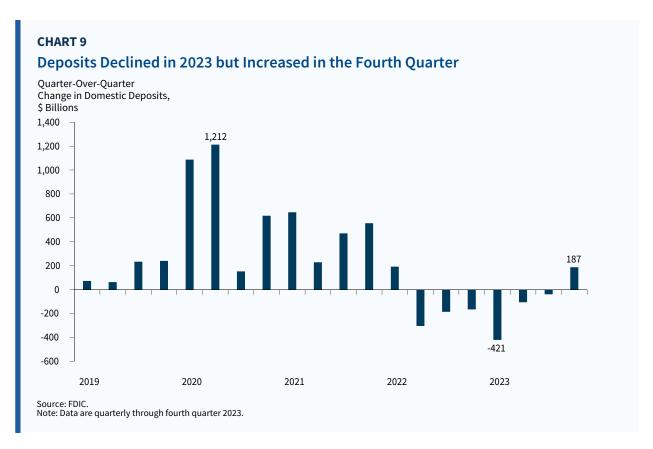
SECTION 3 Market Risks

Liquidity, Deposits, and Funding

- Deposits declined in 2023, with the largest declines occurring during the banking sector stress early in the year. Uninsured deposit balances drove the decline in total deposits, while insured deposits increased.
- · Shifts in deposits toward higher-yielding accounts put upward pressure on interest expense.
- · The industry's on-balance-sheet liquidity declined in 2023 as banks reduced securities holdings and increased securities pledged to secure liquidity lines of credit.
- · Liquid assets at community banks declined in tandem with strong lending, and community banks were more reliant on wholesale funding than before the pandemic.

Deposits declined in 2023, with the largest declines occurring during the banking sector stress early in the year. Industry domestic deposits fell \$380 billion, or 2.1 percent, in 2023. Domestic deposits declined for six consecutive quarters through third quarter 2023 before increasing in the fourth quarter (Chart 9).

The stress in the banking system in first quarter 2023 accelerated the outflow of deposits that quarter after the decelerating trend reported in the second half of 2022.

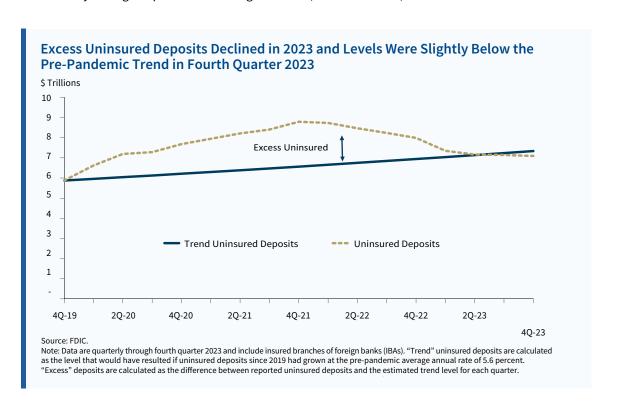


The decline in deposits was driven by a reduction in uninsured deposits from high levels reported during the pandemic (see Box A). In 2023, uninsured deposits declined \$897 billion, while insured deposits grew \$517 billion.

The decline in aggregate deposits largely reflected outflows of uninsured deposits at banks with more than \$100 billion in assets. Banks with assets between \$10 billion and \$100 billion also lost deposits in 2023 but resumed growth in the second quarter after reporting large outflows in the first quarter. Deposits at banks with less than \$10 billion in assets, a group that includes most community banks, had slight deposit growth throughout most of 2022 and 2023. All size groups reported deposit growth in fourth quarter 2023.

