How Fannie and Freddie Can Use Pricing to Expand Affordable Homeownership

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Fannie Mae and Freddie Mac were created by Congress to provide a liquid secondary mortgage market to broaden access to homeownership. They do this by guaranteeing the credit risk on the mortgage-backed securities they issue and standardizing lending activities in what would otherwise be a prohibitively complex market. This attracts private investors willing to pay more for their mortgage-backed securities, translating into lower mortgage rates and thus broader access to mortgage credit and homeownership.

Fannie and Freddie—so-called government-sponsored enterprises—broaden access further by cross-subsidizing the loans they guarantee, charging some borrowers more than the GSEs need to achieve their targeted return so that they can charge others less, increasing the number of those who can afford a mortgage. In this brief, we focus on the role that the cross-subsidy plays, describing how it works for the GSEs today and how it could be improved.

But before we dive into the mechanics of the GSEs' cross-subsidy, it is important to clarify two possible misconceptions. First, even those who are generating the cross-subsidy pay less than they would without the GSEs' support. That is because the GSEs are backed by the federal government with a line of credit that ensures their solvency, increasing the price investors are willing to pay for their mortgage-backed securities and lowering the mortgage rates paid by all GSE borrowers to the tune of more than $6 billion a year.[1] If borrowers providing the cross-subsidy were not benefiting from this taxpayer subsidy, lenders would put them into a better execution elsewhere.

Second, the GSEs are not losing money on the loans receiving the cross-subsidy. They are simply making less profit on them. This is in keeping with their statutory charter, which states that one of the GSEs' primary purposes is to "provide ongoing assistance to the secondary market for residential mortgages (including activities relating to mortgages on housing for low- and moderate-income families involving a reasonable economic return *that may be less than the return earned on other activities*)…" (emphasis added).

These two points are worth repeating given their importance. Even those generating a cross-subsidy are benefiting from the GSEs' support, though not as much as those receiving the cross-subsidy. And those receiving a cross-subsidy are still doing so at a profit to the GSEs, though a smaller one than those generating the cross-subsidy.

Cross-subsidization is common across the economy. Businesses' high-margin wares often support their low-margin ones so that they are able to offer pricing that maximizes sales and overall revenues. This is particularly common in insurance markets, where the pooling of risk makes it easier to use cross-subsidy to expand the number of those who can afford the insurance. For example, health insurance providers pool coverage for those whose health poses higher risk with coverage for those who pose lower risk, pricing along a more gradual curve than the variation in risk would suggest and allowing more to afford health insurance. Elsewhere in the mortgage market, cross-subsidization is used most aggressively by the Federal Housing Administration, the Department of Agriculture, and the Department of Veterans Affairs, each of which charges all borrowers a single insurance premium, irrespective of their risk, to increase the number of those who can afford a mortgage in the communities these government agencies serve.

GSEs' cross-subsidy

We estimate that the GSEs' implicit targeted return on the capital that backs their guarantees is almost 12%, or 9% after tax, consistent with the return that other large, systemically important U.S. financial institutions are earning.[2] Their targeted rate of return thus does not create an additional taxpayer subsidy beyond that already provided by Treasury's backstop, on a fair value basis.[3]

To achieve that overall return, Fannie and Freddie target different returns for different groups of loans. Approximately two-thirds of the $6.3 trillion in outstanding GSE loans is priced for a rate of return greater than the overall target rate, allowing them to price the remaining third for a rate of return less than the overall target rate, generating an estimated $4.74 billion a year in cross-subsidy.[4] This does not include several hundred million dollars a year generated by the 4.2-basis

point housing affordability fee levied on all new GSE loans as required under the Housing and Economic Recovery Act.[5] These funds go to the Housing Trust Fund, which finances the construction of affordable rental housing for very low-income households, and the Capital Magnet Fund, which supports the lending activities of community development financial institutions, or CDFIs.

The cross-subsidy provided by Fannie and Freddie is considerably less than they provided prior to being put into conservatorship nearly 15 years ago. Soon after going into conservatorship, the Federal Housing Finance Agency required them to make loan-level pricing adjustments, or LLPAs, to better reflect loan-level credit risk, increasing the cost of Fannie and Freddie's guarantees on loans to higher-risk borrowers. The FHFA further reduced the cross-subsidy in the system by requiring private mortgage insurers to hold more capital on loans to borrowers with high loan-to-value ratios and lower credit scores, leading them to increase their pricing for those borrowers.[6]

How the cross-subsidy is generated

Mortgage loans to those purchasing a house as an investment provide the largest source of funds for the cross-subsidy (see Table 1). Of the $4.74 billion in annual cross-subsidy, we estimate that $1.87 billion comes from guarantee fees charged on these so-called investor loans. While investor loans make up less than 7% of outstanding GSE loans, those that generate cross-subsidy provide an estimated 32% return for the GSEs.

