk features, it is not unusual for the GSEs to turn down the loan.

## LOAN-LEVEL PRICING REDUCE THE ACCESS TO CREDIT

In a lending environment where so much turns on the ability to make a down payment, assets are essential to the opportunity for home ownership. The LLPA makes assets the key to getting past the barrier. It is a hurdle that complicates the simple critique that borrowers with good credit can get a home. The truth is more nuanced. Good credit is not enough.

Demand in the secondary market creates its own supply. Lenders learn to make loans that are favorable to the agencies, particularly at a moment when there is so little interest in mortgage-backed securities on the part of private investors. In implementing the LLPA, the agencies have told lenders that they expect loans with lower loan-to-value ratios. For the average-priced home in the United States (about \$200,000), a borrower will need to bring at least \$30,000 to the closing. A recent study by the Federal Reserve highlights the challenge to such a rule. In 2009, the Survey of Consumer Finances determined that the median financial asset holding among US households was \$29,600 (Bricker, 2011). Financial assets exclude illiquid holdings – vehicles, residential property, and business equity. Thus, in order to buy an average-priced home with current down-payment standards, the typical American family may have to liquidate all of their savings.

Low-wealth borrowers will be the ones most impacted by the LLPA's pricing matrix. In the short run, the GSEs new rules mean that more mortgage loans will be underwritten through government-guaranteed mortgage programs – effectively leaving taxpayers just as vulnerable to housing market instability as they were prior to

the new rules. The only change is that it moves that vulnerability from the GSEs and to the FHA and the VA. In turn, the LLPA will play a role in undermining some of the methods that existing public policy utilizes to mitigate those shortcomings. In essence, the LLPA should provoke a re-examination of its own framework but also of the capacity of other rules. The LLPA should provoke people to question how Fannie and Freddie will meet the “duty-to-serve” obligation.

The following groups will find that they must pay more for a mortgage, or find that they will no longer be able to buy a home:

- Loans made for 1-4 unit multifamily properties, investor properties, manufactured homes, condominiums, or co-operatively loan real estate (mainly land trusts).
- Loans originated through mortgage brokers
- Borrowers with good credit and acceptable income, but less wealth

Two of these categories are ones that draw more regularly from minority borrowers. Minorities are more likely to use a mortgage broker. As well, minorities tend to have fewer assets. (Shapiro, 2006)

## THE LLPA RULES HAVE A DISPROPORTIONATE IMPACT UPON MINORITY COMMUNITIES

Minority borrowers are disproportionately at risk from any policy that reduces access to capital based upon down-payment. This is a function of wealth. Asset inequality is far greater than among the current income of those households. It reflects the momentum of wealth built up over generations. A recent Pew survey found that the median asset holdings of minority households were approximately one-tenth of those held by white households. Both Latinos and African-American households were so poor as to have little possibility of affording a down payment. For both groups, median asset holdings were less than \$10,000 (Kochhar, 2004). The problem affects homeownership rates. It also impacts minority borrowers can access refinance loans. Borrowers with only \$5,000 (the typical wealth of an African-American household) have little chance of attaining the equity for a refinance in this market.

As long as the LLPA assigns so much risk to high LTV loans, homeownership will become very difficult for most minority households.

In the last years – when the LLPA has been in place – access to capital has dovetailed along lines of race. A new study found a substantial disparity in access to refinance loans across different neighborhoods. The divide was dependent upon the racial and ethnic makeup of a community:

“Between 2008 and 2009, the number of conventional refinance loans made in predominantly white neighborhoods more than doubled in all seven cities examined. During this time, however, conventional refinance lending declined sharply in communities of color in all but one of the seven cities examined. Conventional refinance loan application outcomes followed a similar pattern. In 2009, lenders’ denial rates in communities of color ranged from 29 percent to 60 percent, compared to 12 percent to 24 percent in predominantly white neighborhoods.” (HMDA Working Group, 2011)

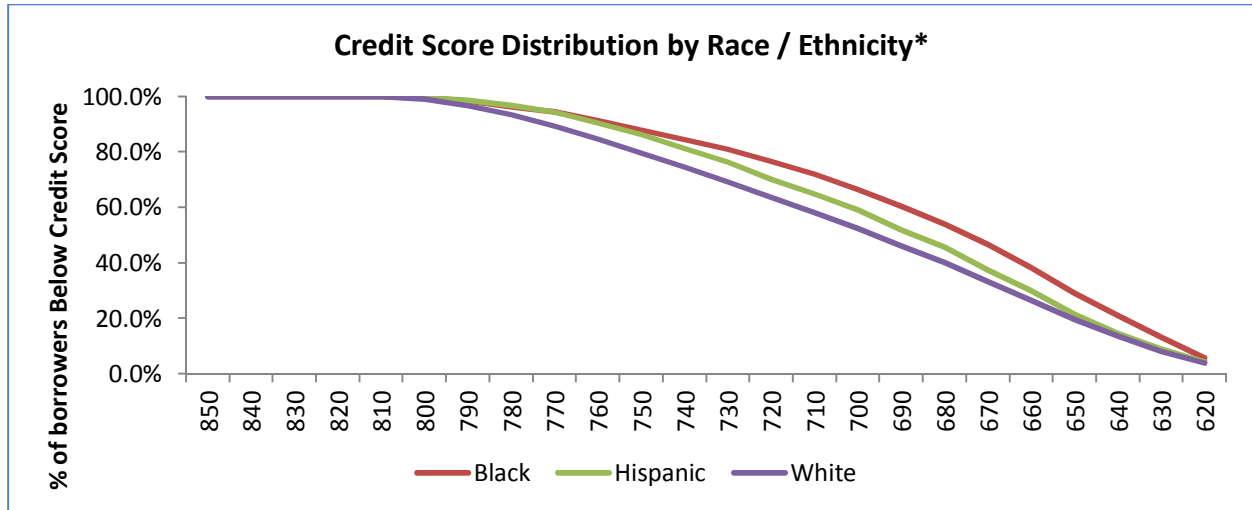
The findings were clear in showing that minority communities were rapidly losing out in the ability to get a mortgage loan.

The inequality in wealth is further compounded by differences in the types of wealth. Poor households tend to have “lumpy” asset holdings. In many cases, the scant wealth that they do have is tied up in illiquid assets such as home equity, a car, or a retirement account. That insight is reinforced by similar findings made in the 2004 and 2007 Survey of Consumer Finances.

If the new results from the latest SCF were available, it seems likely that the disparities would be even greater. Home values, which constituted the largest share of minority wealth, have declined. Stock prices, which are much more likely to be an element of the portfolio held by a household of wealth, have returned to their pre-2008 levels.

The LLPA relies heavily upon credit scoring to price loans. This contributes significantly to disparate impacts upon minority borrowers. The following chart shows an array of credit scores for African-Americans, Latinos, and white borrowers from the North Carolina and Virginia sample.

Chart A: Credit Score Distribution by Race and Ethnicity



The lines represent the percentage of borrowers in different racial or ethnic groups that have a credit score below any point on a credit score range of 620 to 850. Almost all borrowers have credit scores below 800. As the line moves from left to right, it drops down as the share of borrowers with low credit scores diminish. The lines show that more minority-borrowers have lower credit scores. The contrast in these numbers is somewhat muted by the fact that this represents a biased population. These are all people that were able to get a mortgage. The actual variation is far greater. A 2007 report by the Federal Reserve documented the significant disparities in credit between different racial groups. The study adjusted credit scores to a scale from 0 to 100 (0 would be FICO 350 and 100 would be FICO 850). The results suggest that credit scoring can have a substantially more restrictive impact to mortgage access for minority groups than for white borrowers. African-Americans had a median score of 26.4, Latinos had a median adjusted score of 38.2, non-Hispanic whites had a median adjusted score of 54.0, and Asians had a median adjusted score of 54.8. It also suggests that there could be some disparities across neighborhoods. In low-income census tracts,

the median adjusted score was 32 (Federal Reserve Board, 2007).

## THE LLPA PUSHES MORE LOANS TO FHA

Another impact of the LLPA rules is to shift risk away from GSE-purchased loans and to loans guaranteed by government entities such as VA or FHA.

FHA guaranteed 4 percent of new mortgages in 2006 (Frank, 2011). In 2010, 21 percent of borrowers used an FHA loan and another 9 percent used a VA loan. In some cities, FHA guarantees as many as 40 percent of new loans. The increased presence in FHA is sudden and dramatic. In all, FHA guaranteed 6.8 million mortgages with a value of \$685 billion the 3<sup>rd</sup> quarter of 2010 (Frank, 2011).

The divide is driven by two factors: credit score and loan-to-value (LTV) ratios. Borrowers with the best credit and the highest down payment inevitably choose a conventional loan. Borrowers with bad credit and little for a down payment are much more likely to use an FHA loan. The force of LTV is probably greater.



