



publicpolicy.wharton.upenn.edu

# A New Coalescence in the Housing Finance Reform Debate?

Susan Wachter, PhD, and Patricia A. McCoy, JD

ISSUE BRIEF

VOLUME 4

NUMBER 6

JUNE 2016

Nearly eight years after their conservatorship was first announced, the GSEs remain in the same “temporary” arrangement that was put into place to calm the storms of the housing and financial crises of 2007 and 2008.

Namely, Fannie Mae and Freddie Mac continue to be controlled by the Federal Housing Finance Agency (FHFA) under the dictates of the Housing and Economic Recovery Act of 2008.<sup>1</sup>

Two years ago there appeared to be substantial forward movement in the prospects for long-term housing finance reform. Bipartisan legislation was put forth, the Johnson–Crapo bill,<sup>2</sup> which had considerable support. In any event, the proposed legislation did not come to a floor vote. Despite this lack of resolution, leading industry groups and the Obama administration are once again calling for Congress to put into place comprehensive reform.<sup>3</sup>

Impeding comprehensive reform are not just differences about the goals of housing finance reform but also differences in the technical understanding of how the secondary markets need to be structured in order to accomplish the goals of a sustainable, efficient and equitable housing finance system. Nonetheless, there is consensus on a number of points important for the structuring of the housing finance system. An [Issue Brief](#) put forth last year by the Penn Wharton Public Policy Initiative showcased these points of consensus.<sup>4</sup>

Beyond the continued calls for congressional

## SUMMARY

- In the wake of the stalled Johnson-Crapo bill, the overarching goal of housing finance reform continues to be the efficient provision of long-term fixed-rate mortgages to credit-worthy borrowers in all markets throughout the business cycle.
- This Issue Brief analyzes three newly-proposed plans for reforming the U.S. housing finance system: (1) a proposal from Jim Parrot et al. to merge Fannie Mae and Freddie Mac into a new government corporation; (2) Andrew Davidson’s proposal for mutual ownership of the GSEs by mortgage originators; and (3) an opposing plan from Mark Calabria, arguing against securitization altogether and for a return to the regime of originate-and-hold.
- Despite differences regarding implementation and governance philosophy, a new consensus may be emerging for reform, demonstrated most clearly in the first two proposals evaluated here, which recognize the efficiency of centralizing and concentrating control of the housing finance system’s infrastructure and credit risk.
- Despite the important points of consensus, the new proposals still leave certain issues unresolved, including the potential for cyclicity. Still, broad support for centralized functions (i.e., promoting standardization, liquidity, consumer protection, and access to credit), as well as the organic growth of credit risk transfer transactions in recent years, may be important to reigniting the push for resolution of GSE conservatorship.



action, there now appears to be new thinking on how the secondary market needs to be structured for housing finance reform. Strikingly, this new thinking may herald coalescence in the housing reform debate. The Urban Institute has called for and received a number of contributions on rethinking the necessary components of reform.<sup>5</sup> This Issue Brief is informed by a research symposium, jointly sponsored by the Penn Wharton Public Policy Initiative and the Penn Institute for Urban Research, held in Washington, D.C., on June 15, 2016, for presenting and discussing several of these proposals.

This Issue Brief analyzes the potential merits and shortcomings of three of the new proposed plans seeking to restart the conversation on reforming the country’s housing finance system. In addition to the proposals discussed below, this Issue Brief also includes a discussion of the new points of consensus in the debate over securitization reform, commentary on alternative solutions, and a discourse on unresolved issues and persistent unknowns. Ultimately, there is reason for optimism that the new proposals discussed here are laying the foundations for bringing GSEs out of the limbo of the last decade.

## THE PRIOR CONSENSUS FOR SECURITIZATION REFORM

Last year’s Issue Brief laid out four points of consensus included in most reform packages and specifically embodied in Johnson-Crapo.