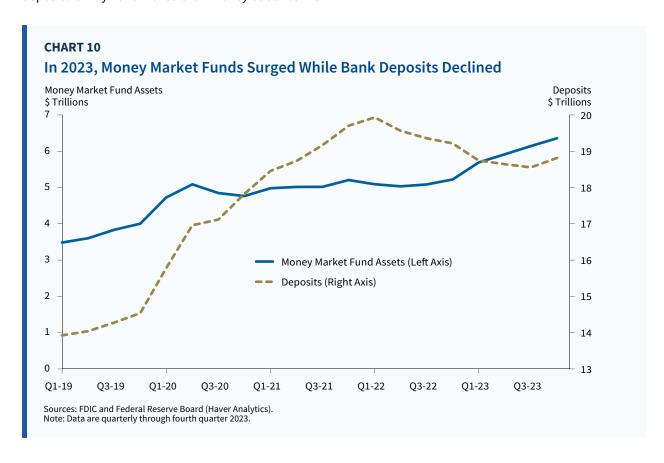
Box A

Beginning in 2020, uninsured deposits grew significantly beyond the average rate reported before the pandemic. Total uninsured deposits began to decline as the inflows received early in the pandemic receded, and the decline accelerated in first quarter 2023 after two bank failures resulted in heightened investor attention to insured deposits. By third quarter 2023, excess uninsured deposits accumulated by the industry during the pandemic no longer existed (see chart below).



Shifts in deposits toward higher-yielding accounts put upward pressure on interest expense. High interest rates in 2023 drove many depositors to seek higher yields on their deposits. Banks reported deposit shifts from lower-yielding deposit accounts, such as transaction and savings accounts, to higher-yielding time deposits. Time deposits accounted for 26 percent of median bank deposits at year-end 2023, up from 19 percent at year-end 2022. In addition, some bank depositors may have moved their money out of banks

in search of higher yields; in 2023, money market fund assets under management increased \$1.1 trillion, while total bank deposits decreased \$401 billion (Chart 10). As deposits declined, banks raised deposit interest rates to retain deposits and relied on more expensive nondeposit liabilities. As a result, the industry's cost of funding earning assets increased from 0.55 percent in 2022 to 2.13 percent in 2023.

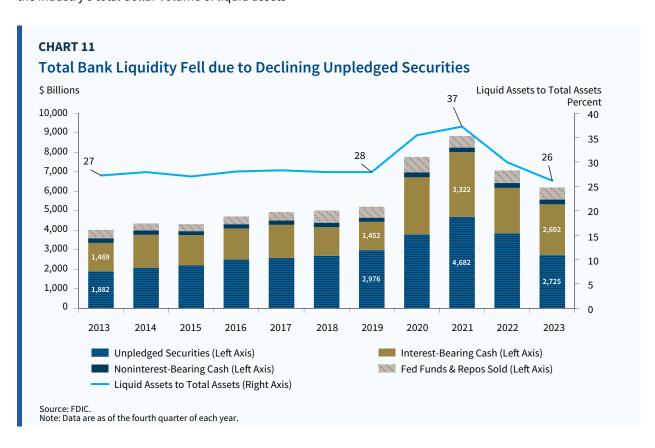


On-balance-sheet liquidity declined in 2023 as banks reduced securities holdings and pledged more securities to liquidity lines of credit. Because bank deposits surged in 2020 and 2021, most banks reported high levels of on-balance-sheet liquid assets, such as cash and securities, at the beginning of 2022. But as a result of rapidly rising interest rates in 2022 and 2023 and the resulting impact on deposits, the industry's on-balance-sheet liquidity levels fell. In 2023, total liquid assets declined \$873 billion after falling \$1.8 trillion in 2022.10 The decline in 2023 was largely driven by bond sales and increased securities pledged to obtain contingency lines of credit. While the industry's total dollar volume of liquid assets

remained above 2019 levels, the ratio of on-balancesheet liquid assets to total assets ended 2023 at 26 percent, below the pre-pandemic level of 28 percent (Chart 11).

In response to declining on-balance-sheet liquidity levels, many banks turned to higher-cost borrowings to cover anticipated liquidity needs.

