



FHFA's Confused Critique of Fannie and Freddie's Transfer of Credit Risk

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The Federal Housing Finance Agency recently released a withering critique of Fannie Mae and Freddie Mac's [credit risk transfer program](#). The critique builds on the arguments made [in the FHFA's new capital framework](#) for the government-sponsored enterprises, offering a fuller defense of its [controversial capital treatment of the program](#). In our analysis, we walk through how CRT has become central to the housing finance system and why the FHFA widely misses the mark in its criticism.

Background on CRT

Fannie and Freddie established the CRT program in 2013, expanding it over the years until they were transferring the lion's share of the credit risk assumed in their guarantee business. According to the FHFA's report, through February the GSEs transferred \$126 billion of their total risk in force, or RIF, through their two largest CRT channels, with three-fourths transferred through the capital markets and the remaining through insurers and reinsurers. They do not quantify the smaller CRT channels such as lender CRT. Out of this \$126 billion, \$72 billion remains outstanding, covering the risk on \$1.7 trillion of unpaid principal balance, almost one-third of the GSEs' outstanding single-family book of business.

CRT is primarily used to transfer credit risk on 30-year fixed-rate mortgages with original loan-to-value ratios above 60%. CRT has not been used for adjustable-rate mortgages given the minimal volume and only sparingly for fixed-rate mortgages with shorter terms or lower LTVs given the minimal risk involved. All told, they have transferred approximately two-thirds of the credit risk they have assumed on the high LTV 30-year lending they have guaranteed since the program's inception.

The rise of CRT has led to a fundamental shift in the role the GSEs play in the mortgage market. They have gone from holding a sizable share of its credit risk to being conduits that pass most of the risk they assume on to a broad mix of global investors. The GSEs insured just over 40% of single-family mortgages originated in the year prior to the pandemic, a number consistent with their market share since the Great Recession, but transferred most of that risk on to others (see Table). They have thus managed to continue to support a large segment of the mortgage market without retaining much of its risk.

This development, arguably the most important change to the GSEs' model since the Great Recession, was largely welcomed by policymakers, stakeholders, and others in the policy community. It was indeed so well received that most have come to view CRT as a critical feature of not only the GSEs while in conservatorship but also whatever future housing finance system should ultimately replace them. While there has been some [criticism](#) of the value of CRT, it has been rare. Most of the debate has focused instead on [how the program could be improved and expanded](#).

FHFA's change of heart

All of this has changed with [new leadership at the FHFA](#). In November, the FHFA released [a new capital framework](#) for the GSEs that all but wipes out their economic incentive to do CRT. It imposes a 10% risk-weighted floor on retained CRT exposure, forcing the GSEs to hold much more capital than the risk left after these transactions would warrant, undermining the value of the transactions.

More consequentially, though, the new capital rule imposes a risk-invariant leverage ratio of 4%. By requiring the GSEs to retain equity capital equal to 4% of their total assets no matter how much risk they hold, the rule removes their incentive to reduce their risk below that which would require 4% of capital. This of course is precisely what CRT is designed to do. Whatever one thinks of the economic logic of such a high leverage ratio—and [we believe it to be deeply flawed](#)—its effect on CRT is potentially existential.

Though the FHFA offered some support in its rule for the surprising move, the language is so opaque that it was difficult to follow the thought process:

Table 1: Credit Risk Share of First Lien Single-Family Residential Mortgage Originations

2019

	Originations		Expected credit loss			Unexpected credit loss			Total credit loss		
	\$ tril	Share	Bps	\$ bil	Share	Bps	\$ bil	Share	Bps	\$ bil	Share
Total	2.375	100%	22	4.65	100.0%	324	64.4	100.0%	346	69.1	100.0%
GSEs	0.988	42%	12	0.66	14.2%	290	16.1	25.0%	302	16.8	24.3%
CRT	0.578	24%	10	0.58	12.4%	251	14.5	22.5%	261	15.1	21.8%
Non-CRT	0.410	17%	2	0.08	1.8%	39	1.6	2.5%	41	1.7	2.4%
Ginnie Mae (FHA/VA)	0.493	21%	55	2.71	58.4%	656	32.3	50.2%	711	35.1	50.8%
Portfolio	0.817	34%	5	0.41	8.8%	95	7.8	12.0%	100	8.2	11.8%
Private-label securities	0.077	3%	20	0.15	3.3%	141	1.1	1.7%	161	1.2	1.8%
Private MI	0.356		20	0.71	15.3%	200	7.1	11.1%	220	7.8	11.3%
GSE + Private MI					29.5%			36.1%			35.6%
Government: GSE Non-CRT + Ginnie Mae					60.1%			52.7%			53.2%