Those were:

- Preservation of the to-be-announced (TBA) market for trading mortgage-backed securities (MBS), given the ongoing political reality of long-term fixed-rate mortgages in the U.S.;
- Private capital in a first-loss position to absorb downturns in the MBS market, with a government guarantee as a backstop to insure against catastrophic outcomes, paid for by borrowers through guarantee fees, or g-fees;
- Creation of a common securitization platform (CSP) to provide enhanced transparency, liquidity, and oversight of credit standards;
- Specific plans for addressing affordable housing goals.

New proposals go further, taking on key points that previously were sources of contention and ultimately led to the stalling of GSE legislation in the last go-around, and arguably, moving the dialogue forward, to at least the beginnings

of a new consensus. This new consensus, at least as demonstrated most clearly in the two main proposals we focus on here, involves a recognition of the efficiency of centralizing and concentrating control of the system’s infrastructure and credit risk. The state of the debate as Johnson-Crapo was being considered included critical differences in opinion on the efficacy of the very structure of the entities that Johnson-Crapo put forward to take over the role of the GSEs. Specifically, Johnson-Crapo proposed distributing the GSE functions among many actors and multiple firms in order to deliver a competitive industry.

The new proposals appear to offer additional points of consensus on the distribution of GSE functions among actors and firms. This move may represent an important transformation, as it involves a new consensus on an issue that had been a critical point of disagreement. In short, most of the new proposals clearly identify the infrastructure role of the GSEs as a necessarily centralized function. The platform concept was put forth in several of the previous proposals, including the Hensarling bill<sup>6</sup> and Johnson-Crapo, but in these new proposals the concept is recognized as in fact the central function of the hous-

## NOTES

<sup>1</sup> Prepared Remarks of Melvin L. Watt, Director of FHFA, at the Bipartisan Policy Center, February 18, 2016.

<sup>2</sup> Housing Finance Reform and Taxpayer Protection Act of 2014, S. 2017, 113th Cong., 2d Sess.

<sup>3</sup> Trey Garrison, “Stegman: White House will not consider recap and release of GSEs,” *Housing Wire*, October 19, 2015; Ben Lane, “Mortgage bankers, Realtors, home builders to FHFA: Let Congress handle GSE reform,” *Housing Wire*, June 8, 2016.

<sup>4</sup> Susan Wachter, “Next Steps in the Housing Finance Reform

Saga,” Penn Wharton Public Policy Initiative Issue Brief, 3:2 (March 2015).

<sup>5</sup> Proposals are available at <http://www.urban.org/policy-centers/housing-finance-policy-center/projects/housing-finance-reform-incubator>. On the single-family market, Moser is explicit in identifying the secondary function as a natural monopoly. Other proposals range from suggesting using the FHLBB as the base for a new secondary market (Pollock) to adding two Newcos to the existing GSEs, while allowing new entries into a heavily regulated market (Mill-

stein).

<sup>6</sup> Protecting American Taxpayers and Homeownership Act of 2013, H.R. 2767, 113th Cong.

<sup>7</sup> Parrott, Ranieri, Sperling, Zandi, and Zigas, “A More Promising Road to GSE Reform”, 2016.

<sup>8</sup> Id.

<sup>9</sup> Id.; “Must Government Remain a Backstop for Fannie and Freddie?,” *Knowledge@Wharton*, May 24, 2016, [http://knowledge.wharton.upenn.edu/article/160523\\_the\\_future\\_of\\_fanniemaes\\_and\\_freddiemac-andrew-davidson/](http://knowledge.wharton.upenn.edu/article/160523_the_future_of_fanniemaes_and_freddiemac-andrew-davidson/).



ing finance securitizing entity. There is recognition that this “platform” is not efficiently provided by individual firms but rather as a centralized infrastructure function.

By consolidating the purchasing, pooling, master servicing, and risk control functions, ultimately the centralized infrastructure function enables and increases competition where it should occur. An equally important outcome is that interest rate risk is separated from credit risk, enabling the TBA market to exist and credit risk to be centrally controlled.