Cash-out refinancing also provides a sizable source of cross-subsidy, about $1.49 billion per annum. Cash-outs account for over one-fifth of outstanding GSE loans, and those that generate cross-subsidy provide an estimated return of close to 18%. Cash-outs are likely to become a more important part of the GSEs' business, and thus a more critical source of funding for the cross-subsidy, as rising rates make rate refinancing increasingly uneconomic for most.[7]

Fannie and Freddie's core business of guaranteeing loans for the purchase or rate-and-term refinancing of an owner-occupied home is the third major source of cross-subsidy, providing just over $1 billion per annum. These loans account for the bulk of the GSEs' loans outstanding, with those lower-risk loans that contribute to the cross-subsidy generating a more than 16% return (see Table 2).

Jumbo and second-home loans insured by the GSEs today provide more modest sums for the cross-subsidy, $260 million and $110 million a year, respectively. However, both of these figures will increase with the higher guarantee fees on these loans taking effect this month. The pricing increase will push returns on the new jumbo loans that generate cross-subsidy to 21%, providing $460 million a year for the cross-subsidy, and returns on second homes to 30%, providing $1.01 billion a year.

Who receives the cross-subsidy?

The GSEs focus most of their cross-subsidy on loans guaranteed to meet their housing affordability goals and duty to serve, which together compose their so-called affordability mission. Each year, the FHFA requires that a certain percentage of loans guaranteed by Fannie and Freddie go to borrowers with incomes below 80% of their area median and another percentage go to those with incomes below 50% of their area median. The GSEs also have a duty to serve the manufactured housing, rural housing, and affordable housing preservation markets in an effort to support borrowers below the area median income.[8]

Table 1: Cross-Subsidy by GSE Loan Product

Loan product	Outstanding $ bil	Before-tax return on equity %	Cross-subsidy $ bil
Before Apr 2022 change in GSE pricing for jumbo and second-home loans			
Basic book	2.11	16.2	1.02
Cash-out refinancing	1.13	17.7	1.49
Investor loans	0.42	32.1	1.87
Jumbo loans	0.31	18.1	0.26
Second-home loans	0.18	15.8	0.11
Total	4.15	19.1	4.74
After Apr 2022 change in GSE pricing for jumbo and second-home loans			
Basic book	2.17	16.2	1.04
Cash-out refinancing	1.13	17.7	1.49
Investor loans	0.42	32.1	1.87
Jumbo loans	0.30	20.8	0.46
Second-home loans	0.20	29.6	1.01
Total	4.22	18.3	5.86

Note: These are for GSE loans that are a source of funds for the cross-subsidy.

Sources: Fannie Mae, Freddie Mac, Urban Institute, Moody's Analytics

Table 2: Before-Tax Return on Equity Across the Credit Distribution for the Basic Book

%

	Loan-to-value ratio										
Credit score	<=30	>30, <=40	>40, <=50	>50, <=60	>60, <=70	>70, <=75	>75, <=80	>80, <=85	>85, <=90	>90, <=95	>95, <=100
<620	191.5	37.9	20.8	10.8	11.0	11.1	7.5	6.3	5.0	4.2	4.0
620-<640	191.5	47.5	26.9	13.7	14.0	13.9	9.5	8.1	6.4	5.3	4.7
640-<660	191.5	54.4	31.5	16.2	14.8	15.0	11.0	9.4	6.6	5.5	4.5
660-<680	146.2	48.4	28.8	14.2	15.9	15.4	12.1	9.6	6.7	5.4	4.5
680-<700	146.2	48.4	32.1	15.8	14.3	13.2	10.6	7.9	5.4	4.3	4.0
700-<720	146.2	58.2	36.2	19.1	17.0	13.9	10.6	7.8	5.8	4.5	4.6
720-<740	146.2	72.9	48.4	22.1	17.3	13.2	10.0	7.2	5.3	4.1	4.4
740-<760	146.2	72.9	58.2	26.2	20.7	14.2	11.1	8.0	5.8	4.4	4.9
760-<780	146.2	97.3	72.9	32.1	25.6	17.3	13.7	10.1	7.4	5.5	6.1
>=780	146.2	97.3	97.3	41.4	33.4	23.7	17.8	13.1	9.8	7.4	8.1

Note: Gray-shaded cells are loans with above-target ROE and provide funds for the cross-subsidy.

