

# ON POINT

ECONOMIC AND POLICY INSIGHT FROM THE OCC

## Deposit Growth Likely Slowing but Abundance of Low-Cost Funding Could Endure Through 2022

Commercial bank deposits increased at a record pace in 2020 and into early 2021 reflecting increased precautionary saving by households and businesses in response to the pandemic. Despite some slowing in the second quarter of 2021 as precautionary saving receded, the pace of deposit growth remains elevated by historical standards. As a result, the banking system currently holds about \$3 trillion in “excess” deposits—equal to roughly 17 percent of total deposits.<sup>1</sup> The outlook is for continued slowing in deposit growth, driven mostly by this projection: the Blue Chip consensus forecasts the U.S. personal saving rate to come down from its still elevated level of 10.1 percent to 7 percent by the end of 2022. Additionally, the Board of Governors of the Federal Reserve System (Federal Reserve) tapering will likely have a mild, temporary negative effect on deposit growth. But at the same time, there are factors, such as low interest rates on Treasury bills and money market funds, that may encourage households and businesses to keep their deposits in the banking system

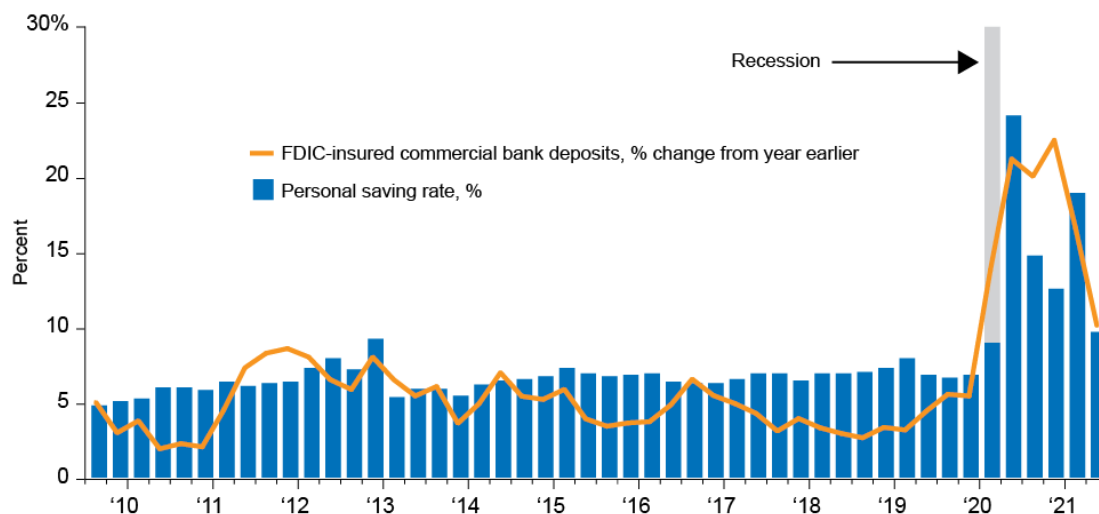
### Bank Deposit Growth Slows After COVID-Related Deposit Surge Last Year

Commercial bank deposits increased at a record 37 percent annual rate over the first half of 2020 as both Paycheck Protection Program (PPP) borrowers and large nonfinancial companies that drew down their lines of credit as a precautionary measure initially kept the money in banks that had extended the loans. Near-zero interest rates as well as government transfer payments, including expanded unemployment benefits and checks to individuals, added to deposit growth—as the public, facing rising economic uncertainty, retained the funds in bank accounts.

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<sup>1</sup> “Excess” deposits are defined here as the amount of deposits over and above what would have been the case had there been no pandemic.

Figure 1: Deposit Growth and Personal Saving Rate



Source: Federal Deposit Insurance Corporation (FDIC), Bureau of Economic Analysis (BEA)/Haver Analytics

Note: Total FDIC-insured commercial bank deposits are end-of-period. Personal saving rate is seasonally adjusted.

Indeed, the household personal saving rate surged to over 33 percent in April 2020 (figure 1). The saving rate spiked again in January 2021 due to the passage of \$900 billion in stimulus in December 2020. An even larger \$1.9 trillion stimulus package was signed into law in early March 2021. This supported increased deposit growth through the first quarter of this year. When personal saving rises, it has a large influence on total deposit growth as well because households account for two-thirds of total bank deposits.

