Redemption and Return on Investment: Using Eminent Domain in the Underwater Mortgage Fight

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Recently, proponents of a plan to refinance underwater mortgages using eminent domain published their argument in the Harvard Law & Policy Review. *The plan mixes populist perspective with capitalistic problem solving: It offers both salvation for the disproportionately poor and minority communities hit hard during the financial crash and profits for funders of the operation. The plan is quickly becoming more than just a thought experiment: Richmond, California has formally adopted (but not yet executed) the plan, and ten other cities are currently considering it. This Article seeks to provide additional legal perspective and financial insight to the ensuing debate. Legally and culturally, the plan inverts the nasty legal heritage of eminent domain for economic redevelopment and doles a touch of symbolic retribution to Wall Street. Financially, proponents insist that the plan is not only profitable for funders, but also a fair deal for security holders. Using a simple financial model and information about the kinds of loans targeted, this Article charts the profitability of the plan and concludes that it could indeed offer substantial returns on investment without cheating Wall Street. However, pressure from banks and the federal government may keep the plan on the shelf.*

Introduction

Underwater mortgages[1]—those for which outstanding debt exceeds property value—have persisted in the housing market for a troublingly long time after the end of the financial crisis that wrought them. Their persistence is a great financial millstone on the mortgagors stuck underneath them and poses a host of problems for surrounding communities. A controversial plan would restructure underwater loans using eminent domain. The plan is promoted by a for-profit entity called Mortgage Resolution Partners ("MRP"). Recently, Professor Robert Hockett and John Vlahoplus, affiliates of MRP, made their case in the *Harvard Law & Policy Review*.[2] Since then, Richmond, California has formally adopted (but not yet executed) the plan, and ten other cities are considering it. These developments have created quite a stir in the mortgage world, with financiers threatening to embargo communities that go ahead, and lawyers brandishing their copies of the Constitution. While Professor Hockett and Mr. Vlahoplus touch on a number of points,

[1] This Article will use often use the term "mortgage" as a shorthand for the package of note (contract stipulating payment) and mortgage (security interest in real property) that comprise what most of us would refer to as a "mortgage loan."

[2] *See* Robert Hockett & John Vlahoplus, *A Federalist Blessing in Disguise: From National Inaction to Local Action on Underwater Mortgages*, 7 Harv. L. & Pol'y Rev. 253 (2013).

they leave two key questions unanswered. First, why is the plan so alluring for some? Second, can MRP pay fair market value to the institutions holding targeted mortgages and still generate profits for its clients?

On the first count, the answer, it seems, is that the plan appeals to a mix of American values: It promises redemption for a disparaged legal tool, redress for the 2008 financial crisis, and a lucrative business investment. The plan inverts the racist and classist reputation of eminent domain for economic redevelopment—taking from large financial institutions that caused the financial crisis and giving to the disproportionately low-income and minority communities targeted for subprime and predatory lending. On the second count, based on national data, this Article estimates that the plan could generate a 26% gross return on investment for its backers while paying fair market value for the takings.

The Article proceeds as follows: Part I outlines the origins of the problem MRP seeks to solve. Part II discusses MRP's solution, summarizing where the plan is being considered, reactions to the plan, legal arguments made, and the plan's legal and cultural heritage. Turning to finances, Part III evaluates the plan's profitability. Building a simple financial model using national mortgage data, it charts the plan's returns as a function of mortgage characteristics. Best estimates suggest that the plan could indeed generate substantial returns while paying investment trusts and their security holders fair market value for mortgages seized. The Article closes with some thoughts about financial institutions' vehement opposition to the plan, despite its ostensibly fair pricing, and a few practical considerations.

I. THE PROBLEM

Residential mortgage-backed securities ("RMBS") reshaped and eventually destabilized the pre-recession financial order. Built using a legal and financial production line that fostered subprime and predatory lending, RMBS trusts now contain large numbers of underwater mortgages, which cause serious problems for homeowners and communities.

A. *The Rise of the Residential Mortgage-Backed Security Economy*

In the decades before 2007, the global financial market saw the rise of RMBS. Created to satisfy an expansion of global capital,[3] these securities acted as bonds: Just as traditional bondholders own the right to future payments from a corporation or municipality in return for up-front investments, RMBS holders are entitled to collect streams of monthly mortgage payments

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[3] *See* ERIC S. BELSKY & NELA RICHARDSON, JOINT CENTER FOR HOUSING STUDIES OF HARVARD UNIV., UNDERSTANDING THE BOOM AND BUST IN NONPRIME MORTGAGE LENDING 2–4 (2010), *available at* http://www.jchs.harvard.edu/research/publications/understanding-boom-and-bust-nonprime-mortgage-lending; *This American Life: The Giant Pool of Money,* Chicago Public Radio (May 8, 2008), *available at* http://www.thisamericanlife.org/radio-archives/episode/355/the-giant-pool-of-money.

from groups of U.S. homeowners.[4] RMBS were initially developed by government-sponsored enterprises ("GSEs")[5] in the early 1970s.[6] These early agency RMBS were created with loans guaranteed by the federal government and used simple pass-through structures.[7] Private-label securities ("PLS"), whose trusts contain only private loans, not guaranteed by the federal government, were introduced in 1977. Both kinds of RMBS proliferated with the advent of sophisticated pricing models, time- and risk-partitioning (tranches), and rating agencies.[8] Between 1980 and 2007, residential mortgage securitization grew at a "staggering pace."[9] At the time of the financial crash, RMBS made up almost one-quarter of the U.S. bond market ($6.8 trillion), and 60% of U.S. mortgage loans (by dollar amount) were securitized.[10]

Even after the advent of PLS, most RMBS were agency RMBS.[11] With outright or implicit federal backing, agency RMBS were seen as relatively low-risk, high-yield investments.[12] However, in the 2000s, PLS overtook the market, representing 56% of RMBS issuance by 2006.[13] Indeed, the dramatic expansion of the RMBS market in the early 2000s was driven in part by the explosion of PLS.[14] Today, PLS represent 10% of the outstanding mortgage loans.[15]

RMBS were created through an elaborate securitization process that ultimately encouraged subprime and predatory lending and led to the 2008 financial crisis.[16] After origination, mortgage loans passed quickly from institution to institution in a chain of assignments designed to isolate the mort-

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[4] Christopher L. Peterson, *Predatory Structured Finance*, 28 CARDOZO L. REV. 2185, 2203 (2007).

[5] *E.g.*, Fannie Mae, Freddie Mac, and Ginnie Mae.

[6] Peterson, *supra* note 4, at 2198–99.

[7] *Id.* at 2199.

[8] *Id.* at 2201–04.

[9] Kurt Eggert, *Held Up in Due Course: Predatory Lending, Securitization, and the Holder in Due Course Doctrine*, 35 CREIGHTON L. REV. 503, 538; *see also* Adam J. Levitin & Tara Twomey, *Mortgage Servicing*, 28 YALE J. ON REG. 1, 17 (2011).

[10] Anna Gelpern & Adam J. Levitin, *Rewriting Frankenstein Contracts: Workout Prohibitions in Residential Mortgage-Backed Securities*, 82 S. CAL. L. REV. 1075, 1080–81 (2009).

[11] Levitin & Twomey, *supra* note 9, at 18.

[12] Peterson, *supra* note 4, at 2199. For a historical treatment of agency RMBS, see *id.* at 2196–99.

[13] Levitin & Twomey, *supra* note 9, at 18.

[14] *See* John Kiff & Paul Mills, *Money for Nothing and Checks for Free: Recent Developments in U.S. Subprime Mortgage Markets* 6–7 (Int'l Monetary Fund, Working Paper 07/188, 2007), *available at* http://www.imf.org/external/pubs/ft/wp/2007/wp07188.pdf.

[15] Tad Friend, *Home Economics: Can an Entrepreneur's Audacious Plan Fix the Mortgage Mess?*, NEW YORKER, Feb. 4, 2013, at 26, 27. For a detailed discussion of PLS, see Peterson, *supra* note 4, at 2199–207.

[16] The term "subprime loan" encompasses a number of characteristics—risky borrower, originator specializing in high-cost loans, high default rate, certain distinctive contract features (e.g., balloon payments, adjustable interest rates, prepayment penalties, etc.). *See* Yuliya Demyanyk & Otto Van Hemert, *Understanding the Subprime Mortgage Crisis*, 24 REV. FIN. STUD. 1848, 1853 (2009). For the purposes of this Article, it is enough that the term always implies a high risk of default.

gage payments from their legal and financial origins and liabilities.[17] Many of the parties along this line of assignment were paid up front and did not retain the assets they created, nor the associated financial and legal risk.[18] Dubbed the originate-to-distribute model, this process diminished incentives to screen out lending risk and encouraged subprime lending as demand for RMBS intensified.[19] Between 2001 and the crash in 2007, subprime lending in the U.S. proliferated.[20]

Subprime lending hit minority and low-income communities dispropor-tionately.[21] During the boom, subprime lending was five times as likely to occur in predominantly black neighborhoods (versus predominantly white ones).[22] As a result, African Americans received twice as many high-priced loans as whites, controlling for other borrower and lender characteristics.[23] And, "[i]n addition to receiving a higher proportion of higher-rate loans, African Americans and Latinos also were much more likely to receive loans with other risky features, such as hybrid and option [adjustable-rate mort-gages ("ARMs")] and prepayment penalties."[24] Similarly, subprime lend-ing was three times as likely to occur in low-income neighborhoods (versus high-income neighborhoods).[25] The high concentration of subprime lending in minority and low-income communities set the stage for disproportionate impacts on these communities during the bust. Hockett and Vlahoplus's plan is ostensibly designed to help these same communities.

At the end of the line, loans landed in trusts along with thousands of others, where the rights to collect their monthly payments were sold to in-vestors across the globe. To reduce systematic risk, banks mixed mortgage

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[17] For more thorough treatments of the RMBS production line, see Peterson, *supra* note 4, at 2208–11, Levitin & Twomey, *supra* note 9, at 13–14, and Gelpern & Levitin, *supra* note 10, at 1081–83.

[18] Gelpern & Levitin, *supra* note 10, at 1084; *see generally* Eggert, *supra* note 9, at 510 (criticizing the holder in due course doctrine as applied to securitized mortgages).

[19] *See* Benjamin J. Keys, *Did Securitization Lead to Lax Screening? Evidence from Sub-prime Loans*, Q. J. OF ECON., Feb. 2010, at 307, 308; Amiyatosh Purnanandam, *Originate-to-Distribute and the Subprime Mortgage Crisis* 1 (Fed. Deposit Ins. Corp. Center for Fin. Res., Working Paper No. 2010-08, 2010).

[20] *See* Demyanyk & Hemert, *supra* note 16, at 1848 (using loan data to show that "the quality of [RMBS] loans deteriorated for six consecutive years before the crisis"); *see also id.* at 1875 (noting that the subprime portion of the market increased from 8% to 20% between 2001 and 2006); *see also* BELSKY & RICHARDSON, *supra* note 3, at 5; BOCIAN ET AL., CENTER FOR RESPONSIBLE LENDING, LOST GROUND, 2011: DISPARITIES IN MORTGAGE LENDING AND FORECLOSURES 8 (2011), *available at* http://www.responsiblelending.org/mortgage-lending/research-analysis/Lost-Ground-2011.pdf (noting that the subprime mortgage market grew from $97 billion in 1996 to $640 billion in 2006).

[21] BELSKY & RICHARDSON *supra* note 3, at 7.

[22] Eggert, *supra* note 9, at 574.

[23] Manuel Aalbers, *Geographies of the Financial Crisis*, 41 AREA 34, 38 (2009).

[24] BOCIAN ET AL., *supra* note 20, at 21, 23 (noting that subprime mortgages were dispro-portionately made in communities of color).