Taxpayers will shoulder the downside risk on these loans, regardless of their destination. However, to the extent that the loans end up in FHA, they are subject to a greater degree of risk. The high LTV loans that end up guaranteed through FHA or VA are more vulnerable to declining housing prices. A borrower that puts 3.5 percent down can easily become underwater. By contrast, a borrower that makes a 30 percent down payment is much less likely to end up underwater. The intent of the new premium reflects concern about FHA's capital ratios. By law, FHA must hold a reserve equal to 2 percent of its potential obligations. At the end of September 2010, reserves were 0.53 percent (Khalfani-Cox, 2010). The new premiums should help to make up that shortfall.

Consider the candid reports made by mortgage insurance companies to their investors. Mortgage insurance companies exist downstream from the decision-making of the GSEs. Their words and their actions suggest that two factors are in play: many consumers that might once have used PMI for a conventional loan are instead being pushed to FHA by the LLPA matrix, and they are opting to re-price to go after the safest borrowers. Here is a quote from a 2011 10-K by a large mortgage insurance company:

“As a result, lenders and borrowers may continue to find it more advantageous to pursue a loan with FHA mortgage insurance, rather than pay higher costs in order to sell the loan to one of the GSEs (although other factors may influence the lender's loan

sale decision). Any future increases to the GSEs' LLPAs will negatively impact demand for private mortgage insurance. On March 1, 2011, Freddie Mac announced that, for mortgages closing on or after June 1, 2011, it will cease purchasing mortgages with LTVs exceeding 95%. Freddie Mac's LTV limitation may have the effect of reducing the size of the private mortgage insurance market and could negatively impact our ability to compete with FHA and our ability to increase our new insurance writings.” (PMI Group, 2011)

The problem with FHA is not just one of taxpayer burden. There are issues that affect individual borrowers and their surrounding communities. Higher principal balances create higher debt-to-income ratios. This may increase the possibility that borrowers will be foreclosed upon. For communities with many FHA loans, the vulnerability of individual borrowers can grow into a tidal wave that dramatically lowers local property values.

The trend may reverse course. New legislation, passed in June 2010, allows the Federal Housing Administration to increase its premiums on new FHA loans. FHA is permitted to charge an annualized premium of as much as 1.5 percent. Prior to that, the maximum was merely 0.55 percent. FHA says that the new rules mean an increase of \$42 a month in mortgage payments to the average borrower.



## MORE LOANS GO TO FHA

Mortgage insurance has leveled the ability of lower wealth households to buy a home. It is a powerful force for increasing home ownership.

Private mortgage insurance companies sell credit enhancement for loans with loan-to-value ratios that are greater than 80. The insurance can be package in two ways: either through a single-premium or paid in monthly installments over the course of the loan. Private mortgage insurance companies compete with FHA for business, although they both serve the same function in the marketplace. They increase the number of households that are able to get mortgages.

Revenues are down because their primary customers (GSEs and private MBS investors) are withdrawing from the higher LTV mortgage market. Table 7 (see appendix) compares mortgage guarantees made by the eight mortgage insurance firms in 2007 and in 2009.

*Table B: Change in Volume of PMI contracts, by borrower income*

The table below shows the change in the number of conventional loans guaranteed by private mortgage insurance. They are sorted by the income level of the borrower.

Borrower Income	07 to 08	08 to 09
Low	-49%	-68.4%
Moderate	-41%	-62.3%
Middle	-33%	-57.3%
Upper	-23%	-54.4%
Total	-39%	-60.5%

There are a few points worth noticing about the sudden changes in the industry:

- The volume of guarantees dropped fourfold, from more than 1.5 million to just a bit over 386,000.
- The only firm to increase its business was CMG. CMG serves credit unions. It is half-owned by PMI group. Credit unions have benefited from ongoing relationships with a consumer base that has good credit.
- The share of loans insured for homes in low-and-moderate income neighborhoods dropped almost six-fold, from more than 675,000 to just below 115,000. The drop-off was even steeper in low and very low-income neighborhoods – approximately tenfold.
- The share of loans insured on behalf of low-and-moderate income borrowers shrunk as well, and to an extent that outpaced declines across the board.

There are two important conclusions to be drawn from this table. From the inception of the LLPA, low-income consumers have seen their ability to get credit enhancements for their loans drop more than any other segment of the population. This table shows year-over-year change. The combined difference ('07 to '09) is 84 percent. Secondly, the rate at which they are withdrawing from conventional PMI fell by 87 percent and by 83 percent to moderate-income households.

This paper repeatedly presses the connection between GSE pricing changes and home ownership. The story of the volume of conventional PMI-guaranteed loans only serves to reinforce that concern. The dramatic fall off that has taken place across all types of mortgage loans is even steeper when isolating for home purchase loans.

There is no way to avoid placing at least some of the blame for this upon the GSEs. The GSEs are now buying more than 60 percent of all conventional loans. They have created a policy that raises costs and even excludes loans to lower-wealth households.

Policy makers should also concede that there is another dimension to mortgage insurance – race. Wealth divides America. While progress in access to education has done much to level gaps between whites and minorities along lines of income, wealth is far different. Recent Pew studies in 2004 and 2007, which referenced the Federal Reserve’s triennial Survey of Consumer Finances, documented the gap. White wealth is ten times greater than African-American wealth.

## LLPA FEES COMPOUND THE IMPACT OF RISKED-BASED PRICING UPON ACCESS TO CAPITAL

**T**oday, because of policies by the GSEs and because of policies by some mortgage insurance companies that are being taken in response to those changes, low-income consumers are being abandoned by PMI for upper-income households.

Pricing is at the root of these developments. Some private mortgage insurance firms (“PMIs”) have responded to the new GSE LLPA rule with a new approach that utilizes risk-based pricing to a far greater extent. Their response contributes to a new segmentation in how risk is allocated.

- Low-risk borrowers (credit above 750 or lower LTVs) seek out the lower premiums available on conventional loans insured by risk-based pricing PMIs.
- The risk posed by medium-risk borrowers (credit between 680 and 750 or LTVs from 85 to 95) is put on the PMI companies that use cross-subsidization.
- The risk posed by the riskiest borrowers (credit below 680 or LTVs greater than 95) is shouldered by the taxpayer through the

This segmentation turns out to be very problematic.

Charts Three and Four (in the appendix) show the pricing systems of FHA, a RBP firm, and one that uses cross-subsidization.

RBP is used to a certain extent by all PMI companies, but some differentiate in borrower quality more than others do.

Consider the following excerpts from recent 10-k’s. These documents come from a variety of mortgage insurance companies. They make clear the strategic shift in how mortgage insurance is going to be priced. Those new pricing plans reflect the new competition for upper credit quality consumers. The new baseline means that borrowers that would have gotten a loan anyway are now able to do so at less expense.

- “lower rates for borrowers with credit scores of 720 or greater, higher rates for borrowers with credit scores between 620 and 679, and no change in rates for borrowers with credit scores between 680 and 719...we intend that these price changes will position us to be price competitive with the FHA for loans to borrowers with credit scores of 720 and above.” (MGIC, 2011)
- “As a result of these changes, the credit profile of our mortgage insurance portfolio has improved. For 2010 and 2009, almost all of our new business production was categorized as prime business. In addition, Fair Isaac and Company ("FICO") scores for

the borrowers of these insured mortgages have increased, while the loan-to-value ("LTV") on these mortgage loans has decreased, meaning that borrowers generally are making larger down payments in connection with the more recent mortgage loans that we are insuring.” (Radian, 2011)

Borrowers that would have contributed more to the capital pools of PMI companies are unable to get mortgage insurance. Some are unable to get a mortgage, and others go to FHA. In effect, private PMI capital is turned away and more mortgage risk is moved to taxpayers.

Location is also a factor. Entire metropolitan areas now pay more to get mortgage insurance. Consider this business model published by one of the nation’s fastest growing mortgage insurance companies:

Table B: Minimum FICO/LTV standards

Loan Type (conventional)	Level 1		Level 2		Level 3	
	Minimum FICO/MAX CLTV (s)		Minimum FICO/MAX CLTV (s)		Minimum FICO/MAX CLTV (s)	
Home Purchase	720/97	680/95	700/95	680/85	720/95	700/85
Refinance	680/95		700/95	680/85	720/95	700/85
<b>Additional property type factors</b>						
Condo	680/95		720/95	700/90	740/90	720/85
Co-Op	680/90		700/90		740/90	720/85
Jumbo SFR (\$417+)	720/90		720/85		No	

\*These numbers are more conservative in MSAs identified as “declining.”

These are very conservative limits for a company that is in the business of managing risk. This company is essentially walking away from risk. We are talking about a company and a pricing methodology in an industry that has traditionally served the underserved. No more.

Most markets are considered “Level 1,” which is used to characterize the most stable housing markets. Level 2 and Level 3 represents progressively lower housing market quality. Most of the level 3’s are in California, Arizona,

Florida, and Nevada. In North Carolina, all markets are Level 1 except for Asheville, and Wilmington MSAs, all of which are Level 2. In Virginia, Richmond and Norfolk are Level 2. This mirrors the LLPA’s Adverse Markets Delivery Charge.