However, in the second quarter of 2021, deposit growth slowed to well below the pace in 2020. The conclusion of the PPP and decline in corporate drawdowns restrained any further growth in associated deposits. In addition, the household personal saving rate came down sharply in the second quarter.

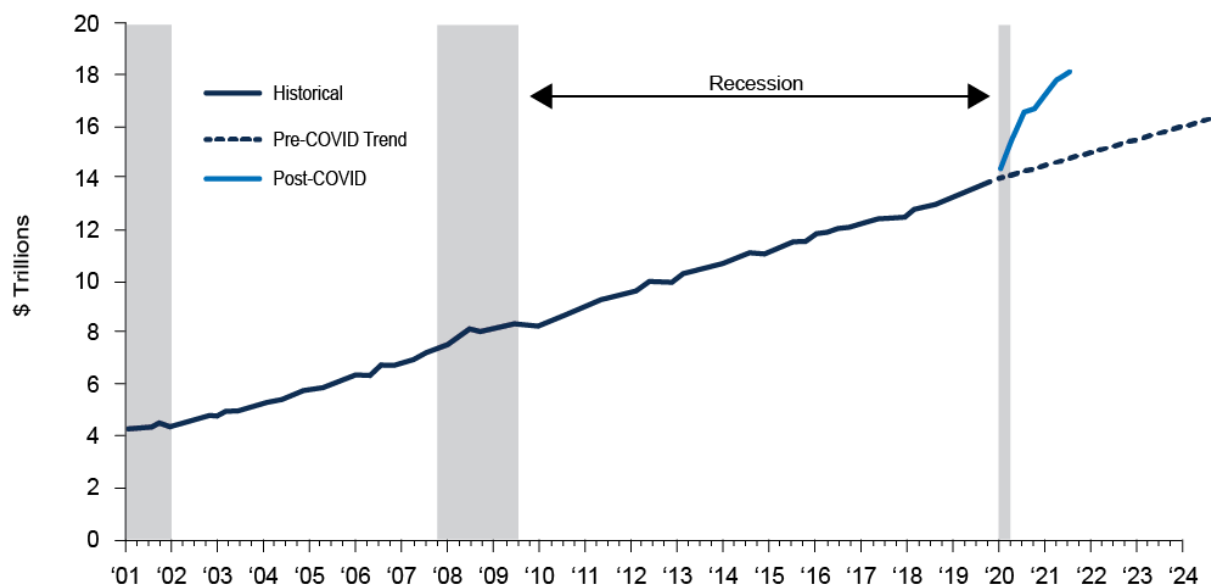
The present 10.3 percent personal saving rate remains elevated by historical standards. Over the decade prior to the start of the pandemic, the saving rate had averaged just 7.2 percent and had never reached 10 percent in a single quarter. So, household demand for precautionary balances remains elevated. In addition, interest rates on low-risk, liquid alternatives to bank deposits such as Treasury bills and money market funds remain near or below zero. As a result, banks are still flush with deposits and the deposit-to-asset ratio remains near 80 percent, the highest since the 1970s, prior to competition from money market funds.

## Banking System Is Carrying “Excess” Deposits

Due to circumstances surrounding the pandemic, the banking system currently holds about \$3 trillion in “excess” deposits—equal to roughly 17 percent of total deposits. From the close of the previous financial crisis in the fourth quarter of 2011 through the fourth quarter of 2019, the trend rate of deposit growth averaged 5 percent annually. By contrast, from the fourth quarter of 2019, just prior to the pandemic, through the second quarter of 2021, deposits grew at an 18.4 percent annual pace. As a result, the total level of deposits at commercial banks in the second quarter of 2021 reached a record \$17.5 trillion. If deposits had continued to increase at their 2011–2019 trend pace of 5 percent, the current level of deposits would be a significantly lower

\$14.6 trillion (figure 2). This suggests that deposits are now about \$3 trillion above where they would have been absent the surge in precautionary saving during the pandemic. The jump in total deposits was accompanied by a change in the composition of deposits. The share of transaction-to-total deposits rose from 18 to 33 percent while nontransaction deposits dropped from 82 to 67 percent of total deposits. So, most of the excess deposit balances currently in the banking system are concentrated in transaction accounts.