The industry's use of wholesale sources to fund assets fell dramatically in 2020 and 2021, but the industry turned back to these sources in 2022 and 2023. This pivot to borrowings was particularly true in the first half of 2023 as banks secured precautionary excess



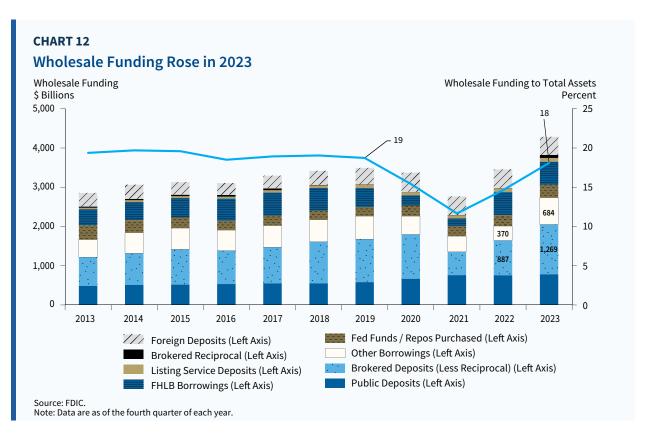
¹⁰ Liquid assets include interest-bearing and noninterest-bearing deposits, fed funds sold, reverse repurchase agreements, and the fair value of available-for-sale and held-to-maturity securities less the value of pledged securities. Pledged held-to-maturity securities are listed at amortized cost in the Call Report, so this measure may understate bank liquid assets when pledged bonds have depreciated below amortized cost.

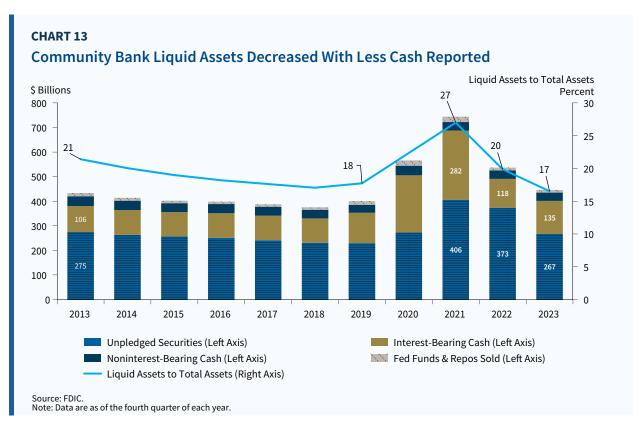
funding in response to fears of a potential widespread banking crisis. As conditions improved, the increase in wholesale funding moderated during the second half of the year. But wholesale funding increased to near pre-pandemic levels in 2023, reaching \$4.3 trillion, or 18 percent of total assets (Chart 12). Wholesale funding growth was led by an increase in brokered deposits (both reciprocal and non-reciprocal) and non-Federal Home Loan Bank (FHLB) borrowings such as Bank Term Funding Program loans. Banks reported a slight decline in FHLB borrowings in 2023 after reporting a \$399 billion increase in 2022.

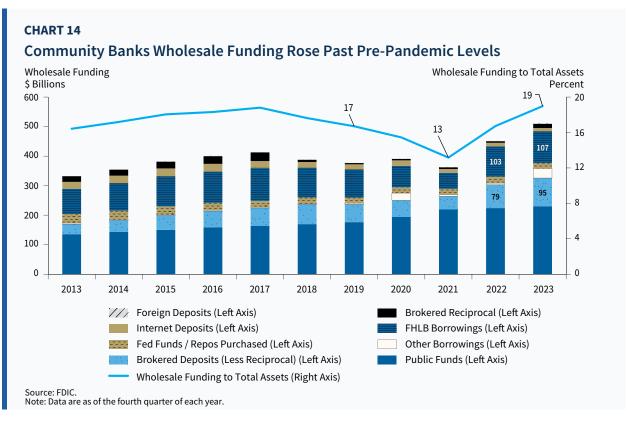
Liquid assets at community banks declined in tandem with strong lending, and community banks were more reliant on wholesale funding than before the pandemic. Although deposits at community banks increased in 2023, loan growth outpaced deposit growth, which required community banks to reduce liquid assets and increase use of wholesale

funding. Similar to the industry as a whole, community banks pledged a significant amount of bonds to secure additional borrowing lines and sold bonds in 2023. Community banks also continued to increase wholesale funding. As a result, on-balance-sheet liquid assets fell to 17 percent of total community bank assets (from 18 percent in 2019), the lowest year-end level since 2008. Wholesale funding levels increased to 19 percent from 17 percent, matching the recent peak in 2017 (Charts 13 and 14).