Sources: Urban Institute, Moody's Analytics

The principal beneficiaries of the cross-subsidy are those with modest incomes, higher LTVs, and lower credit scores. We estimate that almost three in four of those receiving a cross-subsidy have an income of less than 80% of their area median, and almost nine in 10 have incomes below the area median. Nearly all have LTVs greater than 75% and half have LTVs of greater than 90%. Most have a credit score between 680 and 750, with the vast majority of those below 680 unable to qualify for a GSE loan.

How the cross-subsidy should be increased

The FHFA should require the GSEs to price the loans they guarantee that do not fall within their affordability mission to maximize the cross-subsidy for those that do fall within their mission. This means targeting the highest price for the non-mission loans they can charge before losing enough of that business that their revenues decline—an inflection point that will vary by loan product, across market conditions, and by how well-positioned other lenders are to step in to compete.

The FHFA took a step in this direction recently by increasing pricing for jumbo and second-home loans.[9] The highest returns the GSEs are earning on their most profitable jumbo loans are now approaching 30%, and on some second-home loans they are well over 40%, approaching the limit on what they can charge before losing the business to other channels. Their most profitable investor loans are also close to the limit, with returns of over 40% on some loans. The GSEs' return on their most profitable cash-out refinancing is not much higher than 20%, making it the most promising place for the GSEs to focus to increase pricing to fund even greater cross-subsidization.

The cash-out market offers considerable potential given market conditions. Already accounting for close to one-fifth of the GSEs' current loans outstanding, cash-out refinancing will likely grow with the rise in house prices generating enormous growth in equity among homeowners.[10] Even assuming historical volumes, a 10-basis point increase in the guarantee fee charged on cash-out borrowers would ultimately raise more than $1 billion per year in additional cross-subsidy.

How the cross-subsidy should be allocated

There are two ways the allocation of the cross-subsidy could be improved. First, the FHFA should limit providing the cross-subsidy to borrowers with an income above the area median. Approximately 10% of the total cross-subsidy goes to these higher-income borrowers, or about $450 million a year. To avoid sending the cross-subsidy to those who do not need it as much, the FHFA should limit its allocation to those who are below area median income and those below 120% area median income whose parents did not own a home.[11] This will help ensure that this limited resource goes only to those the GSEs should be targeting for support: borrowers constrained by either insufficient wealth or income.[12]

Second, the FHFA should consider ways to expand how the cross-subsidy is delivered. Today, the GSEs provide it almost exclusively through lower pricing because it is most efficient, but many of those who need the subsidy would benefit more from different forms of relief.

Many of those who have the income and credit scores needed to become homeowners are delayed for years, and sometimes foiled altogether, because they cannot come up with the down payment needed to buy their first home. This is most common among those whose parents did not own their home, often leaving them without the means to provide the kind of help to their kids that many rely on to buy their first home. Absent some wealth to start with, it would take the average renter more than 15 years to save $15,000 for a down payment at pre-pandemic renter savings rates.[13] The current double-digit growth in house prices and rents is making matters still more challenging, pushing the purchase of a first home increasingly out of reach for most renters.

A significant number of those who can come up with the needed down payment lack the savings to cover their housing expenses under even modest financial stress. Not surprisingly, those without

some financial cushion to fall back on are much more likely to be pushed into default by temporary disruptions in their income.[14]

Borrowers in these two groups benefit little if at all from a modest reduction in their monthly mortgage payments. To provide them more meaningful help, the FHFA should consider offering all eligible borrowers a choice in how they receive the subsidy. This would better match the subsidy with the range of needs, increasing the number of those who can become sustainable homeowners.

One of the advantages of the current regime is that the subsidy is delivered simply and at little cost. The GSEs embed the subsidy in the pricing they send lenders, which then pass that subsidy on to borrowers in the terms of their mortgage. The FHFA should maintain this simplicity as much as possible as it expands the options available to borrowers eligible for the subsidy.

