HVP Inc.

July 27, 2011

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Subject: Credit Risk Retention — ***OCC (Docket No. OCC-2011-0002, RIN 1557-AD40), Federal Reserve System*** **(Docket No. R-1411, RIN 7100-AD-70),** ***FDIC 3235-AK96), (RIN 3064-AD74), FHFA (RIN 2590-AA43), SEC (File No. S7-14-11, RINHUD (Docket No. FR-5504-P-01, RIN 2501-AD53); HVP Inc. Credit Risk Retention Comment Letter Focusing on Qualified Residential Mortgage Designation for Home Value Insurance that is State-Regulated and Reduces the Risk of Homeowner Mortgage Default***

Ladies and Gentlemen,

Thank you for the opportunity to provide comments on the proposed rule to implement the credit risk-retention requirements of Section 15G of the Securities Exchange Act of 1934 (15 U.S.C. 780–11), as added by Section 941 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. We represent **HVP Inc**. (hereafter, HVP or the Company), a New England-based firm that has developed an innovative combination of insurance products that substantially reduce the risk of homeowner defaults.

We are writing to request that you consider "home value insurance" policies, such as the ones HVP has developed, for inclusion in the "Qualified Residential Mortgage" (QRM) exemption

from risk retention requirements in the Dodd-Frank Act. Home value insurance is a form of financial guaranty insurance, offered in combination with credit insurance, as defined and described in the National Association of Insurance Commissioners' Financial Guaranty Model Act, which was adopted in 1994. The importance of this insurance is highlighted by the fact that it is a state-regulated, private-sector initiative, which reduces homeowner defaults. The combination of insurance protections offered by these policies has the ability to simultaneously protect homeowners against reductions in their houses' market values and provide insurance benefits to lenders in the event of defaults and foreclosures. Some insurers may also elect to advance a limited number of mortgage payments to lenders for policyholders who involuntarily lose their jobs.

HVP respectfully urges you to write rules pursuant to the provisions of Section 15G(e)(4)(B) (*Exemption for Qualified Residential Mortgages*), which permit a real estate mortgage loan that is properly underwritten and backed by state-regulated financial guaranty <u>and</u> credit insurance policies (such as ours) to be included within the definition of a Qualified Residential Mortgage. We believe these types of policies are precisely the type of market solution that the authors of the Dodd Frank Act sought when they added to the qualifications for a QRM exemption, "insurance or credit enhancement obtained at the time of origination to the extent that such insurance or credit enhancement reduces the risk of default." Such insurance benefits both homeowners, by protecting a significant portion of their homes' values, and lenders, by protecting them in instances of foreclosure. We are not asking for HVP's products, per se, to be included in the QRM rules but rather that all insurance that meets strict state-regulated standards and reduces the risks that homeowners will default be included. "Home value insurance," comprising financial guaranty and credit insurance, is a powerful tool to protect homeowners, prevent default, and safely reduce the QRM down payment requirement below 20%.

Proof of our claims that home value insurance reduces the incidence of homeowner defaults is based on a thorough analysis of fourteen major econometric studies (and seven complementary studies) written by distinguished scholars and researchers from prestigious institutions, such as the National Bureau of Economic Research, Office of the Comptroller of the Currency, University of Pennsylvania, University of Chicago, University of California Berkley, George Washington University, Federal Deposit Insurance Corporation, and Federal Reserve Banks of Atlanta, Boston, Cleveland, Philadelphia, Richmond, San Francisco, and Washington D.C.

The structure of the attached *Comment Letter* is as follows:

- Executive Summary
- Introduction
    - Home value insurance: A Solution to the 20% Down Payment Controversy
    - How Home Value Insurance Reduces Default Risk
    - Examples of Home Value Insurance Policies

- Causes of Strategic and Non-Strategic Defaults
    - Causes of Strategic Defaults
    - Causes of Non-Strategic Defaults
- Liquidity Protection
- Conclusion
- Appendix 1: Data Used in Cited Studies
- Appendix 2: Members of the Coalition for Sensible Housing Policy

Thank you, again, for the opportunity to provide comments on the proposed credit risk-retention requirements of Section 15G of the Securities Exchange Act of 1934, as added by Section 941 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. If there is any way we can be of further assistance, please do not hesitate to ask.

Sincerely,

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Ladies and Gentlemen,

Executive Summary

Overview

In this comment letter, we provide empirical proof based on historical loan performance data that home value insurance policies, which are comprised of a unique combination of financial guaranty and credit insurance, result in a lower risk of default by the homeowners and, therefore,

should be included in the definition of a "qualified residential mortgage" that is exempt from the credit-risk retention provisions of the Dodd-Frank Act, which specifically exempts "…other types of insurance or credit enhancements … that reduce the risk of default." The powerful risk-mitigation attributes of home value insurance enable lenders to reduce mortgage down payments below 20% without jeopardizing the credit quality of their assets. As a result, this innovative insurance product aligns the interests of lenders, borrowers, securitizers, and the economy, as a whole.

The agencies' proposed 20% down payment requirement for QRM mortgages is based on the argument that homeowners will take aggressive actions to avoid defaults when positive equity is at stake. The very same argument applies to owners of home value insurance. In declining markets, these individuals have equity in the form of insurance payouts, which they purchased with insurance premiums. What incentive would these homeowners have to protect one form of equity (down payments) and not the other (insurance payouts)? The truth is there is no reason because the two forms of equity are financially identical. In short, rational people will vigorously defend and protect the equity they have built in their homes, regardless of source, and a prerequisite to capturing this equity is not defaulting on their mortgage loans.

Historical Empirical Evidence

Proof of our claims that HVP's form of home value insurance reduces the incidence of homeowner defaults is based on a thorough analysis of fourteen major econometric studies (and seven complementary studies) written by distinguished scholars and researchers from prestigious institutions, such as the National Bureau of Economic Research, Office of the Comptroller of the Currency, University of Pennsylvania, University of Chicago, University of California Berkley, George Washington University, Federal Deposit Insurance Corporation, and Federal Reserve Banks of Atlanta, Boston, Cleveland, Philadelphia, Richmond, San Francisco, and Washington D.C.

Two Major Types of Defaults

This body of research identifies two kinds of defaults. The first is a strategic default, which occurs when individuals are able to pay their monthly mortgages but are unwilling to do so. Strategic defaults account for approximately 20% to 26% of total defaults. The remaining 74% to 80% are non-strategic defaults, which occur when individuals are willing but unable to pay their mortgages.

Main Causes of Defaults

These studies identify the three leading causes of defaults, which are negative equity, insufficient liquidity, and pessimistic expectations about home prices. Strong evidence from these research

investigations indicates that individual cases of default are the result of negative equity, either alone or in combination with one of the other two underlying causes.

Negative equity

There was unanimous agreement among the authors that negative equity significantly increases a homeowner's probability of default, although the data and model designs caused the exact magnitudes to vary. Early studies, which did not control for the broad set of information that affects borrowers' decisions, such as income levels, employment status, family composition, and credit scores, found an extremely strong positive relationship between negative equity and homeowner defaults (e.g., Quigley and Order (1995)). More recent studies prove convincingly that, even after accounting for these factors, negative equity remains the most important cause of defaults. For example, Foote, Gerardi, and Willen (2008), who compare homeowners with negative and zero equity, conclude that borrowers with negative equity equal to -25% are **five times** more likely to default than individuals with 0% equity.

Illiquidity

The second major cause of default, especially for the 74% to 80% group of non-strategic defaults, is insufficient liquidity caused by negative income shocks, due to the loss of employment, unfortunate life event (e.g., divorce or illness), or lack of access to credit, often caused by an overextended credit card balance (see, for example, Bhutta, Dokko, and Shan (2010)).

Pessimistic home price expectations

The third catalyst for default is pessimistic expectations about home prices. When home prices are expected to appreciate, homeowners have an incentive to remain in their homes in order to benefit from anticipated future capital gains. Otherwise, there are financial benefits by simply walking away from a mortgage and renting (or buying) a new house at a much lower cost. A fairly recent study found that the expectation of a 10% decline in home prices can lead to 21.16% increase in the probability of default (see Bajari, Chu, and Park (2008)).

Take-Away Points from Empirical Analyses

The fundamental underlying cause of both strategic defaults and non-strategic defaults is negative equity. For strategic defaults, negative equity acts either alone or in combination with pessimistic expectations about home prices. For non-strategic defaults, it works in combination with illiquidity (i.e., so called "double-trigger events" that combine negative equity with income

shock due to factors such as unemployment, sickness, divorce, and/or change in family conditions).

Home Value Insurance Reduces Default Risk

Home value insurance combines two insurance policies: financial guaranty and credit insurance. These policies are sold together in the same way homeowners insurance was originally sold as a combination of two separate policies (property and casualty). Eventually, Insurance Company of North America (INA) began selling both types of insurance in one policy, and, shortly thereafter, the rest of the insurance industry followed this lead.

The products developed by HVP Inc. are typical of the home value insurance contracts discussed in this comment letter. We believe that products of this type will be adopted by many other companies because they offer superior insurance attributes. Furthermore, there are no barriers to entry, which will ensure rapid adoption and expansion. These policies provide homeowners with protection against declines in housing market prices below insured levels. They also insure lenders against both market value losses and loan recovery costs. Finally, these policies provide forbearance payments to lenders on behalf of borrowers who become involuntarily unemployed.

HVP Inc. is a Massachusetts-based company that has developed a suite of combined financial guaranty and credit insurance products (**HomePrice20**, **HomePrice30**, and **MortgageFace20**), which are designed specifically to prevent negative equity, stabilize home prices, and provide liquidity protection – especially in times when families need it most. By directly addressing the three major underlying causes of mortgage defaults, these home value insurance products are precisely the type of private-market solution that authors of the Dodd-Frank Act sought when they drafted, debated, and enacted this new law.

Request: QRM Status for Home Value Insurance

Because home value insurance contracts, which combine financial guaranty and credit insurance features, reduce the risk of default by mitigating its major causes, we respectfully request that they be included in the definition of Qualified Residential Mortgage in 15G(e)(4)(B) of the Exchange Act.

Introduction

Thank you for the opportunity to provide comments on the proposed rule to implement the credit risk-retention requirements of Section 15G of the Securities Exchange Act of 1934 (15 U.S.C. 780–11), as added by Section 941 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. We represent **HVP Inc**. (hereafter, HVP or the Company), a New England-based firm that has developed an innovative combination of insurance products.