**Figure 2: Total Deposits: FDIC Insured Commercial Banks**



Source: FDIC, OCC Economics & Policy Analysis (E&PA) calculations, Haver Analytics

Although the influx of deposits against the backdrop of near-zero interest rates led to a plunge in banks' funding costs, it also resulted in pressures on bank performance. Loan demand did not keep pace with deposit growth, causing the industry's loan-to-deposit ratio to drop from about 81 percent at year-end 2019 to 57 percent in mid-2021. Partly as a result, banking system net interest margins fell sharply. The weakness in loan demand, especially in the commercial and industrial (C&I) area, occurred as low interest rates encouraged nonfinancial businesses to substitute new bond issuance for bank loans as a means of financing capital expenditures, inventories, and receivables.

How long will the current level of excess deposits persist? The Blue Chip consensus projects that the household personal saving rate will come down steadily from its present level of 10.3 percent, finally settling at 7 percent in the fourth quarter of 2022. A 7 percent saving rate is equal to the average rate in the 2010–2019 period. Households currently hold close to 50 percent of transaction deposits and 76 percent of time and savings deposits. Moreover, nonfinancial business and foreign sector saving are both expected to remain stable through next year (these sectors hold 40 percent of transaction deposits and meager savings deposits). So, on a net basis, the total saving flows from these three critical sectors will fall through the end of next year, which will exert downward pressure on deposit growth.

## While Declining Saving Rate Restrains Deposit Growth, Low Interest Rates Elsewhere May Prevent Banking Deposit Runoff

Declining interest rates, as well as persistent near-zero interest rate levels, encourage reintermediation by reducing the “opportunity cost” of holding noninterest-bearing and low-interest deposits in the banking system. In other words, since opportunities for higher returns in similar low-risk, liquid vehicles such as Treasuries or money market funds are unavailable, households and other deposit holders become more willing to park their funds in bank transaction accounts when rates are low. To what extent will reintermediative<sup>2</sup> influences from the continuation of the current low interest rate environment offset the disintermediative<sup>3</sup> impact of diminishing uncertainty and declining saving rates?

Analysis of the 2007–2015 cycle makes it possible to separate out these two influences on deposit growth. It was clear during the 2007–2015 cycle that heightened uncertainty had a major influence on deposit growth. In October of 2008, in response to public concern over the safety of the financial system, the FDIC initiated the Transaction Account Guarantee Program (TAG) which provided unlimited deposit guarantees for funds placed in certain non-interest-bearing checkable accounts. This program, as well as extensions provided by the Dodd–Frank Wall Street Reform and Consumer Protection Act, lasted until the end of 2012. Non-interest-bearing checking accounts, which were covered by TAG guarantees, displayed enormous growth in the 2008–2015 low interest rate period, while interest-bearing negotiable order of withdrawal (NOW)<sup>4</sup> accounts, which were not covered by TAG, displayed relatively little growth. This suggests that deposit guarantees played a significant role in bolstering deposit growth in the post-2007 reintermediation cycle. Figure 3 further illustrates the unusual nature of the 2007–2015 cycle as well as that of the current cycle. Heightened uncertainty led to unusually large increases in savings and a desire by the public to build a buffer stock of cash. In prior cycles, by contrast, accelerating deposit inflows were powered primarily by low interest rates alone.