The result of efficient provision of centralized functions is more competition rather than less in the system as a whole, although there are trade-offs. In the words of one key new proposal that advocates centralization:

We give up some competition across these dimensions. How much is difficult to tell, as regulators would inevitably impose significant limitations on the discretion that they would allow private companies providing these functions, given the benefits of standardization and the importance of managing risk and consumer protection in the system. However, they would no doubt give private institutions at least some discretion, which would

lead to differentiation and competition, resulting in a system that is in some respects more nimble and efficient than the one we propose, with more innovation in developing new mortgage products, servicing loans, and sharing credit risk. As we learned in the crisis, not all of that competition and innovation would be beneficial to consumers or the stability of the market, but surely much of it would.<sup>7</sup>

Nevertheless, the authors believe that centralization is “worth the trade-off”:

By putting the key infrastructure into a government corporation, we level the playing field for lenders of all sizes to compete rather than become beholden to larger institutions that have gained an advantage in times past by taking control over access to the secondary market. Our system also promotes competition in the secondary market across a wider range of sources of private capital, including capital markets, reinsurers, private mortgage insurers, lenders, and other private entities.<sup>8</sup>

The overarching goal of housing finance reform for the bulk of the new proposals continues to be the providing of long-term fixed-rate mortgages

to credit-worthy borrowers in all markets throughout the business cycle in the most efficient way possible.<sup>9</sup>

While the recognition of a need for centralized secondary market functions is core to two of the new proposals we focus on here and appears to be a part of many of the new proposals, there are still many deep differences in the options for housing finance reform. These include important issues of implementation and governance philosophy that are in contention, to which we turn below.

## PROPOSAL 1: THE GOVERNMENT CORPORATION

A diverse group of housing finance and policy experts—Jim Parrott, Lewis Ranieri, Gene Sperling, Mark Zandi, and Barry Zigas—have proposed a new consensus-minded system in which Fannie Mae and Freddie Mac would cease operating as *de facto* public utilities under conservatorship and would merge into a single entity.<sup>10</sup> This entity would take the form of a government corporation, which the authors have tentatively named the National Mortgage Reinsurance Corporation (NMRC). They argue that a government corporation has much of the flexibility

## NOTES

- <sup>10</sup> Parrott, Ranieri, Sperling, Zandi, and Zigas, “A More Promising Road to GSE Reform”, 2016.
- <sup>11</sup> All loans would have to meet the definition of a “qualified mortgage” and be subject to FHFA price limits.
- <sup>12</sup> Fannie Mae and Freddie Mac have had success in recent years with transferring mortgage credit risk to the private market through structured debt issuance transactions known as Connecticut Avenue Securities (CAS) and Structured Agency Credit Risk (STACR), respectively. While MBS protect investors against the credit risk of underlying

mortgages and exposes them only to interest rate and prepayment risks, CAS and STACR remove that credit risk from the GSEs and offer it to the private market as an investment opportunity. The GSEs also have tested the appetites of private investors for credit risk through insurance/reinsurance transactions, front-end lender risk sharing transactions, and a senior subordinate security. Thus far, private investors, including asset managers, hedge funds, and insurance companies (among others), have demonstrated their capacity and willingness to invest in non-catastrophic

- credit risk. In 2015, Fannie Mae transferred to them the risk on \$187 billion of collateral (\$5.9 billion through CAS) and Freddie Mac on \$210 billion (\$6.6 billion through STACR). Both enterprises surpassed FHFA risk sharing requirements. Today, the guarantee fees borrowers pay on GSE securitized mortgages are set by the Federal Housing Finance Agency and do not fluctuate with market conditions.
- <sup>13</sup> Davidson, “Four Steps Forward: Streamline, Share Risk, Wrap, and Mutualize”, 2016.
  - <sup>14</sup> Andrew Davidson & Co., “Simplifying GSE Reform: A Round-



of a private entity without the rule-making and compensation constraints imposed by Congress on government agencies. The NMRC would be a closely regulated monopoly, charged with “balanc[ing] broad access to credit with the safety and soundness of the mortgage market.” Although the authors envision the NMRC as free from the profit- or market share-driven motives inherent in a stock corporation and the unavoidable and complex organizational challenges of a mutual, they also contemplate private investment in NMRC consisting of common equity of 3.5% and preferred equity of the same percentage.