Our comments respond specifically to the proposed rule's request for comment on Question 111:

> *—111(a) The Agencies seek comment on whether mortgage guarantee insurance or other types of insurance or credit enhancements obtained at the time of origination would or would not reduce the risk of default of a residential mortgage that meets the proposed QRM criteria but for a higher adjusted LTV ratio. Commenters are requested to provide historical loan performance data or studies and other factual support for their views if possible, particularly if they control for loan underwriting or other factors known to influence credit performance. 111(b). If the information indicates that such products would reduce the risk of default, should the LTV ratio limits be increased to account for the insurance or credit enhancement? 111(c). If so, by how much?'*

We are writing to request that you consider a new product, "home value insurance," for inclusion in the "Qualified Residential Mortgage" (QRM) exemption from risk retention requirements in the Dodd-Frank Act. Home value insurance is a form of financial guaranty insurance, offered in combination with credit insurance, as defined and described in the National Association of Insurance Commissioners' Financial Guaranty Model Act. Its importance is highlighted by the fact that this state-regulated, private-sector initiative reduces homeowner defaults. The combination of insurance protections offered by these policies has the ability to simultaneously protect homeowners against reductions in their houses' market values and provide insurance benefits to lenders in the event of defaults and foreclosures. As an option, insurers may also elect to advance a limited number of mortgage payments to lenders for policyholders who involuntarily lose their jobs.

Other types of insurance

In particular, our insurance policies fall into the category of "*other types of insurance or credit enhancement… [that] reduce the risk of default*" which was purposefully and prudently included in the statutory language of the Act. HVP combines financial guaranty insurance and credit insurance to meet the clear statutory test by:

- Protecting homeowners from declining home prices,
- Paying up to six monthly mortgage payments for policyholders who suffer illiquidity due to the negative income shock of unemployment, and

- Insuring lenders, in the event of foreclosure, with better benefits than traditional private mortgage insurance (PMI) currently offers.

Financial guaranty insurance

"Financial guaranty insurance" is defined in the National Association of Insurance Commissioners' (NAIC) Financial Guaranty Insurance Model Act (FGI Model Act), which was adopted in 1994. The FGI Model Act makes provisions for state-regulated insurance that protects against "*changes in the value of specific assets or commodities, financial or commodity indices, or price levels in general*."[1] It goes on to state that a "corporation organized for the purpose for transacting financial guaranty insurance may, be licensed to transact …… credit insurance".[2]

The FGI Model Act has been adopted by bellwether New York State. It contains well-defined sections that permit and define protection against changes in asset values[3] and the sale of credit insurance by companies organized to transact financial guaranty insurance.[4]

In this letter, we focus on fourteen major econometric studies (and seven complementary studies), which identify three major causes of homeowner defaults. From these credible, empirical analyses by respected scholars, HVP has designed insurance policies to address, simultaneously, all these causes.

We believe our products are precisely the type of private-market solution that authors of the Dodd-Frank Act sought. Therefore, HVP respectfully urges you to write rules pursuant to the provisions of Section 15G(e)(4)(B) (*Exemption for Qualified Residential Mortgages*), which permit a real estate mortgage loan that is properly underwritten (as ultimately defined by this rule) and backed by state-regulated financial guaranty and credit insurance policies (such as ours) on the underlying asset, to warrant inclusion within the definition of a Qualified Residential Mortgage.

In direct response to the Request for Comment Question 111(b) and (c):

> "*111(b). If the information indicates that such products would reduce the risk of default, should the LTV ratio limits be increased to account for the insurance or credit enhancement? 111(c). If so, by how much?"*

Based on extensive development and stress testing of our financial model, we are confident that the loan-to-value (LTV) ratio limit for QRM status on well-underwritten mortgages protected by state-regulated financial guaranty and credit insurance policies, such as ours, should be increased above 80%.

[1] NAIC Financial Guaranty Model Act: Section 1A(1)(e)
[2] NAIC Financial Guaranty Model Act: Section 2A(1)(c)
[3] NY 6901 (A)(1)(D)
[4] NY 6902 (a)(A)(i)(c)

Home Value Insurance: A Solution to the 20% Down Payment Controversy

Home Value Insurance is a combination of financial guaranty insurance and credit insurance, as defined by the National Association of Insurance Commissioners and regulated by state insurance commissions.

Down payment controversy

On 26 May 2011, a bipartisan group composed of U.S. Senators Mary L. Landrieu (D-LA), Kay R. Hagan (D-NC), and Johnny Isakson (R-GA), together with U.S. Representatives John Campbell (R-CA) and Brad Sherman (D-CA), penned and submitted a letter to the Honorable Shaun L.S. Donovan (Secretary, United States Department of Housing & Urban Development), Ben S. Bernanke (Chairman, Board of Governors of the Federal Reserve System), Sheila C. Bair (Chairperson, Federal Deposit Insurance Company), and Mary L. Schapiro (Chairperson, Securities and Exchange Commission), along with Mr. John G. Walsh (Acting Comptroller, Office of the Comptroller) and Mr. Edward J. Demacro (Acting Director, Federal Housing Finance Agency) expressing their strong objections to the 20% minimum down payment requirement that regulators have proposed in the credit risk retention requirements pursuant to Section 15G of the Securities Exchange Act of 1934 (15 U.S.C. 780–11), as added by Section 941 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

To them, the "*proposed regulation goes beyond the intent and language of the statute by imposing unnecessarily tight down payment restrictions. These restrictions unduly narrow the QRM definition and would necessarily increase consumer costs and reduce access to affordable credit*." Numerous current members of Congress agreed with the sentiment of this letter, prompting 44 Senators and 282 members of the House of Representative to release joint letters in opposition to the proposed 20% minimum down payment rules.

On 22 June 2011, 45 members of the Coalition for Sensible Housing Policy (hereafter, the Coalition) published a white paper entitled *Proposed Qualified Residential Mortgage Definition Harms Creditworthy Borrowers While Frustrating Housing Recovery,*[5] which openly criticized the 20% minimum down payment regulation because:

- Congress considered and rejected minimum down payments in its deliberations of the Dodd-Frank Bill. Therefore, the 20% minimum down payment rule runs

[5] Members of the Coalition for Sensible Housing Policy are listed in Appendix 2. Among its members are well-recognized names, such as the American Bankers Association, Center for Responsible Lending, Credit Union National Association, Mortgage Bankers Association, NAACP, National Association of Federal Credit Unions, National Association of Home Builders, and National Urban League. It also includes many highly regarded consumer-, minority-, civil-, and human-rights groups, as well as housing-, mortgage-, rental-, land-, realtor-, and finance-related associations.

counter to the intentions and wishes of Congress, which are to "*encourage sound lending behaviors that reduce future defaults without harming responsible borrowers and lenders*."

- The down payment proposal is highly discriminatory. A family earning the median income ($54,474) would need approximately 16 years to save a 20% down payment (plus closing costs) for a median-price home ($172,900). The Coalition highlighted that this penalty would be even greater in high-cost areas and for minority groups.
- Due to declining home prices, "*almost 14 million existing homeowners – many undoubtedly with solid credit records – will be unable to obtain a QRM*," which means the cost to refinance their homes will increase.

The Coalition concluded that: "*Although Congress intended for QRMs to be accessible to a broad range of borrowers, the regulators acknowledge that they crafted this rule to make the QRM a very narrow slice' of the market*."

Solution: financial guaranty and credit insurance

Financial guaranty and credit insurance, such as the policies offered by HVP, are a solution to the current impasse in the debate over regulators' minimum 20% down payment proposal. HVP-type policies:

(1) Permit reductions in down payments without sacrificing the higher standards sought by Congress in the Dodd-Frank Act;

(2) Are more effective than minimum down payments at reducing default risk and have the added advantage of expanding the group of individuals who qualify for QRM loans, which will be important for the future health of real estate securitization. According to the Coalition, increasing from 5% to 10% the "*down payment requirement on loans that already meet the defined QRM standard reduces the overall default experience by an average of only two- or three-tenths of one percent for each cohort year* [emphasis added]. *However, the increase in minimum down payment from 5 percent to 10 percent would eliminate from 7 to 15 percent of borrowers from qualifying for a lower rate QRM loan. Increasing the minimum down payment even further to 20 percent, as proposed in the QRM rule, would amplify this disparity knocking 17 to 28 percent of borrowers out of QRM eligibility, with only small improvement in default performance of about eight-tenths of one percent on average*." The studies reported in this Comment letter provide convincing evidence that, if financial guaranty and credit insurance were available, they would reduce the risk of homeowner defaults by far more than eight-tenths of one percent.

(3) Have well-defined and specific cost estimates, based on extensive financial analysis. The Coalition was critical of the minimum 20% down payment rule

because "[r]*egulators have not provided an estimate of the cost of risk retention to the consumer*."

(4) Offer a less expensive solution to the U.S. housing problem than minimum down payment requirements. The National Association of Realtors ® reported that the 20% minimum down payment could "*raise rates for non-QRMs by as much 80 to 185 basis points*." On 20 June 2011, Mark Zandi of Moody's Analytics put the price tag at 75 to 100 basis points. The cost of HVP's insurance policies that protect homeowners against losses on the face value of their mortgages is well beneath the lowest estimated cost increase for a 20% minimum down payment, and at the same time these policies provide: (1) financial protection for the borrower, (2) liquidity protection for the borrower (to keep his/her home) and lender (to be repaid) in cases of unemployment, and (3) better protection to lenders than private mortgage insurance currently offers.

(5) Broaden the housing market. The Coalition reported that "*regulators acknowledged that, by design, as many as 80% of today's borrowers would not be eligible for QRMs*." The National Association of Home Builders reported that "*for every 1% increase in mortgage rates, 4 million households become ineligible to purchase a median-priced home*." Mark Zandi of Moody's Analytics reported that a 1% increase on a 30-year fixed-rate mortgage reduces home sales by 425,000 units per year, lowers existing-home prices by 8.5%, and reduces homeownership by 1%. HVP-type financial guaranty and credit insurance reduces, substantially, the increased interest rates that rules limiting QRM status to 80% LTV loans would necessitate. Moreover, it does so without sacrificing safety, which means this type of insurance protection will expand housing beyond the limits defined by a 20% minimum down payment rule.

(6) Offer a private market solution at a time when the United States would like to shrink the involvement of government sponsored entities (GSEs) in the housing market. While the impact of the proposed regulations (especially the 20% minimum down payment) can be reduced by increasing the role of Federal Housing Administration (FHA) or GSE loans, this is opposite from the direction in which the United States wants to go. Financial guaranty and credit insurance offers the United States a way to accomplish what the Coalition calls a "*renewed, robust, and diversified private lending market*."

(7) Provide homeowners (borrowers) with a way to protect their interests and not just the interests of lenders, and

(8) Extend a helping hand to homeowners who lose their jobs and are unable to pay their mortgages.