Notes:

Non-CRT credit risk on originations measures the risk on GSE originations not covered by CRTs.

PMI credit risk is for coverage on GSE loans down to 80% LTV.

Source: Moody's Analytics

...if an Enterprise held every tranche of a CRT, the Enterprise's credit risk capital requirement on the retained CRT exposures generally would be greater than the credit risk capital requirement of the underlying mortgage exposures. As under the securitization framework, this departure from strict capital neutrality is important to manage the potential safety and soundness risks of CRT. This approach would help mitigate the model risk associated with the calibration of the credit risk capital requirements of the underlying exposures and also the model risk posed by the calibration of the loss-timing adjustment and loss-sharing adjustment. Complex CRT also may pose structural risk and other risks that merit a departure from capital neutrality.

With its recently released critique of CRTs, the FHFA has finally elaborated on its skepticism, though it frankly remains difficult to comprehend.

CRT is too expensive

The FHFA's central criticism is that CRT simply has not paid off for the GSEs. By the FHFA's calculation, the GSEs have paid \$15 billion to global investors, insurers and reinsurers to transfer their risk through CRTs but have received only \$50 million of payouts in return. A more accurate accounting would include the interest the GSEs earned on the proceeds from the CRTs. Even then, however, the difference between what the GSEs paid for credit risk protection and what they received in loss protection is indeed quite large. Of course, this says nothing about the value of the coverage.

With a few early exceptions, the GSEs have used CRT to cover so-called unexpected losses, or losses arising from the kind of systemic

stress events most likely to lead to a GSE's failure. So-called expected losses, also referred to as first losses, are instead covered by the GSEs' guarantee fees, loan-level price adjustments, and private mortgage insurance. However, since CRT was introduced in 2013 the mortgage market has not experienced the kind of systemic stress event needed to trigger unexpected losses. While there was concern that the pandemic might deliver a systemic blow, [the unprecedented level of government intervention](#) minimized its impact to the market. This has been [particularly true for the GSEs](#), for which mortgage default rates peaked at a manageable 3% and have since fallen as borrowers regain their footing coming out of forbearance. Even through this, the most stressful economic event since CRTs began, the level of credit losses suffered on mortgages insured by the GSEs has fallen well short of what all but a few CRTs were structured to cover.

It thus makes little sense to criticize CRT because the GSEs have paid out more for this insurance than they have collected, in much the way that it makes little sense to criticize the cost of auto insurance because one has not had an accident and a reason yet to file a claim. The value of the coverage provided by CRT will not be tested until the mortgage market suffers the kind of losses CRT has been designed to cover, which thankfully has not happened yet.

Although their coverage has not been tested against an actual systemic stress event to date, various studies have been done to show how the coverage would perform. [Mark Zandi and his colleagues showed](#) that under stress scenarios comparable to most of the recessions we have had since World War II, the GSEs will have transferred 60% to 80% of their risk in each pool for which they have CRT. In more-stressed scenarios comparable to those suffered in the financial crisis, the GSEs will transfer approximately half of their

credit risk through CRT. Without this risk transfer, the GSEs would be forced to raise significant equity capital in a stressed market, which would be extraordinarily expensive if it could be raised at all.

