White Paper: Public Banking in the Northeast and Midwest States

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About the Institute

The Northeast-Midwest Institute is a Washington, D.C.-based, nonprofit, nonpartisan public policy organization committed to economic vitality, environmental quality, and regional equity for the 18 states of the Northeast and Midwest. As a policy-focused institute with a 40-year track record of producing first-rate research, developing policy options, and building and supporting regional coalitions, the Institute has unique standing in that it was founded in response to calls by the Congressional Northeast-Midwest Coalition for a stable and trusted source of regional data and research as well as policy options and analysis. It is precisely these roots and relationships on Capitol Hill which now position the Northeast-Midwest Institute to chart a future that encompasses an expanded agenda of critical regional issues and to embark on a strategy to achieve increased impact.

Executive Summary

This report lays out the major models of public banking around the world and in the United States and examines their various advantages, obstacles, and feasibility of implementation. Specifically, it explores the Bank of North Dakota, the German Sparkassen Banks, and India's Public Sector Banks. It also examines the current political momentum behind public banks in NEMW states and looks into how the concept has built increasingly more widespread support over the years throughout both regions.

This report then lays out the main policy breakdowns that could be addressed by the utilization of a public bank, particularly uncompetitive financial markets, lack of development, state fiscal health, and efficiency issues. In response to each problem, the report details how public banks could serve as a remedy. To combat these issues, the report has outlined a set of recommendations for how a state should create, structure, and regulate a state bank to best achieve its goals and address the problems facing the state.

This report recommends that all NEMW states adopt a public bank and do so with close attention to their circumstances and needs, tailoring the bank's specifics to the nuances of the state. Public banking is not a panacea, but it can move states in the right direction for addressing critical investment gaps and realigning state resources with state interests.

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I. Introduction

Public banks are banks owned by a government entity—be it a nation state, local sub-region, administrative territory, or government agency.[1] A public bank is only distinguished from a private bank by its ownership. If a government wanted to, it could run a public bank exactly like a private one. As such, general statements about public banks are difficult to make. Instead, public banks, and the potential effects they may have, must be understood through the different ways in which they have been implemented and run by governments.

Fortunately, examples of public banks are widely available. Though in the United States public banks are few and far between, a majority of countries have significant public banking systems. This includes countries with close economic and cultural similarities to the US. For example, public banks have been implemented successfully in countries like Australia, New Zealand, Canada, Germany, Switzerland, India, China, and Japan.[2]

These countries have adopted different models of public banking. Across these varying models, public banks have taken on unique roles within their respective economies. These roles include everything from development banks in South America and East Asia to savings banks in Germany and specific-purpose public banks in India and China. America's only public state bank, the Bank of North Dakota (BND), operates on a partnership bank or bankers' bank model. Along with these differing roles, public banks have been owned and governed by their governments in distinctive ways. Some are owned as public companies, with the government as the majority stockholder, some as legally public institutions, some "do business as" their respective government.

Despite these significant differences many public banks do share some similarities. First, because the government of the community in which they operate owns these banks, the community indirectly controls them. Indeed, these banks often have a "public purpose" formalized in their founding documents or business plans which commands them to pursue projects that are in the public interest.[3] This distinguishes public banks from private banks, which usually operate to maximize profits or shareholder returns. Second, these banks often hold government assets or funds as deposits, if the bank is a depository institution, or as capital for investments. Third, public banks are often limited by their founding documents or operational guidelines to investing or conducting business in their local community. Thus, public banks put their assets, which are from the community, back into the community as investments. This, again, contrasts with private banks that usually operate wherever the greatest returns are expected.

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[1] *FAQ On Public Banking*, Public Banking Institute (2019), 2, https://www.publicbankinginstitute.org/faq/.
[2] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 11, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[3] Figart, Deborah, *Exploring a Public Bank for New Jersey: Economic Impact and Implementation Issues*, Stockton University (2018), 4, https://stockton.edu/hughes-center/documents/2018-0326-exploring-a-public-bank-for-new-jersey-economic-impact-and-implementation.pdf.