How Home Value Insurance Reduces Default Risk

Section 15G of the Exchange Act requires regulators to define the QRM exemption based on "*underwriting and product features that historical loan performance data indicate result in a lower risk of default* [emphasis added]." In our comments, we will provide you with such a basis for our request regarding inclusion of certain financial guaranty and credit insurance in the QRM exemption definition.

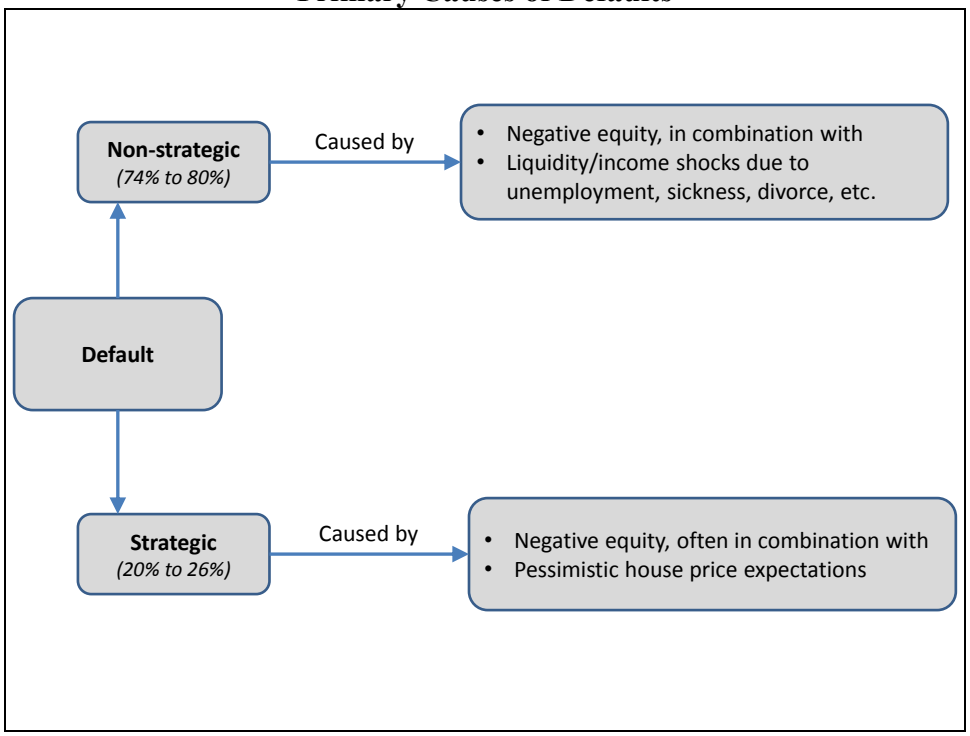
Home Value Insurance Products are new-to-the-market. Therefore, proof of these policies' effectiveness and efficiency derives from identifying, through historical loan performance data, the major causes of defaults and demonstrating how our products address each of these causes by mitigating or eliminating them.

The empirical evidence shows there are two types of default. The first is a non-strategic default, which occurs when an individual is unable to pay his/her mortgage. Non-strategic defaults account for approximately 74% to 80% of total defaults. They are caused by negative equity in combination with income/liquidity shock due to unemployment, sickness, divorce or other life events. This combination is referred to as a "double-trigger event." The remaining 20% to 26% are strategic defaults, which occur when individuals are able to pay their monthly mortgages but are unwilling to do so because the costs of repaying the debt outweigh the benefits of continuing to make payments and retaining possession of the home. Strategic defaults are often caused by the combination of negative equity and a pessimistic view of future housing prices. Therefore, empirical studies unequivocally agree that negative equity is the primary, but not sole, cause of both strategic and non-strategic defaults.

Figure 1 highlights the three main causes of defaults:

- Negative equity.
- Pessimistic expectations about home prices, and
- Liquidity/income shocks.

Figure 1
Primary Causes of Defaults



Examples of Home Value Insurance Policies

Home Value Insurance policies are combinations of financial guaranty and credit insurance that have been specifically designed to reduce the risk of strategic and non-strategic defaults. The following are details of HVP's three policies, each containing important financial guarantee and credit insurance attributes. They are designed to address the aforementioned three underlying major causes of defaults.

HomePrice20

- **Home Value Guarantee** (financial guarantee insurance): Insures losses in the market value of an insured home up to 20% of its purchase price or its index-determined value upon refinancing; coverage is phased in (5% in Year 1, 10% in Year 2, and, thereafter, 20%).
- **Credit Guaranty** (credit insurance):
  - **Monthly Payments**: HVP makes up to six monthly mortgage payments to the lender if the insured borrower becomes involuntarily unemployed and cannot meet his/her financial obligations. These payments are forbearance and not debt relief. They are added to the end of the mortgage payment schedule and returned to HVP, interest free,

when (1) the loan is repaid, (2) a short sale of the home occurs, or (3) the lender extends debt forgiveness.

- **Lender's Recovery Costs**: If a borrower defaults beyond the six HVP forbearance payments to the point of foreclosure by the lender, the lender becomes the home's owner at the time of sale and is paid up to a capped amount equal to 25% of the purchase price.[6] This 25% payment includes an amount to cover the costs associated with maintaining and selling the house, and the remainder is market protection when a home is sold (by the lender) at a loss. The combined policy payment cap is similar in concept to the *Combined Single Limit* in automobile policies.

- **Protection against three major causes of defaults**:

  This policy prevents negative equity and pessimistic expectations about home prices by insuring the market price or refinance value of a home or, at the policyholders' choice, by insuring the mortgage face value of a home. In doing so, this policy converts a home with negative equity (i.e., an "underwater mortgage") into an asset with positive or, at worst, zero equity.

  This policy protects homeowners from liquidity/income shocks by providing policyholders with an opportunity to get back on their feet (financially) and resume paying their mortgages. A necessary condition for collecting HVP's liquidity payments is proof of unemployment.

HomePrice30

- **Home Value Guarantee** (financial guarantee insurance): Insures losses in the market value of an insured home up to 30% of its purchase price or its index-determined value upon refinancing; coverage is phased in (7.5% in Year 1, 15% in Year 2, and, thereafter, 30%).
- **Credit Guaranty** (credit insurance): Same protection as HomePrice20, except the lender's payment is capped at 30% of the purchase price or value upon refinancing

[6] HVP Inc.'s insurance policies should reduce significantly the number of defaults, but some defaults resulting in foreclosure will inevitably occur.

- **Stronger protection against three major causes of defaults**: This policy offers stronger protection than HomePrice20 against negative equity, expectations of home price reductions, and liquidity/income shocks.

MortgageFace20

- **Mortgage Face Value Guarantee** (financial guarantee insurance): Insures losses in the value of an insured home to 20% below the face value of its mortgage; coverage is phased in (5% in Year 1, 10% in Year 2, and, thereafter, 20%).
- **Credit Guaranty** (credit insurance): Same protection as HomePrice20 and HomePrice30, except the lender's payment is capped at 25% of the mortgage's face value.
- **Protection against two major causes of defaults** (negative equity and expectations of declining home prices)

Table 1 explains in more details how Home Value Insurance policies address each of these default causes.

Table 1
Major Causes of Homeowner Defaults and How HVP's Policies Address Them

Cause of Default	How HVP Addresses the Causes
Negative equity	HVP offers three financial guaranty insurance products that protect (at the homeowner's discretion) against market losses, which are below either the purchase price of a home or the mortgage face-value of the home. In particular the: • **HomePrice20** policy insures the top 20% of a home's purchase price or refinanced value, with proceeds paid to the home's owner at the time of re-sale [i.e., borrower or lender (only after foreclosure)]. • **HomePrice30** policy is identical to the HomePrice20 policy, except it insures the top 30% of a home's purchase price or refinanced value, and • **MortgageFace20** policy insures losses to 20% below the mortgage face value.
Illiquidity	All of HVP's policies make up to six monthly mortgage payments to the lender on behalf of an insured borrower who becomes involuntarily unemployed and is unable to meet these financial obligations. These payments are forbearance and not debt relief. Therefore, they are added (at the end) to the mortgage payment schedule and returned to HVP upon (1)

	the loan's full repayment, (2) short sale of the home, or (3) debt forgiveness by the lender. HVP's two criteria for mortgage forbearance are lack of income due to a loss of job and lack of alternative assets.
Pessimistic Price Outlook	HVP's insurance policies create a benign environment for homeowners in declining real estate markets. For homeowners choosing to protect the purchase prices of their homes, HVP defends their down payments. For those choosing to protect the mortgaged (face) value of their homes (i.e. protect their mortgages from default), HVP helps prevent equity from falling below zero.

In the remaining of this comment letter, we will provide empirical proof based on historical U.S. data that negative equity, pessimistic expectations about home prices and liquidity/income shocks are three main causes of defaults.

Causes of Strategic and Non-Strategic Defaults

Causes of strategic defaults: empirical evidence

A strategic default (sometimes called, "ruthless" or "frictionless" default) is equivalent to exercising a put option, thereby, selling a home to the lender in exchange for eliminating a mortgage obligation, even though the homeowner is able to meet contracted debt payments. The incentive behind such defaults is homeowners convert negative-equity positions into zero-equity positions by simply walking away from their mortgages.

HVP policies are designed to address all three causes of defaults, regardless whether it is strategic or non-strategic. HVP's policies are, thus, superior to insurance products that provide coverage for only one or two underlying causes and can only prevent one type of default.

What percent of defaults are strategic?

Two studies, which have tried to separate strategic from non-strategic defaults, reach very similar conclusions.

Guiso, Sapienza, and Zingales (2009) use survey to elicit information about people's willingness to commit strategic defaults. In the survey, these authors ask first: "How many people do you know who have defaulted on their mortgages?" and then: "How many people do you know who have walked away from his/her house (i.e., defaulted on their mortgages) even if he/she could afford to pay the monthly mortgage?" By taking a ratio of the answers to the second and the first questions, the authors estimate the percent of defaults that might be considered "strategic." They find that approximately 26% of the observed defaults were strategic.

Bhutta, Dokko, and Shan (BDH, 2010) merge individual mortgage and loan data with variables for income and liquidity shocks, which allows the authors to separate strategic and non-strategic defaults. More specifically, they investigate the point at which underwater homeowners walk away from their mortgages and houses, even if they could afford to pay. Overall, the authors estimate that 20% of the defaults in their sample were strategic.

Negative equity: Main cause of strategic defaults

Empirical studies consistently find that negative equity is one of the main reasons for a homeowner to default. Among the major studies that report this cause are:

- Quigley and Order (1995),
- Bhutta, Dokko, and Shan (BDH, 2010),
- Guiso, Sapienza, and Zingales (2009), and
- Goodman, Ashworth, Landy, and Yin (2010).