Ideally, the GSEs would provide lenders a subsidy term sheet much like their current pricing term sheet. In it, they would offer each eligible borrower a few economically equivalent options that reflect a range of borrower needs and can be effectively implemented. The offering could include, for instance, a lower mortgage rate, down payment assistance, and funds to cover emergency housing expenses. For example, a borrower with a $300,000 loan, a 700 credit score, and a 95% LTV would be offered three options: a reduction in their mortgage rate from 5.21% (today's rate, inclusive of LLPAs) to 5%, translating to $49 a month in savings; $3,750 in down payment assistance; or $3,750 in savings to cover emergency household expenses. These are economically equivalent for the borrower, who receives a $3,750 subsidy in any case, and for the GSE, which achieves a 2% ROE.

Offering such a menu would be a dramatic shift in the way the cross-subsidy is allocated and present any number of design and implementation challenges. The only options that should be considered are those that are relatively simple and efficient to implement, still profitable to the GSEs, and difficult for borrowers to game.[15] Although these constraints make for a formidable policy challenge and may ultimately limit the FHFA to offering a price reduction and only one or two other options, the benefit of expanding the forms of relief to better match the need makes it worth the effort.

How FHA fits into this picture

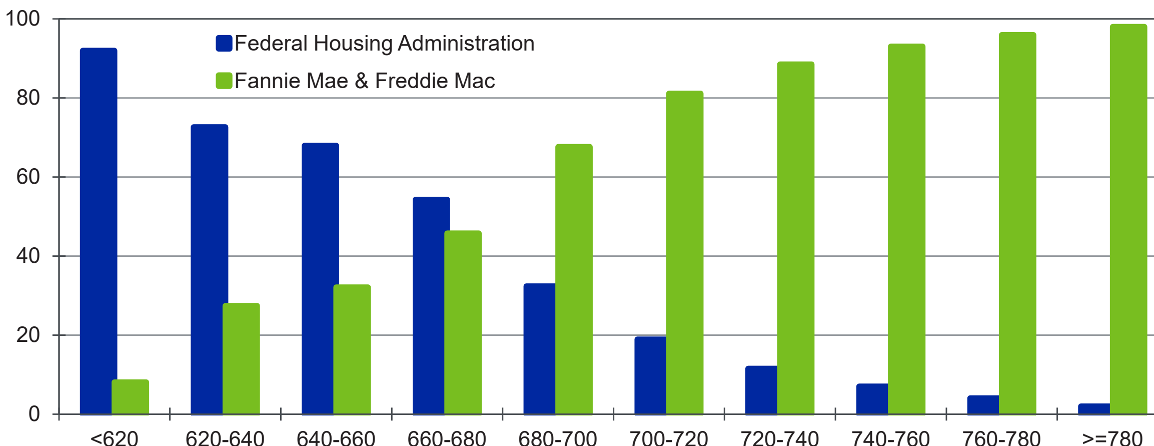
The FHA also plays a critical role in expanding access to homeownership, supporting borrowers who typically pose more credit risk than those supported by the GSEs. If the GSEs were to use their cross-subsidy to provide support further down the credit risk distribution rather than focusing it on those constrained by wealth or income as we propose, it would leave the latter with less help. It thus makes more sense to leave higher-risk borrowers to the FHA, which is well-positioned to provide the deeper subsidy required, to maximize access to homeownership up and down the income, wealth and credit-risk distributions (see chart below).

Conclusion

The point of having government-sponsored enterprises is to provide support to the homebuyers who need it to the degree they need it. It thus makes sense to have the GSEs minimize the subsidy they provide to those who need it least, so that they can maximize it to those who need it most. They already do that to a large degree, but there is room and reason to improve. If they increase the resources available for cross-subsidy and better target its allocation, they could meaningfully increase the number of people in this country who can afford to become homeowners.

Mortgage Debt by Score Band For FHA & GSEs

% of occupied purchase and rate/term refinancings outstanding, March 31, 2022



Sources: eMBS, Urban Institute

About the Authors

Laurie Goodman is an Institute Fellow at the Urban Institute. She founded the Housing Finance Policy Center at Urban in 2013, and was its Director or Co-Director from 2013-2021. The center is dedicated to providing policymakers with data-driven analyses of housing finance policy issues that they can depend on for relevance, accuracy and independence. Before joining the Urban Institute in 2013, Goodman spent 30 years as a research analyst and manager at a number of Wall Street firms, including Amherst Securities Group and UBS. Goodman was inducted into the Fixed Income Analysts Hall of Fame in 2009. Goodman currently serves on the board of directors of MFA Financial, Arch Capital Group Ltd., and Home Point Capital Inc., and is a consultant to the Amherst Group. She has published more than 200 journal articles and has co-authored and co-edited five books. Goodman has a BA in mathematics from the University of Pennsylvania and an AM and PhD in economics from Stanford University.