Public banks have played an important role in financial markets around the world. Though the size of public banks has decreased relative to private firms since the 1970s, they have remained a key part of the financial industry. In the mid-1990s public banks held one-quarter of large bank assets in industrialized countries and half of large bank assets in developing countries.[4] Through a wave of privatizations and structural economic reforms, the government-owned share of assets fell during the 1990s and 2000s. In 2008, government-owned banks accounted for only 16% of worldwide financial assets.[5] But, as the Great Recession forced governments to intervene in their financial systems, the importance of public banks has increased, as has their share of assets. By 2010, their share of assets had risen to 19%.[6]

Interest in public banks has also increased in the United States. Citizens and policymakers have begun to advocate for creating public banks in recent years. This interest has been expressed primarily through calls for public banking at the state and local level. This interest has been substantial enough to lead large cities like New York and Washington DC to consider the idea. Public banks were also included in the Green New Deal resolution released this year.[7]

Most advocates of public banks in the US have pointed to the BND and its performance in the wake of the Great Recession as evidence for the benefits of public banks. They see the BND as a successful model for how public banks could be developed in other American states and localities. Interest in public banking continued to increase after the Territorial Bank of American Samoa was founded in 2016. This public bank only recently gained access to the US payments system through the Federal Reserve.[8] After not having had a commercial loan made on the island in five years, American Samoa has moved to address problems in its financial markets and has proven to other American government entities, both states and municipalities, that there is a path towards establishment of public banks in the national regulatory system.[9]

Building on this growing enthusiasm and the increasing realization of the opportunity for public banking in the US, this report will assess the viability of establishing state public banks in states in the Northeastern and Midwestern (NEMW) United States. These states are: Connecticut,

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[4] Yeyati, Eduardo; Micco, Alejandro; Panizza, Ugo, *Should the Government Be in the Banking Business? The Role of State-Owned and Development Banks*, Inter-American Development Bank (2004), 6, https://www.econstor.eu/bitstream/10419/88042/1/idb-wp_517.pdf.

[5] Cull, Robert; Peria, Maria; Verrier, Jeanne, *Bank Ownership: Trends and Implications*, World Bank Group (2018), 4, http://documents.worldbank.org/curated/en/810621515444012541/pdf/WPS8297.pdf.

[6] Cull, Robert; Peria, Maria; Verrier, Jeanne, *Bank Ownership: Trends and Implications*, World Bank Group (2018), 4, http://documents.worldbank.org/curated/en/810621515444012541/pdf/WPS8297.pdf.

[7] Anzilotti, Eillie, *The One Strategy That Could Finance The Whole Green New Deal*, Fast Company (2019), https://www.fastcompany.com/90364616/public-banking-can-finance-the-green-new-deal.

[8] Blackwell, Rob, *American Samoa Finally Gets a Public Bank. And U.S. States are Watching*, American Banker (2018), https://www.americanbanker.com/news/american-samoa-finally-gets-a-public-bank-and-us-states-are-watching.

[9] Blackwell, Rob, *American Samoa Finally Gets a Public Bank. And U.S. States are Watching*, American Banker (2018), https://www.americanbanker.com/news/american-samoa-finally-gets-a-public-bank-and-us-states-are-watching.

Delaware, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, and Wisconsin. Though the discussion will be specific to issues facing these 18 states, advocates for public banks in other states, municipalities, or regions of the United States may also find helpful information in this report. In general, the problems that public banks solve and the opportunities they offer are not specific to a particular region or state. States can use the basic public bank framework outlined in this report or other research and modify it as suits the needs of their community.

The report will have three sections. First, a background section covering case studies of public banking and political opportunities in the NEMW states. Second, a breakdown of how the creation of a public bank would solve problems facing these states. Third, a set of recommendations for how these states should create a state bank.

This report concludes that all 18 states should establish a public bank in the near future. Though each state should pay attention to its particular circumstances, and should adjust its banking model accordingly, some form of public banking can be helpful to all of these states.

II. Background on Public Banking

To layout the existing implementation of public banks, this chapter will look at a number of case studies of public banks throughout the world. The chapter will then detail the political opportunities for public banking in the Northeast-Midwest.

A. Case Studies

This section will begin with the Bank of North Dakota (BND), which is the paradigmatic example of public banking in the US. But, just because the BND has achieved substantial success and shares a common regulatory, political, and economic environment with many NEMW states, it is not the only instructive approach to public banking. The purpose of including two other case studies is to offer ideas for how to run a public bank which are novel to an American context and reveal potential problems facing public banks.