It is a classic example of the situation that economists describe as a “prisoner’s dilemma”: all parties have some incentive to work together, but when one individual (or in this case, a PMI corporation) acts in his own self-

interest than the cooperative individuals are harmed. In this case, the RBP firms undermine the solvency of the entire market. There are only about 8 major private mortgage insurance companies still actively insuring loans in the United States.

Cross-subsidized firms cannot achieve margins that are healthy enough to sustain their costs. Since lower credit score borrowers pay more, the C-S PMI firms use their additional premiums to increase their overall margin. That business now goes to FHA. By contrast, the risk-based pricing firms can generate a high Alpha by only contracting with high credit score borrowers.

*In North Carolina, the same challenges are apparent. The only difference is in the level of contrast in the change in volume of home purchase loans compared to refinance loans. The following table shows the utilization of private mortgage insurance contracts from 2007 to 2009 in Virginia and in North Carolina.*

*Table C: Volume of mortgage insurance contracts, Virginia and North Carolina, 2007 to 2009*

<b>Virginia</b>				
<b>Purpose</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Change</b>
<b>Home Purchase</b>	28,686	24,117	9,211	-67.9%
<b>Refinance</b>	14,963	12,293	6,725	-55.1%
<b>North Carolina</b>				
<b>Purpose</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Change</b>
<b>Home Purchase</b>	50,593	34,393	10,961	-78.3%
<b>Refinance</b>	17,528	16,622	11,056	-36.9%

There are many factors that make comparisons in loan volume difficult. Whereas 2007 marked the last go-go year, the bubble burst in the fall of 2008. In the aftermath, there were fewer mortgage loan originations. That would naturally imply that there would be fewer customers for private mortgage insurance policies as well.

## PMI DIVIDES ACCESS TO CREDIT ALONG LINES OF RACE

The new risk-based pricing systems conflate the problematic impacts in the LLPA with regard to how minorities access capital.

Table 4: Price increases in mortgage loan guarantees paid by borrowers by race or ethnicity

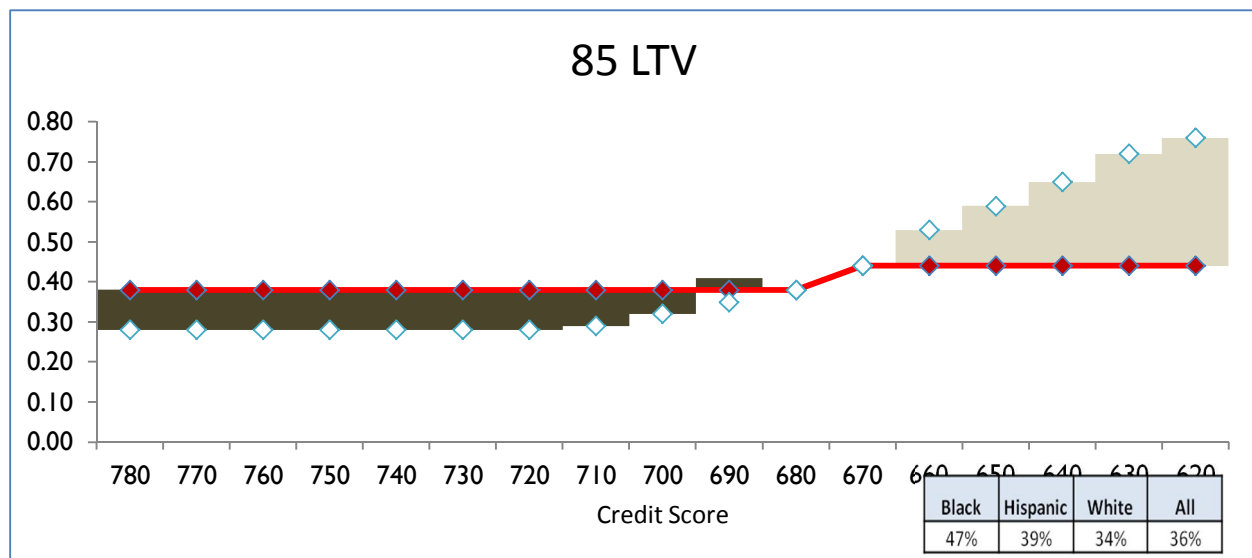
85 LTV			
Black	Hispanic	White	All
42%	30%	30%	33%
95 LTV			
Black	Hispanic	White	All
47%	39%	34%	36%

The table on the left shows the percentage of borrowers, sorted by race or ethnicity, which will pay more under a risk-based pricing system. The table includes borrowers with loans at 85 LTV and 95 LTV.

This system increases costs for borrowers from all demographics. However, its increases are borne more frequently by minority borrowers.

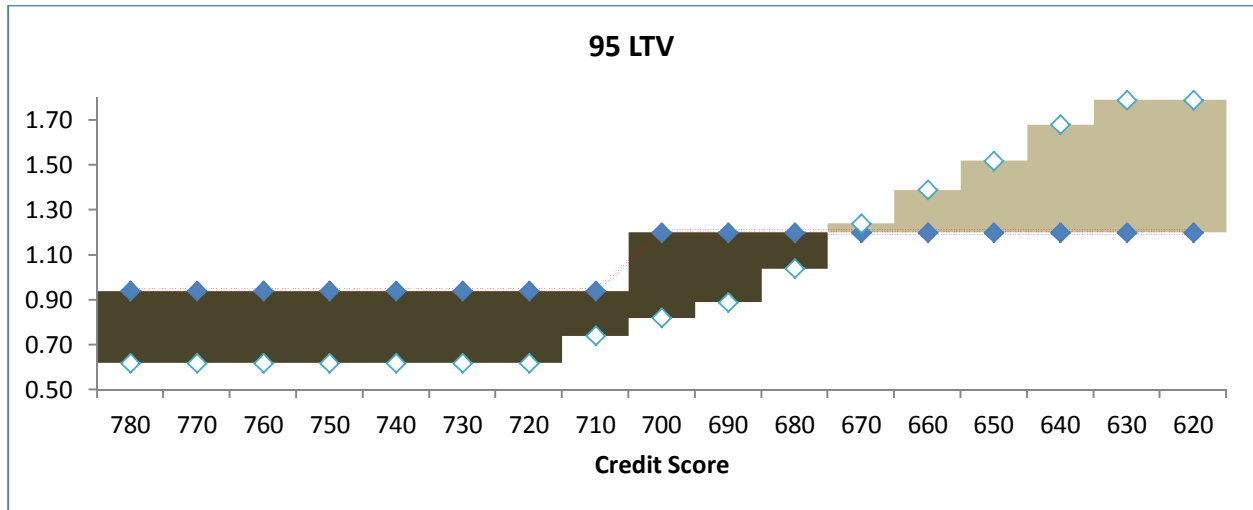
The next chart shows where prices differ between a cross-subsidized approach to PMI pricing and one that is designed around risk-based pricing. The red line tracks the recent changes in how credit score is priced for a cross-subsidized firm. The portion of the premium driven by credit scores at the C-S firm ranges from about 35 to 40 basis points at 85 LTV. At the RBP firm, the price goes from under 30 basis points to as high as 75.

Chart B: Payment changes on mortgage insurance, paid by borrowers in risk-based pricing schedules. Sorted by credit score at 85 LTV



At 95 LTV, the pricing difference is even greater. The C-S firm charges between 90 and 110 basis points. The RBP firm charges between 65 and 160 basis points.

Chart C: Payment changes on mortgage insurance, paid by borrowers in risk-based pricing schedules. Sorted by credit score at 95 LTV



The role of private mortgage insurance is inextricably linked to the role of FHA. PMI revenues shrink when the GSEs lower their maximum LTV, as Freddie Mac did in March 2011 when it lowered its maximum LTV to 95. This effectively moved a large share of mortgages in the 95 to 97 LTV space from the GSEs to FHA. Those mortgages would have used PMI. Now they are guaranteed by FHA. Similarly, as LLPA prices go up, more business goes to FHA. When FHA increases its premiums, as it has been doing for the last year, the opposite is true: more loans are moved back to conventional programs.

According to PMI Group, “private mortgage insurers’ ability to compete with FHA has been negatively impacted on certain loans by the GSEs’ risk-based pricing structures...As a result, lenders and borrowers may continue to find it more advantageous to pursue a loan with FHA mortgage insurance, rather than pay higher costs in order to sell the loan to one of the GSEs (although other factors may influence the lender’s loan sale decision). Any future increases to the GSEs’ LLPAs will negatively

impact demand for private mortgage insurance. . (PMI Group, 2011)”

There are many examples of how these two pricing mechanisms work in other areas of insurance and they point to how this could be done more efficiently. Health insurance provides an example of risk-based pricing. In our health insurance system, low-risk consumers are served by private firms but high-risk consumers get medical coverage through taxpayer-supported funding. Health insurance companies have refused patients with higher risk profiles, such as those with pre-existing conditions or with lower credit scores. The population bias means that the system loses revenue.

Auto insurance uses cross-subsidized pricing. In many states, licensed firms must take some customers from assigned-risk pools. All drivers share in the risk brought to the roads by our high-risk populations (teenage boys).