In 2024, tighter liquidity positions and higher reliance on wholesale funding will increase funding risk for some banks should market stress or rapid changes in market conditions occur. Even if market interest rates decline in 2024, banks with low liquidity positions, higher unrealized securities losses, insufficient access to off-balance-sheet secured borrowing lines, or volatility in deposit retention may continue to experience heightened liquidity pressure.





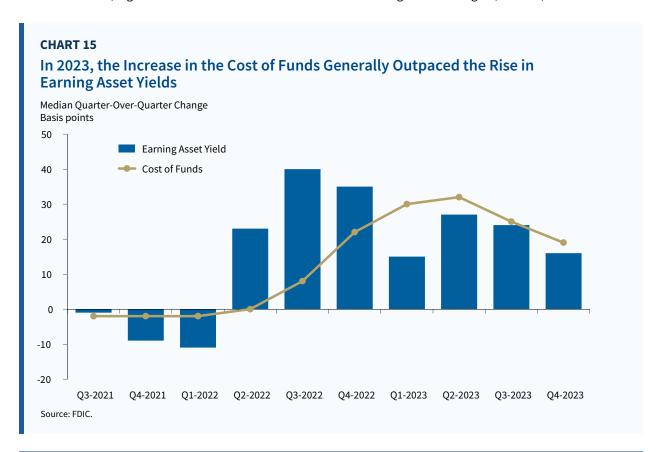


Net Interest Margins and Interest Rate Risk

- · The banking industry's median net interest margin increased in 2023 despite rising funding costs.
- · Net interest margin changes varied by bank asset size; the margin at the smallest community banks was higher than the rest of the industry.
- · Interest rate risk remained high at community banks as they continued to hold an elevated share of longterm assets, but some community banks began to sell off lower-yielding securities to reinvest at higher
- Net interest margin compression contributed to a small but rising share of unprofitable community banks in 2023.
- An increase in the share of profitable community banks whose net interest margins have fallen below 2 percent suggests a widening of weakness in the industry.

Interest rates remained elevated in 2023, resulting in both higher net interest incomes and higher funding costs. Sharply higher interest rates in 2022 and 2023 after years of near-zero rates had a significant impact on bank profitability, especially through the effect on asset yields and the cost of funds. Because loan yields initially tend to rise more quickly than deposit costs in a rising interestrate environment, higher interest rates in 2022 led to a

higher full-year median NIM, along with aggregate net interest income that rose to above pre-pandemic levels.11 But in 2023, median quarterly funding costs increased faster than yields, reversing some of the large gains in NIM that occurred in 2022. Most of the NIM compression occurred in the first half of 2023, as compression slowed in the second half of the year when the increases in yields and funding costs converged (Chart 15).



¹¹ Aggregate figures for the industry are heavily weighted toward the performance of the largest banks. To take a deeper look into bank-specific issues and trends without the outsize effects of the largest banks, this chapter analyzes median ratios.

The banking industry's median NIM increased in 2023 despite rising funding costs, but bank-level performance was far more dispersed in 2023 than