[25] Eggert, *supra* note 9, at 574.

notes from around the U.S. and allocated payout by tranche,[26] assuming U.S. mortgages were unlikely to default at the same time.[27]

B.   Aftermath

U.S. housing prices peaked in 2006 and declined rapidly in 2007.[28] The subprime mortgage market crashed in 2007.[29] The crash triggered a global financial meltdown that approached "utter collapse" by fall of 2008.[30] The worst economic downturn since the Great Depression followed.

The crash set off a tidal wave of home mortgage foreclosures.[31] Since the financial crisis began in the fall of 2008, an estimated 4.7 million U.S. homes have completed foreclosure.[32] While the bulk of foreclosures affected white households, to date, "African-American and Latino borrowers are almost twice as likely to have lost their home to foreclosure as non-Hispanic whites" and disparities persist, even taking into account borrower characteristics such as income.[33] More than five years after the financial crisis began, 13% of all residential properties with a mortgage, or 6.4 million homes, are underwater.[34]

As Professor Hockett and Mr. Vlahoplus note, underwater mortgages pose a number of problems for society.[35] At the individual level, an underwater homeowner must overpay for her house and is more likely to default.[36] At the societal level, the resulting foreclosures displace families, lower prop-

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[26] A tranched security is "divided into a stepped senior/subordinated payment priority system where the subordinated tranches are first in line to absorb losses from reduced mortgage payments." Gelpern & Levitin, *supra* note 10, at 1098.

[27] Technically a mortgagor can default for a slew of reasons beyond non-payment. Lynn M. LoPucki & Elizabeth Warren, Secured Credit: A Systems Approach 217 (7th ed. 2012). This paper will use the term "default" as a shorthand for "default for non-payment."

[28] *See* Press Release, S&P Dow Jones Indices, Home Prices Accelerate in January 2013 According to the S&P/Case-Schiller Home Prices Indices 2 (Mar. 26, 2013) (on file with author).

[29] Demyanyk & Van Hemert, *supra* note 16, at 1875.

[30] Ben S. Bernanke, Chairman, Bd. of Governors of the Fed. Res. System, Meeting of the American Economic Association: Monetary Policy and the Housing Bubble 1 (Jan. 3, 2010) *available at* http://www.federalreserve.gov/newsevents/speech/bernanke20100103a.pdf.

[31] *See* Belsky & Richardson, *supra* note 3, at 10.

[32] CoreLogic, National Foreclosure Report November 2013 2 (2013), *available at* http://www.corelogic.com/research/foreclosure-report/national-foreclosure-report-november-2013a.pdf.

[33] Bocian et al., *supra* note 20, at 18–19.

[34] CoreLogic Equity Report Third Quarter 2013 1 (2013), *available at* http://www.corelogic.com/research/negative-equity/corelogic-q3-2013-equity-report.pdf.

[35] *See* Hockett & Vlahoplus, *supra* note 2, at 254–57 (outlining the costs of negative equity in detail).

[36] *See, e.g.*, Gene Amromin & Anna L. Paulson, *Default Rates on Prime and Subprime Mortgages: Differences and Similarities*, Fed. Res. Bank of Chicago: ProfitWise, Sept. 2010, at 1, 5–7; Laurie S. Goodman et al., *The Case for Principal Reductions*, 17 J. Struc. Fin. 29 (2001). Homeowners may also "strategically default." *See* Neil Bhutta et al., *The Depth of Negative Equity and Mortgage Default Decisions* (Fed. Res. Bd., Finance and Economics Discussion Series Working Paper 2010-35, 2010); Luigi Guiso et al., *The Determinants of Attitudes Towards Strategic Default on Mortgages* (Chicago Booth, Research Paper No. 11–14, 2011).

erty tax revenues, increase city upkeep costs, and foster crime.[37] At the macroeconomic level, underwater mortgages put a drag on the economy: homeowners are also consumers, and their homes are usually their largest asset. Underwater mortgagors are less likely to spend money on consumer items if they must overpay for their housing,[38] all the more so if they used their home equity to sponsor a line of consumer credit during the boom.[39]

As Professor Hockett and Mr. Vlahoplus also note, to date, attempts to modify underwater mortgages have been unsuccessful.[40] While a number of factors impede revaluing these overpriced and socially costly mortgages,[41] the most important is that contracts between the financial entities that manage RMBS explicitly or functionally prohibit modification.[42] In light of all of the rigidities built into RMBS, Professor Hockett and Mr. Vlahoplus argue that eminent domain must be used to revalue underwater mortgages.[43]

II. The MRP Plan

Professor Hockett and Mr. Vlahoplus work with Mortgage Resolution Partners, a private firm offering to help local governments with underwater mortgages, for a profit.[44] This Part will summarize their plan, report where it is being considered, and sample private-sector and government reactions. It will then briefly summarize the legal issues surrounding the plan.

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[37] Aalbers, *supra* note 23, at 38.

[38] There is evidence to suggest that negative equity may disproportionately suppress consumer spending because of the psychological effects of being underwater. *See* K.F. Man & Raymond Y. C. Tse, *The Impact of Negative Housing Equity on Private Consumption: HK Evidence* (Pac. Rim Real Est. Soc'y, Paper No. C011, 2004).

[39] *See, e.g.*, Raphael Bostic et al., *Housing Wealth, Financial Wealth, and Consumption: New Evidence from Micro Data*, 39 Reg'l Sci. & Urban Econ. 79, 79 (2009) (finding that a 10% reduction in housing wealth translates to a 1% reduction in real U.S. gross domestic product growth).

[40] There have been a host of public and private loan modification programs. *See Loan Servicing and Modifications & Foreclosure Assistance Programs*, Nat'l Consumer L. Ctr., http://www.nclc.org/issues/foreclosures-and-mortgages.html (last visited April 15, 2014); *see also* Hockett & Vlahoplus, *supra* note 2, at 263–66 (discussing the failure of federal action).

[41] Three of these barriers are outlined in an earlier paper by Professor Hockett. *See* Robert C. Hockett, *It Takes a Village: Municipal Condemnation Proceedings and Public/Private Partnerships for Mortgage Loan Modification, Value, Preservation, and Local Economic Recovery*, 18 Stan. J.L. Bus. & Fin. 121, 138–42 (2012); *see also* Gelpern & Levitin, *supra* note 10, at 1090–100 (citing tranche division, PSA full-price buyback provisions for modified loans, and bankruptcy evasion as barriers to modification); Levitin & Twomey, *supra* note 9, at 49–50 (observing that servicers profit off of short-term default).

[42] *See* Gelpern & Levitin, *supra* note 10, at 1091, 1124 (characterizing Pooling and Servicing Agreements as financial "suicide pacts," and noting that the Trust Indenture Act may apply to RMBS and thus require unanimous approval of loan modification); *see also* Hockett & Vlahoplus, *supra* note 2, at 261 (discussing the PSA problem).

[43] *See* Hockett & Vlahoplus, *supra* note 2, at 266.

[44] *See id.* at 253.

A.   Mechanics

Under the MRP plan, local governments team up with private investors to take using eminent domain (or purchase voluntarily) non-defaulted, underwater, U.S. residential, owner-occupied mortgages in PLS trusts ("PLS mortgages"). The process would proceed in roughly four steps. To illustrate the process, consider Homeowner, who got a subprime loan of $300,000 to buy a house worth $300,000 during the boom.[45] Now, after the crash, Homeowner's house is only worth $200,000, and she is $100,000 underwater.[46] MRP's plan would proceed as follows:[47]

1. Targeting. First, Homeowner's city or county government, with MRP's help, targets local properties to be taken (or purchased). A homeowner might volunteer for such a program, or more likely, her city might identify her based on the age, or vintage of her loan. MRP only considers private-label performing mortgages for its plan.[48] While MRP has not discussed the matter publicly, the choice to target performing, PLS mortgages appears to be an attempt to maximize financial returns and minimize legal risks. On the return side, performing mortgages are relatively good financial risks in the underwater mortgage pool: They are paying now, at full price, and are good candidates to continue payments once refinanced to lower monthly payments. As for legal risk, PLS mortgages are less likely than GSE mortgages to draw the wrath of the federal government upon seizure: Because they are not guaranteed by the federal government, seizure of these mortgages will not trigger federal reimbursement of security holders. Consequently, targeting PLS mortgages may minimize the federal government's legal standing and financial incentive to sue MRP and its clients. Judging from federal reactions to the plan, success on this front has been mixed.[49]

2. Investors. Second, MRP and the city secure outside investors to fund the taking (or purchase). These investors provide the just compensation required under takings law. The city will use that money to pay the trust holding Homeowner's mortgage. MRP promises these investors returns of 20% to 30%. MRP has not disclosed publicly how it arrived at this esti-

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[45] Loans with no down payment "surged in popularity in the 2000s." Dov Solomon & Odelia Minnes, *Non-Recourse, No Down Payment and the Mortgage Meltdown: Lessons From Undercapitalization*, 16 FORDHAM J. CORP. & FIN. L. 529, 542 (2011).

[46] Similar hypothetical explanations abound in press coverage of the plan. *See, e.g.*, Shaila Dewan, *A City Invokes Seizure Laws to Save Homes*, N.Y. TIMES, Jul. 29, 2013, http://www.nytimes.com/2013/07/30/business/in-a-shift-eminent-domain-saves-homes.html?pagewanted=all&_r=0.

[47] This step-by-step description of the plan is based on Professor Hockett and Mr. Vlahoplus's account, countless descriptions in the popular press, and court pleadings. *See* Hockett & Vlahoplus, *supra* note 2, at 271; Amended Complaint for Declaratory and Injunctive Relief at 9–14, Bank of New York Mellon v. City of Richmond, No. 13-CV-03664 (N.D. Cal. Aug. 9, 2013).

[48] This aspect of the plan has been widely reported. *See, e.g.*, Daniel Fisher, *Richmond, Calif. Ignores Critics, Votes to Seize Performing Mortgages*, FORBES, Sept. 11, 2013, http://www.forbes.com/sites/danielfisher/2013/09/11/richmond-calif-ignores-critics-votes-to-seize-performing-mortgages/.

[49] *See infra* Part II.C.

mate.[50] Part III of this Article will present an independent assessment of the plan's returns.

3. Seizure and just compensation. With investors at the ready, the city seizes (or purchases) Homeowner's mortgage from its investment trust. According to MRP, the price for Homeowner's mortgage in this seizure (or purchase) is the market price of the *mortgage*.[51] Under the MRP plan, the exact price is determined using market rates for similar mortgages, or using common valuation techniques such as discounted cash flow analysis.[52] Given the likelihood of default of these mortgages, MRP contends that the price of the *mortgage* is substantially below the market value of the *real property* securing the mortgage.[53] For the purposes of this example, assume that Homeowner's mortgage is worth $150,000—half of its face value—in light of Homeowner's risk of default and diminished property value.

4. Pass-off and payoff. Once Homeowner's mortgage has been seized (or purchased), two closely related options present themselves. In the more likely scenario, the city and its investors pass off Homeowner's mortgage to the Federal Housing Authority ("FHA") for a profit.[54] More precisely, Homeowner's local government directs her to apply for a FHA refinancing loan, issued at the current market price of the property—$200,000. Having purchased Homeowner's mortgage for $150,000, the city and its investors can now be paid off at $200,000, earning $50,000 in profit and a (gross) return on investment of 25%.[55] Under the second option, the city sells Homeowner's mortgage to third-party investors, who issue Homeowner a new prime mortgage and mortgage-backed securities to go with it.[56] Either way, MRP takes a fixed fee of $4500 per mortgage.[57]

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[50] Friend, *supra* note 15, at 26, 28 (reporting 20% returns); *see also* Al Yoon, *Seizing Mortgages Could Yield Big Returns*, Wall St. J., July 25, 2012, http://online.wsj.com/news/articles/SB10000872396390443295404577547243807191280 (reporting 20% to 30% returns).