The new entity would perform the same core functions as the GSEs. It would purchase conforming loans, pool them, issue securities backed by those loans through a CSP, provide master servicing on the underlying loans, ensure compliance with affordable housing goals and duty-to-serve requirements (funded by a 10 bps affordability fee), and maintain a “cash window” to provide equal access to liquidity to lenders of all sizes, including community banks and other small lenders.<sup>11</sup> But there would be important differences. The NMRC would provide an explicit guarantee on timely payment of principal and

interest of its MBS, backed by the full faith and credit of the federal government and funded by a 10 bps g-fee. It would also be required to transfer all non-catastrophic credit risk to the private market. The price of risk established through the trading of credit-linked notes and other credit risk transfer mechanisms would be passed on to mortgage borrowers and would change with market conditions.<sup>12</sup>

Finally, NMRC would be prohibited from using its modest retained portfolio for investment purposes. In this proposal, the FHFA would continue to serve as the regulator for both the NMRC and the Federal Home Loan Banks (FHLBs). The FHFA also would establish the g-fee for the catastrophic risk and maintain a mortgage insurance fund (MIF) financed by those g-fees, essentially acting as a backstop for the housing finance system similar to the FDIC’s role for the banking system.

The proposal estimates that private capital will cover the first 3.5% of losses, with the MIF supplying an additional 2.5% of first-loss coverage. This 6% capitalization is double the realized GSE losses during the housing crisis but less than the 10% required under the Johnson-Crapo Act. The proposal lists other benefits

to a government corporation. The NMRC would have the flexibility to scale back risk transfers if an established crisis threshold was breached. This threshold would act as an effective cap on g-fees and mortgage rates.

The improvements over the Johnson-Crapo Act motivating this proposal are appealing. Policymakers will appreciate that mortgage rates, under the assumptions laid out, are no higher than in the current system, although the rates would be more procyclical. The transition from GSEs to NMRC could be orderly, as it simply would accelerate what the FHFA is currently doing. And, finally, the government corporation could foster coordination vis-à-vis loan limits and priorities between itself and other government housing agencies (the FHA, the VA, and USDA), resulting in a more unified federal approach to housing.

## **PROPOSAL 2: THE MUTUAL**

Andrew Davidson has put forward another proposal for housing finance reform.<sup>13</sup> His proposal underscores the degree of consensus by tracking Proposal 1 in important respects. Like Parrott and his co-authors, Davidson would centralize the buying

## **NOTES**

table Discussion,” 2015.

<sup>15</sup> Calabria, “Coming Full Circle on Mortgage Finance,” 2016.

<sup>16</sup> This would require the controversial step, however, of extending the current risk retention requirements to qualified mortgages.

<sup>17</sup> Diana Hancock and Wayne Passmore. 2016. “Macroprudential Mortgage-Backed Securitization: Can it Work?” In *Principles of Housing Finance Reform*, Susan M. Wachter and Joseph Tracy, editors. Philadelphia: University of Pennsylvania Press.





and pooling of loans, the issuance of MBS, and master servicing activities in his new proposed entities. Building off of the recent credit risk transfer successes, Davidson's proposal would establish reinsurance and credit risk-sharing programs for up to 75% of risk on new GSE loans, providing first-loss coverage backed by high-quality assets.<sup>14</sup> There would also be a government backstop in the form of an explicit federal guarantee of the entities' MBS, which would be closely regulated and akin to what Ginnie Mae securities currently receive. This guarantee would be funded by g-fees, while affordable housing goals would be funded by an affordability fee, both intended to cushion any losses. Finally, similar to Proposal 1, the new entities' retained portfolios would be sharply reduced.