The FHFA considers stress scenarios in its critique, but the scenarios it chooses do not represent periods of genuine systemic stress. It considers a "severely stressed" scenario with a default rate of 3.4% and loss given defaults of 25%, for losses of 88 basis points. But disclosures by Freddie Mac show that the 2007 and 2008 vintages of loans they guaranteed, even excluding mortgage loan products that have been prohibited since the financial crisis, had a default rate of about 10.5% and loss given defaults of 38%, for losses of 400 basis points. Although mortgage underwriting is much tighter today, it is hard to square the more than fourfold difference between the level of stress considered in the FHFA's critique with that suffered in the financial crisis, much less with the implicit loss assumption it uses as a basis for its capital rule. That is, it makes little sense to require 400 basis points of equity capital to cover 88 basis points of tail risk.

By defining stress in a way that CRT is not even intended to cover, the FHFA is able to obscure the basic flaw in its argument: It makes no sense to assess the value of insurance coverage by comparing premiums paid to the amount recovered if the events the insurance is intended to cover have not happened yet.

CRTs are vulnerable to prepayments

The FHFA's second criticism—that the current refinancing boom is eroding the risk protection provided by CRT—has more merit. As loans in the reference pool are refinanced, three things happen: The loans are pulled out of the pool; the credit quality of the remaining pool deteriorates, as loans that refinance tend to be higher quality than those left behind; and the amount of the coverage provided by CRT on the pool declines with the size of the pool. The GSEs are thus left with less coverage on more risk. There are triggers built into most CRT deals to provide some protection to the GSEs in the event of early prepayments and later spikes in defaults, but arguably not enough to cover the mismatch created in a refinancing boom. In the Zandi et al. paper, the stress scenarios included precisely such a circumstance in its assessment of the coverage that CRT would ultimately provide.

The problem, however, could be addressed by adjusting the structure of the CRTs. CRT investors could receive only scheduled amortizations for the first few years, rather than prepayments, precisely as they do in many private-label securities. Or those loans that refinance out of a reference pool but return to the same GSE could be put back into the same pool, which is roughly how the issue is handled when it is equity capital that covers the risk involved. Either would increase the cost to the GSEs, so they would need to strike a balance between that increased cost and the value of addressing the incremental risk involved.

CRTs are untested

The FHFA's third argument is that CRT remains untested. This is in tension with the first argument, which at least implies that CRT has already been tested to some degree and has failed. Nonetheless, it

is indeed true, thankfully, that we have not suffered enough market stress to test the coverage that CRT provides. Though the analysis of Zandi et al. should provide comfort on the point, we do not yet know for sure how the market for new CRT will behave in times of systemic stress. As with other markets, the CRT market seized up briefly in March 2020 when the pandemic hit as investors grappled with the uncertainty over the number of borrowers who would need forbearance and how their somewhat unique delinquencies would impact payout triggers. But it recovered quickly, returning to pre-pandemic levels by the end of the year.

The market for CRT securities would no doubt be disrupted if credit concerns were to become overwhelming, with investors demanding returns that render the cost of CRT greater than other forms of capital. The GSEs have diversified their sources of CRT to mitigate this risk to some degree, with insurance and reinsurance CRT likely to provide an economic source of capital further into the cycle than capital markets CRT. However, that all of these forms of CRT will have a point at which they become uneconomic is no reason for the GSEs not to rely on CRT when it does make economic sense.

It is worth noting that how much and what kind of capital the GSEs need—whether CRT or equity capital—depends significantly on the government support they can rely on. If the GSEs can count on explicit government support in a time of stress, they do not need as much unexpected loss coverage or equity capital as they would if they cannot count on that support. Being able to rely on explicit government support will also reduce the cost of the capital they do have to raise, whether that is CRT or equity capital. The FHFA made it clear in its [final rule on the GSEs' living wills](#) that the GSEs are not to rely on the government's backstop, likely forcing them to hold more capital, at a higher cost.

The bigger picture

Noticeably absent in the FHFA's critique is any forthright account of the benefits of CRT. After all, the appropriate question is not how CRT works in isolation but how it compares with the primary alternative, equity capital.

There are at least four advantages that CRT has over equity capital: diversification of risk, cost of capital, less procyclicality, and price discovery.