[51] *See* MRP, Frequently Asked Questions (2012), *reprinted in* Amended Complaint for Declaratory and Injunctive Relief, Exhibit J at 7, Bank of New York Mellon v. City of Richmond, No. 13-CV-03664 (N.D. Cal. Aug. 9, 2013) [hereinafter Exhibit J].

[52] *See id.*

[53] *See, e.g.*, Yoon, *supra* note 50.

[54] This is the most likely approach because it offers investors a quick payout and spares them the hassle of holding and servicing mortgages. It appears to be the main permutation contemplated by MRP and Richmond. *See, e.g.*, Exhibit J, *supra* note 51, at 8.

[55] MRP would use the FHA Short Refinance Program. *See FHA Short Refinance for Borrowers with Negative Equity (FHA Short Refinance)*, MakingHomeAffordable.Gov, http://www.makinghomeaffordable.gov/programs/lower-rates/Pages/short-refinance.aspx (last visited July 14, 2013).

[56] Professor Hockett suggests this second alternative in another article on the plan. Hockett, *supra* note 41, at 136.

[57] Amended Complaint, *supra* note 47, at 8.

B.   Who Is Trying It?

Richmond, California adopted MRP's plan in the summer of 2013. At the time, roughly one-half of mortgages in Richmond were underwater.[58] In April 2013, Richmond entered into an advisory agreement with MRP.[59] In late July, Richmond sent letters to the trustees of 624 targeted mortgages within city limits, offering to purchase those mortgages.[60] In September 2013, because no banks agreed to sell the targeted loans voluntarily, the Richmond City Council voted to pursue acquisition by eminent domain.[61] Having approved the policy, Richmond must still approve each specific use of eminent domain, something that requires a supermajority (five of seven councilmembers) under California law.[62] At publication, Richmond has not yet exercised eminent domain—the current City Council is deadlocked on the issue one vote shy of a supermajority.[63] Because the stalemate in the council appears unlikely to change, proponents have begun to discuss establishing a joint powers authority in order to sidestep the gridlock.[64]

In August 2013, prominent RMBS trustees including Wells Fargo, Deutsche Bank, and Bank of New York Mellon, along with the U.S. Bank National Association, sued Richmond and MRP in two separate lawsuits.[65] The banks argued that Richmond and MRP planned to pay less than fair value for the mortgages,[66] and that Richmond's actions were "unlawful and

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[58] *Calif. City Contemplates Using Eminent Domain to Solve Its Foreclosure Problems* (PBS News Hour television broadcast Sept. 19, 2013), *available at* http://www.pbs.org/news hour/bb/business/july-dec13/domain_09-19.html.

[59] Amended Complaint, *supra* note 47, at 3.

[60] *Id.* at 7.

[61] Jim Christie, *California City Backs Plan to Seize Negative Equity Mortgages*, REUTERS, Sept. 11, 2013, http://www.reuters.com/article/2013/09/11/us-richmond-eminentdomain-idUS BRE98A0FN20130911.

[62] Robert Rogers, *Richmond: Council to Move Forward with Plan to Seize Mortgages Through Eminent Domain*, CONTRA COSTA TIMES, Sept. 10, 2013, http://www.contracosta-times.com/west-county-times/ci_24066384/hundreds-show-up-at-richmond-council-meeting-speak.

[63] Carolyn Said, *Richmond Pushes Forward with Eminent Domain Plan*, S.F. CHRON., Dec. 18, 2013, http://www.sfgate.com/realestate/article/Richmond-pushes-forward-with-emi-nent-domain-plan-5073950.php.

[64] A joint powers authority ("JPA") is a legal entity formed by two or more local governments to accomplish a common objective. *See, e.g.*, 3 HEALTH L. PRAC. GUIDE §33:35.n1 (2013). A JPA could be established with a simple majority vote by the Richmond City Council (along with another local government) and could be conferred the power to decide whether and how to execute the plan. Because the board would be appointed by the Richmond City Council (and another government entity) by majority vote, the JPA board could theoretically be populated to meet the supermajority requirement without a supermajority in the Richmond City Council. *See id.*

[65] Wells Fargo Bank, N.A. v. City of Richmond, No. 13-CV-03663, 2013 BL 248023 (N.D. Cal. Sept. 16, 2013); Bank of New York Mellon v. City of Richmond, No. 13-CV-03664, 2013 WL 4016507 (N.D. Cal. Nov. 6, 2013).

[66] Amended Complaint, *supra* note 47, at 3; Complaint for Declaratory and Injunctive Relief at 37, Wells Fargo Bank, N.A. v. City of Richmond, No. 13-CV-03663 (N.D. Cal. Aug. 7, 2013).

unconstitutional" under federal, state, and local law.[67] As such, the trustees sought injunctive and declaratory relief.[68] Both lawsuits have since been dismissed without prejudice for lack of ripeness.[69] It appears that, until Richmond actually exercises eminent domain—or at least until the city approves the law by supermajority—the banks lack legal recourse.[70]

Besides Richmond, ten other cities are currently considering the plan, including El Monte, California;[71] Irvington, New Jersey;[72] La Puente, California;[73] Newark, New Jersey;[74] Oakland, California;[75] Orange Cove, California;[76] Pomona, California;[77] Seattle, Washington;[78] San Joaquin, California;[79] and Yonkers, New York.[80] Having taken up the idea in the second half of 2013, these cities are all in various stages of studying the plan.

Finally, a number of local governments have considered and rejected MRP's plan. Most prominently, San Bernardino County, California came close to adoption in summer 2012, but ultimately voted to reject in early 2013.[81] Berkeley, California;[82] North Las Vegas, Nevada;[83] Chicago, Illi-

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[67] Amended Complaint, *supra* note 47, at 3; Complaint, *supra* note 66, at 12. For a summary of the trustee's legal arguments, *see infra* Part II.D.

[68] Amended Complaint, *supra* note 47, at 6; Complaint, *supra* note 66, at 9.

[69] Order Granting Defendants' Motion to Dismiss and Denying Plaintiffs' Motion for a Preliminary Injunction, Wells Fargo Bank, N.A. v. City of Richmond, No. 13-CV-03663 (N.D. Cal. Sept. 16, 2013), 2013 BL 248023; Order Granting Defendants' Motion to Dismiss, Bank of New York Mellon v. City of Richmond, No. 13-CV-03664 (N.D. Cal. Nov. 6, 2013), 2013 U.S. Dist WL 5955699.

[70] *See* Order Granting Defendants' Motion to Dismiss, Bank of New York Mellon, *supra* note 69, at *6 ("Until the city passes such an ordinance [that infringes the rights of the plaintiff], the case is not ripe.").

[71] Alejandro Lazo, *El Monte Considers Eminent Domain Plan for Underwater Mortgages*, L.A. TIMES, Aug. 6, 2013, http://www.latimes.com/business/money/la-fi-mo-el-monte-eminent-domain-20130805,0,7256185.story#axzz2rkWWKIBH.

[72] *See* Shaila Dewan, *More Cities Consider Using Eminent Domain to Halt Foreclosures*, N.Y. TIMES, Nov. 15, 2013, http://www.nytimes.com/2013/11/16/business/more-cities-consider-eminent-domain-to-halt-foreclosures.html.

[73] *See* RICHMOND CARES, MORTGAGE RESOLUTION PARTNERS (SLIDESHOW), *reprinted in* Amended Complaint for Declaratory and Injunctive Relief, Exhibit F at 11, Bank of New York Mellon v. City of Richmond, No. 3:13-CV-3664-JCS (N.D. Cal. Aug. 9, 2013) [hereinafter Richmond CARES].

[74] Terrence Dopp, *Newark Advances Eminent Domain Plan to Slow Foreclosures*, BLOOMBERG.COM Dec. 5, 2013, http://www.bloomberg.com/news/2013-12-05/newark-advances-eminent-domain-plan-to-slow-foreclosures.html.

[75] *See* Dewan, *supra* note 72.

[76] *See* Richmond CARES, *supra* note 73, at *11.

[77] *See* Dewan, *supra* note 72.

[78] *See* Dewan, *supra* note 46.

[79] *See* Richmond CARES, *supra* note 73, at *11.

[80] Dewan, *supra* note 72.

[81] Alejandro Lazo, *San Bernardino County Abandons Eminent Domain Mortgage Plan*, L.A. TIMES, Jan. 24, 2013, http://articles.latimes.com/2013/jan/24/business/la-fi-mo-eminent-domain-20130124.

[82] Andrew S. Ross, *Eminent Domain Plan Gaining Support*, S.F. CHRON., July 31, 2012, http://www.sfgate.com/business/bottomline/article/Eminent-domain-plan-gaining-support-3751091.php.

[83] Jim Christie, *Nevada City Rejects Eminent Domain Plan for Mortgages*, REUTERS, Sept. 5, 2013, http://www.reuters.com/article/2013/09/05/us-northlasvegas-eminentdomain-idUSBRE98406B20130905.

nois;[84] Suffolk County, New York;[85] and Brockton, Massachusetts[86] all considered and rejected the MRP plan.

C.   *Private-Sector and Federal Reactions*

The plan has prompted strong negative reactions in finance and in the federal government. The strongest criticisms of MRP's plan come from Wall Street,[87] which sees the plan as a dangerous precedent and something close to an existential threat to the mortgage industry.[88] In San Bernardino, a coalition of eighteen financial trade groups publicly opposed the plan, with the Securities Industry and Financial Markets Association ("SIFMA") leading the charge.[89] Since then, SIFMA has vigorously opposed the plan wherever it crops up.[90] Industry representatives and lawyers make a host of arguments against the plan in the press and in court,[91] asserting that it would (1) "hurt the very borrower it seeks to help" by restricting credit,[92] (2) induce moral hazard in future borrowers,[93] (3) reduce local property tax revenues,[94] (4)

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[84] Mary Ellen Podmolik & John Byrne, *Emanuel: Eminent Domain Not 'the Right Instrument' to Address Underwater Mortgages*, Chi. Trib., Aug. 14, 2012, http://articles.chicago tribune.com/2012-08-14/business/chi-emanuel-eminent-domain-not-the-right-instrument-to-address-underwater-mortgages-20120814_1_eminent-domain-underwater-homeowners-mortgages.

[85] Jennifer Medina, *California County Weighs Drastic Plan To Aid Homeowners*, N.Y. Times, July 14, 2012, http://www.nytimes.com/2012/07/15/us/a-county-considers-rescue-of-underwater-homes.html?pagewanted=all.

[86] Christina Mlynski, *Mortgage Investors Raise Alarm as Eminent Domain Spreads*, HousingWire, June 10, 2013, http://www.housingwire.com/articles/21056.

[87] *See, e.g.*, Letter from American Bankers Association et al., to Alfred Pollard, General Counsel, Federal Housing Finance Agency (Sept. 7, 2012), *available at* https://www.aba.com/Advocacy/LetterstoCongress/Documents/Mortgage-ED-JointLetter-090712.pdf; Jayant W. Tambe et al., *They Can't Do That, Can They? Constitutional Limitations on the Seizure of Underwater Mortgages*, Jones Day (June 2012), http://www.jonesday.com/they_cant_do_that/; Richard E. Gottlieb & Vivian I. Kim, *Eminent Domain: Will Local Governments Attempt to Use This Extraordinary Power to Purchase Troubled Residential Mortgages?* 31 Banking & Fin. Servs. Pol'y Rep., no. 11, Nov. 2012, at 1.

[88] Shaila Dewan, *Eminent Domain: A Long Shot Against Blight*, N.Y. Times, Jan. 11, 2014,   http://www.nytimes.com/2014/01/12/business/in-richmond-california-a-long-shot-against-blight.html (noting that "Wall Street also objects to the plan on principle" and that it views the plan "as a dangerous precedent that disrupts contracts and would all but end mortgage lending").