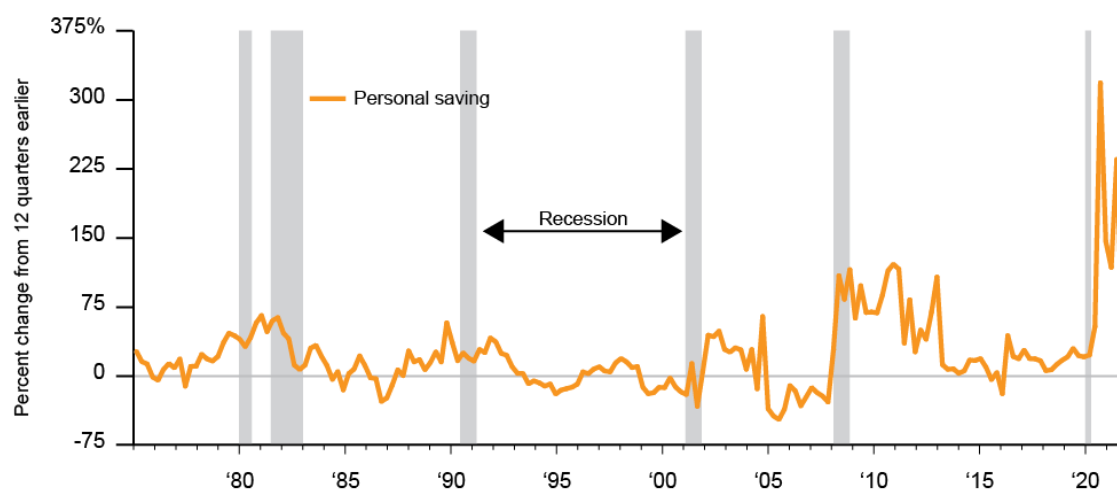
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<sup>2</sup> Reintermediative is the adjective form of reintermediation. “Reintermediation” can mean actual inflows of funds into banks from outside the banking system, or inflows into transaction accounts from other types of bank accounts, such as time deposits. When interest rates are low (or due to liquidity and safety concerns), households tend to be less aggressive at moving their wages, salaries and other sources of income out of bank deposits and into alternative, nonbank investments and simply allow these funds to accumulate in their deposit accounts over time. This is especially the case with transaction and other noninterest-bearing deposits. When rates are near zero, the opportunity cost of holding these types of deposits is negligible. This state of low opportunity costs where funds accumulate is also commonly referred to as “reintermediation.”

<sup>3</sup> Disintermediative is the adjective form of disintermediation which is the opposite of reintermediation. Disintermediative pressures are those that encourage funds to flow out of a particular type of bank account into another type of bank account or out of the banking system altogether.

<sup>4</sup> A negotiable order of withdrawal (NOW) account permits the owner to write drafts on interest-bearing funds held on deposit.

**Figure 3: Personal Saving**



Source: BEA/ Haver Analytics

It is estimated that about 58 percent of transaction deposit growth during the 2007–2015 cycle was due to heightened uncertainty. The remaining 42 percent was due to the near-zero interest rate environment, which encouraged sharp reintermediation into transaction accounts. So far during the current Federal Reserve easing cycle, it is estimated that less than 10 percent of the pickup in transaction deposits is attributable to falling and near-zero interest rates, and 90 percent to heightened uncertainty.

As illustrated in column 3 of table 1, transaction deposit inflows in the 2007–2015 Federal Reserve easing cycle rose far more than in earlier reintermediation cycles stretching back to the 1980s. However, these earlier periods of Federal Reserve easing were shorter than the 2007–2015 cycle, as illustrated in column 2 of table 1. But, even if one calculates a pro forma level of reintermediation for these prior episodes that extends them to equal the length of the 2007–2015 cycle at 32 quarters (column 4 of table 1), deposits in the earlier cycles increased by an average of 66 percent, well short of the 156 percent increase in the 2007–2015 cycle.

**Table 1: Transaction Deposit Inflows Into Depository Institutions Resulting From Heightened Uncertainty: 2007–2015**

Major Federal Reserve easing cycles	Duration of cycle (quarters)	Increase in deposits during associated cycle	Pro forma increase in deposits assuming 32-quarter cycle	Average pro forma increase in deposits due to lower rates in 2007–2015 cycle
2Q 1981–1Q 1987	23	65%	90%	
2Q 1989–4Q 1993	18	45%	80%	
3Q 2000–1Q 2004	14	12%	28%	
			66% (Average)	
4Q 2007–4Q 2015	32	156%		66%/156% = 42%

Source: Federal Reserve Financial Accounts of the United States – Z.1, FDIC, OCC Economics & Policy Analysis calculations

About 42 percent (66 percent/156 percent = 42 percent) of the total reintermediation in transaction deposits in the 2007–2015 period is attributable to the decline in short-term interest rates alone. This leaves 58 percent of the reintermediation due to the heightened uncertainty and a resulting dash for liquidity. In fact, from 2007–2012 during the financial crisis and its aftermath, the personal saving rate surged from 3 percent to 10 percent.