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Bob Ryan is co-owner of Parrott Ryan Advisors, which provides financial institutions with strategic advice on housing finance and business issues. Ryan left the Federal Housing Finance Agency in July 2019 after spending more than five years as Special Advisor to the Director. From July 2015 through September 2018 he was also the Acting Deputy Director for the Division of Conservatorship. Prior to joining the FHFA, Ryan served as Senior Vice President of Capital Markets at Wells Fargo Home Mortgage. He was responsible for strategic policy impacting capital markets and the mortgage company.

From 2009 to 2012 he was Senior Advisor to HUD Secretary Shaun Donovan, the Acting Federal Housing Administration Commissioner and Assistant Secretary for Housing and prior to that the first Chief Risk Officer for the FHA. In that capacity, Ryan was responsible for establishing a new Office of Risk Management that oversees the FHA's credit risk management functions, including single family, multifamily and healthcare. Prior to HUD, Ryan was at Freddie Mac, where he held several senior positions in capital markets, single-family pricing and credit, and the Office of the President. Ryan has more than 35 years of experience in all aspects of the mortgage market.

Mark Zandi is chief economist of Moody's Analytics, where he directs economic research. Moody's Analytics, a subsidiary of Moody's Corp., is a leading provider of economic research, data and analytical tools. Dr. Zandi is a cofounder of Economy.com, which Moody's purchased in 2005. A trusted adviser to policymakers and an influential source of economic analysis for businesses, journalists and the public, Dr. Zandi frequently testifies before Congress on topics including the economic outlook, the nation's daunting fiscal challenges, the merits of fiscal stimulus, financial regulatory reform, and foreclosure mitigation. Dr. Zandi conducts regular briefings on the economy for corporate boards, trade associations and policymakers at all levels. He is on the board of directors of MGIC, the nation's largest private mortgage insurance company, and The Reinvestment Fund, a large CDFI that makes investments in disadvantaged neighborhoods. He is often quoted in national and global publications and interviewed by major news media outlets, and is a frequent guest on CNBC, NPR, Meet the Press, CNN, and various other national networks and news programs. Dr. Zandi is the author of *Paying the Price: Ending the Great Recession and Beginning a New American Century*, which provides an assessment of the monetary and fiscal policy response to the Great Recession. His other book, *Financial Shock: A 360º Look at the Subprime Mortgage Implosion, and How to Avoid the Next Financial Crisis*, is described by The New York Times as the "clearest guide" to the financial crisis. Dr. Zandi earned his BS from the Wharton School at the University of Pennsylvania and his PhD at the University of Pennsylvania. He lives with his wife and three children in the suburbs of Philadelphia.

Endnotes

1 We estimate the taxpayer subsidy to the GSEs to be over $6 billion per annum, equal to approximately 10 basis points for the typical Fannie and Freddie borrower. This is consistent with the Congressional Budget Office's most recent budget analysis of the GSEs.

2 Fannie and Freddie are in government conservatorship and thus do not have an explicit return on their capital. We have determined their implicit return based on a range of estimates, including, most importantly, a 3.3% implicit capitalization under the current capital rules, an average six-year duration for the mortgages backing the securities they guarantee, a 2% after-tax return on their unlevered capital, and a 23% federal, state and local tax rate. The Freddie Mac 30-year fixed mortgage rate consistent with these estimates is 5.5% on average through the business cycle (see Table 3).