1. Bank of North Dakota

The State Legislature of North Dakota founded the BND in 1919.[10] Starting with just $2 million in capital, it was tasked with providing loans to local businesses and local farmers.[11] Its responsibilities started to grow as the bank's assets continued to increase. The bank expanded beyond loans to farmers and businesses to serving a banker's bank function. In this role, the

[10] *The BND Story*, Bank of North Dakota (2019), https://thebndstory.nd.gov/.
[11] *BND-FAQ*, Bank of North Dakota (2013), 1, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.

bank strengthened local credit markets by providing needed services to community banks. In 1945, the state of North Dakota took its first share of bank profits.[12] Since then, the state has regularly earned income not only from interest on its deposits in the bank, but also from its share of bank profits. Throughout the next half-century, the bank has continued to expand its suite of programs to extend credit to farmers, businesses, small banks, and the state.

The first key to understanding the BND model is to understand how the bank is related to the state of North Dakota. The bank is chartered by the state.[13] In the United States, both states and the federal government can charter banks – they can give authorization for banks to begin operations by incorporating the bank and specifying its rights under the law. Second, the BND is set up as a DBA of the state.[14] DBA stands for "Doing Business As." Businesses and other organizations often use a DBA setup to work under an assumed or trade name. Registering a DBA allows an organization to conduct financial transactions and legal activity under a second name of its choice. This means that the BND being a DBA of the state is the same as saying that "North Dakota [is doing] business as the Bank of North Dakota."[15] In other words, the bank is not only owned by the state, it is the state. The state and the bank are the same entity, just one that is operating under different names for business purposes.

This ownership model means that the bank and the state are intimately connected. Because they are technically the same entity, bank officials have close relationships with government officials. This close connection means more communication and coordination between the state and the bank.

Perhaps most importantly, this ownership model avoids several legal issues that may arise in the American regulatory framework. Had the bank been chartered by a federal agency, this would have significantly impeded the ability of the bank to operate according to the state's wishes.[16] The federal agency would be able to define the terms of the charter, including its requirements for granting the charter. This also would have placed the state's banking activities under the jurisdiction of the federal agency. Furthermore, if a federal charter was granted to a DBA bank, it would raise states' rights concerns because it would give a federal agency direct control over the state. Instead, using the state charter ensures that the bank can be founded and operated according to the state's own banking rules and standards.[17]

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[12] *BND-FAQ*, Bank of North Dakota (2013), 1, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.

[13] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 25, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

[14] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 12, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

[15] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 12, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

[16] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 27, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

[17] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 27, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

Creating the bank as a DBA of the state also gives the bank greater access to credit, especially early in its establishment. Because the bank is the state, the bank can count state assets on its ledgers, which allows it to extend greater amounts of credit based on those asset values. Most of these assets are not stored in the bank. Yet, the bank is still be able to loan on the basis of these assets, even before it has had the opportunity to build its own substantial capital base.

The BND's ownership model is combined with a governance structure that defines the high-level and long-term management of the institution. In 1919, the bank was created alongside a State Industrial Commission, which was charged with running the bank.[18] This commission is made up of three officials: the Governor, the Attorney General, and the Agriculture Commissioner.[19] The Governor is the chair of this commission and each member is elected every four years.[20] The Industrial Commission appoints the bank President and approves all senior Vice Presidents.[21] Thus, these elected officials serve an important role in overseeing the bank's long-term operations. Crucially, as the only popularly elected officials with involvement in the bank's governance, these officials ensure accountability and transparency in the bank's operations; accountability because these officials can certify that the bank continues to meet the needs of its community and transparency because they oversee the operations of the bank.

