INDUSTRY PERSPECTIVES

A Case Study of GSE Politicization: The Flawed Narrative of Loose Credit

DECEMBER 2019 | DON LAYTON

JCHS
JOINT CENTER FOR HOUSING STUDIES OF HARVARD UNIVERSITY

Joint Center for Housing Studies
Harvard University

A Case Study of GSE Politicization: The Flawed Narrative of Loose Credit

A Political Economy Essay

Don Layton

December 2019

Papers in our *Industry Perspectives* series offer insights into the business of housing from people with broad experience in the industry. Any opinions expressed in *Industry Perspectives* papers are those of the author(s) and not those of the Joint Center for Housing Studies, Harvard University, or any persons or organizations providing support to the Joint Center for Housing Studies.

For more information on the Joint Center for Housing Studies, visit our website at www.jchs.harvard.edu.

Introduction

A significant feature of America's residential mortgage system is its heavy politicization. This politicization is understandable. The system involves an immense amount of money, with $11 trillion of mortgage debt outstanding. It materially impacts tens of millions of American families, as classically mortgage (or rent[1]) payments are the largest component in the typical monthly family budget. It is of interest to all 535 members of Congress, as housing is a major part of the economy and family life *everywhere*. And, to top it all off, the US government backs over two-thirds of all mortgages. In fact, it would be surprising if the mortgage system were not heavily politicized.

This case study is about one long-running, specific aspect of that politicization: the advocacy-based narratives about the credit quality of the mortgages financed by the two government-sponsored enterprises (GSEs) Freddie Mac and Fannie Mae.[2] During my seven years leading Freddie Mac, I learned how conservative housing finance advocates saw poor GSE credit quality to a greater or lesser degree pretty much at all times, and at the extreme believed that in a significant economic downturn the GSEs would suffer massive losses and could therefore pose a risk to the stability of the entire financial system. I similarly learned that liberal housing finance advocates continually saw pretty much the opposite, believing that the two GSEs are too restrictive in extending credit, claiming that they are passing up, or overcharging for, many mortgages with decent credit quality that could help so many people, especially those of color, obtain the long-term benefits of homeownership.[3]

This article addresses the conservative narrative that credit quality is just too loose. With a Republican administration in office, combined with a Trump-nominated official becoming director of the Federal Housing Finance Administration (FHFA, the regulator and conservator of the two GSEs), this narrative has become the dominant advocacy viewpoint that can impact policy. Recently, there has been an outbreak of this loose credit narrative, culminating in a major article in the *Washington Post* claiming it to be true.[4] In that article and in general, the loose GSE credit narrative is also aimed at – and

[1] A major component of the cost of an apartment's rent goes to the mortgage held by the landlord owning the property.

[2] The two companies are currently under "conservatorship," a legal status whereby they operate essentially as wards of the US government.

[3] During my time as CEO of Freddie Mac, the company's news clipping service collected articles from general and housing-specialized publications on a daily basis. Each week there seemed to be several articles claiming credit was clearly too loose, along with several others simultaneously claiming it was clearly too tight. This polarization was just a fact of life in such a politicized environment.

[4] Damian Paletta, "Federal Government Has Dramatically Expanded Exposure to Risky Mortgages," *Washington Post*, October 2, 2019, https://www.washingtonpost.com/business/economy/federal-government-has-dramatically-expanded-exposure-to-risky-mortgages/2019/10/02/d862ab40-ce79-11e9-87fa-8501a456c003_story.html.

often sloppily intertwined with – the direct government mortgage insurers, in particular the Federal Housing Administration (FHA), which are totally separate from Freddie Mac and Fannie Mae. The outbreak even included one conservative senator, in recent hearings at the Senate Banking Committee on the topic of the Treasury's proposed housing finance reform program, calling GSE credit a "dumpster fire."[5]

The mortgage industry has reacted to this narrative, claiming from its firsthand knowledge that it is false – but relatively quietly, as industry representatives generally go out of their way to not unnecessarily offend administration or regulatory officials.[6]

The two sides of this debate are not equally valid. A host of published, credible financial and credit performance statistics, along with independent (i.e., not from politically aligned sources) commentary,[7] paints an overwhelming picture that this "loose credit" narrative for the GSEs (but not necessarily for the FHA) is indeed flawed. *Furthermore, and amazingly, the proponents of the loose credit narrative fail to acknowledge fundamental post-Crisis policy changes that mitigate the systemic risks posed by the GSEs. For example, no one in that Senate hearing mentioned that the two GSEs no longer even retain most of the credit risk of new mortgages,[8] but sell it off via the capital markets to institutional investors around the world via Credit Risk Transfer (CRT) transactions!*[9] This lapse is very hard to understand in that not only are the GSEs no longer exposing themselves or the taxpayers who support them to significant new credit risk, but they are subjecting their credit decisions to "market discipline": a view of the credit quality of their mortgages is delivered by the professional investing

[5] Senator John Kennedy (R-LA); see https://www.banking.senate.gov/hearings/housing-finance-reform-next-steps.

[6] See "Let's Get Housing Reform Right," co-authored by the heads of four housing and housing finance industry associations. https://www.americanbanker.com/opinion/lets-get-housing-reform-right-this-time.

[7] See two presentations from the May, 2019 Annual Financial Markets Conference of the Federal Reserve Bank of Atlanta: Mark Zandi, "Managing Mortgage Credit Risk," https://www.frbatlanta.org/-/media/documents/news/conferences/2019/0519-financial-markets-conference/presentations/zandi_policy-session-three.pdf, where he calls credit conditions "pristine"; and Andrew Davidson, "The QM Patch," https://www.frbatlanta.org/-/media/documents/news/conferences/2019/0519-financial-markets-conference/presentations/davidson.pdf, where he specifically addresses why DTI (see below) is not a good measure of credit risk.

[8] The *Washington Post* article did very modestly acknowledge CRT by saying, without further comment or explanation, that the GSEs "sell some risk to investors."

[9] Credit Risk Transfer (CRT) also creates a more complex situation in addressing the risk of the mortgages purchased by the two GSEs. One risk is the possibility that homeowners will not be able to maintain their mortgage payments and instead face potential foreclosure. That risk is now separate from the risk to the GSEs and their shareholders (which at the current time mainly means US taxpayers), which at an extreme can create systemic risk. This paper focuses on both of these risks, as both are important from a policy perspective, trying to keep them separate rather than intermixed.

institutions that actually put their money where their mouth is, in contrast to so many others with opinions on the topic.

This article reviews the facts and figures about today's GSE mortgage credit quality, showing strongly that a non-advocacy and open-minded conclusion is that GSE credit quality is not too loose, that it is not endangering the health of the GSEs or, even in a severe downturn, the stability of the country's financial system.[10] No one is claiming that the GSEs have zero risk, but only that they have reasonable and acceptable risk levels. The article has three sections:

1. A review of the actual performance of the credit portfolio in recent years, including a commentary on legal, regulatory and other reforms that have been put in place specifically to prevent a return to the poor lending practices of the past. By its nature, and with one large exception, this is fundamentally a backwards-looking analysis.
2. A summary of the conservative argument that credit quality is too loose in that it will likely cause large *future* losses.
3. A more comprehensive review of the credit quality of the GSEs, also focusing on a forward-looking analysis about potential future losses, demonstrating why the "loose credit" narrative is fundamentally flawed.

Section 1: GSE Credit Portfolio Performance in Recent Years

A Review of the Numbers

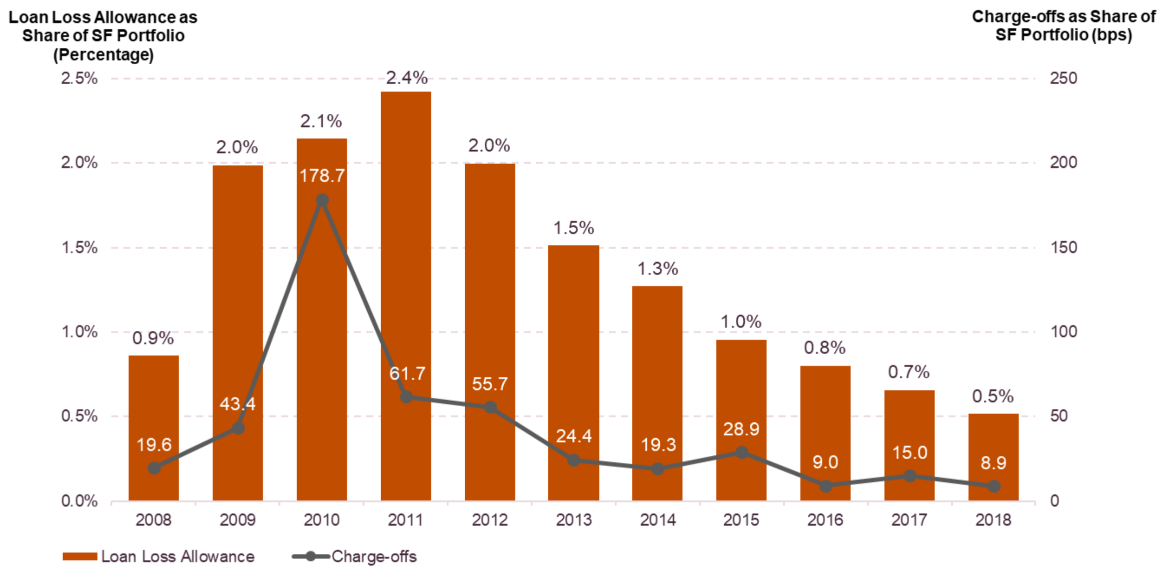
Freddie Mac and Fannie Mae, even while in conservatorship under the FHFA, are still publicly traded companies, meaning they have to report their financial condition to the Securities and Exchange Commission (and the public) using Generally Accepted Accounting Principles (GAAP) certified by an independent auditing firm, just like all public shareholder-owned companies. This audited reporting provides a major source of independent and credible data about the credit quality of their mortgage loans in recent years.