However, the governance structure differs. This proposal puts forth mutual ownership of the GSEs by mortgage originators as an alternative to a government corporation. Fannie Mae and Freddie Mac each would be given the opportunity to convert themselves into mutuals, funded by mortgage activity and regulated by the FHFA. Ideally, the mutual structure would ensure that all profits would be paid out to the mutual owners in the form of dividends and that these funds would be recycled directly back into their mortgage businesses. Davidson also differs somewhat with Proposal 1 in that, while the national duty-to-serve responsibility is a federal mandate, it would be up to the mutual to determine how to incent its members to implement those responsibilities. The overall responsibility is the same, but mutual members would

have greater say in how to implement the national duty-to-serve responsibilities than they would with a government corporation.

A third major way in which the Davidson proposal differs from Parrott et al. is by limiting the mutuals' exposure for losses up to a vintage or cohort limit, with the government wrap covering any additional losses. This would permit the mutuals to survive a housing market collapse or other market catastrophe. Further, in distressed conditions where the availability of private capital is insufficient, the Treasury would be allowed to assume part of the credit risk for new vintages (for an unappealingly high but reasonable return).

Davidson also has thoughtful proposals to ease the transition. If the two new mutuals could not coexist indefinitely, eventually merging into a single mutual sometime in the future (as this plan effectively bolsters a natural monopoly), that combination is not necessary immediately in order for Congress to move Fannie Mae and Freddie Mac out of conservatorship. A CSP, though desirable, also is not mandatory at first, especially if it would be too costly to implement or if it would slow down the transition.

The FHFA can undertake further streamlining measures by itself. But before Congress could authorize the government wrap or the establishment of a mutual structure for the GSEs, it must first facilitate the expansion of the risk sharing investor base in order for this proposal to work. Here Davidson goes into more specific detail than Proposal 1. As the Urban Institute has noted, demand for structured debt issuances is leveling off. Serious explo-

ration of credit-linked notes (CLNs) and other reinsurance mechanisms demands markets with sufficient investors. Davidson recommends several reforms, including changes to IRS and SEC rules to allow REITs to invest in GSE credit risk bonds. He would also amend the bank capital treatment of credit risk transfer transactions and CFTC rules limiting the use of CLNs. In short, Davidson writes, "Bonds created by the GSEs under the regulatory oversight of the FHFA should not be treated like the subprime and [CDO] investments that contributed to the crisis." Davidson would go even further in reducing taxpayer risk and the concentration of credit risk in the economy by developing risk retention and up-front risk sharing for originators on a pooled or specific basis and by establishing capital rules for the mutuals that encourage risk sharing while addressing counterparty risk.

While these proposals are similar in foundational ways, the governance set-ups differ. These differences may not be as important as they seem because Proposal 1 is flexible with the potential of a utility structure or of a mutual or in fact could have shareholders as well.

### **ALTERNATIVE PROPOSAL: ORIGINATE-AND-HOLD**

Mark Calabria of the Cato Institute offers a divergent, non-consensus plan for reform.<sup>15</sup> Arguing that the most fundamental flaw of the housing finance system is investors' lack of knowledge or concern about the underlying credit risk of MBS—even- tually leading to a consolidation of



risk in the most leveraged sectors of the financial system—he advocates against securitization and for the return to the regime of originate-and-hold that prevailed prior to 1980.

Going forward, he proposes that GSE charters be converted to national bank charters, thus reorganizing the GSEs as bank holding companies (BHCs). The GSEs would continue to pool and securitize mortgages, to the extent the market supported this, but without any government guarantees (other than the guarantees through deposit insurance that depositories receive) but they also would be able to originate, collect deposits, and engage in other bank activities. Furthermore, the addition of two large BHCs into the financial system would increase competition. An obvious downside would be an exacerbation of the TBTF problem, though Calabria does call for greater BHC capital requirements. The other and salient downside is, as Calabria acknowledges, that the system likely would move towards short-term mortgages, such as prevail in Canada. The Calabria proposal is instructive in that it clearly lays out how the structure of the housing finance system dictates what mortgages are likely to be offered.

