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Understanding Discount Window Stigma

By Huberto M. Ennis and David A. Price

The discount window is a tool that the Federal Reserve has long used to increase the stability of the financial system, but some believe its effectiveness is diminished by stigma: institutions may avoid borrowing from it out of concern that they may be perceived as being in weakened financial condition. Recent Richmond Fed research has shed new light on the functioning of the discount window and the role that stigma may play in achieving desirable outcomes.

One of the Federal Reserve System's important and longstanding institutions is the discount window — or to be more precise, the discount windows, plural, of the regional Reserve Banks. Through their discount windows, the Reserve Banks make short-term loans to depository institutions, generally at a rate modestly higher than the market rate. This policy is widely viewed as contributing to the stability of the financial system by making liquidity available to institutions that cannot, for temporary reasons associated with various market frictions, satisfy their liquidity needs by borrowing on the private market. This is, for example, how the Fed used the discount window (and other Fed lending facilities) during the 2007–08 global financial crisis (GFC) and how it is using it today in the context of the coronavirus crisis. (Historically, the discount window was also a tool of monetary policy; more recently, open market operations have largely supplanted the discount window in that role.)[1]

Although the discount window has existed in various forms almost since the creation of the Fed more than a century ago, some aspects of its operation are still poorly understood — most notably, the extent to which borrowing from it carries a stigma in the eyes of potential counterparties. Currently, discount window borrowing remains undisclosed for two years, but there are reasons to believe that use of the discount window can sometimes be inferred circumstantially by other financial market participants.[2] To the extent that an institution's discount window borrowing becomes known to other parties, it is possible in principle that those other parties will draw negative conclusions about the institution's health; if the institution were in good financial condition, the argument goes, it would have borrowed privately at the market rate rather than paying the discount window's higher penalty rate. The fear of such a stigma would make institutions that need liquidity more reluctant to borrow from the discount window — a reluctance that could work against the program's purposes.

Stigma is important to understand because the discount window and other similar lending

facilities are tools on which policymakers rely during financial crises. Even in response to recent temporary spikes in repo market interest rates, including a significant one last September, there were extensive discussions of the possibility of establishing a Fed-sponsored repo facility to provide liquidity in times of stress in that important market. The issue of stigma was an important consideration for those thinking about the appropriate design of such a facility.[3]

Besides addressing events of strain in funding markets, a well-functioning discount window can be useful for other purposes, as well; for example, Fed Vice Chair Randal Quarles argued in a February 2020 speech that the discount window should play a more active role in making reserves and Treasury securities substitutable from the perspective of banks, thereby curbing undue holdings of reserves.[4] In short, there is a variety of situations in which policymakers may like to rely on programs such as the discount window, and stigma could interfere with their objectives.

Recent research at the Richmond Fed by one of the coauthors of this *Economic Brief* (Ennis) offers a new perspective to deepen understanding of the mechanisms driving discount window stigma.[5] This research, published in the *Journal of Money, Credit and Banking*, investigates the implications for stigma of a workhorse model in financial economics in which the discount window can enhance the efficient operation of lending markets.

Stigma and Fed Lending Programs

From the late 1920s until the early 2000s, the Fed discouraged discount window borrowing through various restrictions on access to the window. In lieu of charging a penalty rate, the Fed issued regulations during this period delineating "appropriate" and "inappropriate" purposes for borrowing from the window and added a requirement in 1973 that banks must first exhaust alternative sources of credit.[6] The Fed reversed this approach in 2003, creating the Primary Credit program in which financially healthy and well-capitalized banks could borrow from the discount window with no questions asked but at a higher interest rate. (The Secondary Credit program makes loans on a case-by-case basis to banks that do not qualify for Primary Credit.) In theory, the restrictions on eligibility for Primary Credit should guarantee financial strength on the part of participants and thus should reduce, if not eliminate, the possibility of stigma associated with borrowing through that program.

Nonetheless, stigma remained a significant concern of policymakers after 2003, most importantly as they considered responses to the GFC. Then-Fed Chair Ben Bernanke, then-New York Fed President Timothy Geithner, and then-Treasury Secretary Henry Paulson have noted that the design of the Fed's novel Term Auction Facility (TAF), with its use of an auction process and other technical features, was meant to avoid concerns about stigma.[7] These concerns also extended to programs created by fiscal authorities during this period: the same policymakers have recounted that the heads of nine of the largest U.S. financial firms were asked to take capital under the Troubled Assets Relief Program (TARP) to make the program appear less stigmatizing from the perspective of smaller institutions.[8]

