



Bank Lending during Covid-19: The Effects of Increased Deposits due to Stimulus

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Introduction

Economic uncertainty leads consumers to save and stockpile money (Ghosh and Ostry,1997). The U.S. Department of Commerce reports the percentage of savings to income has increased from 7.6% in January 2020 to 13.4% in December 2020 (Bureau of Economic Analysis, 2021). This has led to significant rises in deposit accounts of banks across the country. At the same time, many companies facing uncertainty made cost-cutting measures, focusing on short-term liquidity. Delays on expansion and capital purchases reduced demand for commercial loans. Newly released data estimates 5.2 million businesses sought forgivable loans, like the government-provided PPP loans, to address their needs rather than using traditional commercial lending (New York Times).

Some financial institutions found themselves with large supplies of cash but diminishing demands for loans. How did banks respond and how did their actions affect their financials?

Methodology

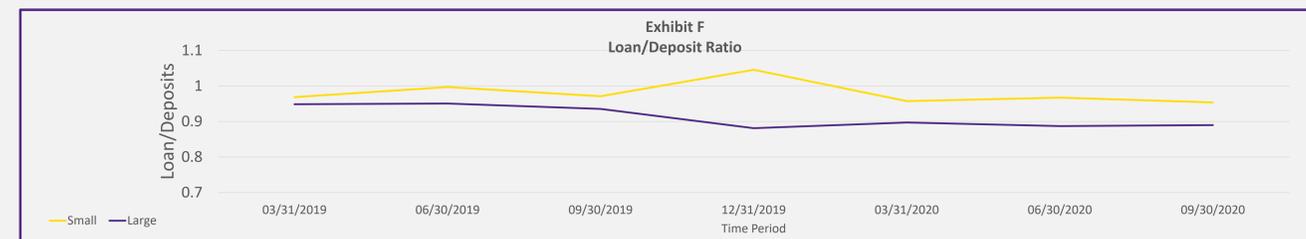
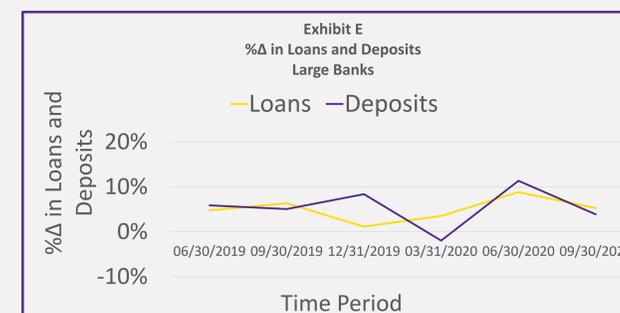
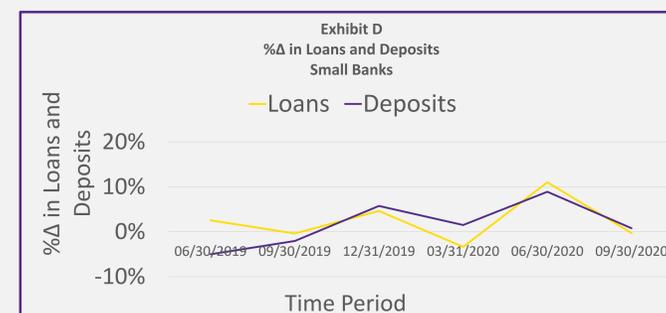
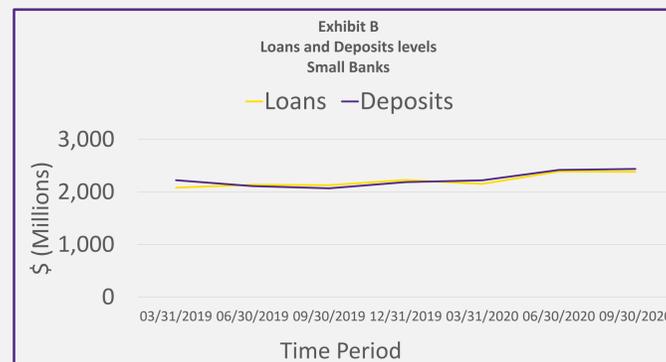
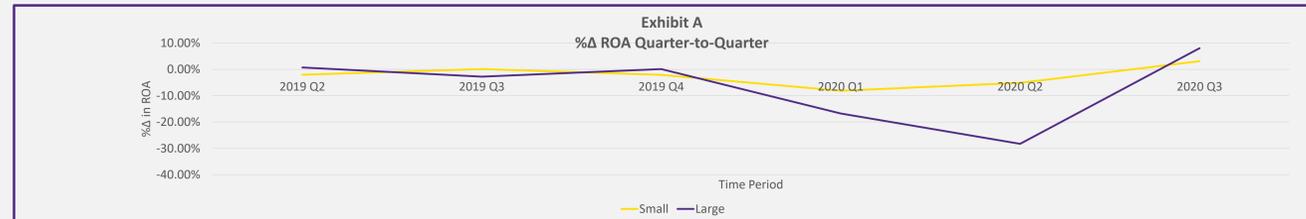
Through thorough trend analysis, we analyzed how banks' % change in return on assets (ROA) was affected by two key trends:

- The rate of growth in a bank's deposits
- The rate of growth in a bank's loans

We separated and analyzed these trends between banks considered "small" by the market (Market Cap<\$1 billion) and banks considered "large" by the market (Market Cap>\$1 billion). We conducted an event study of these variables using data with the following parameters:

- A sample set of 49 banks within the Russel 2000 index that varies in size and operations
- Pre-Covid data being considered as Q1-Q4 of the calendar year 2019
- Covid data being considered as Q1-Q3 of the calendar year 2020.

Results



Discussion

- Larger banks appear to be affected more strongly by COVID than smaller banks in terms of profitability (namely ROA as seen in Exhibit A)
 - %Δ ROA for small banks quarter-to-quarter decreased slightly during the initial phases of COVID
 - %Δ ROA for large banks quarter-to-quarter decreased significantly (2X-4X as much as smaller banks) during the initial phases of COVID
- Loan/Deposit efficiency appears to be a critical factor
 - Small banks were able to manage their ratio of loans to deposits to be at or near 95% throughout COVID (see Exhibit F)
 - The overall levels and the quarterly % changes in both loans and deposits follow similar patterns and tend to overlap (see Exhibits B and D)
 - Larger banks were unable to optimize their ratio of loans to deposits during COVID, resulting in a ratio of 90% (see Exhibit F)
 - At the start of COVID, deposits stagnated, likely due to the economic shutdowns as a result of COVID (see Exhibit E)
 - Large banks' loans grew slightly during the beginning of COVID, almost improving large banks' average loans to deposit ratio
 - Government stimulus introduced by the end of Q2 2020 caused massive growth in deposits, resulting in the loans/deposit ratio stagnating at 90% (see Exhibits C and E)
- This 5% difference in loan/deposit efficiency is likely a probable cause for the disparities in the quarterly % changes in ROA (see Exhibit A)
 - The consistent 5% gap between small and large banks essentially represents lost opportunities for large banks to make profits during COVID

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Conclusion

It would seem how a bank could respond to COVID largely affected their profitability, in terms of ROA, during COVID. Smaller banks appear to have been able to act and operate more efficiently than their larger peers. While all banks received a growth in deposits from the government stimulus payments, smaller banks could better match their loan growth with their deposit growth. Small banks were given higher priority status to give out PPP loans through the SBA to borrowers. This allowed smaller banks to be able to peg their loan/deposit efficiency at a high level. Large banks received lower priority status at giving out PPP loans. This caused larger banks to be unable to match the sudden growth in deposits from the stimulus payments as much as their growth in loans. The way the SBA structured the giving out PPP loans appears to favor smaller banks over larger ones. This means that while the increased deposits from government stimulus hurt both small and large banks' efficiency, small banks seem to have been afforded a way of diminishing this effect that larger banks were not.

Q3 shows promise that the banking industry is stabilizing and returning to normal. While there was a shock during the initial phases of COVID, banks have seemed able to adjust to the new environment, as seen by the Q3 2020 results from Exhibit A. As the economy adapts and the market for loans starts to meet deposits, it will increase efficiency resulting in an increase in ROA for banks of all sizes.

References

- 1) Atish R. Ghosh, Jonathan D. Ostry, Macroeconomic uncertainty, precautionary saving, and the current account, *Journal of Monetary Economics*, Volume 40, Issue 1, 1997, Pages 121-139, ISSN 0304-3932,
- 2) Bloomberg Terminal.
- 3) Cowley, Stacy, and Ella Koeze. "1 Percent of P.P.P. Borrowers Got Over One-Quarter of the Loan Money." *The New York Times*, *The New York Times*, 2 Dec. 2020, www.nytimes.com/2020/12/02/business/paycheck-protection-program-coronavirus.html.
- 4) "Personal Saving Rate." *Personal Saving Rate | U.S. Bureau of Economic Analysis (BEA)*, www.bea.gov/data/income-saving/personal-saving-rate.



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