[89] Jennifer Ablan & Matthew Goldstein, *U.S. Investor Groups Oppose "Condemn" Mortgage Fix*, Reuters, June 29, 2012, http://www.reuters.com/article/2012/06/29/us-mortgage-investors-eminentdomain-idUSBRE85S1IT20120629.

[90] *See, e.g.*, Alexis Goldstein, *Wall Street Group Aggressively Lobbied a Federal Agency to Thwart Eminent Domain Plans*, The Nation, Jan. 17, 2014, http://www.thenation.com/article/177965/wall-street-group-aggressively-lobbied-federal-agency-thwart-eminent-domain-plans# (describing SIFMA's opposition generally and its opposition in Brockton, Massachusetts); *see generally Eminent Domain Resource Center: Activities*, Sec. Indus. & Fin. Markets Ass'n, http://www.sifma.org/issues/capital-markets/securitization/eminent-domain/activity/ (detailing SIFMA's opposition to the plan in cities across the country).

[91] *See generally* Amended Complaint, *supra* note 47.

[92] *Eminent Domain Resource Center*, *supra* note 90; *see also* Letter from American Bankers Association et al., *supra* note 87, at 2.

[93] *Eminent Domain Resource Center*, *supra* note 90; *see also* Letter from American Bankers Association et al., *supra* note 87, at 3.

violate the law in a host of ways,[95] and, most fundamentally, (5) cost Wall Street money. As one bank representative put it, "[i]f we were going to make a ton of money on this, rather than getting our faces ripped off, we wouldn't be going insane to make it stop."[96] More specifically, on the question of just compensation, banks contend that the plan "is only financially feasible[ ] and profitable to [MRP and its clients] if loans are seized at deeply discounted values and then refinanced at higher prices (with [MRP and its clients] profiting from the price spread)."[97] This Article will explore the above financial argument by modeling returns from a plan paying fair market value.

Congress, federal housing agencies, and GSEs have also weighed in against the plan in response to Richmond's actions. In Congress, members have filed bills that would curtail or prohibit the plan.[98] On the agency side, the U.S. Department of Housing and Urban Development ("HUD"), FHA's parent agency, has threatened MRP's easiest route to payout after seizure—FHA refinance loans. Prompted by a letter from several California Congressmen,[99] HUD responded with a letter that raised doubts that FHA would insure mortgages refinanced through MRP's plan.[100]

Finally, GSEs are hitting back, threatening Richmond's access to federally-guaranteed mortgage loans. In August 2013, the Federal Housing Finance Agency ("FHFA"), conservator of Fannie Mae and Freddie Mac, completed notice and comment on the plan[101] and concluded that the plan is a "clear threat to the safe and sound operations of Fannie Mae, Freddie Mac and the Federal Home Loan Banks."[102] In its statement, FHFA cited a number of arguments against the plan, including (1) potential losses to GSEs,

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[94] Letter from Tom Deutsch, Exec. Dir., Am. Securitization Forum, to the San Bernardino Cnty. Bd. of Supervisors at 6 (July 13, 2012), *available at* http://www.americansecuritization. com/uploadedFiles/ASF_Eminent_Domain_Letter_7_13_12.pdf.

[95] Amended Complaint, *supra* note 47, at 3; Complaint, *supra* note 66, at 12. For a summary of the trustee's legal arguments, see *infra* Part II.D.

[96] Friend, *supra* note 15, at 28 (quoting Scott Simon, PIMCO manager).

[97] Complaint, *supra* note 66, at 41; *see also* Amended Complaint, *supra* note 47, at 3–4.

[98] *See* The Defending American Taxpayers from Abusive Government Takings Act, H.R. 6397, 112th Cong. (2012) (prohibiting federal issuance or guarantee of home loans made in localities where eminent domain has been used to seize residential mortgages); Protecting American Taxpayers and Homeowners Act, H.R. 2767, 113th Cong. (2013) §§ 108, 266 (similar).

[99] Letter from Ed Royce et al., U.S. House of Representatives, to Shaun Donovan, Secretary, U.S. Dept. of Housing and Urban Dev. (June 11, 2013) (expressing concern that FHA refinancing of seized mortgages would shift risk of default to the taxpayer, arguing that "the proposed use of eminent domain would slow the return of private capital to the housing finance system, and threaten our fragile housing recovery," and requesting that HUD express, in writing, its refusal to refinance mortgages seized using eminent domain).

[100] Letter from Elliot Mincberg, Acting Assistant Secretary, U.S. Dept. of Housing and Urban Dev., to the Honorable Ed Royce et al., U.S. House of Representatives (Aug. 12, 2013), *available at* http://online.wsj.com/public/resources/documents/08122013HUDEminentDomain LtrtoCADelegation.pdf.

[101] *See* Use of Eminent Domain to Restructure Performing Loans, 77 Fed. Reg. 47652 (Aug. 9, 2012).

[102] Fed. Housing Fin. Auth., FHFA Statement on Eminent Domain (Aug. 8, 2013), available at http://www.fhfa.gov/webfiles/25419/FHFAStmtEminentDomain080813.pdf.

which do not insure the PLS mortgages targeted but have substantial PLS holdings,[103] (2) destabilization of mortgage markets, (3) threats to the safety and soundness of the financial system, (4) valuation problems, (5) uncertain legality of the plan, and (6) a potential conflict between federal and state interests.[104] As such, FHFA reserved the right to mount legal challenges to such a plan, or to "cease business activities within the [enacting] jurisdiction."[105]

Some think that the federal response has not taken citizens' interests to heart: Richmond's mayor has argued that FHFA restriction of funds would constitute illegal redlining.[106] Others allege that FHFA has coordinated its response to the plan with SIFMA. A recent Freedom of Information Act ("FOIA") lawsuit pursued by the American Civil Liberties Union produced emails that provide some support for this allegation.[107]

D.   The Legal Argument

Discussing the merits of the legal argument regarding MRP's plan is beyond the scope of this Article.[108] However, it's worth outlining the basic points. Financial institutions argue, *inter alia*, that, as applied in Richmond, the plan (1) constitutes an illegal extraterritorial taking under the U.S. and California Constitutions and California state law,[109] (2) violates the Commerce Clause of the U.S. Constitution by regulating and threatening interstate commerce,[110] (3) violates the Contract Clause of the U.S. Constitution,[111] (4) violates the public use requirement under the Takings

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[103] *See* FED. NAT'L MORTGAGE ASSOC., FORM 10-Q1 36 (2013), *available at* http://www.fanniemae.com/resources/file/ir/pdf/quarterly-annual-results/2013/q12013.pdf.

[104] *See* FED. HOUSING FIN. AUTH., GENERAL COUNSEL MEMORANDUM: SUMMARY OF COMMENTS AND ADDITIONAL ANALYSIS REGARDING INPUT ON USE OF EMINENT DOMAIN TO RESTRUCTURE MORTGAGES 3–7 (2013), *available at* http://www.fhfa.gov/webfiles/25418/GCMemorandumEminentDomain.pdf.

[105] FHFA Statement on Eminent Domain, *supra* note 102. Similarly, executives at Freddie Mac stated that they would consider legal action against Richmond, if the FHFA approved. Nick Timiraos, *Freddie Mac Considers Legal Action to Block Eminent Domain Plan*, WALL ST. J., Aug. 7, 2013, http://on.wsj.com/14yGpN4.

[106] April Dembrosky, *Battle Lines Drawn as Banks Sue City Over Property Seizures*, FIN. TIMES, Aug. 15, 2013, http://www.ft.com/cms/s/0/4555707c-0589-11e3-8ed5-00144feab7de.html.

[107] *See* Complaint, Alliance of Californians for Cmty. Empowerment v. Fed. Hous. Fin. Auth., No. 3:13-cv-05618-KAW (N.D. Cal. Dec. 5, 2013) (seeking documents via court order after initial FOIA request denied); *Federal Housing Finance Agency FOIA Documents: Eminent Domain*, AM. CIVIL LIBERTIES UNION, https://www.aclu.org/racial-justice/federal-housing-finance-agency-foia-documents-eminent-domain (hosting documents obtained through the FOIA lawsuit); Goldstein, *supra* note 90 (summarizing "damning" emails between SIFMA and FHFA obtained through the FOIA lawsuit).

[108] For a summary of trustees' arguments, see Amended Complaint, *supra* note 47, at 3; see also Complaint, *supra* note 66, at 12. For the full academic legal argument in favor of MRP's plan, see Hockett, *supra* note 41, at 157–70.

[109] Amended Complaint, *supra* note 47, at 22–23.

[110] *Id.* at 23–26.

[111] *Id.* at 26–27.

Clause,[112] California Constitution, and municipal law,[113] and (5) fails to provide just compensation as required under the U.S. and California constitutions.[114]

Proponents disagree on all counts.[115] As a threshold matter, proponents point to a host of case law allowing takings of intangible property—including insurance policies, hunting rights, rights of way, and stocks—and argue that mortgages are also property subject to taking.[116] Proponents also argue that (1) the targeted mortgages are located in Richmond and subject to the city's takings power under the totality-of-the-circumstances analysis applicable under state law,[117] (2) that the plan does not violate the Dormant Commerce Clause because in- and out-of-state securities holders would be treated alike,[118] and (3) the plan does not violate the Contract Clause according to clear Supreme Court precedent.[119] As for public use, proponents argue that stemming a tide of foreclosure-induced blight meets the permissive test of "public use" most recently articulated in *Kelo v. City of New London*.[120] In that case, the Supreme Court approved seizure of residential and commercial property in a "distressed municipality," for the benefit of a large pharmaceutical corporation.[121] Proponents essentially argue that, compared to the public use condoned by the Court in *Kelo*, MRP's plan is a shoo-in.[122] Finally, MRP insists that it will pay fair market value for the properties taken.[123]

From a pragmatic standpoint, if executed, the plan is virtually certain to end up in court. (In California, municipalities may attempt to use the state's quick-take procedure,[124] which would move initial skirmishes to state

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[112] U.S. CONST. amend. V.

[113] Amended Complaint, *supra* note 47, at 19–21.

[114] *Id.* at 27–29. Trustees also argue that the plan (1) intentionally interferes with contracts (a tort under California law), (2) fails a three-part test for takings under California state law, and (3) constitutes a seizure of owner-occupied residences for the purpose of conveyance to a private person, in violation of the California Constitution. *Id.* Additionally, they argue that the act violates the equal protection clauses of the U.S. and California constitutions. Complaint, *supra* note 66, at 32–45.

[115] *See* Defendants' Opposition to Motion for Preliminary Injunction, at x, 17, Wells Fargo Bank, N.A. v. City of Richmond, No. 13-CV-03663 (N.D. Cal. Aug. 22, 2013) (arguing that banks' legal arguments have no probability of success).

[116] *See* Hockett, *supra* note 41, at 164–66.

[117] Defendants' Opposition to Motion for Preliminary Injunction, *supra* note 115, at 17–21.

[118] *Id.* at 24–26.

[119] *Id.* at 27.

[120] 545 U.S. 469, 490 (2005) (approving the seizure of occupied commercial and residential property for redevelopment into a private business park occupied by Pfizer Corporation).

[121] *Id.* at 473–74.

[122] *See* Hockett, *supra* note 41, at 168–69.

[123] *See, e.g.*, Defendants' Opposition to Motion for Preliminary Injunction, *supra* note 115, at 15.