Turning to the present situation, transaction deposits surged by 151 percent between the second quarter of 2019 and the second quarter of 2021. But it is estimated that only about 7 percent of the increase is attributable to pure low-interest rate effects. The remaining 93 percent is likely due to increased uncertainty and induced saving. Interest rates have only been declining or near zero for about two years. By historical standards, this is not enough time by itself to generate significant reintermediative behavior. For example, on average, during the first two years of the three reintermediation cycles between 1981 and 2004, transaction deposits grew by only 10 percent. By contrast, transaction deposits grew by 151 percent from the second quarter of 2019 through the second quarter of 2021. Assuming that these three earlier reintermediation cycles were powered by low interest rates alone, this suggests that only 7 percent of the 2019–2021 increase in deposits (10 percent/151 percent = 7 percent) is attributable just to low interest rates.

Of course, if interest rates remain near zero through mid-2023 as predicted by the Blue Chip consensus, then transaction deposit growth will continue. This will offset the restraining influence of declining uncertainty and saving rates on deposits. But what will be the net impact of these opposing influences on deposit growth? Once again, the 2007–2015 cycle provides some clues. At the close of 2012, FDIC deposit guarantees expired, and market fears and uncertainty were fading. The saving rate fell from 10 percent in the fourth quarter of 2012 to 7.3 percent in the fourth quarter of 2014; similar to the current Blue Chip consensus outlook, which has the saving rate falling from 10 percent currently to 7 percent in the second quarter of 2023. Yet, transaction deposits grew by an additional 17 percent through the end of 2014. This occurred as interest rates remained near zero through 2014. This is about the same time span between now and mid-2023 when the Blue Chip consensus is also predicting near-zero interest rates.

Therefore, as a rough estimate, it's not unreasonable to expect transaction deposits to grow by an additional 17 percent through 2023, similar to the increase in 2012–2014. Meanwhile, nontransaction deposit levels may remain stable or decline slightly through mid-2023. Therefore, a reasonable estimate for total deposit growth through 2023 would be in the 15 percent range.<sup>5</sup>

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<sup>5</sup> Moody's analytics is projecting a similar growth rate for total deposits over the intermediate term. In the short-run, Moody's projects that transaction deposits will decline outright for two quarters or so. Thereafter, deposits are expected to return to their trend rate of growth. The OCC Economics analysis concludes that deposit growth will slow sharply in the short term but avoid an outright decline. However, over the next three years or so, OCC Economics expectation is similar to the Moody's outlook.

## Tapering and Cessation of Federal Reserve Asset Purchases Unlikely to Cause Material Deposit Runoff

In mid-December 2021, the Federal Reserve announced it will double its' pace of tapering asset purchases and halt asset purchases altogether by mid-March 2022. If Federal Reserve asset purchases were a principal source of commercial bank deposit growth, as is often portrayed in the financial media, then deposit growth would slow when asset purchases began to taper. And the level of deposits in the banking system would fall when the Federal Reserve halted asset purchases and allowed securities to run off its balance sheet.<sup>6</sup>

Ultimately, however, Federal Reserve asset purchases do not determine the level of bank deposits.<sup>7</sup> The level of deposits in the banking system as a whole ultimately depends on the public's preference for holding deposits and banks' willingness to compete for deposits.<sup>8</sup> As discussed earlier, increased caution and the desire by households and businesses to build a buffer stock of cash led to a record level of bank deposits. Also, interest rates on low-risk, liquid alternatives to bank deposits such as Treasury bills and money market funds are all near zero. As a result, banks are flush with funds and deposits are likely to remain elevated through 2023 if interest rates remain near zero as expected.

It is difficult to disentangle the influence of Federal Reserve asset purchases and near-zero interest rates on deposit growth because they occurred simultaneously over the course of the pandemic. The central bank engaged in asset purchases continually throughout this crisis period of near-zero interest rates. However, in the 2008–2015 period, interest rates also remained near zero. But, unlike the present cycle, the Federal Reserve engaged in three separate asset purchase programs, and at several points allowed securities to run off its balance sheet.<sup>9</sup> Yet, as illustrated in figure 4, deposit growth remained decidedly stable over that period.<sup>10</sup>

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<sup>6</sup> Nelson, Bill, [QE May Raise Deposits at Banks Immediately, but Not Permanently](#), Bank Policy Institute (April 6, 2021)