Chart 1 shows the recent history of credit charge-offs and credit reserves for the two companies. "Charge-offs" are the actual reduction in the value of a mortgage when a loss is known enough to be recognized – an example would be a house going into foreclosure generating an

[10] This article does not address the liberal advocacy position that GSE credit is significantly too tight or priced too high, which from my time as CEO of Freddie Mac I also believe to be overstated. Addressing that position would require a separate analysis, and would become more relevant should Democrats become the dominant political force in the government's oversight of the mortgage system.

accounting charge-off. It is, however, a totally backward-looking measure. GAAP also requires a measure that is more forward-looking: "allowance for loan losses" represents an amount set aside when there is enough information to know that actual write-offs are likely to occur in the future.[11]

Chart 1: Single-Family Loan Loss Allowance & Charge-offs Net of Recoveries (Before Impact of Credit Risk Transfer)



Source: Freddie Mac and Fannie Mae 10-K reports from 2008-2018.

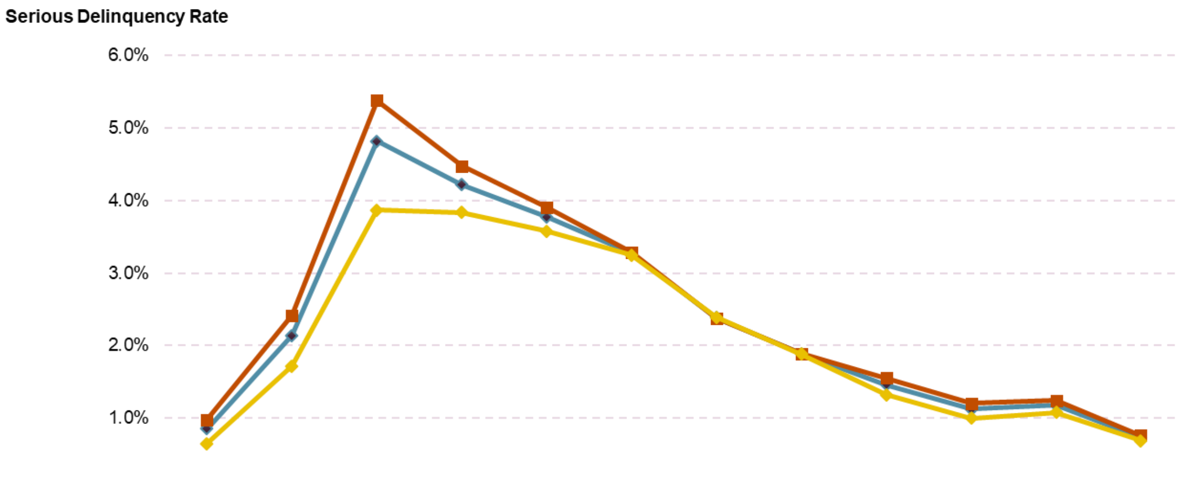
The pattern of credit performance is clear: after the disaster of the Financial Crisis of 2008, which peaked in terms of its impact on mortgage credit quality in 2010 to 2012, all the trends are favorable. There is no recent trend showing that actual credit losses are getting worse (although charge-off data can be a little bit "noisy" for technical accounting reasons). Today's levels are probably still elevated a bit from the levels enjoyed prior to the Financial Crisis (i.e., before 2005 or so), as the poor-quality credits made going into the Financial Crisis are still a modest burden on the two companies.

To be even more forward-looking, a classic measure used to examine mortgage loan credit quality is the delinquency rate – i.e., how much monthly payments of principal and interest from homeowners are past due. This rate is a strong indicator of the trend of future mortgage credit losses, but it definitely reflects the current economic environment (see below for more on this issue). The

[11] GAAP is being revised, beginning next year, to use a different accounting concept to calculate the allowance. It will generally raise the number above current levels.

standard for public reporting is to focus on 90-day delinquencies – i.e., the principal balance outstanding of mortgages that have their monthly payments overdue by 90 days or more.

Chart 2: Serious Delinquency Rate as a Percentage Single-Family Portfolio (Before Impact of Credit Risk Transfer)



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
GSEs	0.85%	2.14%	4.82%	4.22%	3.78%	3.27%	2.38%	1.89%	1.46%	1.12%	1.18%	0.73%
Fannie Mae	0.98%	2.42%	5.38%	4.48%	3.91%	3.29%	2.38%	1.89%	1.55%	1.20%	1.24%	0.76%
Freddie Mac	0.65%	1.72%	3.87%	3.84%	3.58%	3.25%	2.39%	1.88%	1.32%	1.00%	1.08%	0.69%

Source: Freddie Mac and Fannie Mae 10-K reports from 2007-2018.

Chart 2 shows this rate for the two companies. Again, the long-term trends are clear and there is no recent significant reversal.[12] The GSEs also report these delinquencies on loans done since the Financial Crisis (and excluding pre-Crisis loans), as an indicator to investors of how successful the changes to their credit policies post-2008 have been (along with a good economy with rising house prices). For the most recent quarter (2019 Q3), the delinquency rate for loans done since 2008 was reported as 0.24% for Freddie Mac and 0.33% for Fannie Mae; these levels are rather low – in fact, they are lower than expected over the long term, a discrepancy explained by the increase in house prices, since they bottomed in 2011/12, being stronger than the expected long-term average (along with a very low unemployment rate).[13]

[12] The one exception to this is 2017. This slight erosion of the long-term trend of improving credit quality measures was due to the three hurricanes experienced by Texas, Florida, and Puerto Rico late that year, when payments were disrupted temporarily due to the related homeowner dislocation. This disruption quickly dissipated, and the long-term trend towards improving credit delinquencies resumed.

[13] House price increases are particularly important in keeping credit quality strong. If house prices turned down, this statistic would undoubtedly deteriorate. If house prices were stable or just going up a small amount per year,

(Also note that Charts 1 and 2 are listed as being "Before Impact of Credit Risk Transfer," a program that began in 2013. That is because all the statistics reflect the mortgage portfolios' risk characteristics *before* considering whether any resulting loss would be for the account of the GSEs or of CRT investors. Thus, these charts more exactly measure the risk to homeowners of their being able to sustainably carry their mortgages, a risk born partially by the GSEs and partially by CRT investors. As shown, that risk seems to be well-behaved, with no recent upturn.)

But even with the forward-looking nature of delinquencies, the conservative advocates make an accurate argument that today's low levels just reflect the strong house price growth since bottoming in 2011 to 2012, which has on a nationwide average basis grown over 6 percent per year,[14] and during a time when the unemployment rate has gone to record lows. It is not hard to have good credit quality when the economy is doing that well. The issue then becomes, what would happen to credit losses should house prices strongly decrease and unemployment increase (as would happen in a major recession)? Would credit quality collapse, endangering the continued operations of the two companies and creating financial instability? Some conservative advocates who are proudly "foes" of the two GSEs believe it would![15]

Fortunately, because of what happened in the 2008 Financial Crisis, the financial regulators (working under the Dodd-Frank Act, which was passed to address many of the weaknesses in the financial system revealed by the Crisis) have developed a technique *explicitly to address this concern: the stress test.* It is called, for the two GSEs, the Dodd-Frank Act Stress Test[16] (known as DFAST, pronounced 'dee-fast'). It starts with a "severely adverse scenario" for the economy and financial markets as determined by the Federal Reserve, which currently has at its core a 25% decline in house prices (which is comparable to what happened in the Financial Crisis), along with an increase in the

the expectation by the specialists at Freddie Mac prior to my departure was that the 90-day delinquency rate shown of about 0.20-0.25% would increase to the 0.40-0.75% range, a level they considered consistent with proper quality of credit underwriting over the long term.

[14] According to the Freddie Mac House Price Index.

[15] Several think tanks house conservative advocates known for being critics of the GSEs. The most prominent is probably the American Enterprise Institute. Their viewpoint is demonstrated by the polemical title and sub-title of a recent article by one of their senior fellows: Peter J. Wallison, "The Treasury's Housing Plan Would Pave the Way for Another Financial Crisis," which included a bolded sub-title "It should have been clear by now that government backing for private profit-seeking firms is a clear and present danger to the stability of the U.S. financial system," *National Review*, September 27, 2019. https://www.nationalreview.com/2019/09/treasury-housing-plan-would-pave-way-for-another-financial-crisis/.

[16] For banks, it is called Comprehensive Capital Analysis and Review (CCAR).

unemployment rate to 10%, and other changes.[17] It then requires a simulation (heavily supervised by FHFA regulatory staff, and with thousands of pages of documentation produced by the GSEs to back it all up) of what would happen to credit losses, revenues and all the other factors that go into the profit (or loss) of the GSEs.