[124] For quick-take procedures, see CAL. CIV. PROC. CODE, §§ 1255.010 (West 2002), 1255.410 (West 2008). Loosely speaking, public entities may seek immediate possession under quick-take procedures by depositing with the court the probable compensation for the property and making a showing of need. *See id.*

court.[125]) In the end, it remains to be seen whether courts will be willing to extend *Kelo* to a taking against big banks. If the plan survives constitutional challenges, valuation questions, including the source of the plan's profits, will take center stage.

E.   Redemption for Eminent Domain?

Probably for pragmatic reasons, Professor Hockett and Mr. Vlahoplus don't emphasize the legal historical context of their plan. Still, the plan's inversion of past abuses is striking. Eminent domain has a history of displacing minority and low-income communities when used for high-profile urban renewal or economic development projects.[126] In *Berman v. Parker*,[127] the Supreme Court upheld seizure of allegedly blighted black neighborhoods in Washington, D.C. in the name of urban renewal.[128] And "[f]ollowing *Berman* local governments aggressively pursued urban development schemes under the banner of eliminating blight."[129] Many argue that, in *Berman* and the blight takings that followed, cities used urban renewal as a tool of "negro removal,"[130] promoting racial segregation,[131] and subjecting low-income and black communities to the preferences of white elites.[132] As one critic puts it, "[b]light was a facially neutral term infused with racial and ethnic prejudice."[133]

Some sixty years after *Berman*, the Supreme Court again spurred outrage with *Kelo*.[134] The case provoked strong criticism and "massive backlash," including a national movement to curtail similar takings.[135] While reactions to *Berman* focused on race, reactions to *Kelo* have emphasized

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[125] *See* Order Granting Defendants' Motion to Dismiss, *supra* note 69, at 9; *see also* Opposition to Motion for Preliminary Injunction, *supra* note 115, at ix, 12–14.

[126] *See* Wendell E. Pritchett, *The "Public Menace" of Blight: Urban Renewal and the Private Uses of Eminent Domain*, 21 YALE L. & POL'Y REV. 1, 6 (2003).

[127] 348 U.S. 26 (1954).

[128] *See, e.g.*, JANE JACOBS, DEATH AND LIFE OF GREAT AMERICAN CITIES 270–90, 311–14 (1961); Pritchett, *supra* note 126.

[129] James W. Ely, *Post-Kelo Reform: Is the Glass Half-Full or Half-Empty?* 19 S. CT. ECON. REV. 127, 135 (2009).

[130] Pritchett, *supra* note 126, at 47; *Kelo*, 545 U.S. at 522 (J. Thomas, dissenting); 12 THOMPSON ON REAL PROPERTY 194, 98.02e (David A. Thomas ed., 1984).

[131] Pritchett, *supra* note 126, at 6, 44, 47.

[132] *See, e.g.*, Brief for Jane Jacobs as Amica Curiae Supporting Petitioners at 11–12, Kelo v. City of New London, 545 U.S. 469 (2005) (No. 04-108).

[133] Pritchett, *supra* note 126, at 6.

[134] 545 U.S. 469 (2005).

[135] Ilya Somin, *The Limits of Backlash: Assessing the Political Response to Kelo*, 93 MINN. L. REV. 2100, 2101 (2009); Harvey M. Jacobs & Ellen M. Bassett, *All Sound, No Fury? The Impacts of State-Based Kelo Laws*, 63 PLAN. & ENVT'L L. 3, 4 (2011) ("reaction to the Court's decision was strong, swift, and negative"); *see also* Harvey M. Jacobs & Ellen M. Bassett, *After "Kelo": Political Rhetoric and Policy Responses*, LAND LINES, April 2010.

class, framing the conflict as one between homeowners and corporations[136] or low-income residents and wealthy city planners.[137]

In many ways, MRP's use of eminent domain offers an inversion of the abuses of *Berman* and *Kelo*. Where *Berman* evicted blacks in the name of "blight removal," MRP purports to help boom-year mortgagors, many of whom were minorities targeted with predatory lending practices.[138] And where *Kelo* pushed out individual and lower-income property owners for the benefit of a large corporation, MRP would take assets managed by large investment banks in order to keep struggling homeowners in their homes. In short, the MRP plan turns the history of high-profile blight takings on its head: For a society divided at 99 Percent,[139] the plan takes from the financial institutions that blew up the global economy for the benefit of the homeowners of America. For a legal culture chagrined by the racist and classist takings of yesterday, the plan deploys eminent domain to shelter the disproportionately poor and minority communities preyed upon during the boom years. But are the plan's finances as good as its optics?

III.   Return on Investment

MRP promises a 20% to 30% return for those willing to fund the taking.[140] The key question is whether that return comes at a cost to the current owners of the mortgages—RMBS securities holders. Banks claim that profits come from paying less than fair value for mortgages seized.[141] Professor Hockett and Mr. Vlahoplus argue that their profits will come while paying a fair price.[142]

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[136] Andrew P. Morriss, *An Empirical Assessment of State Responses to Kelo*, 17 S. Ct. Econ. Rev. 237, 245 (2009).

[137] *See, e.g.*, Brief of the National Association for the Advancement of Colored People as Amici Curiae Supporting Petitioners at 7, Kelo v. City of New London, 545 U.S. 469 (2005) (No. 04-108) ("The [b]urden of [e]minent [d]omain [h]as and [w]ill [c]ontinue to [f]all [d]isproportionately upon [r]acial and [e]thnic [m]inorities, the [e]lderly, and the [e]conomically [d]isadvantaged."); *see generally* Thomas W. Merrill, *The Morality of Property*, 48 Wm. & Mary L. Rev. 1849, 1880 (2007) (noting that *Kelo* is seen as "distributionally unjust").

[138] For data on the racial and income inequalities of subprime lending, see *supra* notes 22–24, and 33, and accompanying text. For data on Richmond in particular, see Julie Schmitt, *Forceful Mayor's Drastic Plan to Stop Foreclosures*, USA Today, Sept. 29, 2013, http://www.usatoday.com/story/money/business/2013/09/29/richmond-eminent-domain-foreclosures/2834299/ (noting that Richmond is "70% minority" and that four in ten homes in Richmond are underwater); *but see* Marc Joffe, *Richmond's Million Dollar Eminent Domain Homes*, Expect[ed] Loss (Aug. 15, 2013, 12:38 PM), http://expectedloss.blogspot.com/2013/08/richmonds-million-dollar-eminent-domain.html (describing the "expensive homes" that Richmond has targeted).

[139] Brian Stelter, *Camps Are Cleared, But '99 Percent' Still Occupies the Lexicon*, N.Y. Times, Nov. 30, 2011, http://www.nytimes.com/2011/12/01/us/we-are-the-99-percent-joins-the-cultural-and-political-lexicon.html.

[140] *See* Friend, *supra* note 15.

[141] *See supra* note 97 and accompanying text.

[142] Hockett & Vlahoplus, *supra* note 2, at 514.

This Part evaluates the plan's profitability while paying fair market value for mortgages seized. After briefly summarizing the legal just compensation standard, it outlines an expected-value framework to estimate fair market value—the key component of MRP's profitability calculation. It then offers a simple financial model of MRP's profits and returns on investment. After outlining the model in theory, it summarizes each of the empirical inputs needed to quantify profitability, reviewing the literature to find a reasonable range and point value for each key input. Finally, it uses those inputs to calculate estimated returns on investment across each of the above ranges. This Part concludes that, because of the low quality of the mortgages that MRP targets, MRP's profit estimates are accurate. As Professor Hockett puts it, MRP can "Pay[ ] Paul and Rob[ ] No One."[143]

A.   Just Compensation Standard

Under eminent domain law, local governments must provide just compensation for any taking. Standards of just compensation vary by locality, but generally demand market value as seen by an unpressured seller. For example, the federal standard for just compensation is "what a willing buyer would pay in cash to a willing seller at the time of the taking."[144] The standard under California law is similar.[145] As such, MRP (and Richmond) will need to convince a court that mortgages are taken at fair market price. MRP has been careful to follow that mandate word-for-word.[146]

B.   Promises of Profit

Under MRP's plan, profit comes from the difference between the price paid at taking—the fair market value of the *mortgage*; and the price received at sell-off—the value of the *property* that secures the mortgage (redeemed via a FHA refinancing loan):[147]

$$Profit = Sale\ Price - Purchase\ Price$$

$$= Current\ Home\ Value - Fair\ Market\ Value\ of\ Loan$$

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[143] Robert Hockett, *Paying Paul and Robbing No One: An Eminent Domain Solution for Underwater Mortgage Debt*, 19 FED. RES. BANK N.Y.: CURRENT ISSUES ECON. & FIN., no. 5, 2013.

[144] United States v. 564.54 Acres of Land, 441 U.S. 506, 511 (1979) (internal quotations omitted).

[145] *See* CAL. CIV. PROC. CODE §§ 1263.310–320.

[146] *See* Exhibit J, *supra* note 51, at 7 ("[Q:] What is the fair market value of a loan, and how will you determine it? [A:] Fair market value is the price that a willing buyer would pay to a willing seller . . . .").

[147] "Profit" here means returns before they are divided between MRP, investors, and localities. Others might call this gross profit on the eminent domain project. *See* Pamela P. Drake & Frank J. Fabozzi, *Financial Ratio Analysis, in* 2 ENCYCLOPEDIA OF FINANCIAL MODELS (Frank J. Fabozzi ed., John Wiley & Sons 2012). Hence, an investor's amount (and rate) of return will be smaller than those reported in the analysis that follows.

For our purposes, a more useful metric of profitability is return on investment ("ROI"). ROI is simply the ratio of the profit divided by the investment—in this case the fair market mortgage value:[148]

$$ROI = \frac{Profit}{Investment}$$

$$= \frac{Current\ Home\ Value - Fair\ Market\ Value}{Fair\ Market\ Value}$$

Using ROI allows us to evaluate the profitability of the plan generally, considering mortgages of varying values and characteristics.

Just like all profit-making ideas, the idea is to buy low and sell high: MRP expects that the fair market value of the *mortgages* seized will be less than the current fair market value of the *homes* that secure those mortgages—creating profits and positive ROI. This is a surprising proposition for at least two reasons. First, by definition, the face value of an underwater mortgage is greater than the current value of the house that secures it. Barring default, the owner of an underwater mortgage should collect more than the house is worth. Second, in legal terms, a mortgage represents the right to dispose of collateral upon non-payment of a loan.[149] When a homeowner stops paying, eventually the mortgage holder may seize and sell the home. That legal right means that, in the worst case, the holder of a mortgage should be able to seize and sell the mortgaged house and collect its current property value. For these reasons, the fair market value of a mortgage should be *more* than the current home value, meaning losses (and negative ROI) for MRP's clients.

The explanation of MRP's claim to profits is that, as the borrower becomes more likely to default on her loan, and as costs of foreclosure increase, the fair market value of her mortgage will decrease. Given high enough default rates and foreclosure costs, the fair market value of a mortgage will drop below the property value, generating returns for MRP's clients. In other words, when MRP promises profits for its investors, it is making an implicit statement about the quality of the mortgages it thinks that it can find—namely, mortgages with high default rates and foreclosure costs.

C.   Using Expected Value to Quantify Fair Market Value

As discussed above, the key to gauging the profitability of MRP's plan is to ascertain the actual, fair market value of targeted mortgages held by PLS trusts: the lower that value, the greater MRP's profits. Expected value

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[148] ROI is also known as rate of return. *See* Pamela P. Drake & Frank J. Fabozzi, *Time Value of Money, in* 2 Encyclopedia of Financial Models (Frank J. Fabozzi ed., John Wiley & Sons 2012).

