Statistics on Collateral Pledged to the Discount Window

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The Dodd-Frank Act of 2010 required the Federal Reserve to disclose to the public information on each discount window loan with a two-year lag. In this note we summarize the data on collateral provided in the four most recent available quarters of data – 2020Q4 to 2021Q3. In total, the institutions that borrowed from the discount window over the four-quarter period had collateral prepositioned at the Fed with $917 billion in lendable value.

Background

Discount window loans are loans from a Federal Reserve Bank to an insured depository institution extended under Section 10B of the Federal Reserve Act. There are three types of discount window loans: seasonal credit provided to small banks to meet seasonal needs; primary credit provided to financially sound banks on a no-questions-asked basis; and secondary credit which may be provided to banks that do not qualify for primary credit to help resolve financial difficulties. Each quarter, the Fed publishes data for the quarter two years prior. For each loan, the Fed provides the name of the borrower as well as the amount, type and interest rate of the loan. In addition, the Fed provides the total amount and type of collateral pledged by the institution backing the loan after the application of appropriate haircuts. For each loan entry, information on the lendable value of the entire amount of pledged collateral by type is reported.

Results

Over the four quarters ending in 2021Q3, there were a total of 3,816 loans to 1,604 different banks, including credit unions and U.S. branches of foreign banks. Out of these, 57 were branches, 17 were banks with over $100 billion in total assets, 343 were banks with total assets between $1-100 billion, and 473 were banks with less than $1 billion in total assets. For all loans extended during the four quarters, 98.8 percent were primary credit, 0.3 percent were secondary credit and 0.9 percent were seasonal credit. Weighting by loan amount, 99.8 percent was primary credit, with secondary and seasonal credit each less than 0.5 percent.

Table 1 presents statistics on the collateral pledged by all banks and by each bank type. Because banks report the total amount of collateral that they have pledged each time they borrow, if a bank borrowed more than once in the four quarters, we only use information on collateral from the final loan.[1] The data provided are the lendable value of collateral – that is, the amount pledged minus the value adjustments and haircuts applied to determine the amount of discount window credit that the Fed would lend against the assets pledged. Adding up the total amount of collateral pledged by all institutions that borrowed at least once, as shown in Table 1, we see that consumer loans, which are defined as loans to households other than residential mortgages, make up the largest share of collateral pledged by all banks, accounting for almost 41 percent of all collateral pledged. Commercial loans and agency-guaranteed MBS/CMO make up around 21 percent and 9 percent of all collateral pledged, respectively. Other collateral types make up less than 0.5 percent of total collateral pledged by all banks.

The fact that the largest share of collateral pledged by all banks is consumer and commercial loans is not surprising, as banks are able to use the discount window to pledge relatively illiquid assets such as consumer loans in exchange for short-term liquidity. For the same reason, Treasuries and agency MBS, which can be used to raise funds in the marketplace, make up only 5.5 and 9.0 percent of collateral, respectively.

Table 1: Amount and percentage breakdown by collateral type and for different asset categories/branches

Collateral Type	Amount for all banks (including BR, CU,FCU)	Percentage	Branches Amount	Branches Percentage	Assets >$100bn Amount	Assets >$100bn Percentage	Assets $1bn-$100bn Amount	Assets $1bn-$100bn Percentage	Assets <$1bn Amount	Assets <$1bn Percentage
Commercial loans	187.8	20.5	39.0	30.2	88.5	15.1	58.0	54.5	2.3	33.3
Residental mortgages	30.7	3.3	0.0	0.0	25.4	4.3	1.9	1.8	0.2	3.6
Commercial real estate loans	39.2	4.3	0.8	0.6	17.6	3.0	15.2	14.3	1.9	28.1
Consumer loans	372.9	40.7	0.0	0.0	294.2	50.3	18.0	16.9	0.6	9.0
U.S. Treasury/Agency securities	50.2	5.5	7.5	5.8	34.1	5.8	2.6	2.5	0.2	2.4
Municipal securities	22.6	2.5	1.9	1.5	15.4	2.6	3.0	2.8	0.9	13.0
Corporate market instruments	15.3	1.7	12.2	9.5	0.5	0.1	1.1	1.0	0.2	3.0
MBS/CMO: agency-guaranteed	82.8	9.0	1.4	1.1	66.0	11.3	4.6	4.3	0.4	6.2
MBS/CMO: other	12.3	1.3	0.7	0.5	10.6	1.8	0.5	0.5	0.0	0.1
Asset-backed securities	71.4	7.8	38.2	29.5	30.2	5.2	1.4	1.4	0.1	1.4
International securities	31.8	3.5	27.6	21.4	2.6	0.4	0.0	0.0	0.0	0.0
Term Deposit Facility deposits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other collateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	917.0	100.0	129.3	100.0	584.9	100.0	106.4	100.0	6.9	100.0

Total collateral is the lendable value of borrower's discount window collateral, after the application of appropriate margins (haircuts).
Units are in billions USD.