The result is shown in Chart 3. Since the first DFAST results were produced in 2013, the "severely adverse" stress loss for the two GSEs has done nothing but gone down – cumulatively, by roughly 80%! It is now at a level of $43 billion.[18] As the current outstanding proposal from the FHFA to set capital standards for the GSEs – which is not yet finalized – calls for capital of roughly $125 billion[19] (i.e., about three times higher!), this DFAST loss is relatively modest, indicating that the companies – if capitalized properly when released from conservatorship – would hardly be endangering the financial system.[20]

Chart 3: DFAST Stress Test Results (2013-2018)

	Stress Test Year	Comprehensive Income (Loss)	
		Without DTA Write-down	With DTA Write-down
	2013	($ 90.3B)	($ 195.8B)
	2014	($ 73.4B)	($ 162.1B)
	2015	($ 51.3B)	($ 127.6B)
	2016	($ 35.1B)	($ 99.5B)
	2017	($ 41.9B)	($ 77.4B)
	2018	($ 18.0B)	($ 43.3B)
Percentage Decline	2013-2018	-80%	-78%

[17] See the FHFA summary of the stress test at https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/2019_DFAST_Severely-Adverse-Scenario.pdf.

[18] There are two versions of the loss, one with and one without a major write-off of the Deferred Tax Asset (DTA). This is a very obscure and complicated accounting issue, not relevant to explain for this article. I have chosen the more conservative (i.e., larger) loss to cite. But there is a significant likelihood that there would be no DTA write-off, and so the severely adverse loss would be just $18 billion, just *one-seventh* of the $125 billion capital requirement currently estimated.

[19] The total support given to the two companies in conservatorship has been just under $200 billion. So, in an economic scenario similar to the 2008 Crisis, the support needed would now be less than one-quarter of this level (and only about one-tenth under the "no DTA write-off" scenario), a decrease that reflects the major reform of the two companies' risk-taking during their decade in conservatorship.

[20] While the two companies are under conservatorship, their losses would generate an automatic injection of equity from Treasury to bring their net worth back up to zero, under the terms of the Preferred Stock Purchase Agreement (PSPA). This agreement provides such strong backing to the companies that they are regarded by the marketplace as better than AAA – in fact, almost the same as the Treasury itself. The collapse in 2008 was caused by significant losses due certain credit underwriting practices that were very weak by comparison to today, along with having a very low level of capital (a fraction of the roughly $125 billion, on an apples-to-apples basis, that would be required today).

The expectation is that the DFAST severely adverse scenario losses will continue to modestly decline, because (among other reasons) credit risk transfer will be done on an increasingly large share of the GSE mortgage loans held (see below).

So, even the DFAST results, which are totally forward-looking and based upon a severely adverse scenario generated independently of the GSEs or even the FHFA, validate that GSE exposure to credit losses is no longer massive, with corporate bottom-line losses in a severely adverse scenario down about 80% just since 2013. It is not a disaster-waiting-to-happen or a "dumpster fire" or any such hyperbolic thing. Interestingly, the most common adjective I have recently heard applied to GSE credit quality by independent analysts is "pristine" – which, while closer to the truth, may in fact be a bit too optimistic as per all the statistics.

The "Why" of Improved GSE Credit Quality

Much current politicized criticism of the GSEs, including criticism of the credit quality of their mortgages, boils down to an argument that "they did it before, they will do it again." "It," in this case, is making a lot of bad loans (and also purchasing a lot of bad mortgage securities), as they surely did prior to 2008.

I am no apologist for the historic GSEs: they appeared to me too focused on lobbying and influencing people inside DC in order to protect and maximize hidden subsidies to the companies from the US taxpayer, rather than on doing a good job of running their organizations (including managing risk well) and achieving their mission. I do not deny they engaged in a lot of poor practices prior to 2008.

However, in reaction to the Crisis, government and the financial markets implemented reforms to ensure that such a collapse could not happen again. In fact, the government and policy community inside Washington burned a lot of calories over many years developing legislation (like Dodd-Frank), new regulations, and new practices of all sorts, precisely to prevent a recurrence of the Crisis among all types of financial institutions.

Below is a quick description of five significant legislative, regulatory and practice changes designed to prevent a recurrence of poor GSE mortgage credit quality; thanks to these changes, even if the two companies wanted to, they could not "do it again."

1. <u>Credit Risk Transfer</u>

   When it comes the GSEs' credit risk on their mortgages, the biggest reform of the past decade (in my opinion) has been the invention and extensive implementation of Credit Risk Transfer (CRT). It is a true game-changer. Simply put, the risk of credit losses on newly made mortgages does not reside solely or even mostly with the GSEs themselves (and, therefore, not with the taxpayers who support them in conservatorship). Instead, significant amounts of this risk accrue to CRT investors; those investors are a diversified set of dozens of large institutional investors around the world.

The first modern GSE single-family residential mortgage CRT was done by Freddie Mac in 2013, and quickly became a standard business practice of the two companies; the FHFA requires the GSEs, while in conservatorship, to use the practice extensively. For Freddie Mac, over three-quarters of the credit risk of *new* mortgages is being transferred to CRT investors.[21] As the portfolio of old mortgages (which do not have CRT) matures and new mortgages (which do) replace them, the *average* usage of CRT on the entire single-family portfolio goes up. The DFAST losses cited above reflect the average benefit of CRT as of the end of 2018; it will be roughly four or five years before the full impact of CRT is felt on almost the entire mortgage portfolio.

Thus, one benefit of CRT is simply that it makes the GSEs into primarily "pass-through" entities for credit risk – taking it in and then selling it off – as they have long been for interest rate and liquidity risk via their issuance of pass-through mortgage-backed securities (MBS). No longer will the GSEs be at so much risk of losses in a downturn, no longer will the taxpayer be at so much risk via its support of them, and no longer will the companies be such a source of concentrated and systemic risk.[22]

There is a second and very important benefit from CRT. The GSEs naturally now need to disclose extensive and detailed credit statistics on their historic and new portfolios to enable potential CRT investors to make decisions. Therefore, the flow of GSE credit is now subject to "market discipline" – subject, that is, to the "vote" (or, in modern internet parlance, the "wisdom of the crowd") by global mortgage credit risk investors as to how risky a particular pool of mortgages is and how that pool should be priced to induce them to take on the credit risk.

The GSEs' mortgage credit risk is thus now assessed first of all by those who put their money where their mouth is. Regardless of all the politicized or well-meaning commentary

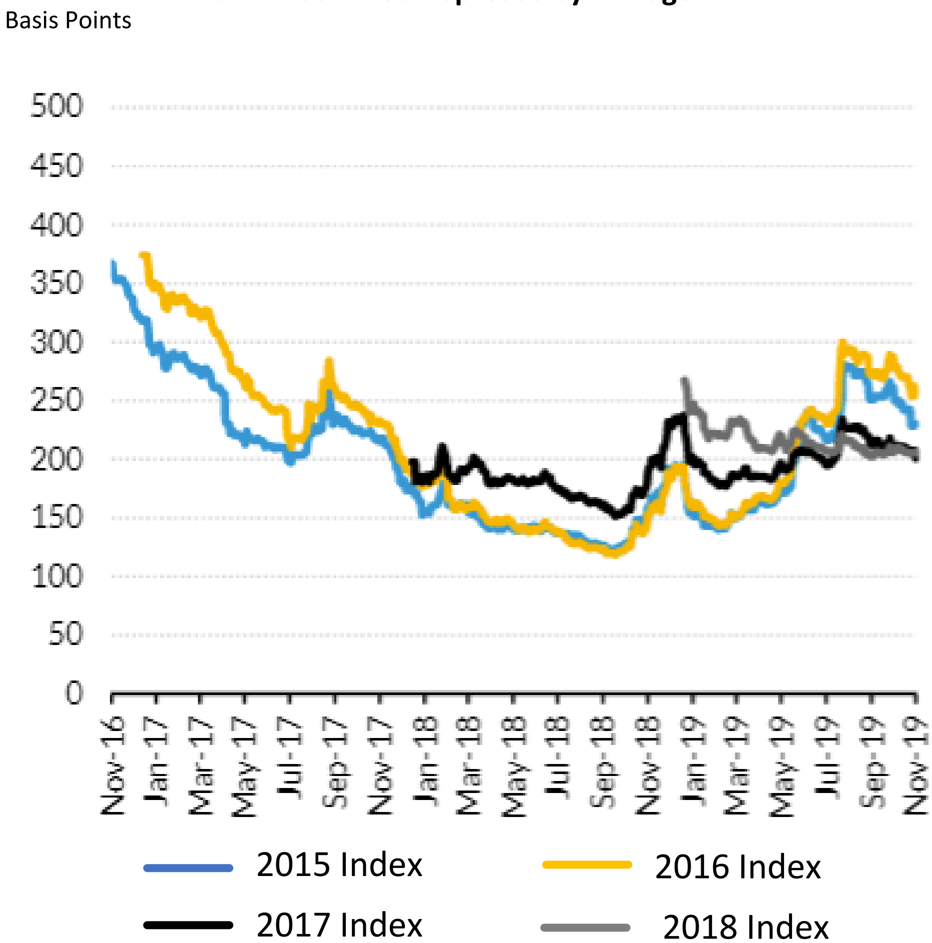
[21] As measured by the capital released according to the rules of the FHFA's outstanding proposed risk-based capital requirement.