Some industries use both models. Property insurance is an example. In North Carolina, homeowners from across the state shoulder a

portion of the premium cost that is needed to address the risk for homeowners on our eastern coast. North Carolina policy holders buy their insurance from private insurance companies. Those private firms then sell their risk to re-insurance companies. In Florida, the opposite system is in effect. The state of Florida

operates its own property insurance firm - Citizens' Insurance. Both states have substantial risk from hurricanes, but one forces the state to bear the risk while the other uses a cross-subsidization approach.

## THE LLPA THWARTS INVESTMENT IN RENTAL PROPERTIES

The rules increase borrowing costs for loans made to investors, even when those loans are made with a significant down payment and by a borrower with a good credit score.

The logic of imposing additional delivery charges for loans to real estate investors contradicts common sense. If policy makers decide to push more low-wealth borrowers out of homeownership, then why make it harder for capital to go for the financing of rental properties? People need housing, and homes need buyers. In many communities, as many as one-third of home sales are made through an all-cash transaction. While some buyers can probably benefit from owning a home free and clear, few investors will sacrifice returns on their equity.

National policy makers know that a need exists. Investment in smaller rental properties dwindled after 2006 (Joint Center for Housing Studies, 2011).

We know that rental housing is going to play an increasingly important role in providing affordable housing. "With half of all renters spending more than a third of their income on housing," said HUD Secretary Sean Donovan, "– and a quarter spending more than half their income – this Administration believes that as a part of a balanced housing policy there should be a range of affordable options for the millions of Americans that rent. (Donovan, 2011)"

"Even as we emerge from this crisis," said Sheila Bair, "it is worth asking whether federal policy is devoting sufficient emphasis to the expansion of quality, affordable rental housing." (Bair, 2010)

Having a system that allocated capital to investors was important prior to the economic downturn. Going forward, this will be the case even more. The number of renting households surged by 800,000 in 2010 (Joint Center for Housing Studies, 2010). Those new renters are competing for homes in a marketplace that has not been producing new stock. The number of new multi-family rental housing unit starts dropped from 284,000 in 2008 to just 109,000 in 2009. Affordable units slowed as fewer corporations sought to buy the low-income housing tax credits that fuel many new affordable housing developments. The full effect of the sudden drop in new rental production may not be felt for some time. It may take some time before new renters saturate existing supply. When the economy comes back, more households will form. Immigrants will return, seeking opportunities to work again. At that point in time, people will need rental housing but the stock will be inadequate and old.

As the LLPA drives down the availability of home purchases by investors, it complements an ongoing drop in new rental housing production. Moreover, the alternative prospect



– making an FHA loan – is not a viable alternative. With the exception of loans already guaranteed by FHA, or for 203 (k) loans, FHA is primarily oriented towards owner-occupied housing.

There is a genuine need. Markets must allocate capital to rental housing production, and in the near future. Many households lost much of their savings during the recent recession. Homeowners have lost equity. In some states, estimates suggest that as many as half of all borrowers are under water. When people lose their jobs, as many have, then they use their existing nest eggs to get by. The result is that fewer households have enough money to put down enough money, particularly for a conventional loan.

These changes mean that more people are going to have to rent. Unfortunately, the LLPA also undermines the ability of investors to buy rental properties. The Federal Reserve Bank of Philadelphia notes that recent underinvestment in small rental units (single-family homes, duplexes) have created both a lack of quantity and widespread need for repairs. According to the Fed, more than half of small unit rental properties are more than thirty years old and many are located in distressed areas (Lambert, 2010). This context suggests that many rental units will suffer double difficulty: investor-

owned loans trigger a special LLPA delivery fee, as do properties in MSAs where values are declining. The Fed recently suggested that policymakers should work to help well-intentioned investors acquire property, particularly in areas with high rates of foreclosure (Black, 2010).

It takes time for new rental housing to come on to the market. New demand for rental housing will not be met with new supply for some time. Demand is unlikely to dissipate. It takes seven years to clear a foreclosure from a credit report. It may take longer than that to build up enough savings to make a down payment. The marketplace should respond to the pent-up demand, but the LLPA will certainly thwart any energy in that direction.

Borrowers with lower credit scores are unable to get FHA loans for either investor properties or for second homes. FHA is the preferred option for borrowers with credit scores below 680 in the owner-occupied category. Among all ownership categories, 6,577 homes were originated through government-backed loans. Only seven of those were not for owner-occupied properties. It is the same story with high loan-to-value loans: only 37 of more than 16,000 government loans went to investors or to second home owners.

## THE LLPA IN NORTH CAROLINA AND VIRGINIA

An analysis of the loans in that data set seems to affirm the role that these risk-based PMI standards would play in the choice of mortgage loan products. Government loans were very likely to demonstrate the credit score/loan-to-value profile that would be excluded from coverage on the part of Republic. The table below makes that point.

Only 18.1 and 30.0 percent of home purchase and refinance loans originated in North Carolina and Virginia, respectively, would have met the Level I requirements for Republic. The rest deemed to have a credit profile that was not adequate for insurance, would have to seek out a PMI firm that utilized a less steep cross-subsidization model.

Conventional borrowers will find that their applications are looked with skepticism as well. Only about 4 in 5 loans would make the cut for Republic in a Level I market. Borrowers with credit below 680 are not served at all. In North Carolina the average credit score is 682. Republic Mortgage is choosing to deny credit enhancement on conventional loans to a very sizable portion of North Carolina.

While loan type does impose higher costs upon ARMs, this is now a very minor sector in the lending market. In the sample set of loans made in Virginia and North Carolina, only 8.4 percent of all originated mortgages had an adjustable-rate mortgage. Anecdotally speaking, those loans are fairly different than the ones that were made prior to the bust. A 10-year ARM, which is among the more popular offerings, is far more stable than a “2-28” or a “3-27.” This is another instance when LLPA fees manage to segregate costs upon risk in a way that does little to harm the mortgage market.

There are many low-down payment home purchase loans, but most go to FHA. There is a widespread need among homebuyers for very low-down payment home purchase loans. Of the 15,799 home purchase loans in the database, 38.5 percent were made with a down payment of three percent or less. The low down-payment loan is much more likely to be for a home purchase. Just 11.3 percent and 2.3 percent, respectively, of the other product categories were originated at such low down payment levels.

The Government loans are much more likely to have not met the criteria for delivery. Seventy-seven percent of home purchase and 48 percent of refinance loans that were underwritten through government-guaranteed programs did not meet the criteria for delivery to the GSEs. This is not surprising and it is at the root of the idea that the LLPA creates a bias in the quality of loans.

## CONCLUSION: LLPA PRESENTS CHALLENGES TO HOME BUYERS AND CONTRADICTS EXISTING LEGAL FRAMEWORK FOR MORTGAGE LENDING

Stepping back, the impact of new, more restrictive loan-to-value requirements should interfere with the GSE’s longstanding duty-to-serve the housing needs for all American households.

The LLPA makes it harder for the GSEs to realistically fulfill their obligations to further the availability of affordable housing. The Federal Housing Enterprises Regulatory Reform Act of 1992 is clear:

*“The purpose of these goals is to facilitate the development in both Fannie Mae and Freddie Mac of an ongoing business effort that will be fully integrated in their products, cultures and day-to-day operations to service the mortgage finance needs of low- and moderate-income persons, racial minorities and inner-city residents.” The Enterprises, the report noted, “can play an important role in ensuring that*

*mortgage credit is increasingly available to those individuals and for those purposes which for too long have been ignored by the secondary market.”*

Later, the Safety and Soundness Act provided specifics to the housing goals for the GSEs: to serve low-and-moderate income consumers, to serve underserved areas, and to meet special “affordable goals.”

Moreover, although the GSEs have no obligation under the Community Reinvestment Act, the impacts of these rules will undermine the ability of loan originators to meet the affirmative obligation to make mortgage capital available in low-income neighborhoods and to low-income borrowers. The LLPA’s preference for low loan-to-value loans narrows the pool of homeowners that can afford a down payment. Certainly, FHA guaranteed mortgage debt will ease that hurdle. However, should CRA become a type of loan largely limited to one loan type? Given that FHA loans do impose high annual mortgage insurance premiums; this is a significant point of concern.

The LLPA rules are an inflexible approach to resolving the issue of GSE solvency. The market is an excellent means for gauging risk. Lenders have decided to require higher down payments. In his annual letter to shareholders, JP Morgan Chase CEO Jamie Dimon discusses how his bank is one among many that now imposes an explicit expectation on new mortgage loans to have more “sensible” loan-to-value ratios. He writes that “the marketplace, investors, banks, regulators and rating agencies already have significantly upgraded the standards by which many products and institutions operate. For example: All new mortgages are being written to comply with standards that existed many years ago, before the worst of the past decade’s

excesses. These mortgages include sensible features such as loan-to-value ratios mostly below 80%, true income verification and more conservative home-value appraisals.” (Dimon, 2011)

The broad picture is one of multiple institutions – the GSEs, Congress, the Federal Reserve, and the FDIC – applying their best intentions to solve a common problem. Yet their individual efforts are compromised by the complementary work of their peers, with the result that unfortunate consequences are brewing. In the end, it appears that the solvency of the GSEs will be enhanced, but the concern remains that the work done to achieve that will undermine homeownership.