Diversification of risk

The most important benefit of CRT over equity capital is that it distributes risk more broadly across the financial system. Approximately 40% of CRTs are purchased by global asset managers, 25% by reinsurance companies, 20% by hedge funds, and the remaining 15% by an array of investors including real estate investment trusts, insurance companies, sovereign wealth funds, banks, and credit unions. Distributing credit risk widely across the global financial system significantly reduces the systemic threat posed by GSEs when they retain the risk, as they did prior to the financial crisis and ultimately failed.

Cost of capital

In many market conditions CRT provides taxpayer protection at a lower cost than equity capital. The pool of investors willing to invest in CRT is deeper and more competitive than that willing to invest in GSE equity. And the former is often able to use debt to finance investments, which brings a tax advantage and thus a lower cost.

The cost benefits of CRT over equity are evident in the indexed-linked notes market used by the nation's large private mortgage insurers. ILN securities are structured much like CRT securities, attracting a similarly diverse set of global investors. Like CRT, the ILN market froze when the pandemic first hit early last year but since has come roaring back, with PMI companies aggressively using ILNs to lay off risk on their growing insurance-in-force rather than raising additional equity capital. The PMIs are operating under the Private Mortgage Insurer Eligibility Requirements, or PMIERS, [capital framework](#), consistent with the GSEs' [previous capital framework](#) and thus more risk-based and friendly to CRTs than the GSEs' new capital framework. This is a further reminder of how CRT would continue to function under a more favorable capital framework, and it is a warning that the ILN market will likely disappear if PMIERS is changed to be consistent with the GSEs' new capital framework.

Softening procyclicality

The GSEs' capital rule, much like the capital rules for the banking system, requires more capital as delinquencies and losses increase. However, CRT is designed to provide more protection with higher defaults, up to the coverage limit. The result is that less additional capital will likely be needed in higher stress periods when CRT is used. And as noted earlier, CRT protects the higher risk portion of the GSEs' single-family book of business, making a large capital raise at an inopportune time less necessary.

Price discovery

CRT creates a deep and competitive market for credit risk, providing visibility into the market's perspective of the cost of that risk. This creates a more efficient mortgage market and should help inform how the GSEs and other government-backed entities price the risk

they assume, with appropriate adjustments for differences in their cost of capital and their mission. In its critique, the FHFA cast some doubt on the value of the pricing information being provided. It argued that CRT may not be equilibrating supply and demand and thus its terms may not reflect a true market price, and that the duration of some senior tranches of CRT are so short that their pricing provides more information about prepayment than credit risk. Although these are valid concerns, the issues raised do not undermine the value of the pricing information provided and should lessen as CRT structures and market conditions continue to mature.

The FHFA itself can do much to help here. It should require the GSEs to provide more information on the pricing of insurance and reinsurance CRT, giving the market a better feel for how other market participants price this credit risk. And it should explore restructuring some capital market CRTs to provide more granular pricing discovery. Current CRT deals with LTVs of 60% to 80% trade separately from those with LTVs of more than 80%, providing information on pricing of loans both with and without private mortgage insurance. If it structured the deals to allow for trading of more targeted groups of loans—for different FICO buckets within each of these LTV ranges, for instance—then it would create still greater price discovery. This would present some liquidity issues, but these could be reduced at least in part by recombining the securities with the same LTV range and different FICO buckets into the current security with appropriate weights for each FICO bucket.

Conclusion

The FHFA's critique of the CRT market is in keeping with its broader vision for GSE reform. Where most view the proper role for the GSEs or their successors as conduits for mortgage liquidity, which maximize access to credit while minimizing the credit risk they retain, the FHFA continues to pursue precisely the opposite course. It is moving the GSEs down a path to provide support for less of the market and yet, remarkably, hold more of its risk. As [we argued elsewhere](#), this is a perplexing path, leading to a system in which taxpayers are at greater risk, the housing finance system is less stable, and mortgages for many are harder to come by.

About the Authors

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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.

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Dr. Zandi's broad research interests encompass macroeconomics, financial markets and public policy. His recent research has focused on mortgage finance reform and the determinants of mortgage foreclosure and personal bankruptcy. He has analyzed the economic impact of various tax and government spending policies and assessed the appropriate monetary policy response to bubbles in asset markets.

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 360° 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.

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