[22] Systemic risk is reduced dramatically as the mortgage credit risk is sold to diversified investors around the world. It is important for that risk not to be re-concentrated, of course. The FHFA is in an excellent position to monitor this. There has been some political pressure to try to unwisely force some re-concentration of the risk in the hands of mortgage insurers, which has for the most part successfully been resisted by the FHFA and GSEs to date.

inside Washington about GSE credit risk, CRT transactions reflect the judgment of the most knowledgeable investors in that risk.[23]

Chart 4, as shown below, comes straight from the November 2019 Urban Institute Chartbook. It shows the spread (i.e., yield over equivalent maturity Treasury securities), as determined by secondary trading in the open markets, of the most junior (i.e., riskiest) tranches of four vintages of recent CRT transactions by the two GSEs. This is sometimes referred to as the "credit spread."

Chart 4: GSE Credit Spreads by Vintage



Source: Urban Institute Monthly Chartbook, November 2019

[23] Market discipline is not, please note, perfect, as markets get excessively optimistic or pessimistic for various reasons from time to time. But it is unbiased by politics, and I would regard it as more likely to be accurate over the long run than what one hears in DC from sources with ideological or economic agendas.

Markets for credit-sensitive bonds tend to go in cycles based upon many market factors as well as factors specific to the particular asset class. Thus, the general "U" shape in the chart is mostly just reflective of market conditions. The difference in the credit spreads of vintages before versus after 2017 would reflect the impact of any increase in high-DTI loans (see below). There are three takeaways from this chart:

- There is a lot of "noise." Markets have all sorts of factors driving credit spreads, some directly relevant to the CRT bonds charted above (like faster-than-expected paydowns) and some very much not (if the chart went back a few months more, it would show a big jump up when British voters, unexpectedly, voted in favor of Brexit back in June 2016).
- In 2017 and 2018, as described below, there was a measurable increase (significantly reversed starting in 2019) in the percentage of new GSE loans that had a DTI over 43%, due to a flawed implementation by Fannie Mae of a credit policy change ordered by the FHFA. The impact of this increase would have been felt in the market approximately six months to a year later when the loans were securitized into the unguaranteed CRT bonds (from which this chart takes its data). Thus, you can see how the 2018 vintage (in gray) was a bit above the other three until just recently. This may have been due to the higher-DTI mix, although obviously the magnitude of the increase was not large – it's pretty much lost in the noise.
- Credit spreads in the 2018 and 2019 vintages, most recently, were actually *below* those of the earlier vintages. Again, many market factors can drive such a movement, but it certainly indicates that the market's view of the credit risk of the later vintages is hardly consistent with the narratives of severely loose credit standards beginning in 2017 with a push into high-DTI lending; independent investors seem to not be agreeing with the assertion of some major deterioration in GSE credit underwriting standards.

In fact, the general conclusion from Chart 4 is that the marketplace view of risk is very "noisy" indeed: perhaps there was a small view of increased risk when the 'DTI over 43%' mix was higher for 2017 and 2018 production, but if so, it was indeed small and far less than the usual tactical and strategic noise in secondary trading.

2. QM Product Restrictions and Documentation Requirements

The Dodd-Frank Act created a new concept – the "qualifying mortgage" (QM). A QM loan is defined by the absence of any features that Congress considers abusive or inappropriate. For example, various products were defined as "non-QM" (as described below); also, loans that did not have full documentation were considered non-QM. As well, Congress handed to the newly created Consumer Finance Protection Bureau (CFPB) the discretion as part of defining QM, to include a loan that had an adequate “ability to repay” by the homeowner. These policies took effect at the beginning of 2014, and QM loans then became the “gold standard” of mortgage lending, with non-QM product being relegated to a small market share in higher-risk channels. I would say it is industry conventional wisdom that the QM restrictions on products and documentation are perhaps the most consequential change to improve the underlying risk of mortgage loans.

In terms of product restrictions, mortgage loans that have interest-only periods, negative amortization, balloon payments or a term greater than 30 years are all excluded from QM. It was clear after the Financial Crisis that such loans, along with those with less-than-full documentation, proved to be a disproportionate source of losses, as would be expected, and so these exclusions enjoy broad support in the financial community.

The FHFA has required the GSEs to adhere to the product restrictions of QM as well as full-documentation requirements. As a result, the GSEs themselves are much less prone to the excessive credit losses that they suffered in the 2008 Financial Crisis.

3. <u>FHFA as a More Independent Regulator</u>

Created in 2008, the FHFA is a new regulator. Previously, over decades, the two GSEs had been regulated by several agencies in sequence, none of which exist today. Congress eliminated and replaced them because, in its view, they were unduly lax in general and in particular with regard to capital requirements. The two most well-known of those regulators were the Federal Home Loan Bank Board and the Office of Federal Housing Enterprise Oversight. There were many accusations that they had been “captured” by the two GSEs.

One major proximate cause of the “capture” and laxness, however, was built by Congress into the regulatory agencies’ fundamental structure. Both were “on budget” – that is, they had to get their budgets approved by Congress as part of the annual government budget and appropriation process. “Old-timers” have told me this meant the senators and representatives on the relevant committees, under pressure from lobbyists from the housing industry (including the GSEs themselves), became the channel for pressuring the regulators to be lax by supposedly threatening to reduce or withhold their budgets.[24]

With the creation of the FHFA in 2008, greater independence was built into the regulatory system, since the budget of the FHFA is paid directly by assessments upon its regulated entities (the two GSEs as well as the Federal Home Loan Banks), just as had been long true for other independent financial regulators.

While one can "never say never" about future actions by the GSEs post-conservatorship and by future members of Congress, the new system is certainly less prone to abuse than the previous one.

I reference this change because the FHFA, more empowered and independent, is very much in a position to monitor and impact the credit quality of the GSEs without bias or undue industry influence – in terms of not just policies but actual execution. As the conservator, its position is even stronger.

4. DFAST and the FHFA Capital Proposal

Under the pre-2008 regulatory regime of the GSEs (and more broadly of all financial institutions), poor-quality credit could too easily go unrecognized by regulators and the accounting-driven financial disclosure process run through the SEC for public companies – until it was too late (i.e., when the economy turned down).

One reason for this shortcoming was that there were no adequate standard financial tools to reveal poor-quality credit that would appear only in a stressed financial and economic environment.

But today there are.

Specifically, as discussed above, there is the "stress test" approach to determining the capital adequacy of a large financial institution, developed during the heat of the Financial Crisis.[25] This test is run through the DFAST requirement placed upon the two GSEs, with the

[24] In such situations, it is easy to blame the GSEs for putting pressure on their regulator through the relevant senators and representatives to "capture" the regulator. But it is just as easy to blame the elected officials for setting up this system in legislation so as to be able to enhance their ability to receive campaign donations or other support from housing-related interests. The truth, I have come to believe, is that both misuses of power were going on at the same time.

[25] See my article describing the development of stress testing: "Four Big Things the FHFA Needs to Get Right in Its GSE Capital Rule," Joint Center for Housing Studies, October 2019, esp. p. 6, https://www.jchs.harvard.edu/sites/default/files/harvard_jchs_FHFA_GSE_capital_rule_layton_2019.pdf.

severely adverse scenario assumptions under the control of the Federal Reserve, and with the FHFA heavily engaged in supervising the GSEs' modeling simulations. This whole process is designed specifically to make visible weak credits (among other potential sources of losses) so that neither management nor regulators can remain ignorant of them.

In addition, the FHFA's proposed capital regulation for the GSEs is highly risk-sensitive: it requires capital in proportion to the riskiness of mortgages.[26] This has not always been the tradition in financial institution regulation, which has been too oriented towards simple leverage ratios (which have no risk sensitivity, so that all risk is treated as being equal). This capital rule, assuming it remains highly risk-sensitive when finalized by the FHFA, will make it hard for anyone not to be aware of weak credit underwriting – and it will require capital commensurate to support the risks taken.

5. Retained Portfolio Restriction

In the years leading up to the Financial Crisis, the two GSEs built up extremely large investment portfolios, reaching a combined pre-Crisis peak of about $1.5 trillion. They were highly profitable because they were funded with borrowings by the two companies that carried the implied guarantee of the US Government, which resulted in those funds being extremely cheap, much cheaper than private sector borrowers (like banks) could obtain. In those portfolios, the two companies invested in both low-risk and higher-risk assets, in particular mortgage credit risk-intensive securities that carried no government support (known as "private label securitizations" or PLS, including those backed by sub-prime loans). In fact, the two GSEs in 2008 alone, when the Financial Crisis got into full swing, wrote down just under $25 billion in their "available for sale" (AFS) investment portfolios, most of which was related to the value of the PLS they owned. In 2009, they took another $33 billion of such write-downs.[27]

In the rescue of the two companies by the government, one requirement was that they shrink these portfolios down by about two-thirds at a minimum, and the FHFA also required that new investments be only extremely high-quality, almost all of which are government-supported.

[26] The Basel international rules for capital requirements for banks treat, in essence, all mortgages as equally risky (all with a 50% weighting). While this can make sense for a bank that has many different asset classes of loans at risk, with mortgages being just a small portion, it is surely too simplistic for a GSE, where overwhelmingly the only asset class involved is mortgages, and where the mortgage have a wide variety of riskiness. To adopt the simple Basel 50% approach would, again, make it easy not to recognize increased risk in mortgage lending.

[27] The AFS portfolios held most of the securities with mortgage-related credit risk. The write-downs were, in technical accounting terminology, "other-than-temporary impairments."