An unfortunate consequence is that the GSEs are not shielding taxpayers from risk, but only moving that risk from the GSEs over to FHA.

Our underlying concern is the impact that Loan-Level Pricing Adjustments pose for historically underserved borrowers.

Unfortunately, the empirical evidence shows that the LLPA is hurting borrowers and communities. The policy creates high hurdles for minority and low-wealth households. The need to come up with a down payment of 20 or 25 percent puts homeownership out of reach for many of these individuals.

Given their market share, the GSEs are able to control the flow of mortgage loans right now. Their decision appears to be that it should be hard to get a loan. This paper has demonstrated the challenges facing borrowers in North Carolina and Virginia and it has viewed the new mortgage market through the lens of private mortgage insurance companies. They all tell the same story – the LLPA is moving homeownership beyond the reach of many households in America.

## POLICY PRESCRIPTIONS

*Use the GSEs to monitor risk-based pricing:* Mortgage insurer get much of their business contingent upon qualifying as an approved partner of Freddie Mac and Fannie Mae. The use of risk-based pricing undermines the capitalization of mortgage insurance companies. It moves low-risk business and its lower premium pricing to MI but the higher-premium higher risk business is captured by FHA. New priorities at HUD, Treasury, and the White House say that the government should wind down its level of participation in mortgage guarantees. This is an opportunity to wind down that level of involvement while also creating a “carrot” to insure greater access to mortgages for low-wealth households.

*Use repurchase agreements to protect GSEs from exposure to risk.* Repurchase agreements still give banks the liquidity to make loans more available to borrowers. LTV requirements create a line in the sand. Wealthy households are treated differently than low-income households.

*Allow mortgage insurance to factor in the calculation of risk-retention in the Qualified Residential Mortgage rules.* A common alternative posed in many comments on the QRM has been

to couple a lower down payment with a credit enhancement. One definition might be a 10 percent downpayment along with private mortgage insurance. This has the effect of lowering the bar to homeownership for lower-wealth households, while still mitigating against systemic risk.

*Rescind the adverse markets delivery charge in markets where housing prices have ceased to drop.* In more than half of the metros included in the Case-Shiller Index, home prices have stabilized. In many, prices have increased since March 2009. Our suggestion is not for the GSEs to eliminate the charge, but instead to review the use of the ADMC on a market-by-market basis.

*Reconsider plans by Freddie Mac to cease purchasing loans with LTVs greater than 95.* This is another step that pushes more loans to FHA. In North Carolina and Virginia, 22.3 percent of loans made in vintage 2010 had an LTV of greater than 95. In majority-minority census tracts 95-plus LTV loans accounted for 28 percent of mortgage originations.

### *About the data used for this research*

The first source of data for this paper comes from a set of approximately 50,000 mortgage loans in 2010 in Virginia and North Carolina. They are collected from about twenty difference loan servicing entities. This means that not every loan made during 2010 is in our analysis. For the most part, there is good coverage in prime loans but slightly less in subprime. All of the loans are for single-family residential homes. They include home purchase loans, rate-term refinances, and cash-out refinance loans. There are loans made both to owner-occupants as well as investors and to buyers of second homes.

In turn, that data is complemented by a database of Virginia and North Carolina loans insured by private mortgage insured. The information is collected from PMI firms and then released in a loan-level format by the Federal Financial Institutions Examinations Council (the “FFIEC”). In order to show some

trends in the use of PMI, the paper uses PMI records from 2006 to 2010.

This report also makes use of documents filed to the Securities and Exchange Commission (the “SEC”) by several mortgage insurance companies.

In order to show the physical impact of the LLPA, we use zip code-level data from the 2000 and 2010 Censuses. The data includes demographic information about the race and income of households in those areas. The LLPA database identifies the zip code of each loan. Zip code serves as a common identifier. The zip codes are then cross-matched against Congressional Districts. Census offers shape files for zip codes, Congressional Districts, and other levels of geography. Taken together, these points allow the paper to show more about the geography of these policies.

## APPENDIX ONE – LENDING IN NORTH CAROLINA AND VIRGINIA

Table 1: Loans by Congressional District: Share and Disposition of Loans Deliverable to the GSEs and Share of loans Utilizing Government Mortgage Guarantees.

Name	Dist	Cost	Share Not Deliverable	Deliverable with Fee	Share Gov.	Average Delivery Fee
Butterfield	NC-1	\$211,604	24%	52%	36%	\$399
Cantor	VA-7	\$869,360	21%	52%	31%	\$577
Coble	NC-6	\$487,902	25%	51%	36%	\$425
Connolly	VA-11	\$1,140,848	25%	48%	28%	\$1,016
Elmers	NC-2	\$352,529	26%	52%	36%	\$463
Forbes	VA-4	\$819,187	25%	54%	38%	\$632
Foxx	NC-5	\$396,964	21%	53%	32%	\$421
Goodlatte	VA-6	\$522,357	21%	56%	33%	\$422
Griffith	VA-9	\$231,019	21%	56%	31%	\$359
Hurt	VA-5	\$410,641	19%	56%	29%	\$447
Jones	NC-3	\$578,976	22%	51%	27%	\$549
Kissell	NC-8	\$509,684	25%	52%	37%	\$523
McHenry	NC-10	\$398,355	18%	57%	29%	\$454
McIntyre	NC-7	\$442,970	20%	52%	25%	\$534
Miller	NC-13	\$608,928	24%	52%	35%	\$560
Moran	VA-8	\$903,715	21%	48%	26%	\$1,045
Myrick	NC-9	\$1,201,775	22%	51%	28%	\$697
Price	NC-4	\$812,169	22%	52%	30%	\$621
Rigell	VA-2	\$597,009	23%	53%	33%	\$703
Scott	VA-3	\$478,730	28%	51%	45%	\$540
Shuler	NC-11	\$417,676	13%	56%	20%	\$462
Watt	NC-12	\$434,847	27%	50%	40%	\$481
Wittman	VA-1	\$752,042	27%	49%	33%	\$617
Wolf	VA-10	\$1,419,306	25%	48%	29%	\$898

*Single-family residential loans, vintage 2010*

Table 2:

*Disposition of Loans by Racial and Ethnic Composition of Zip Code*

Minority Concentration	Home Purchase			Refinance		
	Not Deliverable	With Fee	No Fee	Not Deliverable	With Fee	No Fee
0 to 10	15%	45%	40%	46%	35%	19%
10 to 20	18%	43%	39%	47%	33%	20%
20 to 40	19%	43%	37%	51%	31%	18%
40 to 50	23%	43%	34%	56%	28%	16%
majority minority	23%	44%	33%	61%	27%	12%

*Includes only owner-occupied single family-residential mortgage loans*

Table 3: Disposition of loans by Loan Purpose and loan type

Loan Type	Treatment	Count	Cash Out	Purchase	Refinance
Conventional	fee with delivery	20,705	7,697	4,533	8,475
	no fee	11,165	419	2,614	8,132
	not deliverable	2,873	61	1,415	1,397
Government	fee with delivery	5,736	2,090	1,303	2,343
	no fee	1,698	668	311	719
	not deliverable	8,753	250	5,623	2,880
Totals		50,930	11,185	15,799	23,946

\*For the purposes of this analysis, government loans are tested for LLPA standards, even though they are unlikely to be delivered to the GSEs.

Table Four: Disposition of Loans by Loan-to-Value and Loan Type

		Loan-to-Value								
Disposition	Type	Total	60-70	70-75	75-80	80-85	85-90	90-95	95-97	97-100
fee with delivery	Conventional	19,688	3,879	3,194	8,577	996	693	2,349		
	Government	5,480	290	262	464	848	1,424	2,192		
no fee	Conventional	10,614	3,496	2,553	680	1,673	2,212			
	Government	1,603	60	48	49	242	1,204			
not deliverable	Conventional	2,730					130	80	709	1,811
	Government	8,325					6	4	1,509	6,806

Single-family homes, VA and NC

Table Five: Share of loans made through conventional programs, by Loan-to-Value and FICO Bucket

FICO Bucket	Loan-to-Value Bucket							
	60.01 - 70.00	70.01 - 75.00	75.01 - 80.00	80.01 - 85.00	85.01 - 90.00	90.01 - 95.00	95.01 - 97.00	97.01 - 100.00
350 - 619	<b>80.1%</b>	74.0%	72.9%	62.1%	44.2%	35.7%	22.0%	<b>23.1%</b>
620 - 639	73.2%	68.3%	65.7%	33.0%	15.8%	30.5%	17.2%	17.0%
640 - 659	78.0%	67.3%	73.2%	37.5%	20.4%	30.5%	19.2%	17.8%
660 - 679	89.4%	85.5%	82.9%	47.7%	27.0%	32.7%	25.3%	18.8%
680 - 699	92.7%	94.6%	93.5%	65.0%	41.6%	45.8%	26.3%	18.0%
700 - 719	95.6%	95.1%	95.9%	75.1%	55.3%	54.7%	28.1%	17.9%
720 - 739	97.3%	97.4%	96.6%	79.1%	60.8%	58.1%	31.6%	21.8%
740 - 759	97.9%	97.6%	97.3%	81.2%	67.3%	60.9%	34.7%	20.4%
760 - 950	<b>98.7%</b>	98.7%	98.2%	87.0%	75.7%	66.5%	47.4%	<b>29.9%</b>