Quigley and Order (1995) investigated homeowner default rates and default behavior to determine if they were purely strategic. If the theory were correct, default rates should be greater for high loan-to-value loans than for low loan-to-value loans. Overall, their empirical results were consistent with the "strategic default" hypothesis, but it is equally clear that other factors play significant roles, such as personal characteristics of the borrowers, negative income shocks, and changes in family conditions. The authors discovered that:

- Homeowners with negative equity were 81 times more likely to exercise the implicit put option on their houses than homeowners with positive equity.
- When housing prices fall, default probabilities increase even at low positive levels of equity.
- Households with 15% to 30% equity stakes in their homes are about 2.7 times more likely to default than those with larger equity stakes.
- Households with a 0% to 15% equity stakes are about 29 times more likely to default than those with at least 30 percent equity.
- Finally, those with negative equity are more than 75 times as likely to default as those with at least 30 percent equity.

The authors go on to disaggregate negative equity into classes and find that, for realized equity ratios more negative than -0.1, default is essentially complete and "instantaneous." Again, for small negative equity ratios (less than 0.1 in absolute terms), the probabilities of default are significantly larger than for higher ratios.

Certain cautions should be exerted when interpreting such large effects of negative equity because the authors are only controlling for the equity ratio and the year the mortgage is issued. Despite this shortcoming, the conclusion that negative equality is

an important cause of defaults remains correct, even after controlling for other socioeconomic factors in recent studies.

Bhutta, Dokko, and Shan (BDH, 2010) is one of the most recent studies that control for a multitude of individual socioeconomic factors in addition to mortgage and loan data, which allows the authors to separate defaults caused by negative equity and other shocks from those caused by negative equity alone. The study uses a two-step model. Holding equity fixed, the first step predicts the probability of a borrower defaulting due to a negative income shock or negative life event (e.g., job loss or divorce). The second step incorporates these predicted probabilities into the model while estimating the depth to which negative equity has to fall to trigger a strategic default.

The authors find that, when borrowers are not deeply underwater, default can be entirely accounted for by liquidity shocks, but once negative equity reaches the range of -10% to -15%, unconditional and liquidity-driven default rates diverge, suggesting that equity becomes an important, independent predictor of default decisions as borrowers become increasingly underwater.

The authors also find that borrowers face high monetary and non-monetary costs, including the prospect of foregoing future capital gains, which discourages them from ruthlessly exercising their implied default (i.e., put) options at relatively low levels of negative equity. By the time equity falls below -50%, half of all defaults appear to be strategic. As mentioned in the previous section, the authors estimate that 20% of the defaults in their sample were strategic.

Guiso, Sapienza, and Zingales (2009) use survey data to study individual default decisions.

To elicit information about the sample's willingness to commit strategic defaults, the authors asked: "If the value of your mortgage exceeded the value of your house by $50,000, would you walk away from your house (i.e., default on your mortgage) even if you could afford to pay your monthly mortgage?" Those who answered negatively were then asked: "If the value of your mortgage exceeded the value of your house by $100,000, would you walk away from your house (i.e., default on your mortgage), even if you could afford to pay your monthly mortgage?" Respondents who had answered negatively to this question were finally asked the same question, but with a greater difference between the mortgage and the value of the house. In the December survey, this value was $300,000, and, in the March survey, it was $200,000.

The conclusions were enlightening. No respondent was willing to default strategically if the negative equity shortfall was less than 10%, but this percentage rose almost linearly to 17% if the value of the shortfall fell to the negative 50% to negative 60%

range. This percentage was much higher for people who thought it is morally acceptable to default at negative equity level below 10%.

The Figure 2 below is taken from the Guiso, Sapienza, and Zingales (2009) study. On the vertical axis is the fraction of homeowners who claim they would default if equity in their homes was equal to -$50,000. On the horizontal axis is the ratio between the negative equity amount (i.e., -$50,000) and the self-reported value of the home. The green-dotted line represents those who feel defaults are morally acceptable, and the solid blue line represents the entire sample.

Figure 2
Percentage of Homeowners Willing to Default as a Function the Equity Shortfall
(-$50,000 Equity)

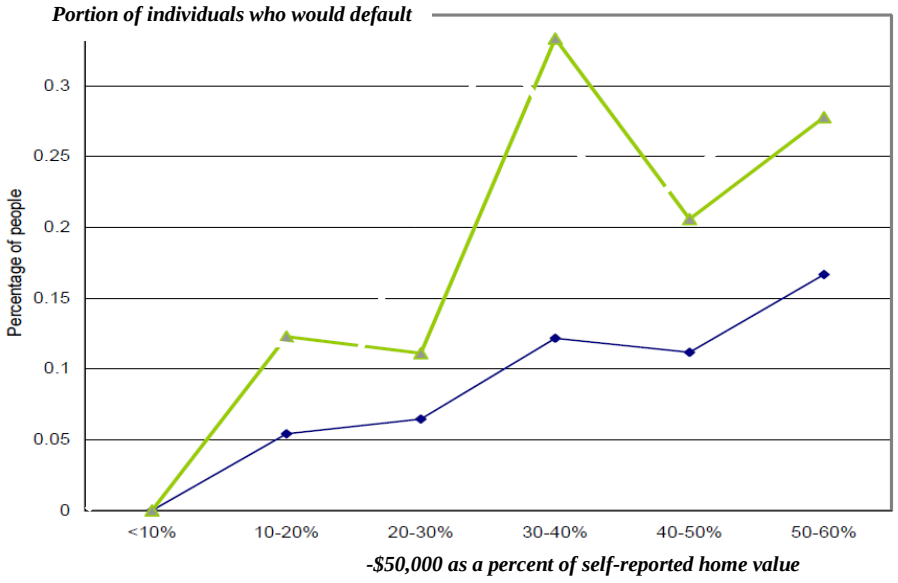
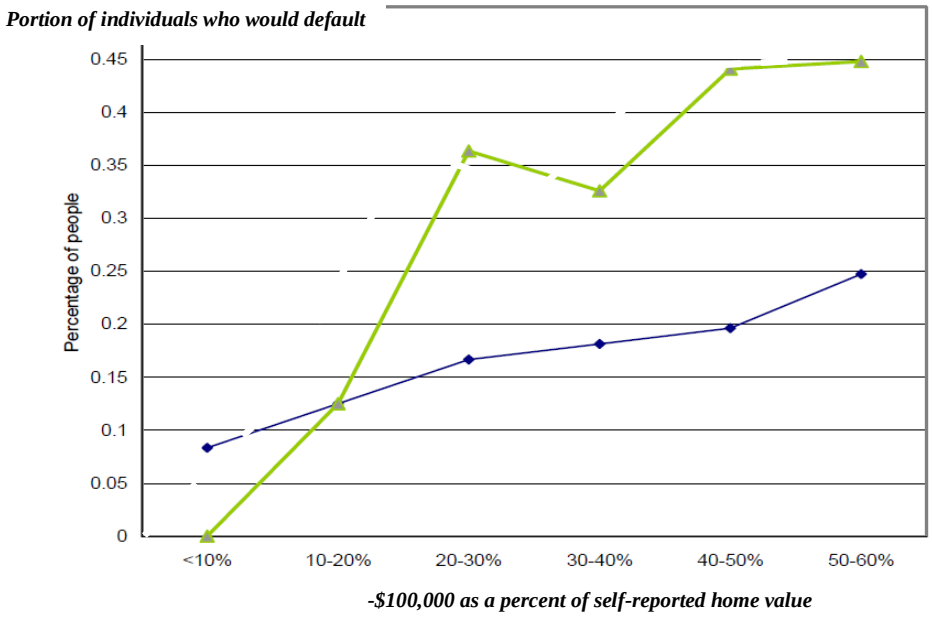


Figure 3 is identical to Figure 2 except the negative equity threshold is -$100,000. The percentage of people willing to strategically default rises goes from 7%, if the value of the shortfall is less than 10%, to 25%, if the value of the shortfall is between 50% and 60% of the value of the house. The difference between the level of responses (if not the trend) can be attributed to the fact that the decision to default is not only driven entirely by an assessment of how big the shortfall is relative to the personal wealth but also how large it is in absolute terms.

Figure 3
Percentage of Homeowners Willing to Default as a Function the Equity Shortfall
(-$100,000 Equity)



Finally, **Goodman, Ashworth, Landy, and Yin (2010)** analyze the importance of negative equity in determining mortgage defaults. In one of the examples for Alt-A mortgage owners, the authors show that holding unemployment constant, the default transition rate increases by 3.7 times, from 0.67% per month to 2.45% per month, when CLTV increases from less than 80 to over 120. The complete default transition rates across different unemployment rates and equity levels are shown in Table 2.

Table 2
Monthly Default Transition Rates of Prime Mortgage Owners

	CLTV	CLTV	CLTV	CLTV
Unemployment Rate	<= 80	81 – 100	101 – 120	> 120
≤ 8.0	0.23	0.50	0.64	0.85
8.1 – 10.0	0.21	0.55	0.82	1.69
10.1 – 12.0	0.18	0.54	0.91	1.74
> 12.0	0.18	0.51	0.97	2.05
Monthly Default Transition Rates of Alt-A Mortgage Owners				
	CLTV	CLTV	CLTV	CLTV
Unemployment Rate	<= 80	81 – 100	101 – 120	> 120
≤ 8.0	0.67	1.39	1.94	2.45
8.1 – 10.0	0.62	1.42	2.08	3.51
10.1 – 12.0	0.43	1.00	1.58	3.18
> 12.0	0.52	1.07	1.50	3.56

Monthly Default Transition Rates of Option ARM				
	CLTV	**CLTV**	**CLTV**	**CLTV**
Unemployment Rate	<= 80	81 – 100	101 – 120	> 120
≤ 8.0	0.98	1.80	2.53	3.38
8.1 – 10.0	1.20	1.82	2.37	4.16
10.1 – 12.0	0.82	1.42	2.15	4.08
> 12.0	0.52	1.79	2.45	4.57
Monthly Default Transition Rates of Subprime Mortgage Owners				
	CLTV	**CLTV**	**CLTV**	**CLTV**
Unemployment Rate	<= 80	81 – 100	101 – 120	> 120
≤ 8.0	1.43	2.85	3.67	4.47
8.1 – 10.0	1.46	2.87	4.16	5.64
10.1 – 12.0	1.03	2.21	3.24	5.39
> 12.0	1.36	2.19	2.85	5.23

Take-Away Point: A market solution, such as HVP's financial guaranty and credit insurance, that reduces the risk of negative equity should substantially reduce the risk of mortgage defaults.