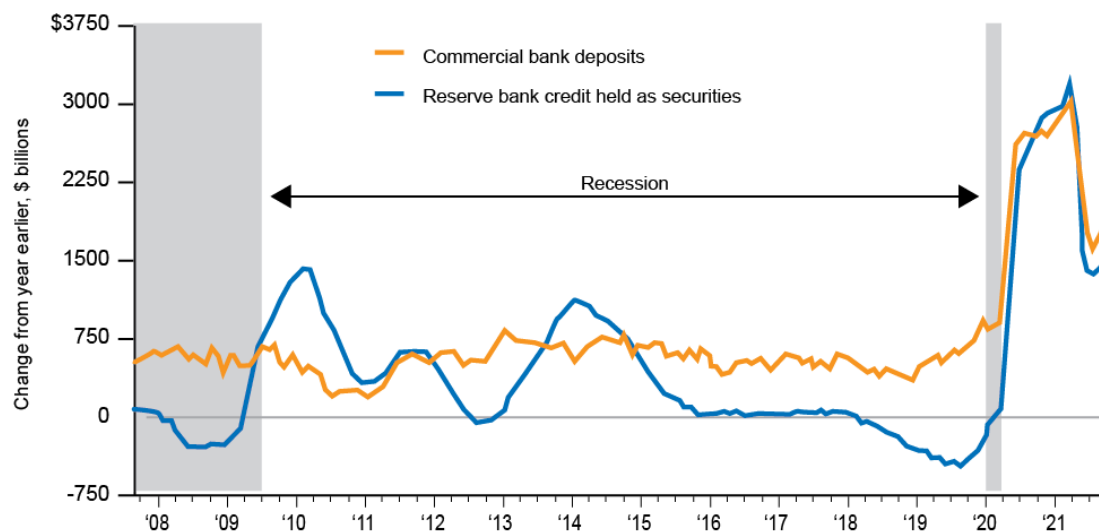
<sup>7</sup> Often, Federal Reserve asset purchases initially create bank deposits in an immediate accounting sense. So, even if there had been no rise in pandemic-related uncertainty, it would take a period of time for those deposits to be redeployed by the public to nondeposit vehicles such as money market funds, bonds, and stocks if the public so desired.

<sup>8</sup> Tobin, James, *Commercial Banks as Creators of "Money,"* Cowles Foundation Discussion paper No. 159, Cowles Foundation for Research in Economics at Yale University, July 24, 1963

<sup>9</sup> The Federal Reserve allowed securities to 'run off' its balance sheet by not purchasing new securities to replace maturing securities.

<sup>10</sup> Nelson, Bill, [QE May Raise Deposits at Banks Immediately, but Not Permanently](#), Bank Policy Institute (April 6, 2021)

**Figure 4: Deposits and Reserve Bank Credit Held as Securities**



Source: Federal Reserve Board/Haver Analytics

Note: Commercial bank deposits are seasonally adjusted. Reserve bank credit held as securities is end-of-period.

## Eventual Fed Tightening Unlikely to be an Issue for Banks

The Federal Reserve expects to hike interest rates by a quarter point three times per year in 2022 and 2023. By that time, the banking system is likely to still hold a relatively elevated level of deposits and loan-to-deposit ratios will likely remain depressed by historical standards. As rates increase, banks are likely to initially see little disintermediative pressure on transaction deposits. Similar to the 2015–2019 period of Federal Reserve tightening, interest rate increases would be starting from such a depressed point that critical levels would not be reached for some time. In the 2015–2019 Federal Reserve tightening cycle, it was not until short-term rates had reached about 1.8 percent that disintermediative pressures emerged. Moreover, even when rates do climb to these critical levels, banks will still be flush with deposits and cash and will be under less pressure to compete intensively for deposit or nondeposit funds, and this will be positive for bank margins.

Of course, as the central bank continues to tighten, institutions will eventually come under pressure to lift deposit rates to keep and attract funds. If this proves to be the case, net interest margins (NIM) may continue to rise, but the pace of NIM improvement would slow.

## The Point?

Bank deposit growth will slow as public uncertainty fades, but still high deposit levels relative to loans will help support bank margins for a time even once interest rates start to climb.