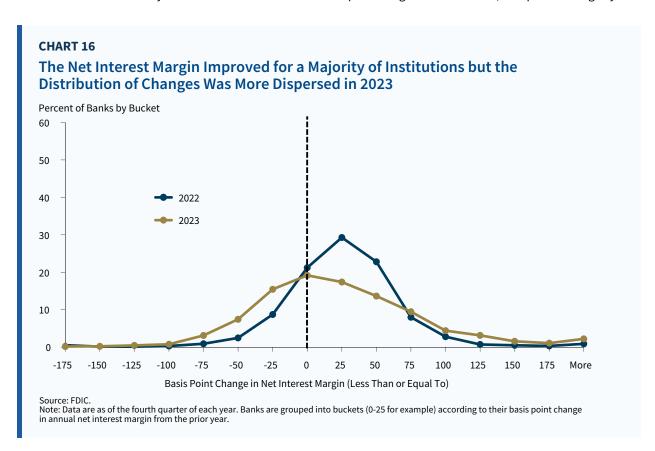
it was in 2022. The median full-year NIM among all banks increased 7 basis points to 3.45 percent in 2023. This was slightly lower than the 11 basis point increase in 2022, which was the highest annual increase since 2002. However, only 53 percent of banks reported an increase in NIM in 2023 compared to 66 percent in 2022. Even more notable was the increased dispersion in NIMs between the two years. The share of banks with a 75 basis point or higher increase in NIM more than doubled to 12.6 percent, while the share of institutions with a 75 basis point decline in NIM also more than doubled to 4.8 percent (Chart 16).

Higher interest rates continued to support higher earning asset yields in 2023. Noncommunity banks were able to take better advantage of higher rates on assets than community banks because of their

greater volume of short-term assets (Chart 17).12 On the funding side, driven by both higher interest rates paid and a shift to interest-bearing deposits, the median cost of funds for all banks also continued to increase throughout 2023, rising to its highest level in more than a decade.13 Although both community and noncommunity banks reported rising cost of funds, noncommunity banks generally reported higher increases in 2023 than community banks (Chart 18).

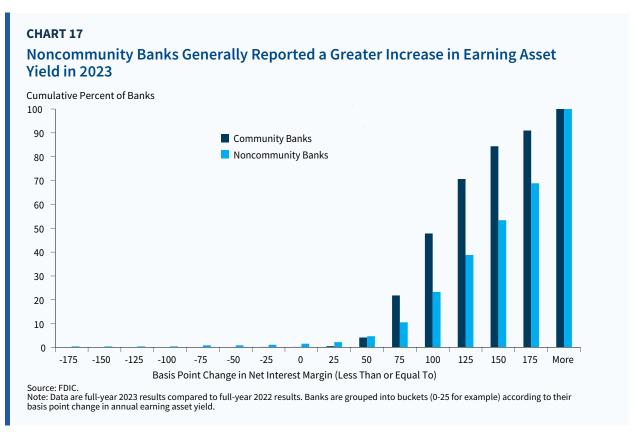
NIMs increased more among smaller community

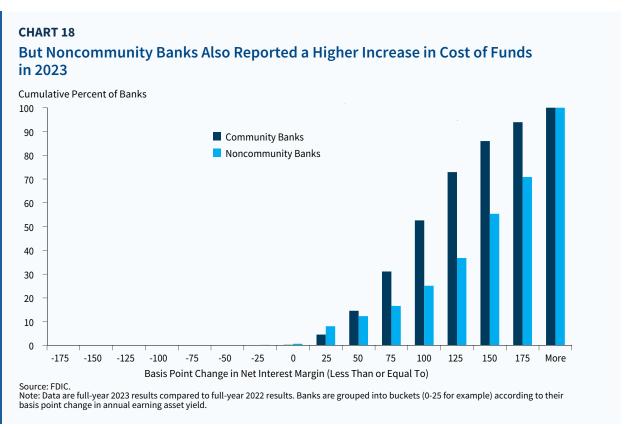
banks. In 2023, a majority of community banks with assets of \$1 billion or more (referred to as large community banks in this chapter) reported a decline in NIMs, while a majority of smaller community banks (those with assets under \$1 billion) reported an increase in NIMs. This was particularly true at the smallest community banks: More than 70 percent of community banks with less than \$100 million in assets reported higher NIMs in 2023, compared to slightly



¹² As of year-end 2023, the median noncommunity bank ratio of short-term assets (cash and balances due from depository institutions, fed funds and repos sold, and loans and securities maturing in one year or less) to total assets was 34.3 percent, compared to 27.3 percent at community banks.