[149] Black's Law Dictionary 1101 (Bryan A. Garner ed., 9th ed. 2009).

is a standard approach to pricing an asset when its value is outcome-dependent.[150] Because the value of a given mortgage to a trust depends on whether or not the mortgage defaults, an expected-value calculation suits our financial modeling needs.[151]

Expected value is a calculation that weights the value of each outcome by the probability that it will occur, and sums across all outcomes:

$$EV = \sum p_i(outcome_i) \times value_i$$

To calculate the expected value of a given mortgage, we must consider two possible outcomes:

Outcome #1: borrower defaults (and either cures or enters foreclosure);
Outcome #2: borrower does not default.

Each of these outcomes has a value to the trust that holds a homeowner's mortgage:

V_1 = value given default;
V_2 = value absent default.

Value given default (V_1) will reflect all losses in default—including resale value and foreclosure costs if the loan enters foreclosure, as well as delay costs if the loan cures—weighted by the respective frequencies of occurrence. Helpfully, financial institutions often report these losses in a single metric: loss given default ("LGD"). LGD, or "loss severity," is expressed as a fraction of the outstanding loan balance. For example, a loss severity of 60% means that a mortgage holder lost 60% and recovered 40% of the outstanding balance of a defaulted loan. If we define "M" as the outstanding loan balance, we can express value given default (V_1) as follows:

$$V_1 = M \; x \; (1 - LGD)$$

Value absent default (V_2) will reflect full payment of the remaining loan balance. To properly calculate that number, we would need to tabulate the net present value of all future loan payments. For a given mortgage, that calculation would involve, *inter alia*, (1) the loan's interest rate at all times until full payment—which, for adjustable-rate mortgages, would change with market rates—and (2) the loan's payment structure, including any balloon payments—a common feature of subprime loans. A net-present-value

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[150] *See* C. Steven Bradford & Gary Adna Ames, Basic Accounting Principles for Lawyers: With Present Value and Expected Value (2d. ed., 2008).

[151] Professor Hockett and Mr. Vlahoplus also suggest an expected-value approach, although they do not present the analysis. *See* Hockett & Vlahoplus, *supra* note 2, at 520 ("The default rates on underwater loans are so high, and the amounts recovered after default are so low, that the expected values of the loans are significantly lower than the face value."); *see also* Robert Hockett, *Paying Paul and Robbing No One: An Eminent Domain Solution for Underwater Mortgage Debt That Can Benefit Literally Everyone* 17 (Cornell L. School, Research Paper No. 12-64, 2012), *available at* http://ssrn.com/abstract=2173358 (suggesting that fair market value of PLS mortgages be derived by using default rates, recovery rates, and discount rates in an NPV calculation).

calculation would also depend heavily on the discount rate selected, especially if balloon payments were present.[152] This calculation would not only require many difficult inputs, it would have to be repeated for each mortgage under study. In order to sidestep these challenges and arrive at a general, albeit rough estimate of the plan's profitability, we will assume here that the unpaid balance of a given loan, M, equals the net present value of the remaining future loan payments:

$$V_2 = M$$

So long as the relevant discount rate exceeds the mortgage interest rate, this assumption makes our model more conservative—that is, less likely to predict profits for MRP. Algebraically, this is because if the discount rate exceeds the mortgage interest rate, then discounting future payment streams decreases value absent default (V_2), which in turn, decreases the expected/fair market value, lowering MRP's purchase price, and generating more profit for MRP.

Each of the outcomes discussed above (V_1 & V_2) also has a probability of occurrence:

p_1 = the probability that the borrower will default over the course of the loan;

p_2 = the probability that the borrower will never default.

There are only two outcomes in this universe:

$$p_1 + p_2 = 1$$

$$p_2 = 1 - p_1$$

Hence, the expected value of the mortgage is:

$$EV = \sum_{i=1}^{2} p_i(outcome_i) \times value_i$$

$$= p_1(V_1) + p_2(V_2)$$

$$= p_1(V_1) + (1 - p_1)(V_2)$$

$$= p_1(M)(1 - LGD) + (1 - p_1)(M)$$

To summarize, we need three inputs to calculate expected value: the probability of default (p_1), the current unpaid balance (M), and the LGD.

Once we know expected value, we can calculate profits under the plan, using expected value as our best approximation of fair market value:

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[152] For a discussion of NPV, see Pamela P. Drake & Frank J. Fabozzi, *Cash-Flow Analysis, in* 2 Encyclopedia of Financial Models (Frank J. Fabozzi ed., John Wiley & Sons 2012).

$$Profit = Current\ Home\ Value - Fair\ Market\ Value\ of\ Loan$$

$$= Current\ Home\ Value - EV$$

To make this calculation scalable across mortgages, we can calculate a return on investment from MRP's perspective. Recall that ROI is simply the ratio of the profit divided by the investment—in this case the fair market mortgage value:

$$ROI = \frac{Profit}{Investment}$$

$$= \frac{Current\ Home\ Value - EV}{EV}$$

Conveniently, ROI does not depend on the size of the given mortgage in question; only the ratio between current outstanding balance and home value (i.e., Loan-to-Value ratio ("LTV")[153]).[154] That means that to model ROI, we need only know (1) probability of default, (2) LGD, and (3) LTV for the targeted mortgages.

D.   Model Parameters

With an approach to calculating return on investment, we can now evaluate the profitability of MRP's plan. To do so, we need to quantify the parameters for the three inputs to our model—(1) probability of default, (2) LGD, and (3) LTV—for the kinds of mortgages that MRP and its local government partners seek to refinance. While some limited data about the loans targeted in Richmond and other cities considering the plan are publicly available,[155] we are nowhere close to having all of the inputs above. Furthermore, any involved party will no doubt hire consultants to quantify the value of the specific mortgage pool in question. As such, this Article will not analyze the loan pool of any particular city considering the plan and will not be able to provide localized assessments of profitability. Instead, it will use national mortgage data to provide a general, public account of the profitability of the plan put forth by Professor Hockett and Mr. Vlahoplus. This approach demonstrates how profitability changes with mortgage attributes and how those attributes interact. It also tells us if the plan could work in the average locality: in some ways a more useful answer for a general audience.

MRP is pursuing underwater, PLS-held, owner-occupied, performing mortgages. These are likely to be subprime loans from the boom years of

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[153] LTV is typically expressed as a whole number 100 times the actual ratio.

[154] With a bit of algebra, we see that: $ROI = \frac{1}{p_1(LTV)(1-LGD) + (1-p_1)(LTV)}$.

[155] *See, e.g.*, Amended Complaint for Declaratory and Injunctive Relief, Exhibit C at 20–22, Bank of New York Mellon v. City of Richmond, No. 13-CV-03664 (N.D. Cal. Aug. 9, 2013) (showing purchase price offered by Richmond to the Bank of New York for mortgages, as a percentage of outstanding loan balance).

the mortgage bubble: 2004, 2005, 2006, and 2007. For loans of that vintage, we can establish a plausible range, predicted range, and point value for each parameter, and then model profitability across those ranges. Plausible range encapsulates any reasonable value reflected in the literature. Predicted range encapsulates the range of best estimates, removing estimates that appear outdated or otherwise questionable. Each point value is the approximate best estimate from the middle of the predicted range: my best guess at a single number. Both predicted ranges and point values represent my qualitative judgments, based on surveying the literature and speaking with experts in the field. The input estimates and resulting profitability estimates should be viewed accordingly (i.e., "garbage in, garbage out"). However, while this meta-analysis approach involves some discretion, it allows us to generate useful results based on a body of empirical work. The goals of this analysis are first, to get a sense for how the three inputs interact to affect the plan's profitability, and second, to estimate the plan's profitability generally. We can do both using this approach.

1. *Probability of Default*

Estimates of the likelihood of default for boom-year mortgages vary substantially. We need a "cumulative default rate" that predicts the likelihood of default for the entire remaining duration of the loan. The best publicly available data on projected cumulative default rates of boom-era PLS mortgages come from Fannie Mae and Freddie Mac. As part of their quarterly reporting to the U.S. Securities and Exchange Commission ("SEC", Fannie and Freddie publish a wealth of information about their securities holdings, including cumulative default rates of loans in their PLS holdings.[156] For its subprime holdings, Fannie Mae estimates cumulative default rates from 38% to 67%, depending on vintage year.[157] The average expected cumulative default rate for all of Fannie Mae's subprime holdings is 64%.[158] Similarly, Freddie Mac estimates a cumulative default rate for its subprime PLS holdings of 43% to 64%, with an average of 63%.[159]

Private industry data echo these figures. A recent estimate by Core-Logic®, an industry research firm, predicts cumulative default rates between 50% and 73% for PLS subprime holdings originated between 2004 and 2007

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[156] In a 2012 working paper, Professor Hockett seems to have been the first to suggest using GSE SEC filings to estimate default rates for an expected-value-type calculation of this sort. *See* Hockett, *Paying Paul and Robbing No One*, *supra* note 151, at 17. The idea appears to have been cut from the final version of the paper, but it is nonetheless a good one. *See* Hockett *supra* note 143, at 4 (citing default rates from Fannie Mae's second-quarter 2012 10-Q, but not suggesting that those numbers be used in an expected-value valuation).

[157] Fed. Nat'l Mortgage Assoc., *supra* note 103, at 103 (estimating "expected remaining cumulative default rate of the collateral pool" underlying Fannie Mae subprime PLS RMBS).

[158] *Id.*

[159] Fed. Home Loan Mortgage Corp., Form 10-Q1 123 (2013).

and active as of 2013.[160] Based on the above sources, our plausible range of cumulative default rates will be 15% to 75%; our predicted range will be 40% to 75%; our point estimate will be 65%.

2. *Loss Given Default*

Similarly, using academic studies[161] and Fannie Mae[162] and Freddie Mac[163] financial disclosures, we can estimate a plausible range for LGD from 25% to 85%; a predicted range from 60% to 85%; and a point value of 75%.

3. *Unpaid Balance Versus Market Property Value: LTV*

By definition, MRP only targets underwater loans—loans with current, cumulative LTV of greater than 100.[164] Nationally, underwater mortgagors have an average LTV of 143.[165] By city, underwater LTV averages range from 132 (Portland, Oregon) to 174 (Las Vegas, Nevada).[166] Of course, individual LTVs may prove much more extreme. For example, in Las Vegas, 31% of underwater mortgages have LTVs greater than 200, the highest number reported.[167] Given that LTV depends heavily on locality, and that MRP operates in the hardest-hit places, we will consider a plausible LTV range of 100 to 250; a predicted range of 130 to 175; and a point value of 155.

E. *Results*

Estimates suggest that the plan is profitable by the margins MRP claims. Using all three point estimates—65% default rate, 75% loss severity, and 155 LTV—our model predicts a 26% ROI.[168] Crucially, as Professor Hockett and Mr. Vlahoplus maintain, this profit comes while paying fair market value for assets seized. To better understand how each input affects

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[160] Proprietary Data from Core Logic®, transmitted June 29, 2013 (on file with author).

[161] Min Qi & Xiaolong Yang, *Loss Given Default of High Loan-to-Value Residential Mortgages*, 33 J. BANKING & FIN. 788, 792 (2009) (showing a 25% to 50% LGD for 1990s mortgages); Yanan Zhang et al., *Local Housing Market Cycle and Loss Given Default: Evidence from Sub-Prime Residential Mortgages* 8 (Int'l Monetary Fund, Working Paper 10/167, 2010) (estimating a mean LGD of 62% and a maximum of 82% for subprime mortgages between 1998 to 2009).

[162] FED. NAT'L MORTGAGE ASSOC., *supra* note 103, at 103 (reporting LGDs of 61% to 71% and a mean 72% for subprime holdings).

[163] FED. HOME LOAN MORTGAGE CORP., *supra* note 159, at 123 (reporting LGDs of 66% to 72%, with a mean of 71% for subprime holdings).

[164] Current LTV (as opposed to origination LTV) represents LTV using the current loan balance. Cumulative LTV includes all loans outstanding on the property.