There is some evidence that discount window stigma did influence outcomes during the financial crisis. Olivier Armantier and Asani Sarkar of the New York Fed, Eric Ghysels of the University of North Carolina, Chapel Hill, and Jeffrey Shrader of Columbia University analyzed TAF borrowing from December 2007 to September 2008 and found that banks were willing to pay a premium to avoid borrowing from the discount window. In other words, some banks were willing to pay higher interest rates in the market or at the TAF than the ones they could have obtained at the discount window. One candidate explanation for such an anomaly is the presence of extra stigma-based cost from discount window borrowing.[9]

Concerns about stigma have persisted. Anecdotal reports have indicated that stigma, and the resulting desire to avoid discount window borrowing, is one motivation of large banks to hold large amounts of cash (reserves).[10] And most recently, the Fed announced on March 15, 2020, that it was lowering the Primary Credit interest rate by 1.5 percentage points

to 0.25 percent, effectively reducing or eliminating the penalty component of the rate;[11] this move has been generally interpreted as reflecting policymakers' desire to reduce stigma.[12]

Modeling Discount Window Stigma

To assess the effects of stigma, Ennis employed a workhorse model in financial economics. That model was originally developed to analyze situations in which a firm's managers have more information about the value of the firm than its potential outside investors — a situation analogous to lending markets for banks, in which the bank has more information about its ability to repay than its creditors.[13] In both cases, there is potential for adverse selection given the coexistence of good and bad risks in the market and the limited ability of investors or lenders to tell them apart. Such a situation tends to lead to asset prices that are too low (or interest rates that are too high), from the perspective of firms that are good (that is, low) risks, driving good risks out of the market.

Ennis built on work by Thomas Philippon of New York University and Vasiliki Skreta of the University of Texas, who used this model to analyze the optimal design of government programs to intervene in financial markets suffering from adverse selection but did not investigate stigma explicitly.[14] Ennis's objective is to uncover the main implications for stigma of this widely used framework, extending the model in relevant ways that allow him to address explicitly the role of stigma in the context of the discount window. Ennis's model assumes both that banks have information about their ability to repay their debts, unknown to other market participants, and that discount window borrowing is observable. The assumption of complete observability is used only for simplicity; a lower probability of observation would have delivered comparable results.

Findings on the Discount Window and Adverse Selection

Ennis found that in the equilibrium of the model, the average riskiness of borrowers at the discount window can indeed be higher than that of banks in general. In that way, borrowing from the discount window can function as a signal of possible financial weakness. Furthermore, under some conditions, the model generates the pattern of interest rates often associated with the presence of stigma. Indeed, in the model, some discount window borrowers pay higher rates in the market than those paid by banks that do not borrow from the discount window; moreover, some banks are willing to pay higher interest rates in the market than the ones they would be able to obtain at the discount window, thus avoiding the discount window altogether. These patterns originate from the fact that discount window borrowers in the model are correctly perceived by the market as less healthy, a feature that has been shown to be essential for a rational explanation of discount window stigma.[15]

Ennis shows that in the context of the model, the configurations that give rise to stigma also enhance the efficacy of the discount window in promoting market efficiency. Because the discount window attracts inferior risks (which is the source of stigma), it helps to mitigate the adverse selection problem in the market for private credit. As a result, interest rates can decrease and more of the low-risk firms are able (and willing) to receive external funding and invest. Given that adverse selection in the absence of intervention produces inefficiently low investment, a discount window that attracts relatively risky banks can produce desirable economic outcomes.

Ennis's model also highlights a delicate interaction between borrowing at the discount window and borrowing in the market, when banks can do both, as is normally the case. In a form of preemptive borrowing, some banks in the model borrow from the discount window to reduce the amount that they may need to borrow from the market later. Given that market interest rates are relatively more sensitive to repayment risks, some banks are able to reduce their total borrowing costs by meeting part of their credit needs at the discount window (hence borrowing less from the market). This logic may help to account for why some banks took loans at the TAF during the GFC without an evident immediate need for that liquidity.

Conclusion

Stigma has been thought to affect government credit programs since at least the Great Depression.[16] The Fed's discount window, one of these programs, is often thought to be less effective as a result. While the issue of stigma in government credit programs has long been a concern among policymakers, formal treatments of the problem have become available only recently. The lessons from such contributions seem to indicate that the logic behind the idea of stigma is more complex than previously recognized. These recent efforts to develop fully specified, rational, and consistent explanations of the phenomenon constitute a useful foundation from which to build a better understanding of how stigma operates in practice and what, if anything, needs to be done to address it. ■

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Endnotes

[1] See Huberto M. Ennis and John A. Weinberg, "The Role of Central Bank Lending in the Conduct of Monetary Policy," Federal Reserve Bank of Richmond *Economic Brief* No. 16-12, December 2016. The brief also explains the role that the discount window can play in monetary policy implementation based on a so-called channel system.