¹³ The median share of deposits in interest-bearing accounts began to fall significantly during the pandemic before reaching a low of 73.7 percent in third quarter 2022. Since then, the share of interest-bearing deposits has begun to revert to the longer-term average, reaching 76.9 percent in fourth quarter 2023. This remains below the 2017 to 2019 average of 79.5 percent.





over half of community banks with assets between \$100 million and \$1 billion. 14 In contrast, only slightly more than one-third of larger community banks reported NIM improvement (Chart 19).

Smaller community banks reported slightly lower increases in earning asset yields in 2023 than did larger community banks, but they also reported much smaller increases in funding costs. The difference in funding costs was especially pronounced at the smallest community banks. Strong liquidity levels enabled the smallest banks to keep funding costs in check even though, as a result, they reported deposit outflows while other community banks reported deposit growth. 15 Conversely, large community banks relied more heavily on borrowings and reported the largest increase in interest-bearing deposits during 2023, contributing to much higher increases in their cost of funds. 16 The increase in the cost of funds at large community banks outpaced the increase in earning asset yields, driving the median NIM lower.

Community banks continued to hold an elevated share of long-term assets, but some banks began to sell off lower-yielding securities to reinvest at **higher rates.** The median ratio of long-term assets to total assets at community banks declined from a peak of 54.9 percent at year-end 2022 to 50.2 percent at year-end 2023, still well above the pre-pandemic (year-end 2019) level of 44.0 percent. The higher share of long-term assets may constrain NIM growth as these assets will not reprice in tandem with higher funding costs. At the median, more than a quarter of long-term assets held by community banks are securities, many of which may have unrealized losses as market rates have risen. Notably, more than 30 percent of community banks reported a realized loss on securities in 2023 as they sold securities to reinvest the proceeds at higher rates.

NIM compression contributed to a small but rising share of unprofitable community banks in 2023. As of year-end 2023, the share of unprofitable community banks increased to 5.2 percent, up from 3.5 percent

at year-end 2022. NIM compression contributed to the rising number of unprofitable institutions. More than three quarters of community banks that were profitable in 2022 but unprofitable in 2023 reported NIM compression in 2023.

Despite an increase in earning-asset yields in 2023 that were relatively in line with the industry, unprofitable community banks reported a larger increase in the cost of funds than did profitable community banks. At unprofitable community banks, the median increase in the cost of funds was 125 basis points, compared to the median increase of 96 basis points at profitable community banks. Increased reliance on other borrowed funds relative to total liabilities contributed to the higher cost of funds for these banks. While the banking industry overall reported a greater reliance on other borrowings, the share of other borrowed funds to total liabilities and the degree of the increase were higher among unprofitable community banks than the industry.

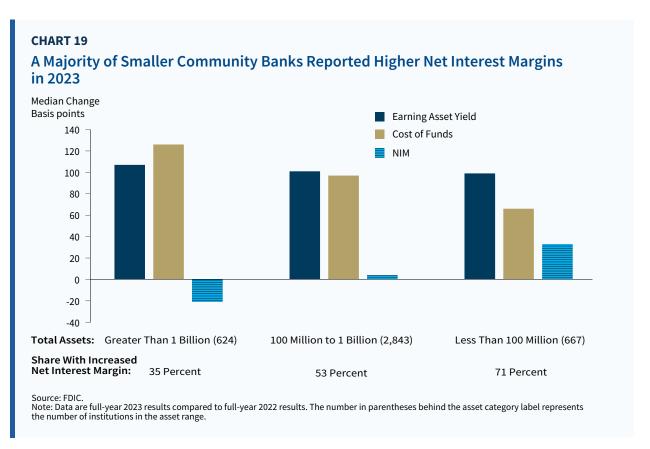
Another factor that contributed to the growing share of unprofitable community banks in 2023 was losses on securities sales. In 2023, 17 institutions that were unprofitable would have been profitable had it not been for losses on securities sales. As noted previously, some banks incurred losses related to balance sheet restructuring in 2023 to reinvest at higher interest rates, which may contribute to higher earning asset yields in 2024.