Pessimistic home price expectations and strategic defaults

Recent studies agree that while negative equity is a necessary condition for strategic default, it may not a sufficient condition. As pointed out in **Guiso, Sapienza, and Zingales (2009)**,

> *"In practice, even in non-recourse states there are frictions that make defaulting less appealing. First of all, there are significant pecuniary and non-pecuniary relocation costs, which include difficulty in renting or buying a new house, moving expenses, possible change of school for the children, and loss of friends in the community (unless one can easily relocate around the corner)."*

These costs can be divided into (1) relocation costs (e.g., problems renting or buying a new house, moving expenses, school changes, and loss of familiar community and friends), (2) credit costs (e.g., worsened credit rating and reduced borrowing capacity), and (3) moral costs (e.g., qualms about breaking a contract). Moral norms may strongly mitigate the likelihood of homeowner defaults, even in declining markets.

Recent empirical evidence suggests that strategic defaults are often triggered by the combination of negative equity and pessimistic real estate price expectations. Three major studies link these causes and effects:

- Foote, Gerardi, and Willen (FGW, 2008),

- Bajari, Chu, and Park (BCP, 2008), and
- Doms, Furlong, and Krainer (DFK, 2007).

Foote, Gerardi, and Willen (FGW, 2008) use a duration model to analyze the major factors causing default. They find that, in deciding whether or not to default, borrowers compare the benefits of staying in homes to the costs of doing so. Especially important in the default decision are expectations of future house prices relative to mortgage obligations (i.e., not current book equity per se). This means that current book equity can be substantially negative without a default occurring, and the results are valid even without considering additional costs, such as moving expenses, default penalties (e.g., limited future access to credit), sentimental attachments to a home, and the presence of moral qualms associated with defaulting on one's debts.

In the authors' words:

> *"Even though price expectations are unobservable, assuming that a group of homeowners have some hope of price appreciation is probably the most appropriate case when examining data and constructing foreclosure-reduction policies. To begin with, the relevant house price is in nominal terms, so overall inflation raises future house prices even without a change in the relative price of homes. Additionally, the relevant 'second period' for real-world homeowners may be quite distant, so that house prices may have plenty of time to recover, even if they have recently fallen. A homeowner who has no plans to move in the next several years would do well to expect at least some possibility of price appreciation during his ownership experience, even if he is in a position of negative equity today. Thus, we believe that the low default rates of early 1990s homeowners in Massachusetts are likely to be replicated across other negative-equity groups. This likelihood has important implications for the construction of policies designed to reduce foreclosures among negative-equity owners, …." [Page 242]*
>
> *"[i]f required monthly mortgage payments are larger than rents of otherwise identical properties and the stigma of default, then default will occur. Low default rates among Massachusetts owners in the early 1990s suggest that most of these homeowners held out at least some hope that prices would someday recover, as they eventually did." [Page 241]*

Bajari, Chu, and Park (BCP, 2008) find that, in markets where housing prices have been appreciating at an annual rate 10% above the sample average, the

hazard of default is 4.22% lower than for an otherwise identical borrower in an average housing market. The volatility of home prices also plays a role. An increase by one standard deviation in home price volatility is associated with a 2.77% higher hazard of default. The expectation of a 10% decline in home prices can lead to a 21.16% increase in the probability of default.

The authors state:

> *"In a world in which agents have dynamic incentives, expectations about home price appreciation affect the value of keeping a mortgage alive, and therefore influence the default decision. When home prices are expected to appreciate rapidly, borrowers have a reduced incentive to default, because default would entail forgoing the capital gains from the increased value of the home." [Page 4]*

They go on to conclude that:

> *"Economic theory suggests additional reasons why expectations should enter into the default decision. First, there are costs to defaulting, including the transaction costs associated with finding a new house to rent or buy and the cost of having a damaged credit history. The addition of these costs makes the default decision a dynamic optimization problem whose solution depends on expectations about future states of the world, including the evolution of housing prices. Second, option pricing theory suggests that if agents are not risk-neutral, the appropriate pricing kernel depends on higher moments of the process by which home prices evolve over time." [Page 10]*

Doms, Furlong, and Krainer (DFK, 2007) use cross-sectional data from metropolitan statistical areas (MSAs) to evaluate three alternative channels for explaining subprime mortgage performance, namely (1) increased riskiness of the subprime borrowing pool, (2) areas of regional economic weakness, which may have been responsible for pushing subprime borrowers into delinquency, and (3) the recent appreciation or deceleration of local housing price indices.

By analyzing the three channels, the authors identify house price expectations as the most important factors for explaining subprime and prime mortgage delinquencies. The other two factors can, at most, explain 28% to 29% of variation in subprime and prime mortgage delinquencies, while changes in house prices can explain 47% to 65% of the variation in delinquency rates across MSAs. In the authors' words:

> *"While we find a role for all three candidate explanations, patterns in recent house price appreciation are far and away the best single predictor of delinquency levels and changes in delinquencies.*

Importantly, after controlling for the current level of house price appreciation, measures of house price deceleration remain significant predictors of changes in subprime delinquencies. The results point to a possible role for changes in house price expectations for explaining changes in delinquencies." [Page 1]

~~"~~In addition, changes in the rate of house price appreciation remain significant predictors of changes in subprime delinquencies. Thus, the results point to a possible role for changes in expectations for house price appreciation and, by extension, for housing demand, that is potentially not confined to the subprime household sector." [[Page 2]

Take-Away Point: A market solution, such as HVP's financial guaranty and credit insurance, which reduces the risk of negative equity by mitigating the effects of pessimistic price expectations, should substantially reduce the risk of mortgage defaults.

Causes of non-strategic defaults: empirical evidence

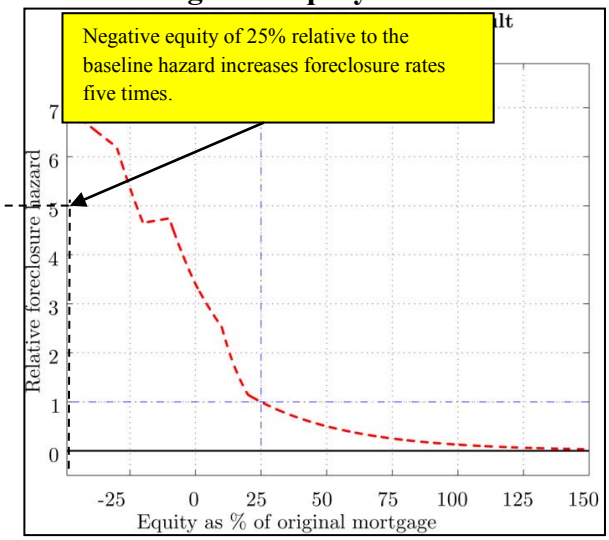
An impressive body of empirical literature has been generated that identifies negative equity and insufficient liquidity as the significant causes of non-strategic homeowner defaults. The sections below review the relevant studies that come to these conclusions.

Negative equity & double trigger events

Six major empirical studies analyze the impact that negative equity (alone) and "double trigger events" (i.e., the combination of negative equity and illiquidity) have on homeowner defaults.

Foote, Gerardi, and Willen (FGW, 2008) conclude that a borrower with negative equity of 25% is five times more likely to default than an individual with 0% equity (See Figure 4). Their simulated default rate ranges from 7.3% to 7.9%, which was very close to the actual 6.4% rate, and their theoretical model provides a rationale for the "double trigger" theory of default. If homeowners believe home prices will not recover enough to erase their negative equity, they are likely to default.

Figure 4
Effect of Negative Equity on Default Rates



Source: FWG, Estimated Effect of Equity on Default, page 238

In the authors' words:

> *"The initial conclusions of this paper can be summed up in two statements which, at first blush, appear contradictory. The first conclusion is that most borrowers who lose their homes have negative equity. The second is that most borrowers with negative equity will not lose their homes. The first statement reflects the necessity of negative equity for foreclosure—borrowers with positive housing equity will sell if they need to move. The second statement addresses the fact that the default decision involves weighing the payments on the mortgage against the income, imputed or actual, that accrues from retaining ownership of the house." [Page 245]*
>
> *"A homeowner with positive equity will virtually never default; he is always better off selling his house, paying off the mortgage, and pocketing whatever remains from the sale. This strategy is not available to owners with negative equity, so foreclosures increase when house prices fall and negative equity becomes common." ..."If required monthly mortgage payments are larger than rents of otherwise identical properties and the stigma of default, then default will occur." [Page 234]*

Ghent and Kudlyaky (GK, 2011) emphasize the conclusion that negative equity causes defaults and then take the conclusion one step further by showing that negative equity causes a higher incidence of delinquencies and defaults in states with non-recourse (mortgage) loans relative to recourse loans.

Further evidence of the connection between negative equity and strategic defaults was provided by **Bhutta, Dokko, and Shan (BDH, 2010)**. In particular, this study supports the "double trigger" theory of defaults. Table 3 shows the authors' estimated relationship between *relative default probability* and negative equity for intervals between -1% and -60%. At relatively low levels (i.e., between -1% and -9%), negative equity does not elevate substantially the chances of default relative to zero equity, but these probabilities increase monotonically as negative equity builds.

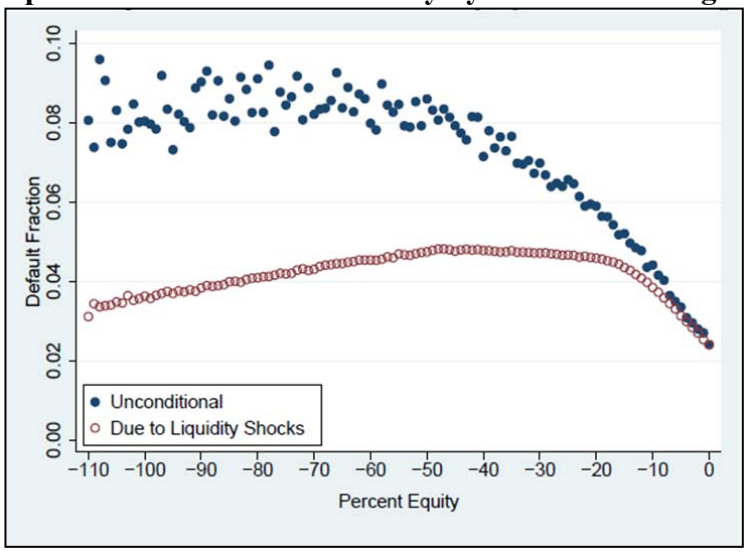
Table 3
Relationship between Negative Equity and the Relative Probability of Default

Negative Equity Interval	Relative Probability
-1% to -9%	Not statistically significant
-10% to -19%	1.18
-20% to -29%	1.37
-30% to -39%	1.57
-40% to -49%	1.71
-50% to -59%	1.86
-60% to -79%	2.06

Source: BDH, 2010, Table 2: Logit Estimation of the Probability of Default. Page 41.