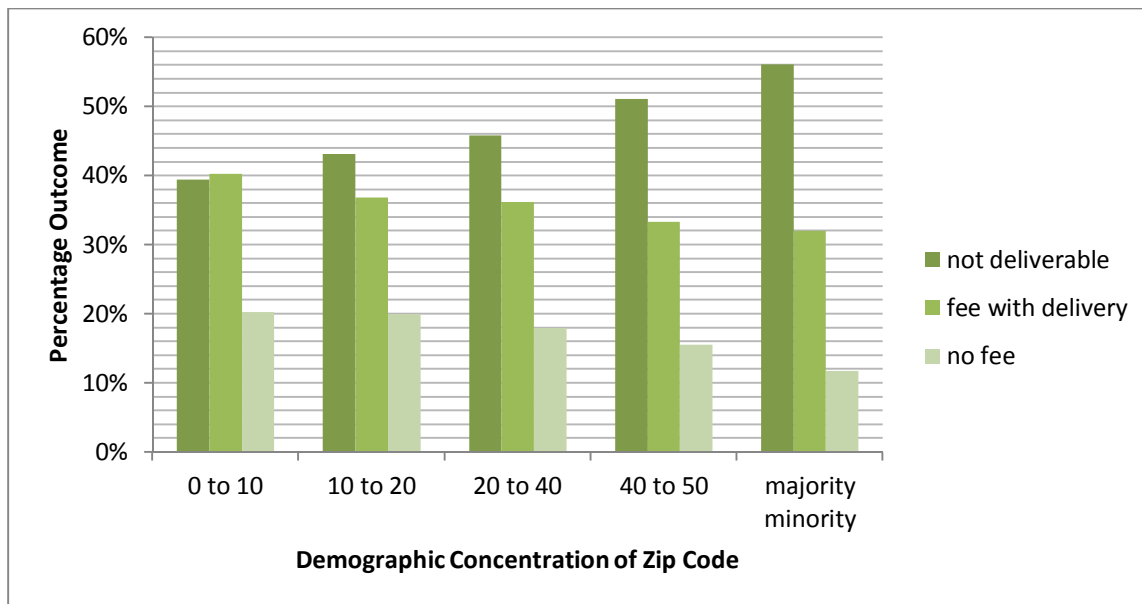
Single-family homes, VA and NC

District	Representative	Mortgages with Fees	Sum
NC-1	Butterfield	531	\$ 211,604
NC-2	Elmers	761	\$ 352,529
NC-3	Jones	1,054	\$ 578,976
NC-4	Price	1,308	\$ 812,169
NC-5	Foxx	942	\$ 396,964
NC-6	Coble	1,147	\$ 487,902



NC-7	McIntyre	830	\$ 442,970
NC-8	Kissell	974	\$ 509,684
NC-9	Myrick	1,723	\$1,201,775
NC-10	McHenry	877	\$ 398,355
NC-11	Shuler	904	\$ 417,676
NC-12	Watt	904	\$ 434,847
NC-13	Miller	1,088	\$ 608,928
VA-1	Wittman	1,218	\$ 752,042
VA-2	Rigell	849	\$ 597,009
VA-3	Scott	886	\$ 478,730
VA-4	Forbes	1,297	\$ 819,187
VA-5	Hurt	918	\$ 410,641
VA-6	Goodlatte	1,239	\$ 522,357
VA-7	Cantor	1,506	\$ 869,360
VA-8	Moran	865	\$ 903,715
VA-9	Griffith	644	\$ 231,019
VA-10	Wolf	1,580	\$1,419,306
VA-11	Connolly	1,123	\$1,140,848

Chart 1: Disposition of Home Purchase Loans, by Racial and Ethnic Composition of Zip Code



APPENDIX Two: MORTGAGE INSURANCE

Table 2.1

<i>percentage change in guaranteed loans, by tract income, 2007 to 2009</i>							
Company Name	ALL	low	middle	moderate	na	upper	very low
<b>AIG United</b>	-73.4%	-88.7%	-71.8%	-81.3%	-83.7%	-52.4%	-90.7%
<b>CMG</b>	13.5%	-24.5%	20.4%	-3.3%	-19.9%	54.9%	-38.5%
<b>Genworth</b>	-84.8%	-92.3%	-83.2%	-87.3%	-89.4%	-77.5%	-93.7%
<b>MGIC</b>	-74.8%	-87.1%	-72.8%	-80.2%	-83.5%	-59.7%	-88.4%
<b>PMI Group</b>	-78.1%	-90.4%	-76.0%	-83.4%	-85.9%	-61.1%	-92.6%
<b>Radian</b>	-61.4%	-77.4%	-61.1%	-70.9%	-79.9%	-37.9%	-79.9%
<b>Republic</b>	-76.8%	-89.4%	-75.1%	-82.4%	-86.4%	-61.5%	-93.5%
<b>Triad</b>	-99.8%	-99.9%	-99.9%	-99.8%	-98.8%	-99.9%	-100.0%
<b>ALL</b>	-74.6%	-87.2%	-72.6%	-80.2%	-84.4%	-58.8%	-89.9%

Table 2.2

<i>2009 PMI, volume of guaranteed loans, by company and tract income</i>								
PMI Firm	Sum	low	middle	moderate	na	upper	Very low	LMI share
<b>AIG United</b>	57,815	3,949	16,251	11,111	1,565	24,517	422	27%
<b>CMG</b>	38,200	3,284	11,876	9,600	1,090	12,152	198	34%
<b>Genworth</b>	38,460	2,987	11,414	8,604	1,327	13,806	322	31%
<b>MGIC</b>	96,879	7,490	28,060	20,829	3,629	36,091	780	30%
<b>PMI Group</b>	41,416	3,260	11,460	8,404	1,249	16,667	376	29%
<b>Radian</b>	73,470	6,430	19,721	14,568	1,834	30,218	699	30%
<b>Republic</b>	39,844	2,721	11,464	8,090	1,251	16,117	201	28%
<b>Triad</b>	149	7	25	44	49	24		34%
	386,233	30,128	110,271	81,250	11,994	149,592	2,998	30%
<i>2007 PMI, volume of guaranteed loans, by company and tract income</i>								
<b>AIG United</b>	217,611	34,941	57,660	59,336	9,609	51,505	4,560	45%
<b>CMG</b>	33,659	4,349	9,861	9,924	1,360	7,843	322	43%
<b>Genworth</b>	253,308	38,691	67,767	68,001	12,503	61,259	5,087	44%
<b>MGIC</b>	384,406	57,855	103,026	105,115	22,059	89,604	6,747	44%
<b>PMI Group</b>	189,136	34,119	47,722	50,493	8,885	42,835	5,082	47%
<b>Radian</b>	190,431	28,438	50,643	50,128	9,113	48,640	3,469	43%
<b>Republic</b>	172,006	25,734	46,129	46,055	9,172	41,816	3,100	44%
<b>Triad</b>	77,625	11,788	20,298	20,449	3,976	19,667	1,447	43%
	1,518,182	235,915	403,106	409,501	76,677	363,169	29,814	44%

Table 2.3

<i>percentage change in guaranteed loans, by Borrower Income, 2007 to 2009</i>						
Company Name	ALL	lmi	middle	moderate	na	upper
AIG United	-73.4%	-84.3%	-69.0%	-76.6%	-90.5%	-59.7%
CMG	13.5%	-15.2%	24.5%	6.1%	-24.9%	39.6%
Genworth	-84.8%	-89.2%	-81.7%	-85.8%	-93.7%	-79.4%
MGIC	-74.8%	-84.4%	-70.3%	-77.9%	-87.9%	-62.6%
PMI Group	-78.1%	-83.4%	-73.0%	-78.3%	-94.1%	-71.5%
Radian	-61.4%	-73.0%	-57.6%	-65.7%	-86.3%	-47.1%
Republic	-76.8%	-85.4%	-72.4%	-79.1%	-94.4%	-63.1%
Triad	-99.8%	-99.9%	-99.8%	-99.9%	-99.7%	-99.7%
ALL	-74.6%	-82.9%	-69.6%	-76.5%	-91.8%	-63.5%
<i>percentage change, all actions, by Borrower Income, 2007 to 2009</i>						
Company Name	ALL	LMI	moderate	middle	an	upper
AIG United	-68.4%	-79.3%	-63.1%	-71.1%	-86.2%	-54.6%
CMG	38.2%	3.1%	48.1%	27.6%	10.5%	70.1%
Genworth	-75.8%	-81.5%	-71.5%	-77.2%	-86.1%	-68.3%
MGIC	-64.9%	-76.8%	-59.5%	-69.0%	-77.3%	-50.4%
PMI Group	-70.2%	-75.3%	-63.8%	-69.5%	-89.1%	-63.1%
Radian	-55.8%	-66.9%	-50.7%	-59.6%	-83.9%	-40.4%
Republic	-62.8%	-73.2%	-57.7%	-66.4%	-83.9%	-46.3%
Triad	-98.3%	-98.0%	-98.3%	-98.0%	-98.5%	-98.3%
ALL	-66.3%	-75.5%	-60.4%	-68.4%	-84.5%	-53.9%