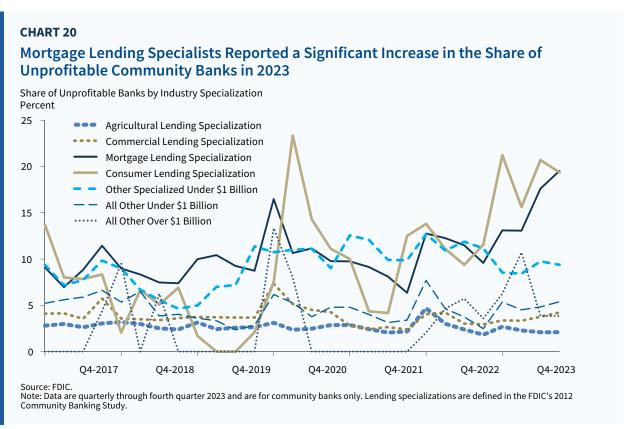
The type of lending that community banks specialize in was also an important factor in determining whether a community bank was unprofitable in 2023. Among all lending specialists, community bank mortgage lending specialists were most likely to be unprofitable. The share of community bank mortgage lending specialists that were unprofitable rose to 19.5 percent as of fourth quarter 2023, up from 9.6 percent as of year-end 2022 (Chart 20). Mortgage lending specialists accounted for more than a quarter of all unprofitable community banks despite representing 7.1 percent of all community banks.

¹⁴ At the median, the smallest community banks reported annual NIM improvement of 33 basis points in 2023, while all other community banks reported no change at the median.

¹⁵ The median on-balance-sheet liquidity level at the smallest banks was 29.3 percent, higher than the community bank median of 18.2 percent as of fourth quarter 2023. The slower increase in the cost of funding led to deposit run-off throughout the year for these banks. At the median, the smallest community banks reported deposit declines of 2.0 percent from a year earlier, compared to a median increase of 0.7 percent for all community banks.

¹⁶ At the median, large community banks reported a cost of funds increase of 126 basis points in 2023 compared to year-end 2022, outpacing the median 92 basis point increase for all other community banks.





Mortgage lending specialists typically hold some of the most elevated shares of long-term assets and therefore reported the weakest median increase in earning asset yields (70 basis points) among lending specialist groups in 2023. Meanwhile, a rising share of other borrowed funds, combined with a high reliance on interest-bearing deposits, contributed to the cost of funds rising faster than earning yields, driving the median NIM down 13 basis points at mortgage lending specialists. As a result of the NIM compression, the median NIM of 2.87 percent at mortgage lending specialists was the lowest of all lending specialist groups in 2023.

An increase in the share of profitable community banks whose net interest margins have fallen below 2 percent suggests a widening of weakness in the industry. The share of profitable community banks with NIMs below 2 percent (a level considered historically low) increased to 1.7 percent in 2023 from 0.9 percent in 2022. These institutions were more affected by increasing funding costs while interest rates rose because they tended to be more reliant on interest-bearing deposits than the broader industry.

Further, these institutions used a much higher share of borrowings to total liabilities than did other institutions in 2023. As a result, the cost of funds at these institutions increased a median 135 basis points in 2023, outpacing the median increase of 95 basis points at all other community banks.

The increase in earning asset yields at these institutions also trailed that of the broader industry as they generally hold a higher share of longer-term assets. At community banks with NIMs below 2 percent, the median share of long-term assets was 58.3 percent as of fourth quarter 2023, higher than the median 49.7 percent at all other community banks.

Although these institutions remained profitable in 2023, their median return on assets of 0.27 percent was relatively low, making them more susceptible to earnings challenges should asset quality weaken and provision expenses increase. Indeed, these earnings challenges affected these institutions when economic and credit quality conditions were generally favorable.