[165] *See Table 1: Negative Equity Snapshot*, ZILLOW, http://cdn2.blog-media.zillowstatic.com/3/table1-52a2f1.png (last visited May 8, 2014).

[166] *Id.*

[167] *See id.* fig.5.

[168] That is a "gross" return on investment: It reflects returns before they are divided among MRP, the city, and investors.

profitability, this Subpart calculates ROI across a range for each input, holding the other two inputs constant at their respective point values. The plan appears profitable across virtually all of the predicted input ranges.

1. *ROI by Default Rate*

As expected, profitability increases as cumulative default rate rises: A higher default rate means a lower expected value, lower fair market value, and a lower payout price tag for a given mortgage. Across our predicted range of default rates, ROI ranges from negative 8% to positive 47%. Payout turns positive above a 47% chance of default. As discussed, our point value for default rate of 65% generates a 26% (gross) ROI.

**Figure 1. Return on Investment by Probability of Default**[169]
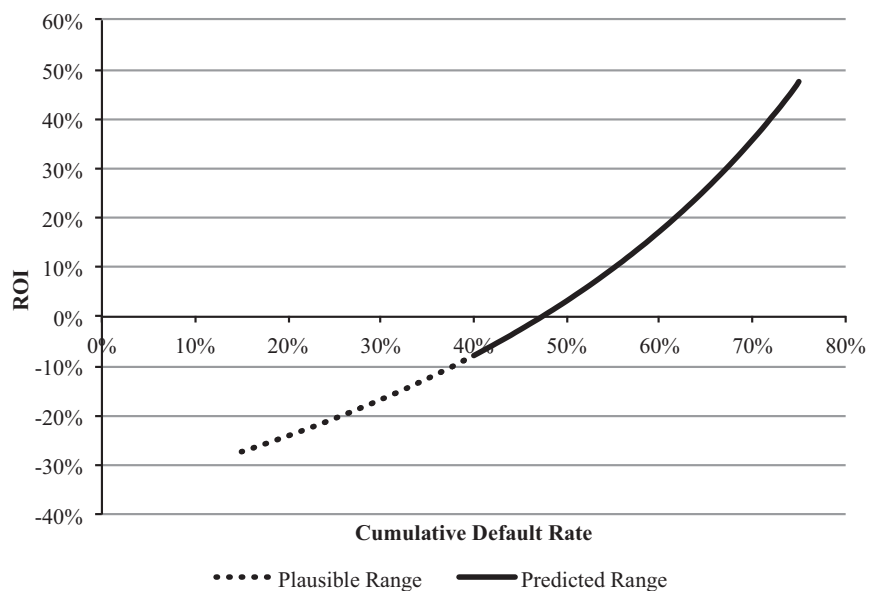
2. *ROI by Loss Given Default (Severity)*

Similarly, profitability increases with LGD: Higher losses in default decrease the expected value (i.e., fair market value) of a given mortgage, decreasing payout cost, and boosting profit. ROI turns positive above a 55% loss severity (i.e., a 45% recovery rate). Within our predicted range of severity, ROI ranges from 6% to 44%.


[169] Holding severity at 75% and LTV at 155.

Figure 2. Return on Investment by Loss Given Default[170]

Loss Given Default (% of current loan balance)

• • • • • Plausible Range   ———— Predicted Range
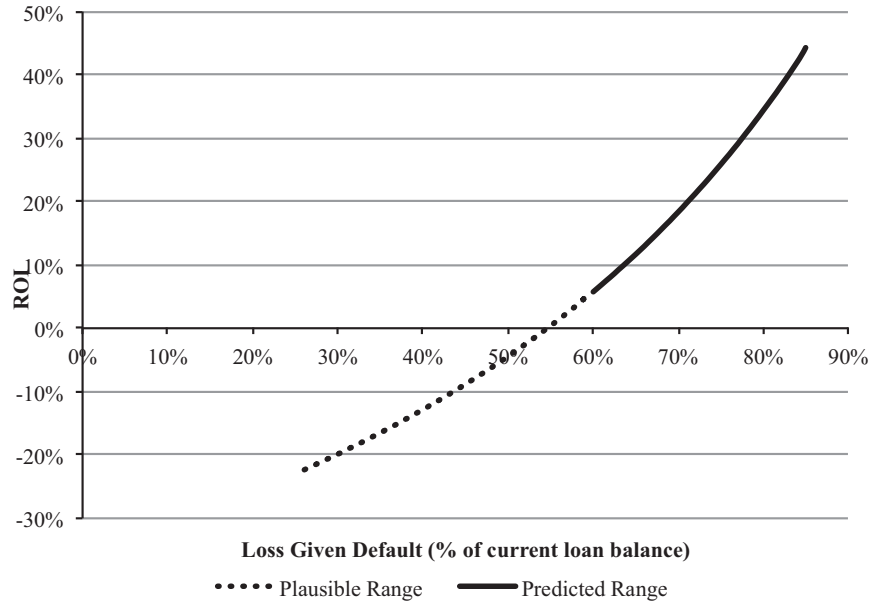
3. *ROI by Loan-to-Value Ratio*

Profitability decreases as loans go deeper underwater (i.e., as LTV increases). Within our predicted LTV values, ROI ranges from 50% to 11%. ROI goes negative with LTVs greater than 195.

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[170] Holding probability of default at 65% and LTV at 155.

Figure 3. Return on Investment by Loan-to-Value Ratio[171]

●●●●● Plausible Range   ━━━━ Predicted Range
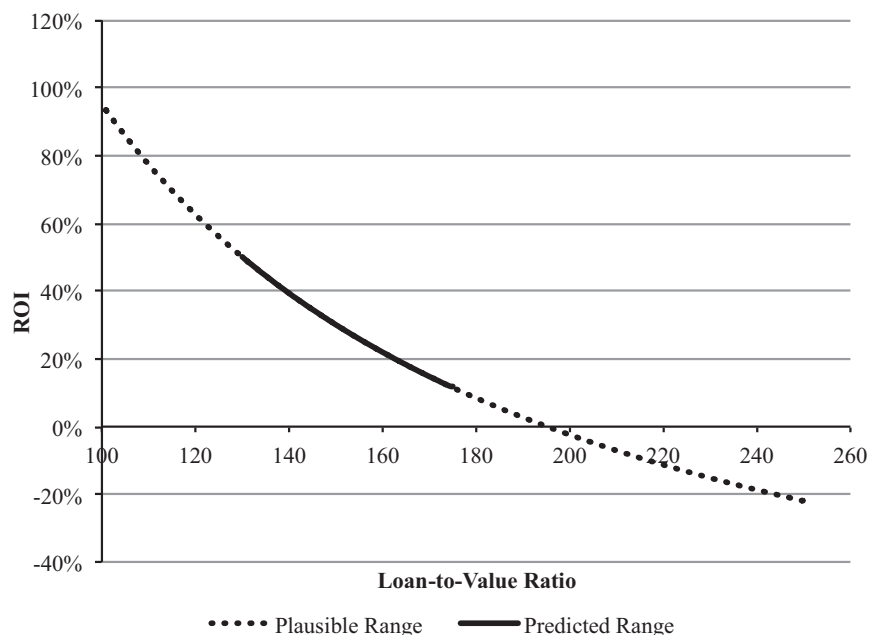
At first glance this is a puzzling result. After all, the purpose of MRP's plan is to target mortgages in such bad shape—and frozen there by contract—that the mortgages' financial peril pushes their fair market value below that of the homes that secure them. And everything we know about the mortgage market suggests that mortgages with higher LTVs are in greater peril. So, one might think, high LTV should be the sweet spot for MRP profit.

The explanation here is that Figure 3 calculates ROI across a range of LTV values *while holding probability of default and loss severity constant*. All else equal, higher LTV generates higher value absent default (V_2), higher expected value, higher fair market value, higher payout cost, and thus, lower profit for MRP. After all, assuming no default, the greater the LTV, the more banks are "overpaid" for their loan, relative to the current value of the house the loan financed. Put another way, our three input variables are clearly correlated: Loans with higher LTV also likely have higher probabilities of default and higher severities. But because we don't know precisely how these variables move together, in Figures 1, 2, and 3, we've presented them as independent variables. That approach helps us better understand the mathematical relationship between our variables and profitability; it should not be read to imply actual independence.

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[171] Holding probability of default at 65% and loss severity at 75%.

4. *Takeaway*

MRP isn't bluffing: At least for the dilapidated segment of the U.S. residential mortgage pool it targets, MRP can conceivably resuscitate underwater mortgages, pay fair market value for takings, and generate an estimated 26% gross return on investment. In other words, the plan generates profits *without* cheating Wall Street. This result appears across virtually all of our predicted range of inputs. Additional sensitivity analysis suggests that, pushed to its numerical extremes, the model predicts profitability by a preponderance of the evidence, with stronger results if we incorporate our intuitions regarding correlation of model inputs.[172] All else equal, profits increase with default rate and LGD, and decrease with LTV. Of course, as discussed, these results show that profits are possible in the average community, rather than in any specific locality. This general answer is in some ways more useful for a proposal being considering in nearly a dozen localities.

F.   *Explaining the Backlash*

If the plan can generate returns while paying a fair price, why the backlash from the financial industry? Three plausible explanations come to mind. First, perhaps financial institutions have better, more specific data suggesting that the mortgages targeted in localities considering the plan are worth more than MRP claims and national data suggest. Our model tells us where to look: LGD could plausibly be lower in communities that consider the plan (from, say, economies of scale in foreclosure efforts) and LTV is probably higher (explaining why the communities are considering the plan in the first place). Both dynamics lower ROI, according to our model. On the other hand, we might expect default rates to be higher than average in areas considering the plan, meaning lower ROI according to our model. No doubt financial institutions have superior local data, and those data may well suggest higher fair market value. Still Wall Street's monolithic opposition to the plan, wherever proposed, suggests something else is at stake.

Second, perhaps banks (and their clients, RMBS securities holders) expect a housing rebound and thus want to hold on to property in hopes of greater profits. Here again the explanation relies on information asymmetry. Our model incorporates housing-market projections by using GSE estimates of forward-looking cumulative default rates and LGD. Furthermore, although our LTV data are not forward-looking, our model indicates that lower LTV caused by an ongoing housing recovery would increase ROI, relative to our results (and holding other variables constant). That dynamic means that, if the banks are holding on to mortgages in anticipation of a housing recovery, then they must have better housing-market projections than GSEs. Again, a plausible but not totally satisfying explanation. That leaves us with

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[172] *See infra* Appendix.

a simple explanation: Financial institutions do not like the prospect of being subject to takings en masse, and are fighting hard to avoid bad precedent.

CONCLUSION

Professor Hockett and Mr. Vlahoplus (and MRP) have a striking proposal. Their plan offers redemption for the past injustices of eminent domain and provides relief for homeowners hurt in the financial collapse, all with a promise of profit. But the financial world has been quick to the draw. Richmond has battled lawsuits and intense lobbying, and may now face a credit squeeze: In August 2013, the city was unable to refinance its highly rated municipal bonds, losing out on four million dollars in savings.[173] Similarly, Richmond's access to federally guaranteed mortgage lending may now be in jeopardy.

Amidst the struggle, this Article provides insight on a key point of contention—the profitability of the plan, paying a fair price for takings. Using expected value to quantify mortgages' fair market value, the Article offers a simple financial model that charts the plan's profitability relative to key mortgage attributes. It concludes that, given what we know about the national mortgage pool today, MRP's profit estimates are reasonable, even paying fair value. Consequently, we must look beyond accusations of underpayment to understand financial institutions' opposition to the plan. The explanation appears to be a mix of information asymmetry and principled opposition.