The commission is assisted in its oversight of the bank by another board tasked with reviewing the bank's operations. In 1969, state statute established the Advisory Board of Directors to assist the Industrial Commission in its important tasks.[22] The Industrial Commission chooses this seven-member board within certain restrictions.[23] The board must have at least two members who are officers of banks whose majority stockholders are North Dakota residents.[24] Additionally, at least one member must be an officer of a chartered financial institution. Along with these required appointments, the Governor appoints a Chairman, Vice Chairman, and Secretary for the board. These board members remain on the board for four years, which ensures that each new Industrial Commission selects its own Advisory Board members.[25] Due to these requirements, the Advisory Board has both sufficient expertise and the extensive local connections needed to be the bank's watchdog. As the board can understand the bank's activities and has its own connections to the communities that the bank is intended to serve,

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[18] *The BND Story*, Bank of North Dakota (2019), https://thebndstory.nd.gov/.
[19] Figart, Deborah, *Exploring a Public Bank for New Jersey: Economic Impact and Implementation Issues*, Stockton University (2018), 11, https://stockton.edu/hughes-center/documents/2018-0326-exploring-a-public-bank-for-new-jersey-economic-impact-and-implementation.pdf.
[20] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 20, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[21] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 20, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[22] *BND-FAQ*, Bank of North Dakota (2013), 1, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.
[23] Hussam, Shareef, *Public Banking for Infrastructure Finance*, Cornell University (2018), 2, http://cms.mildredwarner.org/summaries/hussam2018.
[24] Hussam, Shareef, *Public Banking for Infrastructure Finance*, Cornell University (2018), 2, http://cms.mildredwarner.org/summaries/hussam2018.
[25] Hussam, Shareef, *Public Banking for Infrastructure Finance*, Cornell University (2018), 2, http://cms.mildredwarner.org/summaries/hussam2018.

the board plays a key role in interpreting the bank's actions for the commission. The recommendations of the board regarding the long-term operations of the bank are a crucial component of certifying that the commission can hold the bank accountable.[26] These recommendations cover the bank's management and internal policies and procedures, as well as its services and outward-facing activities.[27]

Together, the two boards provide the high-level oversight and governance of the bank. This governance is maintained in an accountable and transparent way because of the manner in which these two boards are organized relative to the bank. That is, the boards are given both the access and the impetus to oversee the bank's activities. Because each new Industrial Commission appoints the Advisory Board, each board will have the same views on the proper role of the bank as the commission members. This aligns the incentives of the two boards and ensures that they work together to do what is best for North Dakotans. Thus, these two boards work in tandem to ensure that the bank's mission is upheld.

On the other hand, the bank's managers are given sufficient independence in their day-to-day operations to avoid undue political influence. Though the Governor appoints the President, their terms do not coincide and the appointments are non-partisan. Almost all of the leadership is chosen from within the bank itself.[28] As a result, the appointments allow for the political independence of the bank managers.

The Executive Committee manages the bank's day-to-day activities. This committee is made up of seven members, including the President and various Vice-Presidents in charge of different bank functions.[29] As previously noted, the President is appointed while the rest of the committee are selected by the President but are subject to Industrial Commission approval. The full committee membership is: the President and CEO, the Chief Business Development Officer, the Chief Credit Officer, the Chief Administrative Officer, the Chief Technology and Operations Officer, the Chief Financial Officer, and the Chief Risk Officer. Overall, the committee manages 168 BND employees.[30]

The bank itself has a number of noteworthy operational processes. Principal among these is its relationships with other financial institutions. Though the bank holds deposits, it is not a member of the Federal Deposit Insurance Corporation (FDIC).[31] As a result, the FDIC does not insure the bank's deposits. Instead, "North Dakota Century Code 6-09-10 provides that all BND deposits are guaranteed by the full faith and credit of the State of North Dakota."[32]

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[26] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 20, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[27] *The BND Story*, Bank of North Dakota (2019), https://thebndstory.nd.gov/.
[28] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 20, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[29] *BND-FAQ*, Bank of North Dakota (2013), 2, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.
[30] *BND-FAQ*, Bank of North Dakota (2013), 2, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.
[31] *The BND Story*, Bank of North Dakota (2019), https://thebndstory.nd.gov/.
[32] *The BND Story*, Bank of North Dakota (2019), https://thebndstory.nd.gov/.

Furthermore, the bank has an account with the Federal Reserve through its relationship with the Minneapolis Federal Reserve Bank which allows it to clear checks, deposit its excess cash, maintain its reserve requirement standards, and have access to discount window borrowing.[33]

The bank also has established relationships with banks within North Dakota. The bank has a close relationship with most of the community banks in North Dakota. Of the 94 separate banks in North Dakota, the BND has a working relationship with 85 of them.[34]

Finally, the bank has strict procedures in place to manage risk, liquidity, and its portfolio of investments. As loans make up the largest proportion of its assets, the loan approval process is particularly important to the operations of the bank. Additionally, a rigorous loan approval process not only manages risk, liquidity, and diversity of investments, but it also ensures that the bank receives adequate returns on its assets and that it fulfills its mission to improve the North Dakotan economy.