[2] To make such inferences less possible, the Fed announced changes on March 19, 2020, to the reporting of loans taken by depository institutions, including discount window loans. Such loans are to be consolidated into a larger category, "Securities, unamortized premiums and discounts, repurchase agreements, and loans." The Fed stated, "This modification supports the Federal Reserve's goal, expressed in its statement on March 15, 2020, of encouraging depository institutions to use the discount window to help meet demands for credit from households and businesses, including needs related to the spread of the coronavirus." See Board of Governors of the Federal Reserve System, "Changes to Factors Affecting Reserve Balances – H.4.1," March 19, 2020.

[3] See, for example, Bill Nelson, "Design Challenges for a Standing Repo Facility," Bank Policy Institute blog, August 13, 2019.

[4] Randal K. Quarles, "The Economic Outlook, Monetary Policy, and the Demand for Reserves," remarks to the Money Marketeers of New York University, February 6, 2020.

[5] Huberto M. Ennis, "Interventions in Markets with Adverse Selection: Implications for Discount Window Stigma," *Journal of Money, Credit and Banking*, October 2019, vol. 51, no. 7, pp. 1737–1764.

[6] Olivier Armantier, Helene Lee, and Asani Sarkar, "History of Discount Window Stigma," Liberty Street Economics blog, August 10, 2015.

[7] Ben S. Bernanke, Timothy F. Geithner, and Henry M. Paulson Jr., *Firefighting: The Financial Crisis and Its Lessons*. New York: Penguin Books, 2019, pp. 42–43; Timothy F. Geithner, *Stress Test: Reflections on Financial Crises*. New York: Crown Publishers, 2014, p. 141.

[8] See Bernanke, Geithner, and Paulson (2019), pp. 90–91; Geithner (2014), pp. 235–238. See also Yeon-Koo Che, Chongwoo Choe, and Keeyoung Rhee, "Bailout Stigma," Manuscript, February 2, 2018, for a theoretical study of stigma in the context of a program such as TARP.

[9] Olivier Armantier, Eric Ghysels, Asani Sarkar, and Jeffrey Shrader, "Discount Window Stigma during the 2007–2008 Financial Crisis," *Journal of Financial Economics*, November 2015, vol. 118, no. 2, pp. 317–335. For an overview of work addressing the evidence of stigma before and during the GFC, see also Huberto M. Ennis and Renee Haltom, "Is There Stigma Associated with Discount Window Borrowing?" Federal Reserve Bank of Richmond *Economic Brief* No. 10-05, May 2010.

[10] See, for example, David Benoit, "JPMorgan Won't Shun the Fed's Discount Window Anymore," *Wall Street Journal*, February 25, 2020.

[11] See Board of Governors of the Federal Reserve System, "Federal Reserve Actions to Support the Flow of Credit to Households and Businesses," press release, March 15, 2020. The spread between the Primary Credit interest rate and the target federal funds rate, set by policymakers, has varied over time. It was 100 basis points before the GFC, then the Fed reduced it to 50 basis points in August 2007 during the crisis and cut it further to 25 basis points in March 2008 before raising it back to 50 basis points in February 2010. See also Board of Governors of the Federal Reserve System, "Credit and Liquidity Programs and the Balance Sheet."

[12] See, for example, Ben S. Bernanke and Janet Yellen, "The Federal Reserve Must Reduce Long-Term Damage from Coronavirus," *Financial Times*, March 18, 2020.

[13] Stewart C. Myers and Nicholas S. Majluf, "Corporate Financing and Investment Decisions When Firms Have Information that Investors Do Not Have," *Journal of Financial Economics*, June 1984, vol. 13, no. 2, pp. 187–221.

[14] Thomas Philippon and Vasiliki Skreta, "Optimal Interventions in Markets with Adverse Selection," *American Economic Review*, February 2012, vol. 102, no. 1, pp. 1–28.

[15] Huberto M. Ennis and John A. Weinberg, "Over-the-Counter Loans, Adverse Selection, and Stigma in the Interbank Market," *Review of Economic Dynamics*, October 2013, vol. 16, no. 4, pp. 601–616. A description of the model is given in Ennis and Haltom (2010).

[16] The Depression-era Reconstruction Finance Corporation, established in 1932, served as lender of last resort to banks

that were not members of the Fed; banks that borrowed from it appear to have been stigmatized in financial markets. See Sriya Anbil, "Managing Stigma during a Financial Crisis," *Journal of Financial Economics*, October 2018, vol. 130, no. 1, pp. 166–181.