Chart 2.1: Comparing Risk-Based Pricing with Cross-Subsidized Pricing  
 Loan-to-Value = **95 percent**

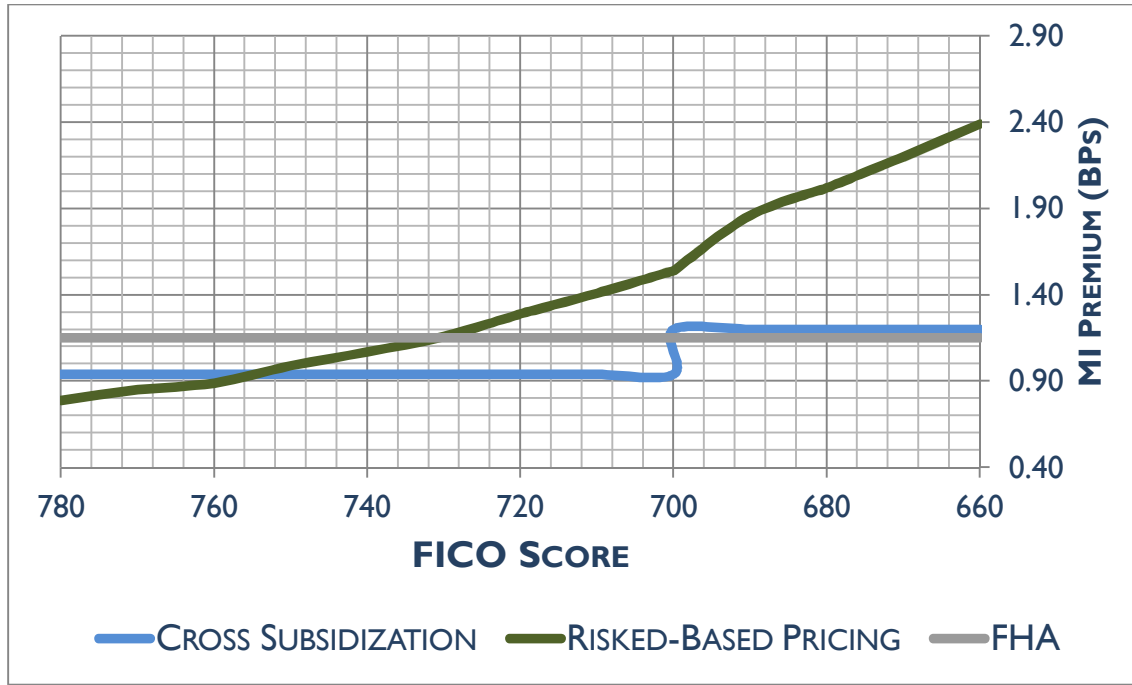
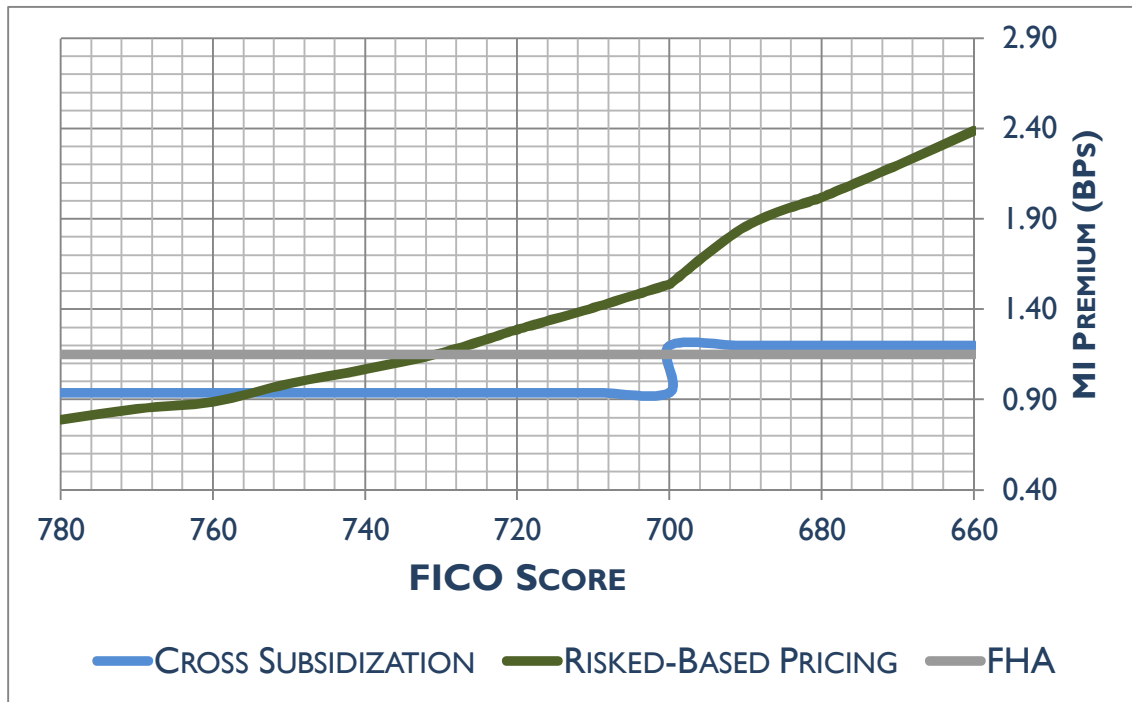


Chart 2.2: Comparing Risk-Based Pricing with Cross-Subsidized Pricing  
 Loan-to-Value = **90 percent**



\*Prior to April 2011 FHA pricing changes

## APPENDIX THREE: SOME EXAMPLES OF THE TREATMENT OF BORROWERS BY THE LLPA

This section will describe the process of the LLPA by showing its impact on a hypothetical family where three members are seeking a home mortgage at one time.

Imagine a hypothetical scenario where three people in the Jones family want a mortgage – Peter Jones, Paul Jones, and Mary Jones.

Mr. Peter Jones has found a single-family home for his family. The home is located in Charlottesville, Virginia. Mr. Jones has a lot of things going for him – he has a high credit score (760) and he can put down more than twenty percent. He is going to apply for a fixed-rate loan.

Peter got those good credit habits as his father, Paul. Paul is a small businessman from Blacksburg. He has the same 760 score as his son. About ten years ago, he bought an investment property in a beach town near Wilmington, North Carolina for \$287,000. Today, he owes \$250,000 and is paying 6.25 percent. He turned down offers a few years ago to sell for \$400,000. He knows that the market has struggled, but he still thinks the house is worth what he paid for it. Ever since a large storm came through Wilmington, he has wanted to install a good drainage system at the property. He would like to get some of his equity out so that he could do those fix-ups. He is eager, in fact, because he thinks he will be able to save some money after he refinances at a today's historically low rates. In the end, he calculates that he would like to exit with his outstanding debt refinanced and then pull out another \$15,000 for the repairs.

Peter has a sister named Mary that is looking to buy a home as well. Mary moved to the outskirts of Washington, DC right after college. She doesn't have a lot of savings but she feels like it would be better to own rather than rent. She has found a condominium. Her credit score is fair. She pays her bills, but she isn't entirely savvy about her credit score. She has several department store charge cards. She paid off the "BillMeLater" credit account that she opened up when she bought a mountain bike on eBay last year, but it is another open revolving line of credit. She is making payments on her student loans. She bought a car last year, because she needs to drive to get to work. Coupled with the fact that she didn't have any credit four years ago, and Mary has a credit score of 675.

Each of these borrowers is employed and current on their bills. However, the LLPA will treat each one differently.

Peter will be undeterred by the LLPA. Peter is buying the right kind of house (single-family) with the right kind of mortgage (fixed-rate) with a solid downpayment. Peter has a good credit score and he lives in a city where home prices have remained stable.

Peter's father will have more trouble. Peter faces three problems. He is refinancing an investment property. The GSEs are cautious with any property that isn't owner-occupied homes. Second, he is doing so in a city (Wilmington, North Carolina) where property

values have struggled. The GSEs have taken to apply a 25 basis point fee for all loans in some areas where home values have declined significantly. Wilmington is one of five areas in North Carolina and Virginia that have this designation. Last, he is seeking to take some money out of his loan.

Paul is going to have to adjust his plans. The home appraised for \$300,000 which was more than he paid for it in 2001. But that is not going to work for him. Paul's great credit score means that he won't have to pay a fee for having a high loan-to-value rate (83.3 percent without cash-out, or 88.3 with cash-out). Unfortunately, the GSE's cash out criteria has trouble with his idea. It turns out that the GSEs will not buy any loan with a cash-out feature if the loan-to-value is greater than 85. Paul can take out \$5,000 and not a penny more. There is a price to pay for the privilege. To get that \$5,000, the GSEs will charge his lender 62.5 basis points on the entirely loan balance of \$255,000. This is a cost of \$1,594. If he had a credit score of less than 740, then the fee would have more than doubled – to 150 basis points.