## UNRESOLVED ISSUES AND PERSISTENT UNKNOWNNS

In all three of the proposals, there remains the potential for cyclicity, both in terms of g-fees and mortgage rates themselves. For instance, Parrott and his colleagues envision a crisis scenario where private investors increase their required return on equity from 10% to 25%, caus-

ing g-fees to rise by 53 bps. At that point the federal government would step in. An increase of this size likely would cause lending to contract and slow down the recovery. However, this procyclicality could be mitigated by counter-cyclical standards for capital and provisioning as well as risk retention requirements,<sup>16</sup> posing less of a threat than the procyclicality inherent in the Johnson-Crapo Act.

On the related subject of capital, the government corporation proposal terms its plan for total capitalization of 6% as adequate, on grounds that that level is approximately double the losses realized by the GSEs due to the crisis. However, the proposal fails to respond to serious critiques calling for higher private capitalization of 15% or more, as discussed in the previous Issue Brief, which again suggests that the proposal underestimates the potential for procyclicality. It also should be noted that capital requirements should be inverse to the procyclicality of the system as a whole. Thus, the importance of a system that promotes stability.<sup>17</sup>

Proposals 1 and 2 also tee up the question of the proper choice of entity. The mutual form is more conducive to efficiency. Meanwhile, mutuals face difficulties in raising capital and well-known governance challenges that are unique to the mutual form.

None of the proposals addresses the possible re-emergence of a private-label market for non-amortizing products and other non-qualified mortgages and the resulting implications for moral hazard by the successor(s) to the GSEs. If these riskier loans gain headway, what would stop the NMRC or a mutual

from loosening credit standards to preserve market share (particularly if leadership at FHFA was weak)? Even without a response from the NMRC or mutual, would this not destabilize the system?

Similarly, all three proposals are silent about the opportunity that GSE reform affords to institute fundamental reforms of mortgage servicing practices. Among those problems, servicer compensation and loss mitigation protocols need thorough revamping going forward.

Another unresolved issue in the Davidson proposal concerns the limiting of MBS losses by cohort or vintage and whether such a feature is necessary. Grouping MBS by vintage theoretically confines losses to one year's book of business, but it cannot perfectly insulate lenders from serial correlation and the practical creeping of losses across years. This brings to the fore the greatest unknown for the NMRC and mutual proposals: what if the federal government does need to intervene in the housing system again?

For example, if investors suddenly flee the credit risk transfer market and a GSE successor experiences a run and requires a bail out, what are the implications, both from a political standpoint and in terms of moral hazard? Could the flight from securitization markets in 1998 and 2007-2008 occur again? These questions warrant consideration, particularly given the perverse incentives toward even greater risk-taking going forward.

A final unknown that needs to be carefully addressed is whether the estimates in Proposal 1 regarding capitalization and the NMRC's ability



to raise sufficient private capital to cushion losses and avoid procyclicality are sufficient or too low, and whether raising the necessary funds is feasible.

## CONCLUSION

With each passing year, the “temporary” conservatorship of the GSEs becomes more and more untenable.

Fortunately, over time, there appears to be more agreement among proposals than is currently recognized, and increased coalescence around a path forward in the debate over GSE reform, despite several points that still require reconciliation. Broad agreement over the need for centralized functions—promoting standardization, liquidity, consumer protection,

and access to credit—and the organic growth of credit risk transfer transactions in recent years, may be enough to reignite the conversation and lead to a resolution of the conservatorship, which is needed for the long-term stability of the U.S. housing finance system.