The risky investments they had previously made, and which had so much mortgage credit risk, were simply banned. These requirements are expected to continue while the GSEs are under conservatorship and also upon their exit from it. Thus, no such losses should occur again.

Other regulatory and institutional changes, beyond the five discussed above, will also reduce the GSEs' ability to take unreasonable mortgage credit risks. All together, these changes form a tremendous web of new regulations, laws and market practices designed specifically to ensure that the GSEs (as well as many other financial institutions) do not again commit the sin of exposing themselves to unduly large mortgage credit losses as they did prior to 2008.

I also note that most observers of the GSEs have recognized that there has been tremendous reform during conservatorship. Nonetheless, the concern still exists that the companies would "revert to their old ways" upon exiting conservatorship, so it is important to see how the legal and regulatory system (rather than just conservatorship "directives") would maintain those reforms. The system's power to do so should be made clear during the conservatorship exit process just begun by the FHFA and Treasury.

Section 2: The Conservative Assertion of Loose Credit

Conservative advocates in housing finance are generally critical of the two GSEs. They have ideologically-driven antipathy to "big government" playing such an outsized role in housing finance, of which the GSEs are definitely a part. These advocates also point out, often with much validity, lapses that led to the Financial Crisis. Recognition of fundamental reforms made during conservatorship (such as credit risk transfer) is scarce in their writings.

Currently, the focus on the claim of "loose mortgage credit risk" is based heavily upon the trend of DTI ("debt to income" ratio), which measures the percentage of household income that must be paid in monthly mortgage (and other recurring) payments. This focus on DTI is both controversial and understandable:

- Controversial: For decades, the two big "input factors" believed to drive the future credit performance of a mortgage have been (1) credit score (i.e., the FICO score) and (2) LTV (loan-to-value ratio). FICO is regarded as a very good measure of the track record of a borrower paying bills on time, with some adjustment to predict how this may change in the future.[28] Thus, it measures what in credit risk analysis is called the "first way out" – i.e., the likelihood that monthly mortgage payments will be made routinely without disruption. LTV measures the amount of a mortgage versus the value of the house to which it is attached; it is considered the best measure of the "second way out," – i.e., if a homeowner defaults in making the required monthly payments, it is an indicator whether the lender will suffer a loss or not after going through foreclosure or a foreclosure alternative. It is totally ingrained in the industry to look at FICO-LTV grids to develop risk profiles, to risk-adjust pricing, and so on. DTI, however, is not and never was part of the "big two"; it is regarded in the industry as a moderate-quality, second-tier indicator of mortgage credit risk, and no more.[29]

- Understandable: The focus on DTI, even if not justified by professional credit analysis, is nonetheless understandable. When the newly formed Consumer Financial Protection Bureau (CFPB) issued its final rule on QM, as described above, it defined the "ability to repay" (which Congress required it to do, although it gave discretion as to how) as having a DTI no higher than 43%. The impact of this definition on the market was not great, as there was a giant "loophole" because it did not apply if the mortgages were bought by the FHA, the two GSEs or other government units.[30] However, the new definition brought DTI to the fore legally, if not in terms of accurate credit risk analysis, as *the* measure of a key aspect of mortgage credit quality.

In about early 2016, a major increase began in the average DTI (and thus in the percentage of loans with over-43% DTI) of loans made by the FHA (see Chart 5). This increase caught the attention of the housing finance policy community. The trend was so pronounced that it seemed to some that the Obama administration, in classic election-year manner, was trying to buoy the economy to attract voters for the presidential election in November of that year.

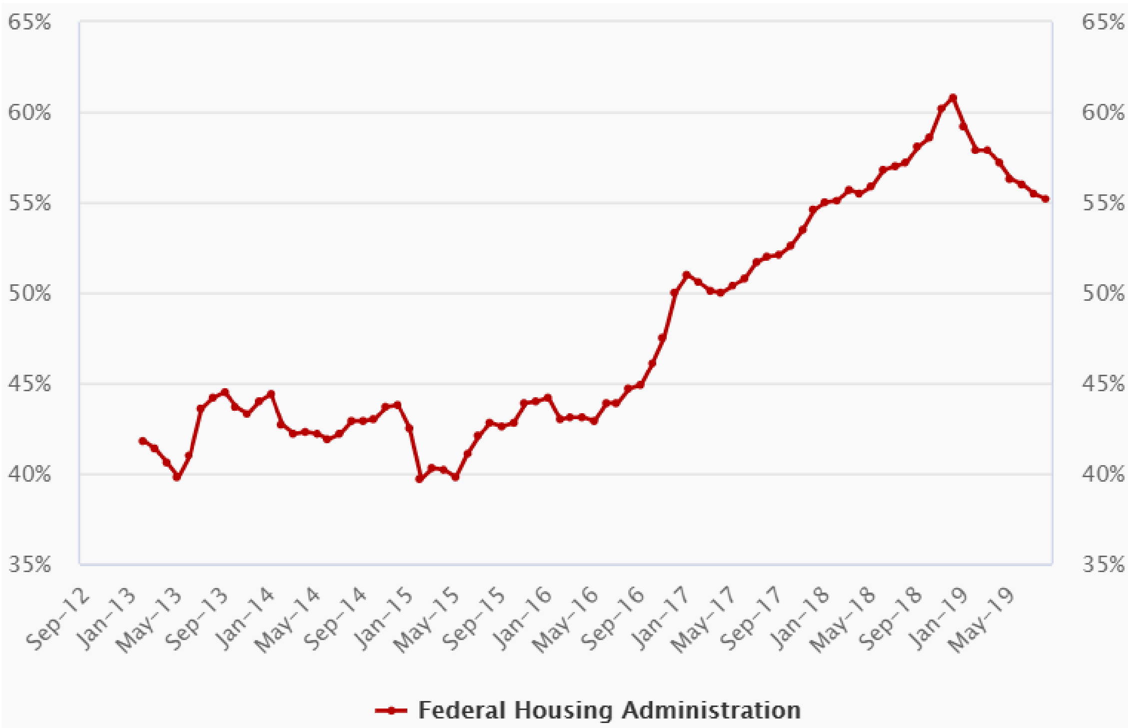
[28] For mortgages, almost all credit scores used come from the Fair Isaac Company ("FICO"), the company which originated consumer credit scoring. But others do exist. For ease of understanding, I will just use "FICO" as a generic term to mean "credit score."

[29] For more on this topic, see Davidson, "The QM Patch," referenced in note 7.

[30] The GSE exemption expires at the end of 2020, so now the industry is focused on the issue that the 43% DTI limit is simply poorly constructed as a measure of "ability to repay." The CFPB has agreed and is now in an official rule-making mode to likely replace it; industry expectations are that there will be a revision to the "ability to repay" calculation to make it significantly better than the poorly-regarded "not over 43% DTI" measure. The GSEs would then adhere to the rule like other providers of mortgage credit. (Direct government units, like the FHA, would still be exempt from it.)

Note: This chart below and all of those below are for "purchase" loans (i.e., they exclude refinancings). This is regarded as a better measure of how mortgage credit is being extended in the economy. If one is focused on an individual company's risk appetite and profile, including refinancings is more accurate.

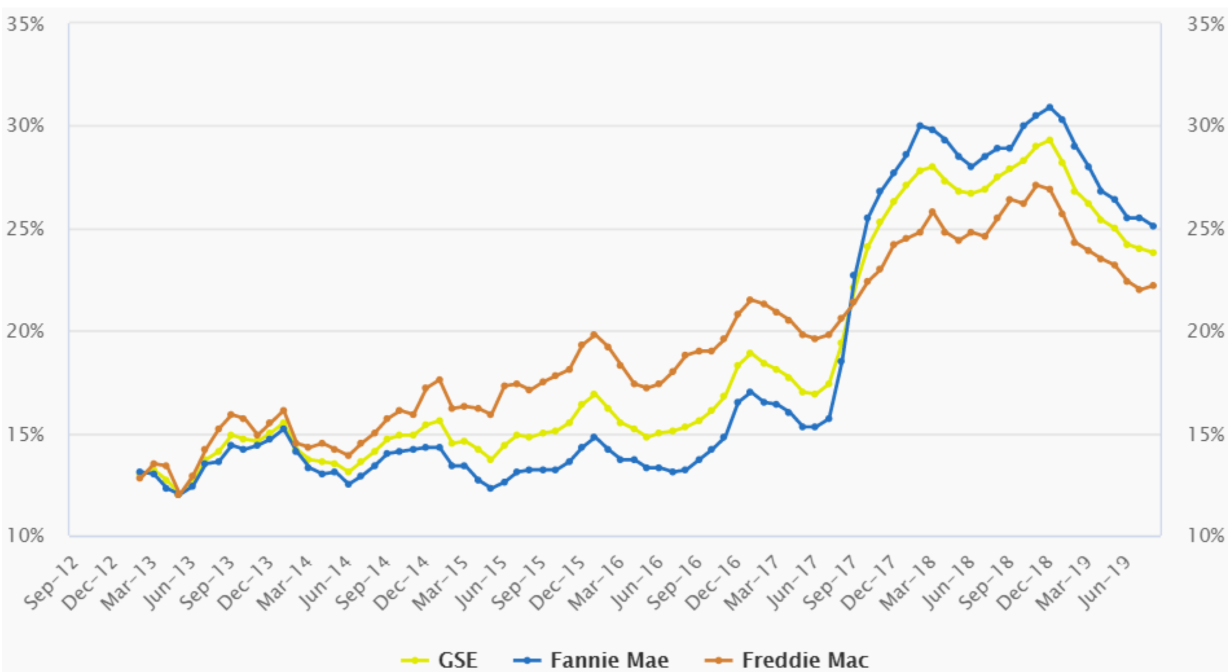
Chart 5: DTI Above 43% Share for Federal Housing Administration, Purchase Loans