BDH go on to support the "double trigger" theory of defaults by showing how increases in county-level unemployment rates and credit card delinquency rates are positively correlated with mortgage defaults. Figure 5 is based on 1.9 million loan-month observations. The solid circles measure the unconditional probability of default at given levels of equity, and the hollow circles represent the probability of default due to liquidity shocks. For borrowers who are not deeply underwater, the results indicate that default rates can be (almost) entirely accounted for by liquidity shocks, but between -10% and -15% equity, unconditional and liquidity-driven default rates diverge, suggesting that negative equity becomes an important, independent predictor of default decisions as borrowers sink increasingly underwater.

Figure 5
Decomposition of Default Probability by Percent Housing Equity



Source: BDH, 2010, Figure 2: Decomposition of Default Probability by Percent Housing Equity, page 34.

Elul, Souleles, Chomsisengphet, Glennon, and Hunt (ESCGH, 2010) assess the relative importance of negative equity and illiquidity on mortgage defaults. They find that both negative equity and illiquidity are significantly associated with mortgage default. More specifically, their study finds that: (1) going from a combined loan-to-value statistic below 50 to above 120 raises default risk by 1.3% per quarter;[7] (2) high credit card utilization rates significantly increase default risk, and (3) the marginal effect of changes in local unemployment rates are significant and monotonic, *though much smaller* in magnitude than the effects of negative equity and liquidity.

In the authors' words:

> *"We found that both negative equity and illiquidity, as measured by high credit card utilization are significantly associated with mortgage default, with comparably sized marginal effects. Moreover the two factors interact with each other: the effect of utilization generally increases with CLTV (combined loan-to-value) (peaking at CLTV near 100) though it is significant even for low CLTV." [Page 493]*

Elmer and Seelig (ES, 1999) identify two principal motivations for mortgage default (insolvency and negative equity) and compare their effects under alternative scenarios. Their model suggests that insolvency is a primary motivation for default, and broader measures of consumer financial health provide better predictions of the likelihood of

[7] The marginal effects should not be interpreted as additive. This statistic means that during any quarter, if an individual is in a certain category, his/her probability of default in that quarter will increase by x%.

default than narrow measures based solely on home or mortgage value. Adverse shocks to income and house prices also affect default and insolvency through the erosion of personal wealth. Empirical evidence supporting the hypotheses developed is provided along with an analysis of the aggregate time series of mortgage defaults.

Consistent with previous models, the loan-to-value (LTV) and house-appreciation variables in ES' analysis support the notion that the diminution of home equity has an important effect on foreclosures. The statistically significant unemployment rate variable also suggests a role for trigger events, whereas the saving rate variable recognizes a possible role for broader measures of personal financial effects. This empirical model has an R square of approximately 90%.

The study by **Bajari, Chu, and Park (BCP, 2008)** estimate structural models of default with both cash-flow considerations and negative-equity considerations. Then, they use these estimated parameters to simulate a shock to home equity (alone) and compute the predicted effect. The authors suggest that, for a foreclosure mitigation policy to produce the desired result, it must address both declining home equity and a borrower's ability to pay in the short run.

They conclude that:

- Negative equity caused by declining home prices is an important driver of subprime mortgage defaults. For a borrower who purchased a home one year earlier with a 30-year fixed-rate mortgage and no down payment, a 20% decline in home price makes that homeowner 15.4% more likely to default than an otherwise identical borrower whose home price remained stable.
- The estimated effect of housing prices on default behavior implies that defaults are geographically correlated when home prices decline nationwide.
- Borrower creditworthiness, which affects households' access to the capital market, is an important cause of defaults.

In the authors' words:

> *"According to our results, one main driver of default is the nationwide decrease in home prices. The decline in home prices caused many borrowers' outstanding mortgage liability to exceed their home value, and for these borrowers default can increase their wealth." [Page 1]*
>
> *"[O]ur findings suggest that for a foreclosure mitigation policy to produce the desired result, it must address both declining home equity as well as borrowers' ability to pay in the short run."* [Page 34]

<u>Take-Away Point</u>: A market solution, such as HVP's financial guaranty and credit insurance, that reduces the risk of negative equity should substantially reduce the risk of mortgage defaults.

Illiquidity

Two major empirical studies link illiquidity to homeowner default. Because "double trigger" events were already covered in the previous section of this comment letter, our focus here is on studies analyzing illiquidity as a cause of defaults and also the way in which forestalling illiquidity (as HVP's insurance policies do) can reduce the risk of default.

Anderson and Dokko (AD, 2011) test whether the timing of liquidity shocks has a significant effect on mortgage defaults and delinquencies. Their conclusion is that delays in liquidity shocks significantly reduce the risk of homeowner defaults. The statistical problem they encountered was that liquidity shocks can have many causes, and there are numerous traditional measures of liquidity, such as unemployment, credit card delinquency rates, credit card utilization rates, and divorce rates. Often, it is difficult to disentangle the pure effects of these commingled causes. To overcome this problem, the authors used the due dates for local property taxes as proxies for pure liquidity shocks. Then, they ensured the payment of these property taxes would represent a large financial obligation for individuals in their sample by considering only subprime mortgages. Therefore, their study followed the liquidity/illiquidity effects during the periods immediately following these tax due dates.

AD conclude that:

- The average 30-day delinquency rate is 30.87% when property taxes are due during the one-to-three month period after loan origination;
- If property tax payments are postponed to the four-to-six month period, the probability of a 30-day delinquency falls by 0.4%, which is a relative change of 1.3% (i.e., 0.4%/30.87% = 1.3%);
- When property taxes are due seven-to-nine months after loan origination, the probability of a 30-day delinquency falls by 0.69%, which is a relative change of 2.2% (i.e., 0.69%/30.87% = 2.2%), and
- Finally, when property taxes are due 10-to-12 months after loan initiation, the probability of a 30-day delinquency falls by 1.01%; which is a relative change of or 3.3% (1.01% / 30.87% = 3.3%).

These results are summarized in Table 5 below.

Table 5
First-Year Delinquency and Default Rates by Timing of First Property Tax Due Date

Outcomes	Mean 1-3 Months	4-6 Months		7-9 Months		10-12 Months	
30-day	0.3087	-0.004***	-1.3%	-0.0069***	-2.2%	-0.0101***	-3.3%
60-day	0.1589	-0.0026*	-1.6%	-0.0052***	-3.3%	-0.0059***	-3.7%
90-day	0.1060	-0.0026**	-2.5%	-0.0022	-2.1%	-0.0034*	-3.2%
FC Start	0.0702	-0.0019*	-2,7%	-0.0017	-2.4%	-0.0035**	-5.0%

FC Start means "foreclosure start."
*** Result statistically significant from 0 at the 1% significance level.
** Result statistically significant from 0 at the 5% significance level.
* Result statistically significant from 0 at the 10% significance level.

Source: Table 5: 1st-year Delinquency and Default Rates by Timing of 1st Property Tax Due Date. Page 23.

AD also analyzed two-year delinquency and foreclosure rates and found similar results. Table 6 shows that, two years after the loans were originated, 44.3% had 30-day delinquencies. Compared to the earliest due date (i.e., one-to-three months), paying taxes four-to-six months after a mortgage's initiation reduced the delinquency probability by 0.34%, which is a relative change of 0.8% (i.e., 0.34%/44.3% = 0.8%). The authors' regression results demonstrate that loans facing property tax due dates that are one-to-three months after origination have at least a 3% percent higher chance of first-year delinquency and default rates than loans that face property-tax due dates seven-to-twelve months after origination.

Table 6
Second-Year Delinquency and Default Rates by Timing of First Property Tax Due Date

Outcomes	Mean 1-3 Months	4-6 Months		7-9 Months		10-12 Months	
30-day	0.4430	-0.0034*	-0.8%	-0.0087***	-2.0%	-0.0131***	-3.0%
60-day	0.2880	-0.0031*	-1.1%	-0.0086***	-2.9	-0.0097***	-3.4%
90-day	0.2270	-0.0010**	-0.4%	-0.0074***	-3.3%	-0.0068***	-3.0%
FC Start	0.1741	-0.0001	-0.0%	-0.0052**	-3.0%	-0.0059**	-3.4%

FC Start ≡ foreclosure start.
*** Result statistically significant from 0 at the 1% significance level.
** Result statistically significant from 0 at the 5% significance level.
* Result statistically significant from 0 at the 10% significance level.

Source: Table 5: 2nd-year Delinquency and Default Rates by Timing of 1st Property Tax Due Date. Page 24.

One way to interpret the size of this effect is to compare the increase in delinquency and default probabilities, which are due to additional exposure from reduced liquidity, to previous estimates of the effects of negative equity. Table 6 (Column 7) shows that homeowners with taxes due in the 10-to-12 month period are 0.59% less likely to become 60-days delinquent during the first year of the mortgage than loans with early

tax due dates (i.e., in the one-to-three month range). By contrast, the estimates of ESCGH (2010) suggest that an increase in the combined loan to value (CLTV) from 90 to 120 (i.e., moving from positive to negative equity) is associated with a 1.9% increase in the probability of loans becoming at least 60-days delinquent during a year. Therefore, the effect of reduced liquidity from adding three additional quarters of exposure to the post-due-date period is about one-third as large as the effect of a transition to negative equity.

In AD's words:

> *"The lack of property tax escrow accounts among subprime mortgages causes borrowers to make large lump-sum tax payments that reduce liquidity. Different property tax collection dates across states and counties create exogenous variation in the time between loan origination and the first property tax due date, affording the opportunity to estimate the causal effect of loan-level exposure to liquidity reductions on mortgage default. We find that a nine-month delay in owing property taxes reduces the probability of first-year default by about 4 percent, or about one-third of the effect of a reduction in equity from 10% to negative 20%." [Page 1]*

Demyanyk, Koijen, and Van Hemert (DKvH, 2011) find that updated credit scores, six-month changes in credit scores, and credit scores at origination are important predictors of mortgage defaults. In particular, higher credit scores significantly reduce the probability of delinquency or foreclosure. Demonstrating the vital link between credit scores and defaults, the authors show that credit scores drop, on average, 51 points when a borrower becomes 30-days delinquent on his/her mortgage, but the effect is significantly damped for transitions to longer, more severe delinquency records and even for foreclosures. Not only do borrowers with higher VantageScores have a lower probability of transitioning to a worse state, but also the coefficients and marginal effects are monotonically declining.