Table 3: 30-Year Fixed-Rate Loan for the Typical GSE Borrower Through the Business Cycle

Mortgage rate, %		**5.5**
Yield on mortgage securities		445 bps
Servicing and origination compensation		50 bps
G-fee		58 bps
Cost of capital		30 bps
Expected credit losses		12 bps
Administrative costs		6 bps
Surcharge (currently being used to pay for BBB infrastructure plan)		10 bps
	Capitalization	**Cost of capital**
Cost of capital	3.25%	30 bps
Common equity	1.00%	15 bps
Preferred equity	0.0%	0 bps
Debt	1.00%	4 bps
Credit risk syndication	1.25%	15 bps
Less: Return on cash reserves to pay for losses		-3 bps
Assumptions		
Before-tax cost of common equity		11.7%
After-tax cost of common equity		9.0%
After-tax cost of preferred equity		7.0%
Pre-tax return on unlevered capital		3.0%
10-year Treasury yield		3.7%
MBS spread with Treasury yield		0.75%
Tax rate (federal and S&L)		23%

Note: GSEs are assumed to be in conservatorship under the current capital framework.

Source: Moody's Analytics

3 It is worth noting that a lower targeted rate of return would allow the GSEs to more readily serve their affordability mission, although this would add to the federal government's budget deficits and make it more difficult for the GSEs to raise private capital should they be re-privatized. We leave the question of their appropriate target rate of return to the broader debate over what kind of role we want the GSEs to play long term.

4 The cross-subsidy estimates presented in this brief are subject to significant uncertainty. This goes to a number of factors, including our reliance on the GSEs' estimates of borrowers' credit risk and the implicit capital they are required to hold to take on that risk. It also goes to the other risks posed by borrowers that we are unable to fully account for. However, despite this, we believe our cross-subsidy estimates to be unbiased.

5 The GSEs provided an extraordinary $1.1 billion in 2021 to the Housing Trust Fund and Capital Magnet Fund, but this reflects a record close to $5 trillion in mortgage originations driven in significant part by record-low mortgage rates and refinancing activity. This is not expected to continue given a normalization in mortgage rates. Mortgage originations are expected to average $1.7 trillion per annum in the coming decade.

6 This was done through the implementation of the PMIERS capital rules for private mortgage insurers, most recently updated in 2020.

7 Nearly three-fourths of outstanding Fannie and Freddie loans have coupons below 4%. The current Freddie Mac fixed mortgage rate has risen to 5%, its highest in more than a decade.

8 The cross-subsidy provided by the GSEs goes well beyond that to higher-risk borrowers, including their lower-return activities supporting small lenders and servicers, the cash window, rural borrowers, and arguably to any geography whose population and economy are not growing.

9 See FHFA Announces Targeted Increases to Enterprise Pricing Framework.

10 See Balance Sheet of Households and Nonprofit Organizations, Federal Reserve Economic Data, Federal Reserve of St. Louis, March 2022.

11 To determine how to define when a borrower below 120% area median income can be eligible for a cross-subsidy on these grounds, the FHFA should weigh the objective of narrowing the benefit to those who are not able to rely on their parents' housing wealth to buy their first home against that of ease of implementation. The narrowest version would be to limit the benefit to those whose parents have never owned a home. But this could be prohibitively difficult to implement given the difficulty a great many borrowers will have answering the question. And the broadest version would be to limit the benefit to those whose parents do not own a home at the time of the borrower's loan application. But this could be overbroad, sending some of the cross-subsidy to those whose parents had only just sold their

home. The right place to land may be somewhere in between, providing the benefit only to those whose parents have not owned their home for some meaningful but discrete period prior to the borrower's loan application. For how this decision impacts the numbers of those who might benefit, see Jung Hyun Choi and Janneke Ratcliffe, "Down Payment Assistance Focused on First-Generation Buyers Could Help Millions Access the Benefits of Homeownership," Urban Institute, April 2021.

12 This runs directly contrary to proposals to eliminate LLPAs altogether. If LLPAs were eliminated altogether, investor properties, jumbos and cash-outs would no longer provide much if any cross-subsidy. And if LLPAs were eliminated only for purchase loans and rate-and-term refinancing, even more of the cross-subsidy would go to those with higher incomes who happen to fall on the receiving end of the cross-subsidy created through flat pricing. The answer is not to be less targeted about pricing, but more.

13 See the 2019 Consumer Expenditure Survey.

14 See Diane Farrell, Kanav Bhagat and Chen Zhao, "Trading Equity for Liquidity," June 2019.

15 The FHFA should avoid reliance on expensive intermediaries to deliver the relief. And any up-front payments, like those to support a borrower's down payment or housing expenses, would need to be returned if the house is sold quickly to ensure that the subsidy cannot be gamed, the GSEs do not lose money on the loan, and so on. The list of challenges to solve for will be long.