Source: AEI Center on Housing Markets and Finance

The perception that partisan considerations were influencing decisions about credit risk, at least at the FHA, was then exacerbated by a politically sensitive decision made by the FHFA as conservator of the GSEs in 2017. For many years, Freddie Mac's limit on DTI had been 50%; the company took care that such high-DTI loans were, otherwise, strong in terms of credit, producing a decent track record of credit performance. (The statistical reality is that one poor credit input measure, especially a secondary one like DTI, is not enough by itself to make a loan be of unacceptable quality. Two or more weaknesses – known in the industry as "risk layering" – creates high credit risk, according to the data. Freddie Mac had done high-DTI lending successfully in modest amounts for many years by guarding against risk layering). Unlike Freddie Mac, Fannie Mae had historically capped its DTI at 45%, with very limited exceptions. The FHFA directed Fannie to end this disparity, seeing it as being inconsistent with fair lending requirements,[31] so that it (like Freddie Mac) would purchase loans from 45% to 50% if the credit was appropriate according to its statistical models but, importantly, without the use of additional special requirements they had been using previously, and which the FHFA believed were in possible violation of fair lending requirements. Unfortunately, the implementation of this change was flawed, causing an unexpectedly large increase not only in high-DTI loans (including, as a by-product, at Freddie Mac, but to a lesser degree), but also, unintentionally, in loans with "risk layering," a fact disclosed in SEC filings at the time. These increases also caught the attention of the housing finance policy community, with the conservatives taking them to be akin to what they believed was behind the FHA action a year-plus earlier: they saw them as the results of a government-led decision specifically to loosen credit, rather than as by-products of a flawed implementation that would be fixed. (The fix is now significantly underway, as shown in Chart 6; it takes a fairly long time to do, as the pipeline of a credit policy change impacting an actual securitized mortgage, upon which the data is based, is fairly long.)

Chart 6: DTI Above 43% Share for GSE, Purchase Loans

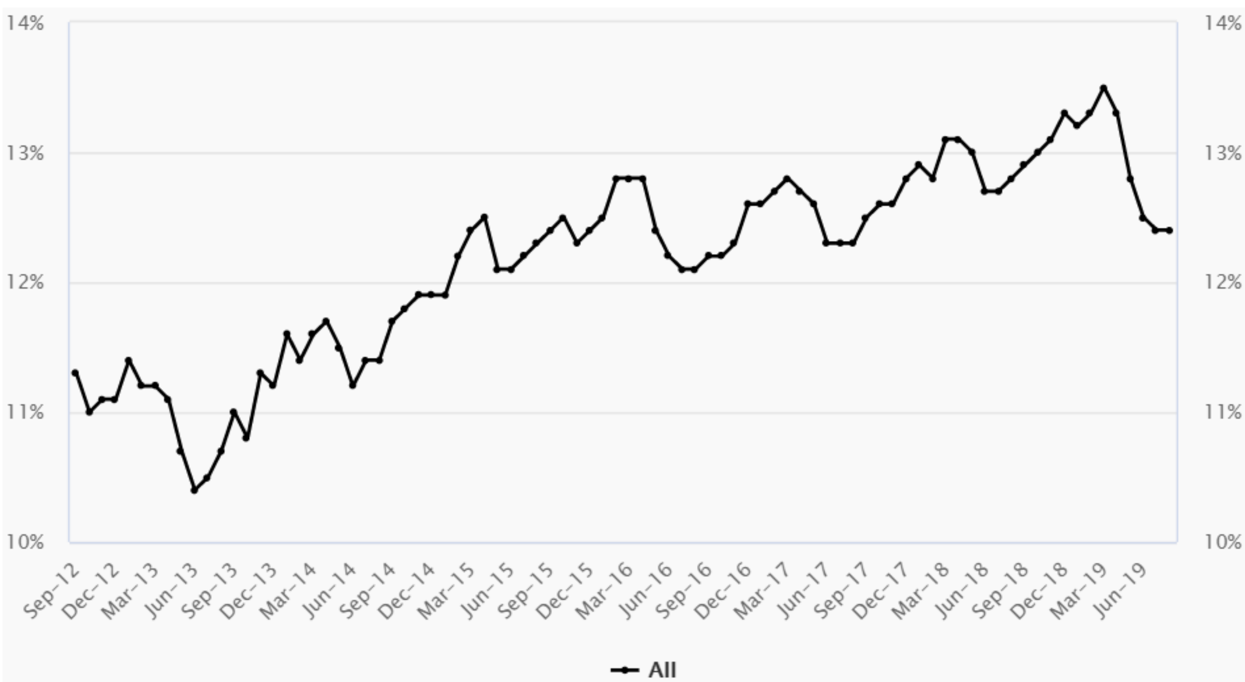


Source: AEI Center on Housing Markets and Finance

[31] "Fair Lending" refers to a combination of requirements and prohibitions contained in several consumer protection and civil rights laws and regulations, all designed to prevent discrimination in housing finance. Because the Fannie Mae policy was more restrictive than Freddie Mac, and because minorities are a greater percentage of high DTI borrowers, the difference was a potential violation of fair lending requirements.

But taken together, these two actions created a picture that the conservatives took to represent a major loosening of credit – engineered by the government through FHA (a unit of HUD) and the FHFA. The American Enterprise Institute (AEI), a prominent conservative think tank, also produces its own "National Mortgage Risk Index" (NMR Index) that is designed to be a measure of delinquencies (as a precursor to losses) that would occur in a stressed environment comparable to the 2008 Financial Crisis.[32] The NMR Index began a climb that gave quantitative concreteness to the narrative of credit loosening, on top of the gradual loosening the NMR Index had already shown from the 2012-13 era.

Chart 7: National Mortgage Risk Index, Purchase Loans



Source: AEI Center on Housing Markets and Finance

This narrative was established, please note, well before the large reduction in high-DTI loans that occurred in 2019, which reflects mainly the so-far partial fix of the implementation of the FHFA's DTI directive (and also an apparent change of policy at the FHA). I also note that the AEI-predicted stress default rate on all government loans (i.e., not just the GSEs' loans) went from the 11% range in 2012 to

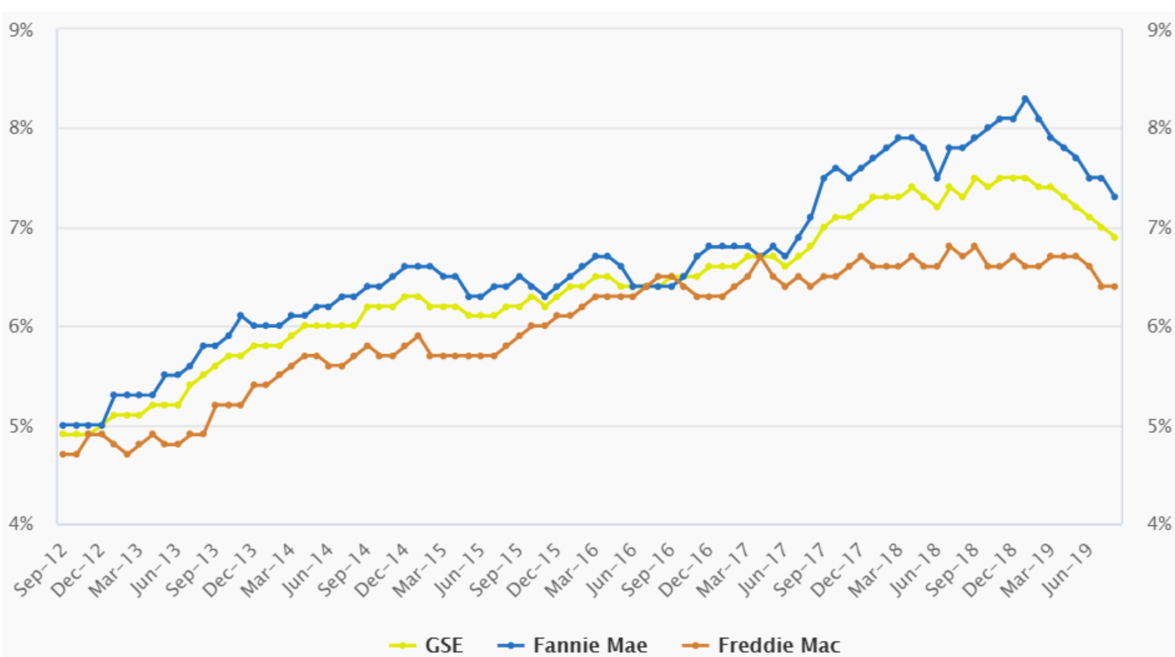
[32] Their methodology is reasonable, but it focuses only on predicting defaults, not actual losses. The DFAST calculations cited above are far more comprehensive, covering many more risks and sources of profit and loss at the GSEs.

the 13.5% range at its peak, but is now down to about 12.5%. This is a non-trivial level of increase, but not anything like the "dumpster fire" referenced at the Senate Banking Committee hearing.