**ABOUT THE AUTHORS**

**SUSAN M. WACHTER, PHD**

Albert Sussman Professor of Real Estate and Professor of Finance, The Wharton School

From 1998-2001, as Assistant Secretary for Policy Development and Research, U.S. Department of Housing and Urban Development, Professor Wachter served as the senior urban policy official and Principal Advisor to the Secretary on overall HUD policies and programs. At The Wharton School, she was Chairperson of the Real Estate Department and Professor of Real Estate and Finance from July 1997 until her 1998 appointment to HUD. She founded and currently serves as Director of Wharton's Geographical Information Systems Lab, and is Co-Founder and Co-Director of the Penn Institute for Urban Research. Previously, Wachter served as a member of the Board of Directors of the Beneficial Corporation from 1985 to 1998 and of the MIG Residential REIT from 1994 to 1998. She was the editor of *Real Estate Economics* from 1997 to 1999, and currently serves on the editorial boards of several real estate journals. Wachter has been a member of the Advanced Studies Institute of the Homer Hoyt Institute since 1989. She is the author of more than 150 scholarly publications and the recipient of several awards for teaching excellence at The Wharton School.

**PATRICIA A. MCCOY, JD**

Liberty Mutual Insurance Professor, Boston College Law School

Professor McCoy's research interests focus on the nexus among financial products, consumer welfare, and systemic risk. In 2010-2011, she was the Assistant Director of Mortgage Markets at the newly formed Consumer Financial Protection Bureau in Washington, D.C., where she oversaw all of the Bureau's mortgage policy initiatives. McCoy received her JD from the University of California at Berkeley. At law school, she was Editor-in-Chief of the *Industrial Relations Law Journal*. Later, she clerked for the late Hon. Robert S. Vance on the U.S. Court of Appeals for the Eleventh Circuit. Before entering academe, McCoy was a partner at the law firm of Mayer, Brown in Washington, D.C. She spent the 2002-2003 school year as a Visiting Scholar at the MIT Economics Department. She has three books to her credit, including *The Subprime Virus*, which was published by Oxford University Press in 2011 and written with Kathleen C. Engel.

Photo credit: Taxrebate.org.uk

**ABOUT THE PENN WHARTON  
PUBLIC POLICY INITIATIVE**

The Penn Wharton Public Policy Initiative (PPI) is a hub for research and education, engaging faculty and students across University of Pennsylvania and reaching government decision-makers through independent, practical, timely, and nonpartisan policy briefs. With offices both at Penn and in Washington, DC, the Initiative provides comprehensive research, coverage, and analysis, anticipating key policy issues on the horizon.

**ABOUT PENN WHARTON PUBLIC  
POLICY INITIATIVE ISSUE BRIEFS**

Penn Wharton PPI publishes issue briefs at least once a month, tackling issues that are varied but share one common thread: they are central to the economic health of the nation and the American people. These Issue Briefs are nonpartisan, knowledge-driven documents written by Wharton and Penn faculty in their specific areas of expertise.

**CONTACT THE PENN WHARTON  
PUBLIC POLICY INITIATIVE**

**At Penn**

Steinberg Hall-Dietrich Hall, Room 3012  
Philadelphia, PA 19104-6302  
+1.215.898.1197

**In Washington, DC**

440 First Street, NW, Suite 810  
Washington, DC 20001  
+1.202.503.3773

For additional copies, please visit the Penn Wharton PPI website at [publicpolicy.wharton.upenn.edu](http://publicpolicy.wharton.upenn.edu).

Follow us on Twitter: [@PennWhartonPPI](https://twitter.com/PennWhartonPPI)

Founded in 1881 as the first collegiate business school, the Wharton School of the University of Pennsylvania is recognized globally for intellectual leadership and ongoing innovation across every major discipline of business education. With a broad global community and one of the most published business school faculties, Wharton creates economic and social value around the world.

////////////////////////////////////  
KNOWLEDGE FOR POLICY IMPACT  
////////////////////////////////////