The loan approval process begins when the bank receives an application for a potential loan opportunity. Depending on the type of loan, this may come from the prospective borrower or from a community bank. Regardless of where the loan application originated from, an assigned loan officer handles it first.[35] Loan appraisal begins with a "scoring matrix," which is part of the bank's due diligence process.[36] This system was developed in partnership with the Department of Transportation, Department of Health, and the North Dakota Public Finance Authority to assess the public need for the proposed investment opportunity. After analysis and assessment of the loan opportunity, including the risk associated with the investment, the requested loan principal, the proposed interest rate charged, as well as the public benefits of the loan opportunity, the loan officer must then prepare a report for the loan to be reviewed by a higher authority.[37]

The loan officer has a legal lending limit over which he or she cannot approve loans.[38] Any loans above this limit move to a Loan Committee that is made up of major local lenders. Should the loan be above the lending limit of this committee, the loan would be considered by the Investment Committee, which is made up of senior bank managers.[39] For the largest loans, ones that would commit substantial bank capital to a single investment, both the Advisory

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[33] *The BND Story*, Bank of North Dakota (2019), https://thebndstory.nd.gov/.
[34] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 19, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[35] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 18, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[36] Hussam, Shareef, *Public Banking for Infrastructure Finance*, Cornell University (2018), 3, http://cms.mildredwarner.org/summaries/hussam2018.
[37] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 18, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[38] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 18, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[39] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 18, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

Board and the Industrial Commission review the loan opportunity. Thus, the loan process gives attention to loans on the basis of their capital commitment, and ensures that the most substantial investments are the least risky. This is because these loans must be accepted by an increasing number of officers, with increasing amounts of experience and expertise in the financial system. The largest loans must not only be accepted by a loan officer, as well as senior bank officials and major local lenders, but also by the top of the bank's hierarchy.

Thus, risk minimization and prioritization of public impact are integrated into the bank's loan approval process. This is also apparent in the scoring matrix system and the fact that many of the approvers of the loans have a vested interest in the performance of the North Dakotan economy. Not only are the approvers of loans all residents of North Dakota, but many of them are also placed within roles that rely on the economic health of North Dakota, such as the major local lenders and the politicians of the Industrial Commission. This incentivizes these individuals to be expressly careful about approving loans that do not meet the bank's strict loan underwriting standards.[40]

So the bank has strong management of risk on the micro-level-- at the level of approval of individual loans-- but also on the macro-level. Macro-level management of risk includes maintaining loan loss reserves – excess cash reserves held to account for losses from loan defaults. The BND's Asset Liability Committee constantly monitors these reserves to ensure they are sufficient to cover expected losses, and in 2010 they were 1.79%, less than the average for similarly sized banks of 2.03%.[41] This indicates that the BND has fewer losses on loans than comparable financial institutions. The BND also keeps strict capital requirements. It maintains its capital ratios at 8 to 10% for all levels of capital.[42] Its standards are higher than the Federal Reserve standards and thus are safer than most other banks.[43] As a result of these strict capital ratio controls, the bank has an A-plus long-term rating from Standard and Poor's.[44]

Additionally, the bank has an independent department that reviews credit risks on all investments and with all potential financial partners.[45] This review process creates an extra

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[40] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[41] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[42] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[43] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[44] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 21, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

[45] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

layer of due diligence in investment operations. Overall portfolio risk is managed by standards that prohibit above-average risk loans—loans that offer below-market interest rates—and other riskier bank activities.

Lastly, the bank subjects itself to regular auditing both externally and internally to manage its risk position. The BND is annually audited by a CPA firm.[46] This firm publicly presents its findings each year.[47] Additionally, the North Dakota Department of Financial Institutions audits the bank every other year and the bank has its own internal audit department that performs regular checkups on the bank's position.[48]

This operational model minimizes risks relative to rewards by only engaging in investments which promise relatively certain public benefits for North Dakota and private returns for the bank. And, it succeeds by granting the bank's managers sufficient autonomy from political influence on bank decisions.