The *Washington Post* then published an article on October 2, 2019, titled "Federal Government Has Dramatically Expanded Exposure to Risky Mortgages." The article referred to a "binge in high-risk lending." The entire premise of the article – with lots of claims about political pressures and such – is that there was an increase in high-DTI lending that would end very badly in the next and inevitable economic downturn. (The article gave no attention to other credit measures; the "big two," FICO and LTV, went conspicuously unmentioned.) This article is a clear embodiment of the conservatives' narrative; it has lots of caveats in the back half of the article (like reporting how the 43% DTI choice was very arbitrary), but these caveats did nothing to distract from the storyline of loose credit by the FHA and the GSEs, which were lumped together for the most part as "the government."

However, the picture is not so clear or extreme in the case of the GSEs alone. As shown in Chart 8, using the AEI's own measure of mortgage market risk, the GSE picture shows a very gradual increase from 2012 to 2017, at which point the flawed DTI policy change implementation began to distort the numbers; a major portion of that post-2017 increase has already reversed in 2019 as the implementation has been corrected. So, it's a picture of increased underwriting risk, but nowhere near as severe as at the FHA. (The index went from around 6-1/2% in 2015 to about 7-1/2% at its peak about a year ago, and is now down to under 7% again.)

Chart 8: National Mortgage Risk Index for GSE, Purchase Loans



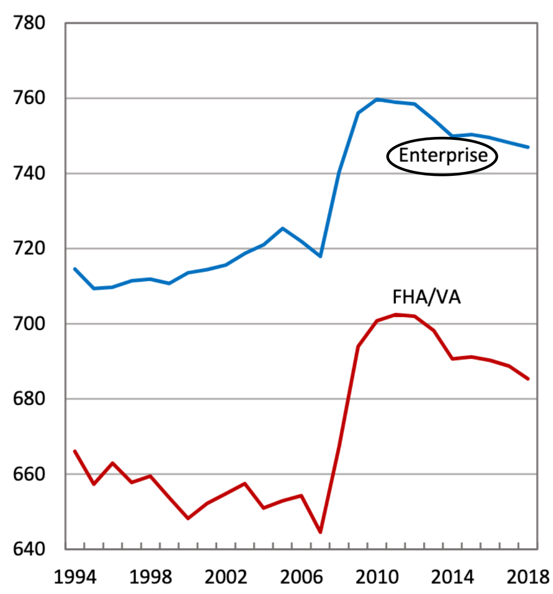
Source: AEI Center on Housing Markets and Finance

Section 3: Why the Loose Credit Narrative Is Flawed

Spoiler alert: what will be shown below reveals that the key problems with the conservative analysis are, first, the choice of 2012 as the year to begin all their trends, and, second, the massive over-focus on "over 43% DTI" as the singular measure of future probable credit losses. Whether chosen to intentionally bias the results or not, these choices produce a seriously flawed analysis. A fuller analysis produces a very different picture. The following analysis draws on a history of the past 25 years (rather than just 7) produced earlier this year by the FHFA (with the AEI, please note) for the GSEs, from which all charts below are excerpted.[33] It also examines a range of key credit risk-related features of GSE mortgages (rather than just one).

First, let's examine the 25-year trend of the "big two" credit indicators – the "first way out" of credit score, and the "second way out" of the LTV ratio.

Chart 9: Average Credit Score for Home Purchases, 1994-2018

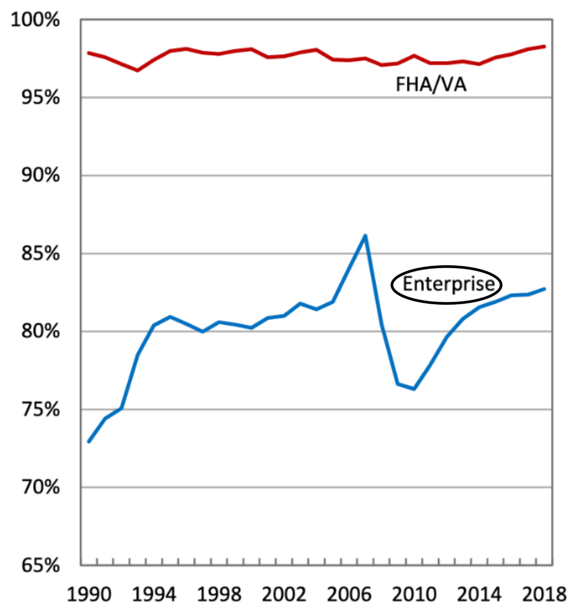


Source: FHFA Staff Working Paper 19-02: A Quarter Century of Mortgage Risk

[33] Morris A. Davis et al., "A Quarter Century of Mortgage Risk," FHFA Working Paper 19-02, October 2019, https://www.fhfa.gov/PolicyProgramsResearch/Research/PaperDocuments/wp1902.pdf.

The average credit scores today – at the FHA/VA[34] and at the "Enterprise" (meaning the two GSEs added together) – are materially higher than they were prior to the Financial Crisis. Some would argue they may be too high. For the GSEs, they are about 25 to 20 points higher than the benchmark years of 2000 to 2002, regarded by many as a period of quality risk underwriting in the mortgage industry. This increase in credit scores is a material *reduction* in the risk being taken by the GSEs, not an increase.

Chart 10: Average CLTV for Home Purchase Loans, 1990-2018



Source: FHFA Staff Working Paper 19-02: A Quarter Century of Mortgage Risk

The "second way out" shows a more mixed pattern. The GSEs averaged just over 80% LTV in the benchmark years prior to the lead-up to the Financial Crisis; they then allowed it to grow to over 85% in the loose lending years running up to 2007, after which it plunged. More recently, it has been increased and is now about 82% to 83%.

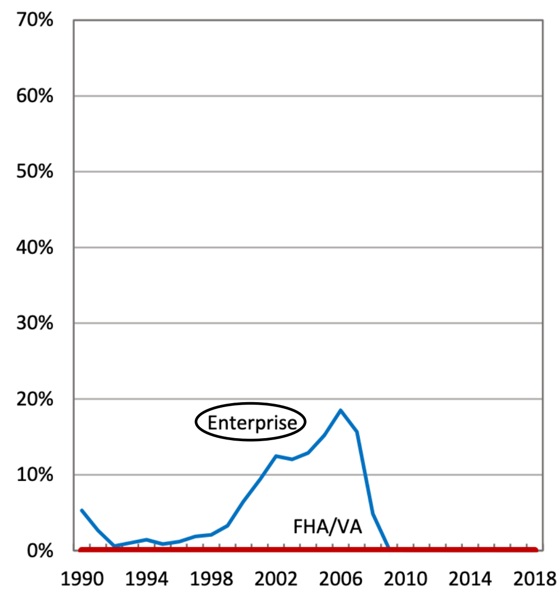
Taken together, the "big two" paint a picture of underwriting that is now the same as or more conservative than in the benchmark years of 2000 to 2002. That's because the increased average FICO score means more homeowners will be able to meet their mortgage payments in the ordinary course,

[34] The Veterans Administration (VA) also guarantees mortgages in a similar fashion to FHA. Here they are added together. The inclusion does not substantively change any of the results, especially as the focus of this paper is on the GSEs.

and lenders will not have to resort as often to foreclosure or foreclosure alternatives to "get their money back." That's better for everyone, especially the homeowner.

Now, let's look at the improvements made in underwriting that reflect not doing no-documentation or low-documentation loans (Chart 11) or not doing those with less-than-full-amortization, one of the features the CFPB properly considers likely to be abusive of homeowners and thus "non-QM" (Chart 12).

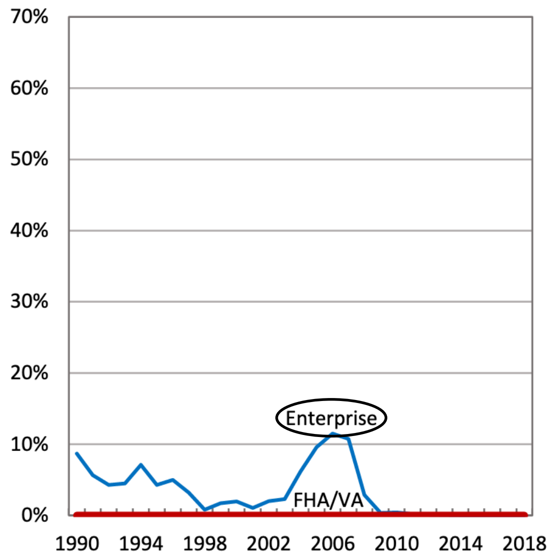
Chart 11: Share of Home Purchase Loans with Low or No Documentation, 1990-2018



Source: FHFA Staff Working Paper 19-02: A Quarter Century of Mortgage Risk

The pattern here is clear – improved credit underwriting, as the GSEs no longer do any low- or no-documentation loans. The same is true, as shown in Chart 12, for "less-than-full amortization lending." Such loans are no longer done, but a lot were done by the GSEs even before the bubble years of 2005 to 2007. This change in lending practices further insulates the GSEs, the taxpayers and their CRT investors from risk.