There are some reasons why MRP's plan may never come to fruition. First, as discussed, the financial sector is putting up quite a fight, and the federal government is not fond of the idea. Second, lawsuits will consume profits and time, making the plan less attractive for interested localities. Most importantly, rising housing prices continue to lift homeowners above water, deflating the plan's financial justification and popular support. For MRP, it may be a race against the clock. However, at least for now, the numbers add up.

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[173] Carolyn Said, *Eminent Domain Plan May Have Spooked Investors*, S.F. CHRON., Aug. 29, 2013, http://www.sfgate.com/realestate/article/Eminent-domain-plan-may-have-spooked-investors-4773720.php; *Eminent Domain Plan May Force Premium on Richmond, Calif., Bonds – City Report*, REUTERS, Nov. 25, 2013, http://www.reuters.com/article/2013/11/25/municipals-richmond-idUSL2N0JA1MW20131125. After months of delay, Richmond finally completed the refinance in late March 2014. Robert Rogers, *Richmond Enjoys Improved Bond Rating, Refinances Previously Snubbed Bonds*, CONTRA COSTA TIMES, Mar. 31, 2014, http://www.contracostatimes.com/west-county-times/ci_25460780/richmond-enjoys-improved-bond-rating-refinances-previously-snubbed.

APPENDIX: SENSITIVITY ANALYSIS

The Article already incorporated an element sensitivity analysis: By changing one input at a time while holding the other two constant, it has tried to isolate the effects of each. We can extend this approach by holding constant the two "background" inputs in three states as we vary the subject input.[174] These states will be the upper and lower bound of the background inputs' predicted ranges, and, in between, their point estimates.[175]

Using this approach, the Appendix will present two sensitivity analyses. First will be an "extremes" sensitivity analysis. The extremes analysis displays the numerical extremes of the model, using the bounds of the predicted ranges specified in Part III.D. The "scenarios" sensitivity analysis uses the same bounds, but incorporates the intuition that mortgage pools with high LTV likely have high default rates and high loss severities.

The usefulness of two sets of sensitivity analyses stems from the inverse relationship between LTV and ROI. Of the inputs, probability of default and severity are positively correlated with ROI.[176] By contrast, LTV is inversely correlated with ROI (holding the other inputs constant).[177] That relationship means that, when LTV is a background input, we can combine it with the other background input to either (1) explore a numerical extreme of the model or (2) explore how the numbers probably look in reality.

The extremes analysis shows that, pushed to its limits, our model predicts profitability by a preponderance of the evidence—i.e., more than half of the time. The scenarios analysis incorporates intuitions about the correlation of our inputs, and generates tighter distributions around our best predictions.

I.   EXTREMES SENSITIVITY ANALYSIS

The extremes analysis combines background inputs to produce the numerical extremes of the model ("Maximum" and "Minimum"), displayed alongside our results from the main body of the paper ("Estimated"). For example, for the Maximum configuration, the extremes analysis pairs low LTVs with high default/severity, creating maximum predicted profitability. Even within the wide range of numerical outcomes of the "predicted" range of variable inputs, a preponderance of outcomes show profits for the plan.

A.   *ROI by Default Rate*

In the Maximum configuration, loss given default = 85% and LTV = 130. In the Estimated configuration, loss given default = 75% and LTV =

[174] *See generally,* GLOBAL SENSITIVITY ANALYSIS: THE PRIMER 1 (2008).
[175] *See supra* Part III.D. (defining "predicted range," "plausible range" and "point estimate").
[176] *See supra* Parts III.E.1, III.E.2.
[177] *See supra* Part III.E.3.

155. In the Minimum configuration, loss given default = 60% and LTV = 175. (The predicted range for cumulative default rate is 40% to 75%; the point estimate is 65%.)
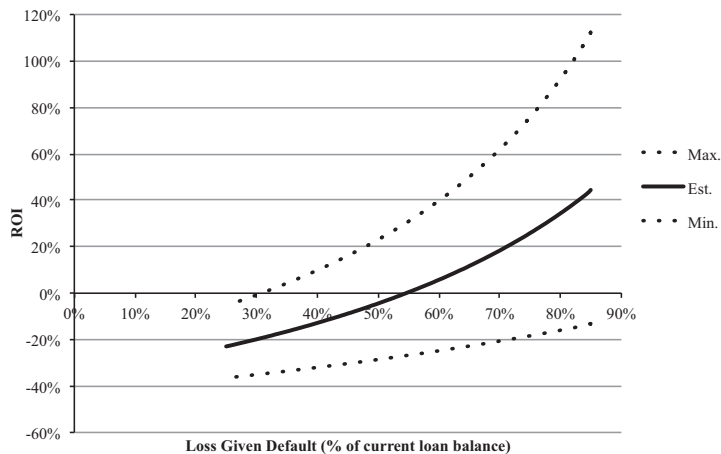
Figure A.1. ROI by Cumulative Default (Extremes)
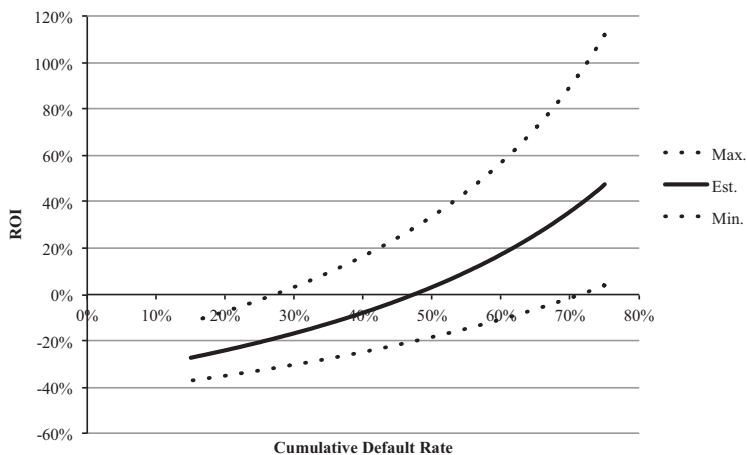
B.   ROI by Loss Given Default

In the Maximum configuration, cumulative default = 75% and LTV = 130. In the Estimated configuration, cumulative default = 65% and LTV = 155. In the Minimum configuration, cumulative default = 40% and LTV = 175. (The predicted range for loss given default is 60% to 85%; the point estimate is 75%.)

Figure A.2. ROI by Loss Given Default (Extremes)

C.   ROI by LTV

In the Maximum configuration, cumulative default = 75% and loss given default = 85%. In the Estimated configuration, cumulative default = 65% and loss given default = 75%. In the Minimum configuration, cumulative default = 40% and loss given default = 60%. (The predicted range for LTV is 130 to 175; the point estimate is 155.)

Figure A.3. ROI by Loan-to-Value Ratio (Extremes)
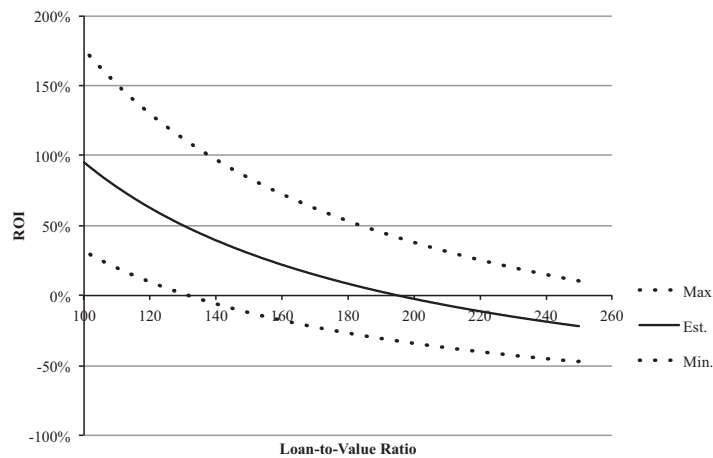
## II.   SCENARIOS SENSITIVITY ANALYSIS

The scenarios analysis posits a correlation between LTV and probability of default/severity, and imagines "Healthy" and "Weak" mortgage pools. Healthy pools are better off than we expect in our main analysis: they have low LTVs and low default/severity (within the predicted ranges). Weak pools have high LTVs and high default/severity. This analysis produces a tighter distribution of outcomes than the extremes scenarios (except for ROI by LTV, which is identical). Numerically this result is unsurprising: When LTV is one background variable, it will counteract the influence of the other background variable. Substantively, these results suggest that, while Weak and Healthy mortgage pools have different payoff profiles, those profiles do not differ enormously from the estimated results showcased in the Article. Here again, the majority of the outcomes predict profitability for the plan.

A.   ROI by Default Rate

In the Weak configuration, loss given default = 85% and LTV = 175. In the Estimated configuration, loss given default = 75% and LTV = 155. In the Healthy configuration, loss given default = 60% and LTV = 130.

(The predicted range for cumulative default rate is 40% to 75%; the point estimate is 65%.)
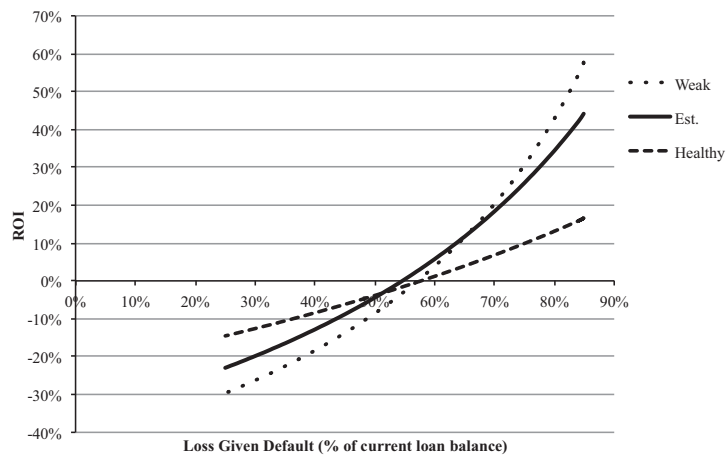
Figure A.4. ROI by Cumulative Default (Scenarios)
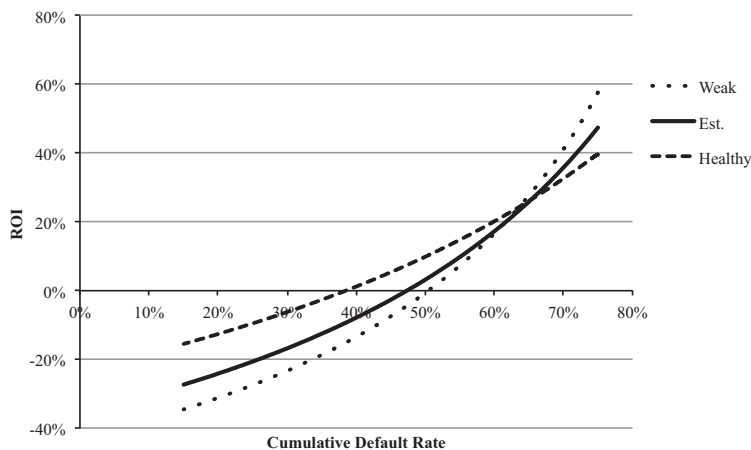
B.   ROI by Loss Given Default

In the Weak configuration, cumulative default = 75% and LTV = 175. In the Estimated configuration, cumulative default = 65% and LTV = 155. In the Healthy configuration, cumulative default = 40% and LTV = 130. (The predicted range for loss given default is 60% to 85%; the point estimate is 75%.)

Figure A.5. ROI by Loss Given Default (Scenarios)

C.   ROI by LTV

In the Weak configuration, cumulative default = 75% and loss given default = 85%. In the Estimated configuration, cumulative default = 65% and loss given default = 75%. In the Healthy configuration, cumulative default = 40% and loss given default = 60%. (The predicted range for LTV is 130 to 175; the point estimate is 155.)

Figure A.6. Return on Investment by Loan-to-Value Ratio (Scenarios)