Paul decides not to take the cash.

Unfortunately, he has more fees to pay before he can borrow. He can't change that this is an investor property. Already, he is borrowing almost as much as is possible (83 percent LTV) under the guidelines. With this combination of owner type and LTV, the GSEs will charge his lender 375 basis points, or \$9,325. There is also the question of the home's unfortunate location in the Wilmington area. Given that it qualifies as a declining area, he will have to pay another \$625 in delivery fees. In all, his fees come to \$10,000.

Paul cannot believe what he is hearing at the bank. Having paid down his mortgage for ten years, he is about to give up 30 percent of his equity just to refinance into a lower interest rate. The lender offers him a choice – pay it all upfront, or amortize over time through a higher interest rate. This fungibility may reveal why so many people do not realize how much their lender is charging to deliver their loan.

“We can offset it for you,” the lender says. “It really is no problem. We do it all the time. You can pay the \$10,000 in fees up front through your closing, or we can raise your interest rate. Your interest rate with the fees paid up front is 4.875 percent. If you want to pay them off over time, your rate is 5.25 percent.”

Paul's choice seems bad, but he was still able to get a loan. Moreover, he was able to save money in spite of the fees. The fact that the public is not as vocal about the LLPA may be because interest rates are so low right now. If rates come back up, then refinancing will look very problematic. In Paul's case, for instance, he amortized \$10,000 in fees but his monthly payment (sans taxes and insurance) still dropped from \$1,724 to \$1,376. The difference would have been less if he had held the loan for less than ten years, but even if he had only held it for five, the interest rates would hide the sticker shock.

Mary won't have the same luck as brother, and she may fare worse than even her father did. Mary's main problem is that she lives in an expensive city. She is trying to buy a home in Northern Virginia. Unfortunately, jobs are usually located in places where housing costs more. She isn't going to earn as much in Blacksburg, where her father lives, as she will in Washington, DC. In the face of that, she opts to buy a condominium instead. But if condominiums have a lot of appeal for up-and-

coming young people, particularly in dense urban areas where land costs are high, the GSEs do not feel the same way.

Imagine the scenario that follows when Mary puts \$5,000 down to buy a \$200,000 condominium. In the terms through which banks underwrite loans, Mary is seeking a loan with a loan-to-value ratio of 97.5. This is a very high LTV, but it is not one that is uncommon. Many buyers come to banks with less than 3.5 percent down.

The GSEs do not buy these loans. Although a lender could make the loan with the intent of holding it or perhaps finding a private buyer of MBS on the secondary market, what is more likely is that she will be directed to the FHA program. That should be fine, because FHA serves these kinds of borrowers. Unfortunately, Mary is going to end up in a catch-22.

FHA may not guarantee her loan. For better or worse, there are some quirks to the FHA program that can make it particularly difficult to get a condominium loan in some areas. There are quirks in the geography of homes: a condo cannot be insured by FHA if it is within 1,000 feet of a highway or a “heavily-traveled road,” 3,000 feet from a railroad, one mile from an airport, or five miles from a military airfield (Miller, 2009).

“If you look at the new FHA rules above you will instantly notice several problems,” reports Peter Miller in an opinion published by RealtyTrac. “First, a lot of existing condo projects are easily within 1,000 feet of a “heavily traveled road.” That’s why they were built in major metro areas and while the financing rules have changed the condo units cannot be moved. Second, huge numbers of properties — especially in California, Florida and Las Vegas —

will never pass muster under the new ownership standards or the arrears guidelines.” (Miller, 2009)

Many of the units in the condominium complex that she wants to live in are rented. As well, the condo is located near the Little River Turnpike. The Little River Turnpike is a major thoroughfare in the area. The condo was built near that road on purpose. Both of these factors rule out her purchase of this loan.

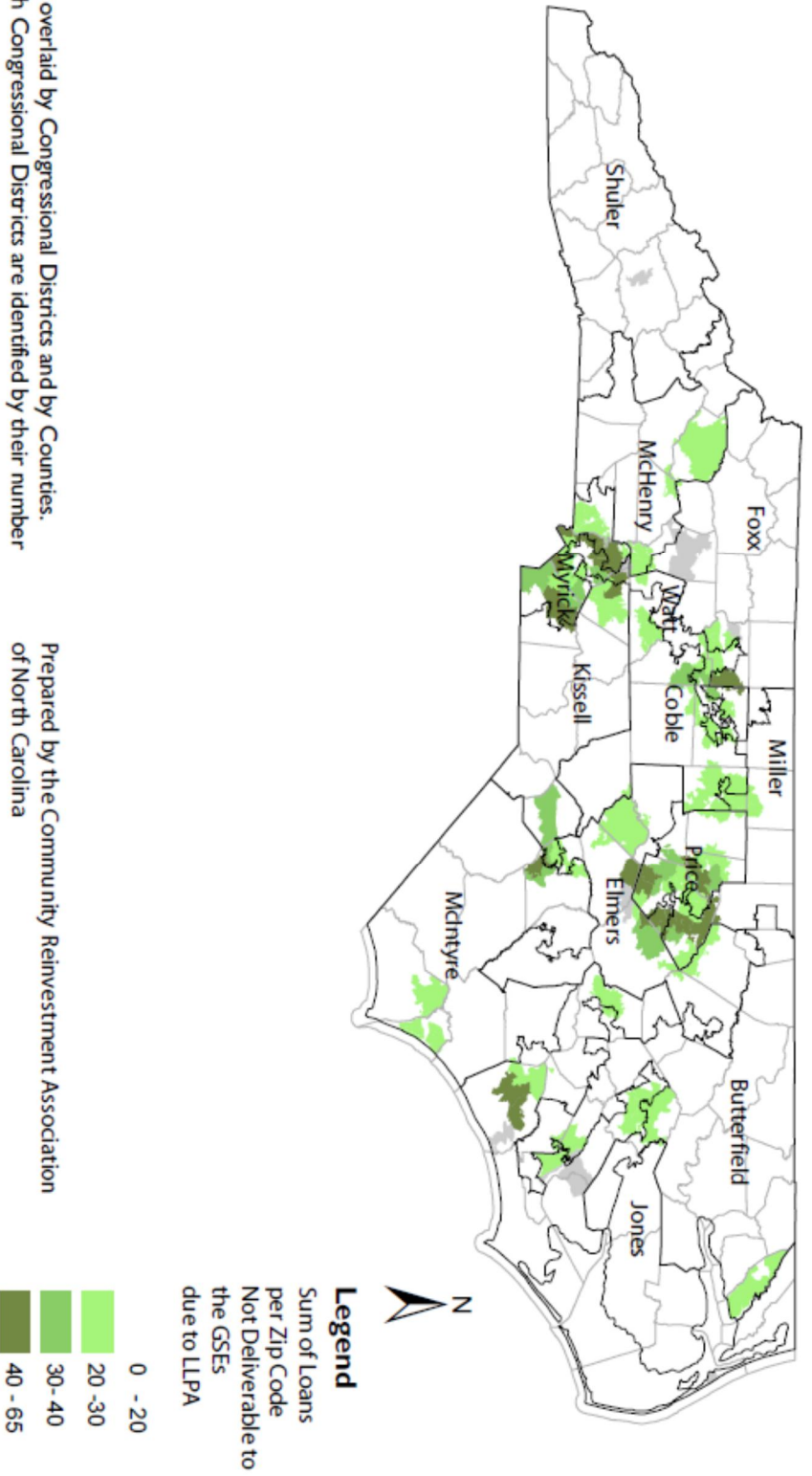
Mary has a few options. She can abandon the condominium idea and turn to a single-family house. Of course, then she will have to have a lot more money. Not having a lot of money was the reason that she sought a condo in the first place. She might be able to arrange to buy a different condo. It might be difficult to find one in the Washington, DC area that meets all of the geography standards for FHA. By some interpretations, even a close proximity to a gas station could disqualify a condo from the FHA guarantee program. Her only choice, short of finding a gift from a family member, is to rent a home. She could try a conventional loan. If she did, her lender would pay \$5,790 in delivery fees and she would need to pay at least another 212 basis points in mortgage insurance.

The GSEs will charge \$5,850 to mitigate the risk of a loan, even it has simultaneously been insured already through a private mortgage insurance contract. The GSEs expect that she will bring mortgage insurance to the loan at a minimum price of 1.75 percent. Mortgage insurance companies will insure as much as 35 percent of that loan. The amount of guarantee on any loan is dependent upon the initial loan-to-value. As well, borrowers can often cease to pay an MI premium when their debt is reduced to 80 percent of the original loan amount.



# Loan-Level Pricing Adjustments: A New Hurdle to Homeownership

Counts of originated loans that were not deliverable to the GSEs  
Vintage 2010



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