The bank conducts its financial activities using deposits as the reserves with which it creates loans. These deposits, uniquely, come mainly from the state. Instead of depositing its revenues in large private commercial banks, the state of North Dakota puts these funds within the BND.[49] Specifically, this is limited to all state funds. So, state taxes and collected fees, and the funds of all state institutions are deposited within the BND.[50] But, trusts managed by the state, such as pension funds, are not. The deposits of the bank are the state's revenue that will be held as deposits until the state spends it on expenses like contracts, procurement, and payroll.

The original bill, which created the BND in 1919, mandated that all public funds were to be deposited in the bank.[51] But, a revised measure in 1921 allowed political subdivisions of the state, but not the state itself or its institutions, to deposit their funds elsewhere.[52] Still, the BND does take deposits from non-state actors. As a part of its original legislation, the bank cannot pay different interest rates on deposits from the state versus non-state depositors.[53]

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[46] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 18, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

[47] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[48] *The BND Story*, Bank of North Dakota (2019), https://thebndstory.nd.gov/.

[49] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 5, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[50] *Washington State Bank Analysis*, Center for State Innovation (2010), 2, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

[51] *BND-FAQ*, Bank of North Dakota (2013), 2, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.

[52] *BND-FAQ*, Bank of North Dakota (2013), 2, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.

[53] *BND-FAQ*, Bank of North Dakota (2013), 2, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.

These non-state deposits have typically made up only around 10 to 20% of the bank's deposits.[54] Most of non-state deposits come from municipal and county governments from within the state as well as local businesses and non-profit organizations.[55] While individuals may also deposit their funds in the bank, these make up only 2% of the bank's total deposits.[56]

As mentioned earlier, these deposits go on the bank's ledger. The deposits function as reserves that allow the bank to create loans. As such, the deposits allow the bank to maintain its strictly controlled capital and reserve ratios. With the majority of its deposits coming from the state, the bank has a unique benefit not afforded to private banks. That is, the BND knows that a majority of its deposits will not be withdrawn. Additionally, it knows when it should expect withdrawals from the state. This allows it not only to manage its liquidity so that there are always sufficient reserves for the state's expenses, but also to manage its loan portfolio so that it will not be adversely impacted by deposit withdrawals. This means that the BND has substantial freedom to extend credit in pursuit of its mission, a freedom that allows the BND to engage in a variety of different activities to improve the North Dakotan economy.

The primary role that the BND inhabits through its loan activities is that of a bankers' bank. That is, the BND provides a number of services to community banks within North Dakota. In fact, the BND charter states that it must support, and not compete with, local banks.[57]

The most substantial way in which the BND helps local banks is through partnership loans. The BND does not do most of its lending directly.[58] Instead, it works with other financial institutions to provide funding for investments in a way that aids both the state economy and local financial institutions. Local banks, including community banks and credit unions, often have trouble providing capital for loan applicants. These banks tend to be small and lack the reserves needed to provide extensive loans while also satisfying Federal Reserve requirements. As a result, these smaller banks try to make joint loans with larger financial institutions. The larger institution will split the loan amount in exchange for a part of the returns, while the small bank will maintain its relationship with the loan applicant and handle the servicing of the loan.[59] In many cases, the larger institutions that smaller banks must turn to are bigger private banks. In these cases, the bigger bank can use its participation in the loan to get information on the loan applicant and, if the potential borrower is a good risk, use this to attract their future business. As a result, "community bankers routinely complain that participation loan deals with, say, Wells Fargo or

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[54] *Washington State Bank Analysis*, Center for State Innovation (2010), 2, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

[55] *Washington State Bank Analysis*, Center for State Innovation (2010), 2, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

[56] *Washington State Bank Analysis*, Center for State Innovation (2010), 2, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

[57] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 6, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[58] *BND-FAQ*, Bank of North Dakota (2013), 3, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.

[59] *BND-FAQ*, Bank of North Dakota (2013), 3, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.

Bank of America, turn into lost business."[60] The BND fills the large institution role in North Dakota by being a willing partnership lender which does not compete with these banks, but instead provides additional credit to both increase overall investment in the state and the strength of these local banks.