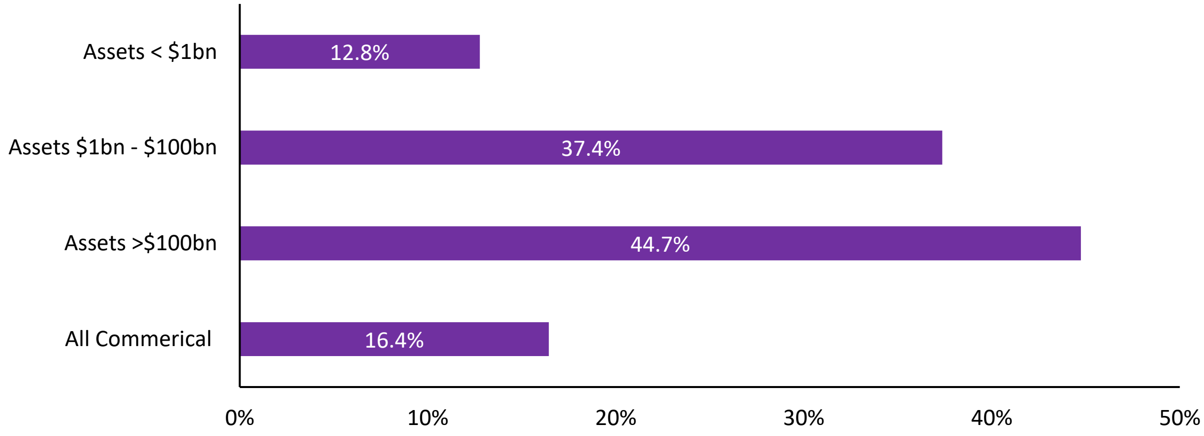
The share of collateral type relative to total collateral pledged varies across bank types. Branches of foreign banks, which do not make consumer loans, pledge relatively more commercial loans and asset-backed securities at 30.2 percent and 29.5 percent, respectively. Consumer loans make up the largest category of collateral for banks with total assets over $100 billion, at 50 percent. Banks with total assets between $1 billion and $100 billion are more likely to pledge commercial loans (54.4 percent), whereas banks with total assets of less than $1 billion mostly pledge commercial and commercial real estate

[1] Because banks report all collateral pledged for each loan entry, and the pools of collateral are fairly stable, the results are similar irrespective of which specific loan we use for banks that borrowed multiple times.

loans as collateral, at 33.3 percent and 28.1 percent, respectively. The smallest banks also pledge a relatively high percentage of municipal securities as collateral at 13 percent.

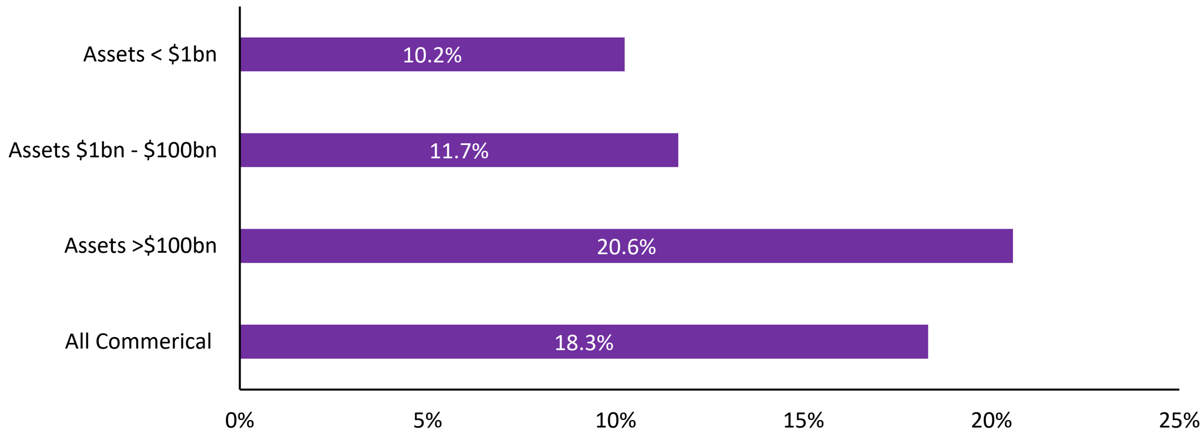
The bank turmoil this spring highlighted the importance of banks being able to borrow from the discount window. While clearly a lower bound, looking at banks that did borrow provides information on the proportion of banks that can borrow, especially because many banks with access conduct occasional test borrowings. As shown in Chart 1, 45 percent and 37 percent of banks in the large and medium asset size categories, respectively, used the discount window at least once over the four quarters in the sample. By contrast, only around 13 percent of banks with assets of less than $1 billion used the window.

Chart 1: Percentage of Banks That Used the Discount Window at Least Once for Different Asset Size Categories



Lastly, to get a crude measure of collateral sufficiency, we compare the lendable value of discount window collateral pledged by each category of commercial bank to uninsured deposit accounts (the uninsured portion of deposit accounts of more than $250,000). As shown in Chart 2, collateral pledged at the discount window equals 18.3 percent of uninsured deposits for all commercial banks. The coverage is a bit higher for larger banks. For banks with total assets above $100 billion, lendable value of collateral equals 21 percent of uninsured deposits while for banks in the medium and small asset size categories, collateral equals only around 12 percent and 10 percent of uninsured deposits, respectively. Investigating the distribution of coverage might be an interesting next step in this analysis.

Chart 2: Lendable Value of Collateral as a Percentage of Uninsured Deposits for Different Asset Size Categories



Conclusion

In this note we analyzed discount window data, more specifically data on collateral for the four most recent quarters – 2020Q4 to 2021Q3 – as published by the Fed. A significantly higher percentage of larger banks borrowed at least once over the year than smaller banks, suggesting strongly that larger banks are more likely to be prepared to borrow if necessary. We find that the vast majority of loans were primary credit rather than secondary or seasonal credit. Additionally, we find that the type of collateral pledged by banks varies depending on whether it is a branch and its total asset size. For all banks that utilized the discount window in the analyzed timeframe, consumer loans and commercial loans made up the largest share of total collateral pledged. We find that banks with assets over $100 billion in total assets are more likely than smaller banks to have used the discount window at least once. Lastly, we find that a modest percentage of uninsured deposits are covered by the total collateral pledged.

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