Chart 12: Share of Home Purchase Loans with Less Than Full Amortization, 1990-2018



Source: FHFA Staff Working Paper 19-02: A Quarter Century of Mortgage Risk

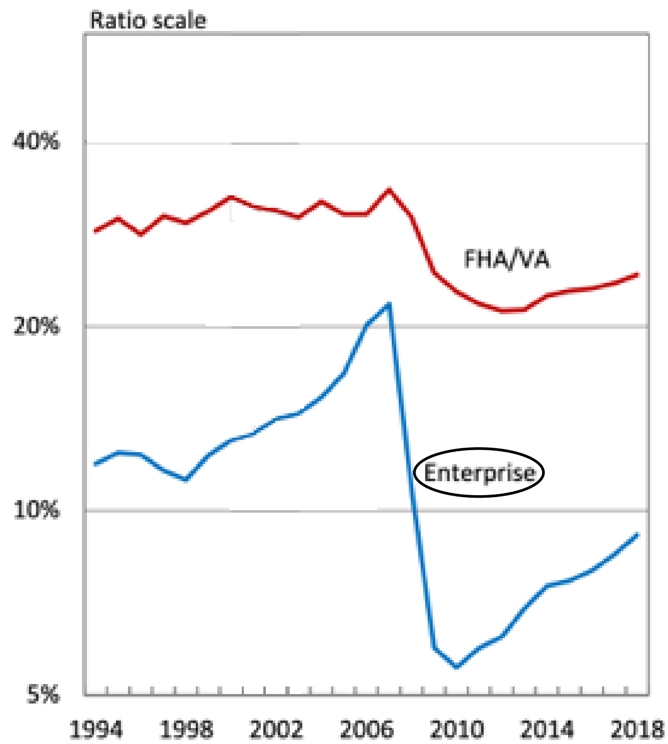
These two charts, which reflect the adoption of the QM product and documentation standards by the GSEs, are quite material in representing improved credit underwriting. Post-Financial Crisis analysis has led to a consensus that a large share – maybe half, as a very rough estimate – of credit losses were enabled by what are now non-QM design features.

The FHFA study also includes a "stressed default rate," which uses a comparable methodology to the AEI's NMR index but with enough differences that, as of late 2018, the FHFA stress default rate of about 9% is even higher than the AEI one of about 7-1/2%.[35] Over the 25 years for which the FHFA working paper published stressed default rate data, however, a very clear trend picture emerges. It shows that underwriting standards today are *not* out of line or higher than the benchmark years prior to the buildup to the Financial Crisis. Focusing specifically on the GSEs (again, "Enterprise" in the chart), it shows that the poor risk decisions of the bubble years led to a major reduction in risk-taking immediately afterwards that bottomed out in 2009 to 2011, with a "return to normalcy" since then that

[35] As a great example of the politicization of this topic, the Urban Institute, a left-of-center "think tank" with a substantial housing finance practice, produces its own risk index in its monthly "Housing Finance at a Glance" chartbook, which shows that as of late 2018 the stress default rate is about 3%, less than half, leading it to the conclusion that credit is too tight, the exact opposite conclusion of the AEI. See https://www.urban.org/research/publication/housing-finance-glance-monthly-chartbook-november-2019/view/full_report

leaves underwriting risk – per the FHFA's stressed default rate – still noticeably below where it was in the benchmark years of 2000 to 2002.[36]

Chart 13: Stressed Default Rate for Home Purchase Loans, 1994-2018



Source: FHFA Staff Working Paper 19-02: A Quarter Century of Mortgage Risk

In fact, there is often a misinterpretation that GSE credit risks – as measured here by the stressed default rate – are solely the result of the GSEs' credit policies. In fact, the GSEs define for the lenders who sell them loans what is called "the credit box" – that is, the outer limits of the mortgage risk each of them will take. It is well known in the industry that after the 2008 Financial Crisis got underway, lenders and potential borrowers became very cautious. Lenders added "overlays," i.e. terms more restrictive than what the GSEs permitted, due to the uncertain legal risks associated with varying underwriting practices.[37] Potential homeowners, having had the shock of seeing dramatically declining

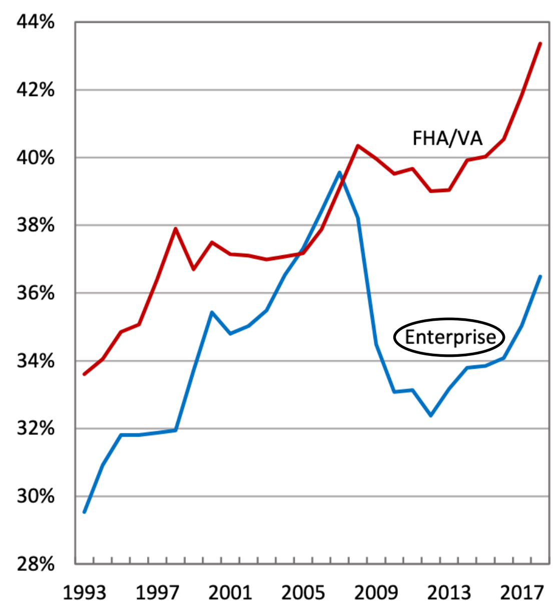
[36] The credit data for 2000 to 2002 also include certain underwritings that are now non-QM and therefore no longer done. Thus, the benchmark stressed default rate of today's product line (e.g., with no 'no- or low-documentation' loans) would be modestly less than what is shown for those years.
[37] The most noteworthy of these were about "representations and warranties," where lenders had risk of being required to repurchase loans due to documentation defects. There was an FHFA-driven major reform of this

house prices, were also more conservative than normal. Their behavior also contributed to the less-than-full usage of the GSE credit box until recent years.

Again, the overall GSE picture is very clear – the AEI charts showing the increase in risk starting in 2012 in fact reflect the "*return to normalcy"* after the shock of the Financial Crisis, with the "new normal" being perhaps generally a bit more conservative than prior to the Crisis.

And what does the FHFA study show about DTI, the almost-exclusive focus of the "GSE credit is loose" narrative in the *Washington Post* and among conservative commentators?

Chart 14: Average DTI for Home Purchase Loans, 1993-2018



Source: FHFA Staff Working Paper 19-02: A Quarter Century of Mortgage Risk

The GSEs – separate from the FHA/VA,[38] for which the chart shows a significant deterioration from before the Financial Crisis – show that return to normalcy as well through 2016; in 2018, the last year of the chart, the GSE numbers are very definitely above the pre-Crisis benchmark years, reflecting the implementation of the FHFA's high-DTI directive that began in 2017 (the data end before the

"representation and warranty risk" from 2012 to 2015, so that lender overlays dissipated and had mostly disappeared by 2016-17.

[38] The increase in high-DTI lending by FHA/VA is quite pronounced, by comparison. It does not drive a similar increase in the stressed default rate, as shown in Chart 13, but is definitely worth more examination by policymakers.

reversal in 2019 from that directive's implementation being fixed).[39] But as high DTI is just a secondary input into mortgage risk, as measured in Chart 13 by a stress default rate, it matter relatively little that it was higher than pre-Crisis.

Conclusion

The world of housing finance in America is very politicized. I can attest to that first-hand. One aspect of that politicization – although nowhere near the biggest – is that the portrayal of GSE credit underwriting standards and the creditworthiness of the portfolio of their guaranteed mortgages is caught up in the usual left-right politics. Conservatives see the GSEs' credit as loose and their underwriting standards as weak; liberals see GSE credit as too tight and priced too high, needlessly denying the benefits of homeownership to many who could benefit by it.

The recent outbreak of the "loose GSE credit" narrative – it's not the first, and it probably won't be the last – has been based heavily upon two supposedly data-driven but in fact biased (and therefore misleading) aspects of the credit analysis underlying this narrative: (1) focusing almost exclusively on "DTI over 43%" as a reliable measure of credit quality, which it is *absolutely* not (notwithstanding the CFPB's using it as an "ability to repay" measure for its QM rule), and (2) using 2012 as the initial year to show trends, when that year, still in the aftershock of the Financial Crisis and before market conditions returned closer to normal, featured just about the most conservative profile of GSE credit risk in recent memory.

A fuller analysis taking into account all the factors that produce GSE credit quality in a mortgage portfolio, especially the "big two" of FICO and LTV, and starting 25 years ago, shows a totally different picture. Given all the changes in laws, regulations and market practices – such as requiring full documentation, and avoiding risk-intensive products – it is not surprising that this fuller analysis shows that GSE credit is not, in fact, loose; on the contrary, it is returning to roughly the normal range that existed before the buildup to the Financial Crisis, and it is arguably a bit more conservative (thanks largely to the increasing average FICO score and the implementation of QM in terms of product restrictions and documentation requirements).

This fuller analysis does not even take into account the impact of Credit Risk Transfer, as the two GSEs sell off credit risk to global and diversified institutional investors. As per the DFAST results,

[39] Why the Trump administration has taken so long to turn around the unduly increased DTI of the FHA/VA portfolio is unknown to me. The focus of this article is on the GSEs.

including CRT means that risk is down (and down by a lot), even in the extreme stressed scenario assumed in the DFAST process.

Policymakers should thus not listen to those still "fighting the last war" – a lot of things the government did to guard against a repeat of the Financial Crisis have in fact produced a safer housing finance system in the US. They should instead focus on other, more important housing issues rather than the loose credit narrative[40] – it's a policy red herring.

[40] The most important of these other issues would be the shortage of new housing production in both the single-family and multifamily markets, which has lasted over a decade now and shows few signs of abating. It is probably the biggest single cause of housing affordability issues today.