The bank engages in a number of other activities designed to increase the lending capacities of small banks as well. This includes purchasing loans from community bank portfolios to free up capital for additional investments.[61] The bank also engages in direct bank stock lending to smaller banks. This involves purchases of community bank stock and securities to allow smaller banks to expand their own lending activity.[62]

Furthermore, the bank uses its discount window borrowing authority to provide credit at cheaper interest rates to banks. The discount window allows the BND to borrow directly from the Federal Reserve at lower than market rates.[63] Another avenue for increasing small banks' liquidity and lending capacity employed by the BND is letters of credit. A letter of credit serves as a guarantee from the BND on behalf of the smaller bank that it will cover any funds missing in a financial transaction. As such, smaller banks can replace their securities with letters of credit from the BND, which allows them to make more loans.[64] This is essential for smaller community banks because to take many public deposits they need to hold securities. Instead of buying securities, these banks can use low-interest BND letters of credit "to pledge for the deposit" and use the funds they've saved to invest in the community.[65]

Finally, the bank offers a variety of services to smaller North Dakota banks. In particular, the bank has an automated clearing house system which smaller banks can use, it offers check clearing, it allows smaller banks to use its account at the Federal Reserve, and it provides currency to smaller banks that need physical coinage.[66]

While bankers' bank activities improve local credit markets the BND also engages in more directly developmental activities. Many of the partnership loans the bank participates in have a developmental focus. These loans are made to local community members, usually to local businesses or local governments, and they represent a substantial investment in the state's

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[60] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 10, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[61] *Washington State Bank Analysis*, Center for State Innovation (2010), 3, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.
[62] *Washington State Bank Analysis*, Center for State Innovation (2010), 12, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.
[63] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 20, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[64] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 20, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[65] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 21, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[66] *BND-FAQ*, Bank of North Dakota (2013), 8, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.

economy.[67] Many of the loans that the bank offers come through its programs targeted at farmers, small businesses, or development projects. Across these 18 different programs, the bank offers favorable-rate loans for particular purposes, from improving community water quality to funding small business capital expansion and helping farms diversify their income streams.[68] Some of these programs also offer interest rate buy-downs to reduce borrowing costs for projects that would benefit the public.[69]

One illustrative program is the BND's Infrastructure Loan Fund, started in 2015.[70] The fund invests in water treatment plants, sewers, and transportation infrastructure.[71] With $150 million in start-up capitalization, the fund promises to build essential infrastructure in the state through affordable loans. The fund requires that applicants seek out other sources of funding first, but can provide supplementary funding for publicly important opportunities.[72] The maximum loan size is $15 million and interest charged on loans is limited to a 2% fixed rate.[73] This rate is about 1% lower than what cities like Grand Forks could obtain for a similar loan from private banks.[74] Grand Forks, however, was able to get this lower rate through the Infrastructure Fund. Additionally, the city saved money through the program because of the flexibility of when interest rate payments were activated for different components of the loan funding. Moreover, the BND aided the city with bond issuance, lowering its costs for taking out the loan.[75] Overall, the loan program lowered infrastructure investment costs substantially for Grand Forks and promises to do so for many other cities. The fund represents a concerted effort by the BND to provide affordable credit to improve important developmental factors in the state.

The bank does also provide some consumer lending programs. Specifically, it is engaged in two consumer-related activities: residential and student loans. The bank participates in a secondary market for mortgages, ensuring that there is demand for mortgages granted by smaller banks.[76] This makes banks more willing to create mortgages and to offer favorable terms to households hoping to purchase residential property.[77] The bank both helps to service and provides direct

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[67] *BND-FAQ*, Bank of North Dakota (2013), 3, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.
[68] *BND-FAQ*, Bank of North Dakota (2013), 4, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.
[69] *BND-FAQ*, Bank of North Dakota (2013), 5, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.
[70] Hussam, Shareef, *Public Banking for Infrastructure Finance*, Cornell University (2018), 2, http://cms.mildredwarner.org/summaries/hussam2018.
[71] Hussam, Shareef, *Public Banking for Infrastructure Finance*, Cornell University (2018), 2, http://cms.mildredwarner.org/summaries/hussam2018.
[72] *BND Infrastructure Loan Fund*, Bank of North Dakota (2019), https://bnd.nd.gov/infrastructure/bnd-infrastructure-loan-fund/#1443041252788-d3b587b4-c196.
[73] *BND Infrastructure Loan Fund*, Bank of North Dakota (2019), https://bnd.nd.gov/infrastructure/bnd-infrastructure-loan-fund/#1443041252788-d3b587b4-c196.
[74] Hussam, Shareef, *Public Banking for Infrastructure Finance*, Cornell University (2018), 3, http://cms.mildredwarner.org/summaries/hussam2018.
[75] Hussam, Shareef, *Public Banking for Infrastructure Finance*, Cornell University (2018), 3, http://cms.mildredwarner.org/summaries/hussam2018.
[76] *BND-FAQ*, Bank of North Dakota (2013), 8, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.
[77] *Washington State Bank Analysis*, Center for State Innovation (2010), 3, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