DKvH find that:

- Borrowers with VantageScores between 550 and 700 are, on average, 1% less likely to be 30-days past due on their mortgage than borrowers with scores below 550;
- Borrowers with scores above 800 are, on average, 3% less likely than those with scores below 550 to be 30 days past due, and once a borrower has already missed one mortgage payment, the likelihood of missing another payment increases;

- Borrowers with VantageScores between 550 and 700 are, on average, 3.6% less likely to miss a second payment on their mortgage than borrowers with scores below 550, and finally,
- Borrowers with scores above 800 are, on average, 13.6% less likely to be 60 days past due, again, compared to borrowers with scores below 550.

In the authors' words:

> "*We study a unique dataset of borrower-level credit information from TransUnion, one of the three major credit bureaus, which is linked to a database containing detailed information on the borrowers' mortgages. We find that the updated credit score is an important predictor of mortgage default in addition to the credit score at origination. However, the 6-month change in the credit score also predicts default: A positive change in the credit score significantly reduces the probability of delinquency or foreclosure. Next, we analyze the consequences of default on a borrower's credit score. The credit score drops on average 51 points when a borrower becomes 30-days delinquent on his mortgage, but the effect is much more muted for transitions to more severe delinquency states and even for foreclosure*." [Page 1]

Take-Away Points: These studies show that a market solution, such as HVP's financial guaranty and credit insurance, which addresses both negative equity and provides temporary relief from monthly mortgage payments, is essential. Homeowners without this insurance are caught in a vicious circle. Unemployment causes missed mortgage payments and technical default, which sparks a downgraded credit score (e.g., FICO) and a higher probability of delinquency and foreclosure. Financial guaranty and credit insurance could reduce 30-day delinquencies by more than 2% and 60-day delinquencies by more than 3%.

Liquidity Protection

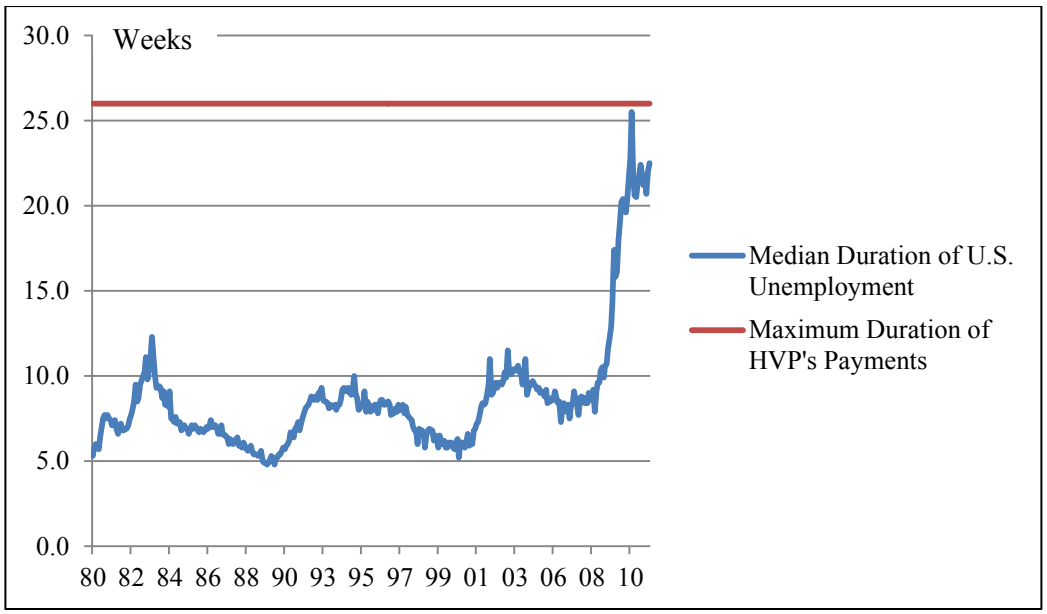
In structuring its policies, HVP had to choose among alternatives. This section provides insights into why one product attribute was chosen over another.

Time span

HVP offers liquidity relief to its policyholders by paying up to six months (approximately 26 weeks) of mortgage payments. Figure 6 puts this six-month respite from mortgage payments into perspective by comparing it to the median U.S. unemployment duration. Based on statistics from the U.S. Department of Labor, HVP's payments exceed the

median duration of U.S. unemployment from 1980 to 2011. In fact, they exceed the highest median unemployment duration during the recent economic and financial crisis (i.e., December 2007 to June 2009).

Figure 6
Median[8] U.S. Unemployment Duration (1980 to 2011) Compared to Liquidity Payments Available in HVP's Insurance Policies
(January 1980 to June 2011)



Source: United States Department of Labor, Bureau of Labor Statistics, http://research.stlouisfed.org/fred2/series/UEMPMED/downloaddata?cid=12. Accessed 21 June 2011.

Debt forbearance –not loan modification or forgiveness

HVP offers six months of liquidity relief to its policyholders, but payments are in the form of debt forbearance and not debt modification or relief. Advances are added to the end of the mortgage maturity and act as interest-free loans until the home is sold or the mortgage is fully paid. Empirical evidence indicates that debt modification and relief invite gaming by lenders, who anticipate higher returns from defaults, and also by borrowers, who are either capable of paying their mortgages or highly likely to "self-cure" during the default-foreclosure process. HVP's debt forbearance reduces gaming by lenders and borrowers, but, more importantly, it provides policyholders with one of the most important assets of all, "time," because it gives them flexibility to find new jobs, without draining all their savings.

Proof of the relationship among forbearance, modification, and defaults is provided by **Foote, Gerardi, and Willen (FGW, 2008)**, who reinforce this conclusion by stating

[8] Average US Unemployment duration may differ.

> *—[f]orbearance programs that allow borrowers to delay—but not avoid—repaying the mortgage in full can help at-risk borrowers without generating serious moral hazard problems." [Page 245]*

Conclusions

The recent financial and economic crisis has prompted regulators to propose a 20% minimum down payment as an effective way to reduce the risk of mortgage defaults because it forces homeowners to have "skin in the game" and "get back to basics." By the same logic, financial guaranty and credit insurance, such as HVP's suite of innovative insurance products, does the same because protection worth 20% or 30 % of a home's purchase price/refinance value or protection worth 20% of a home's mortgage face value is equivalent to having "skin in the game." Homeowners will protect the insured value of their homes just as vehemently and passionately as they protect their down payments.

We respectfully urge the joint agencies writing the Credit Risk Retention rule to include a real estate mortgage loan that is both properly underwritten and backed by state-regulated home value insurance, comprising financial guaranty and credit insurance policies, in the definition of a Qualified Residential Mortgage. The Dodd-Frank Act specifically includes as a criterion in its QRM definition "insurance or credit enhancement obtained at the time of origination to the extent that such insurance or credit enhancement reduces the risk of default." We hope you agree that this comment letter (1) provides empirical proof of three major causes of homeowner default and (2) shows how financial guaranty and credit insurance policies directly address each of these major causes.

We believe the power of empirical evidence, logic (the science that investigates the principles governing correct or reliable inference), and HVP's carefully crafted insurance policies provide sufficient evidence, based on "*historical loan performance data*", that the U.S. housing market will be safer in the future with state-regulated insurance policies that can protect the value of a homeowner's asset, protect the homeowner's liquidity during times of income shock, and protect lenders through a reduced incidence of foreclosure because the result of such protections is a substantial reduction in risk of homeowner defaults.

HVP provides a strong private-market solution to the U.S. housing market problem. It was created as a result of the 2007-2009 housing turmoil and hopes to be a significant part of the market solution to this continuing problem. There are no barriers to entry into this insurance market, and we readily expect and welcome competitors to follow into the vast housing insurance marketplace. While our comments benefit our new insurance product line, they are not intended to be company-specific and should apply broadly to any state-regulated financial guarantee insurance/credit insurance companies that follow.

Thank you for your thoughtful consideration of these comments to your Proposed Rule on Credit Risk Retention and the Qualified Residential Mortgage exemption.

Thank you, again, for the opportunity to provide comments on the proposed credit risk-retention requirements of Section 15G of the Securities Exchange Act of 1934, as added by Section 941 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. If there is any way we can be of further assistance, please do not hesitate to ask.

Sincerely,

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- Demyanyk, Yuliya, Ralph S.J. Koijen and Otto A.C. Van Hemert. "Determinants and Consequences of Mortgage Default." Working Paper, Federal Reserve Bank of Cleveland and University of Chicago (January 2011).

- Doms, Mark, Fred Furlong, and John Krainer. "Subprime Mortgage Delinquency Rates. Federal Reserve Bank of San Francisco. Working Paper 2007-33 (November 2007).

- Elmer, Peter J. and Steven A. Seelig. "Insolvency, Trigger Events, and Consumer Risk Posture in the Theory of Single-Family Mortgage Default." Journal of Housing Research. 10:1 (1999) 1–25.

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- Ghent, Andra C. and Marianna Kudlyaky. "Recourse and Residential Mortgage Default: Evidence from U.S. States." Federal Reserve Bank of Richmond Working Paper No. 09-10R (25 February 2011).

- Goodman, Laurie, Roger Ashworth, Brian Landy and Ke Yin. "Negative Equity Trumps Unemployment in Predicting Defaults." Journal of Fixed Income 19:4 (Spring 2010) 67–72.

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Complementary Studies

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Appendix 1: Data Used in Cited Studies

This appendix summarizes data used in the major studies cited in HVP's comment letter.

Adelino, Manuel, Kristopher Gerardi, and Paul S. Willen. —Why Don't Lenders Renegotiate More Home Mortgages? Redefaults, Self-Cures, and Securitization." No 09-4. Federal Reserve Bank of Boston Public Policy Discussion Paper (6 July 2009).

The authors used use a dataset constructed by LPS Applied Analytics, Inc. (LPS). This is a loan-level dataset that covers approximately 60 percent of the U.S. mortgage market between 2005 and 2007. The data do not contain information on loan modification, but the authors were able to identify such modifications through an algorithm by examining the history of every loan. The authors denote a loan as being modified if there was a change in its terms that was not stipulated by the initial terms of the contract.

The authors identified the following three types of modifications: interest-rate reductions, principal-balance reductions, and term extensions. They also identified principal-balance and mortgage-payment increases that reflect the addition of arrears into the balance of a loan.

Anderson, Nathan B. and Jane K. Dokko. —Liquidity Problems and Early Payment Default among Subprime Mortgages." Finance and Economics Discussion Series Divisions of Research & Statistics and Monetary Affairs. Federal Reserve Board. Washington, D.C. (22 November 2010).

Loan-level data on payment status are from CoreLogic (formerly known as LoanPerformance) and these data track whether a loan is current, 30/60/90 days delinquent, or in foreclosure. The loan's age at the property tax due date is constructed by combining CoreLogic's data with information on property tax due dates, which were obtained from the 2008 U.S. Master Property Tax Guide, internet resources, and phone/email contact with property tax-collecting government officials. It is important to remember that this sample only includes sub-prime mortgage loans between 2000 and 2007, not prime mortgage loans.

Bajari, Patrick, Chenghuan Sean Chu, and Minjung Park. —An Empirical Model of Subprime Mortgage Default from 2000 to 2007." NBER Working Paper No. 14625 (December 2008).

This analysis uses a unique dataset from LoanPerformance, which tracks the universe of subprime and Alt-A mortgages that were securitized between 2000 and 2007. The unit of observation is an individual mortgage observed at a point in time. The LoanPerformance dataset covers more than 85% of all securitized subprime and Alt-A mortgages. These data are merged with the Case-Shiller home price indices in 20 major U.S. cities. The merged information allows tracking the current value of a home by inflating the original appraisal value by the applicable

disaggregated price index. These data are then matched with the loan-level data from the 2000 Census. This information is on demographic characteristics at the zip-code level (e.g., per-capita income, average household size, and education, median age of householder, and racial composition).

Bhutta, Neil, Jane Dokko, and Hui Shan. "The Depth of Negative Equity and Mortgage Default Decisions." Finance and Economics Discussion Series. Divisions of Research & Statistics and Monetary Affairs. Washington: Board of Governors of the Federal Reserve System. Washington, D.C. (2010).

Data for non-prime/sub-prime loans and mortgage performance comes from LoanPerformance (LP), a division of First American CoreLogic. Information is on non-prime, first-lien home purchase mortgages originated in 2006 in Arizona, California, Florida, and Nevada for homes with combined loan-to-value ratios (CLTV) of 100 percent. An advantage of this sample is it avoids the problem of many borrowers exiting the sample by refinancing before default takes place. Therefore, it reduces the chances of mis-measuring CLTV at the time refinancing occurs.

Variables include loan characteristics at origination, such as ZIP code-level house price indices (HPIs) to calculate housing equity for each loan in each month, county-level unemployment rates, county level credit card 60+ day delinquency rates, and ZIP code characteristics from the 2000 Census. (All explanatory variables are at the zip code or county level. None is at the individual level.)

Default in this paper is defined as being 90+ days delinquent for two consecutive months, and the time of default is described as three months prior to the month when the loan reaches the 90+ day delinquency mark. By this definition, 78% of the loans in the sample "default" by the end of the observation period (September 2009).

Demyanyk, Yuliya, Ralph S.J. Koijen and Otto A.C. Van Hemert. "Determinants and Consequences of Mortgage Default." Working Paper, Federal Reserve Bank of Cleveland and University of Chicago (January 2011).

The authors study a unique dataset of borrower-level credit information from TransUnion, one of the three major credit bureaus, which is linked to a database containing detailed information on the borrowers' mortgages. The TransUnion data cover most borrowers who, at some point during the September 2004 to July 2009 sample period, had a securitized subprime or Alt-A mortgage. LoanPerformance database contains information about loan and borrower characteristics at origination and monthly loan performance for about 85% of all U.S. subprime and Alt-A securitized mortgage loans. The authors supplement these data with the ZIP code-level Zillow Home Value Index (ZHVI) to estimate home values and account for housing market trends. The authors also use data on monthly county-level unemployment rates from the Bureau of Labor Statistics and the average household income in the ZIP code, based on 2000 Census data, from the U.S. ZIP Code Database.

Previous studies on the topic of the determinants and consequences of default faced data limitations because they relied principally on loan-level mortgage databases, which are often merged with county or zip code-level information. Furthermore, most of the data are at loan origination. The authors make use of two main data sources to overcome both issues. First, they use individual-level credit data from TransUnion's Consumer Credit Database. This is a comprehensive and rich database summarizing the credit situation of households. Second, they use the LoanPerformance database from CoreLogic, which contains loan-level data on U.S. subprime and Alt-A mortgage loans.

Doms, Mark, Fred Furlong, and John Krainer. "Subprime Mortgage Delinquency Rates. Federal Reserve Bank of San Francisco. Working Paper 2007-33 (November 2007).

The authors merge data from several sources to measure regional variations in delinquency rates and explanatory variables. To measure the risk of borrowers' pool, the analysis uses "*APR's on loans from the 2004 and 2005 Home Mortgage Disclosure Act (HMDA) data and the share of loans that are subprime.*" The measures of local economic conditions are unemployment rate and growth rate in employment at MSA level. House prices and changes are derived from Office of Federal Housing Enterprise Oversight (OFHEO) national house price index. The delinquency data in 2005 and 2006 are MSA-level from First American LoanPerformance.

Elmer, Peter J. and Steven A. Seelig. "Insolvency, Trigger Events, and Consumer Risk Posture in the Theory of Single-Family Mortgage Default." Journal of Housing Research. 10:1 (1999) 1–25.

Data used in this paper comes from several sources. The foreclosure rates are annualized and based on the publications from Mortgage Bankers Association, the Department of Housing and Urban Development, and the Federal Home Loan Bank Board. The other variables, including 10-year treasury bond rate, unemployment rate, three-year moving average of the loan-to-value ratio on conventional mortgages index (1972 = 1.0), three-year moving average of the house appreciation as measured by the shelter component of the CPI, personal savings as a percentage of disposable income, household liabilities divided by household assets, business failure rate per 1,000 firms, and consumption of casino gambling divided by disposable income are all annualized rates collected from various sources including the Federal Reserve, National Bureau of Economic Research, Office of Thrift Supervision, National Association of Realtors, Dunn and Bradstreet, and the Bureau of Economic Analysis.

Elul, Ronal, Nicholas S. Souleles, Souphala Chomsisengphet, Dennis Glennon, and Robert Hunt. "What Triggers' Mortgage Default?" American Economic Review: Papers & Proceedings 100 (May 2010) 490–494.

The authors merge two main datasets: mortgage data from LPS and credit bureau data from Equifax. Observations are matched through the characteristics of the first mortgages, in particular, open date, initial balance, and zip code. These are individual-level credit

observations. Additional data include metropolitan statistical area level house price indexes from the Federal Housing Finance Agency and county-level unemployment rates from the Bureau of Labor Statistics.

Foote, Christopher L., Kristopher Gerardi, and Paul S. Willen. —Negative Equity and Foreclosure: Theory and Evidence." Journal of Urban Economics 64 (2008) 234–245.

Data used comes from the Warren Group, a Boston-based firm that collects information from county-level, Registry of Deeds offices in Massachusetts. The data cover virtually all residential mortgage and housing transactions, including foreclosure deeds, during the past 20 years. House-price-index and equity values are estimated based on this dataset.

Ghent, Andra C. and Marianna Kudlyaky. —Recourse and Residential Mortgage Default: Evidence from U.S. States." Federal Reserve Bank of Richmond Working Paper No. 09-10R (25 February 2011).

The authors define a loan as "defaulted" if it is terminated in one of the following ways: by REO (i.e., real estate owned) sale, short sale, payoff out of foreclosure, payoff out of bankruptcy and serious delinquency, or liquidation due to termination. In the analysis of the probability of default, which is the dependent variable, takes a value of 1.0 during the month the loan defaults.

The data used in the study are loan-level data from LPS Applied Analytics, Inc. They contain information on prime and non-prime private securitized loans, portfolio loans, and GSE loans on a monthly basis.

The authors control for trigger events by including the contemporaneous state divorce rates and the state unemployment rates. They use lagged monthly seasonally unadjusted unemployment rates from the BLS and employ a probit analysis as the benchmark model to study the effect of recourse on whether a borrower defaults.

Goodman, Laurie, Roger Ashworth, Brian Landy and Ke Yin. —Negative Equity Trumps Unemployment in Predicting Defaults." Journal of Fixed Income 19:4 (Spring 2010) 67–72.

In this study, default is defined as a mortgage that becomes 60+ days delinquent for the first time. The authors measure the percentage of loans that transition each month from the category of "*have never been delinquent for more than one payment*" to the category of "*60+ days delinquent.*" The monthly default transition rates and CLTV from 2006 to 2009 are calculated based on data published by Loan Performance, and Amherst Securities; monthly unemployment rates are collected from Bureau of Labor Statistics.

Guiso, Luigi Paola Sapienza, and Luigi Zingales. —Moral and Social Constraints to Strategic Default on Mortgages." NBER Working Paper No. 15145 (July 2009).

The authors use survey data as an alternative method of analysis. The main data sources are two surveys of the Chicago Booth Kellogg School Financial Trust Index Survey. Each survey was conducted by Social Science Research Solutions, which collects information on a representative sample of 1,000 American households. The first wave of the survey took place from the 17th to the 28th of December 2008. The second wave took place the third week of March 2009. One adult respondent in each household was randomly contacted and asked whether he/she was in charge of household financials, either alone or together with a spouse. Only individuals who claimed such responsibility were included in the survey. The main purpose of these surveys was to study the level of trust people have in the financial system and how it changes over time.

Quigley, John M. and Robert Van Order. —Explicit Tests of Contingent Mortgage Default." Journal of Real Estate Finance and Economics 11 (1995) 99-117.

Data in these empirical models are based on default behavior of mortgages issued between 1976 and 1980 and bought by Freddie Mac. The default experience of these mortgage holders is followed until 1990. The authors use a hazard model of default, where the probability of default at time t is modeled as a function of homeowner equity when the mortgage is at age t and dummy variables are used to indicate the year of mortgage origination.

Appendix 2: Members of the Coalition for Sensible Housing Policy

American Bankers Association	Mortgage Insurance Companies of America
American Escrow Association	NAACP
American Financial Services Association	National Association of Federal Credit Unions
American Land Title Association	National Association of Hispanic Real Estate Professionals
American Rental Property Owners and	National Association of Home Builders
Landlords Association	National Association of Human Rights Workers
Asian Real Estate Association of America	National Association of Neighborhoods
Black Leadership Forum	National Association of Real Estate Brokers
Center for Responsible Lending	National Association of REALTORS®
Colorado Mortgage Lenders Association	National Community Reinvestment Coalition
Community Associations Institute	National Fair Housing Alliance
Community Mortgage Banking Project	National Housing Conference
Community Mortgage Lenders of America	National NeighborWorks Association
Community Reinvestment Coalition of North Carolina	National Urban League
Consumer Federation of America	National Real Estate Investors Association
Council Of Federal Home Loan Banks	North Carolina Institute for Minority Economic Development
Credit Union National Association	Real Estate Services Providers Council
Enterprise Community Partners, Inc.	Real Estate Valuation Advocacy Association
HomeFree USA	Realty Alliance
Independent Community Bankers of America	Texas Bankers Association
International Association of Official Human Rights Agencies	U.S. Conference of Mayors
Louisiana Bankers Association	Worldwide ERC
Mortgage Bankers Association	