loans to students attending school in North Dakota.[78] These loans offer post-secondary students in North Dakota favorable rates that make higher education more widely accessible.[79]

The bank has extensive involvement with both the state and municipal governments. In this role, the bank provides direct aid to these governments. The most important benefit that the state receives directly from the bank is dividends from the bank's annual profits. These profits are often quite substantial. The bank usually contributes around half of its profits to the state general fund each year.[80] This has translated to around $30 million a year over the past 15 years.[81] In 2009, the bank counted $58 million in profits.[82] Since 1945, when the bank began returning part of its profits back to the state, the BND has returned over a billion dollars to the state.[83]

Nor does the bank make these profits by paying the state very low interest rates on its deposits. Indeed, the BND pays the state treasury a market-average rate for its deposits.[84] For example, in 2010 the state received $23.4 million from interest payments on deposits.[85] When combined with the profits dividend the state received from the bank that year, the state's return per dollar deposited dwarfed nearby Washington's, which deposited all of its funds in private banks. While Washington received 2.53 cents per dollar deposited, North Dakota received 5.28 cents per dollar deposited.[86]

When the state receives a profit dividend is highly flexible. The Industrial Commission as well as bank leaders, who negotiate with state legislators on the final dollar amount returned, determine the amount that is returned to the state.[87] This flexibility allows the state to draw on

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[78] *Washington State Bank Analysis*, Center for State Innovation (2010), 3, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.
[79] *BND-FAQ*, Bank of North Dakota (2013), 9, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.
[80] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 5, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[81] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[82] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[83] *Bank of North Dakota 2018 Annual Report*, Bank of North Dakota (2018), 10, https://bnd.nd.gov/annual-report/.
[84] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 10, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[85] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 10, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[86] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 10, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[87] *Washington State Bank Analysis*, Center for State Innovation (2010), 18, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

bank profits in times of need, but it can also reinvest these profits back into bank capital in economic boom times. Recapitalization of profits multiplies the impact of the bank by allowing it to further increase its lending activities.

The bank does more than return profits to the state in times of fiscal need. It has also repeatedly helped the state manage its finances during economic downturns. After the burst of the dot-com bubble, the BND paid a one-time dividend to the state to close a $40 million budget deficit.[88] The bank's activities during the Great Recession also ensured that local financial markets remained stable, with no banks closing in North Dakota during this time.[89] The bank can even lend money to the state at an interest rate set by the Industrial Commission in the midst of economic crises.[90]

The bank also provides helpful services to municipal governments to aid them in their public investments. First, the BND provides counsel to municipalities that helps them obtain capital at cheaper rates than they would otherwise.[91] Over its lifetime it has helped with 225 municipal debt issues.[92] Second, as highlighted by the Infrastructure Loan Fund discussed above, the bank provides some direct and low-interest investment in important public investments. Finally, the bank's Trust Department offers Corporate Trust services to the state and its subdivisions.[93] Currently, the bank is a trustee for 52 municipal issues.[94]

The bank's 2018 financial records show the scale of its activities. In 2018, the bank had a record annual profit of $159 million.[95] Its assets totaled over $7 billion while it held $4.77 billion in deposits.[96] The BND had nearly $2 billion in its investment portfolio and $4.584 billion in loans.[97] Of these loans, 14.5% focused on agriculture, 44.5% on business, 15.2% for residential loans, and 25.8% in student loans.[98]

While causality in macroeconomic measurements is difficult to determine, North Dakota has consistently outperformed comparable states on key economic indicators where the bank's

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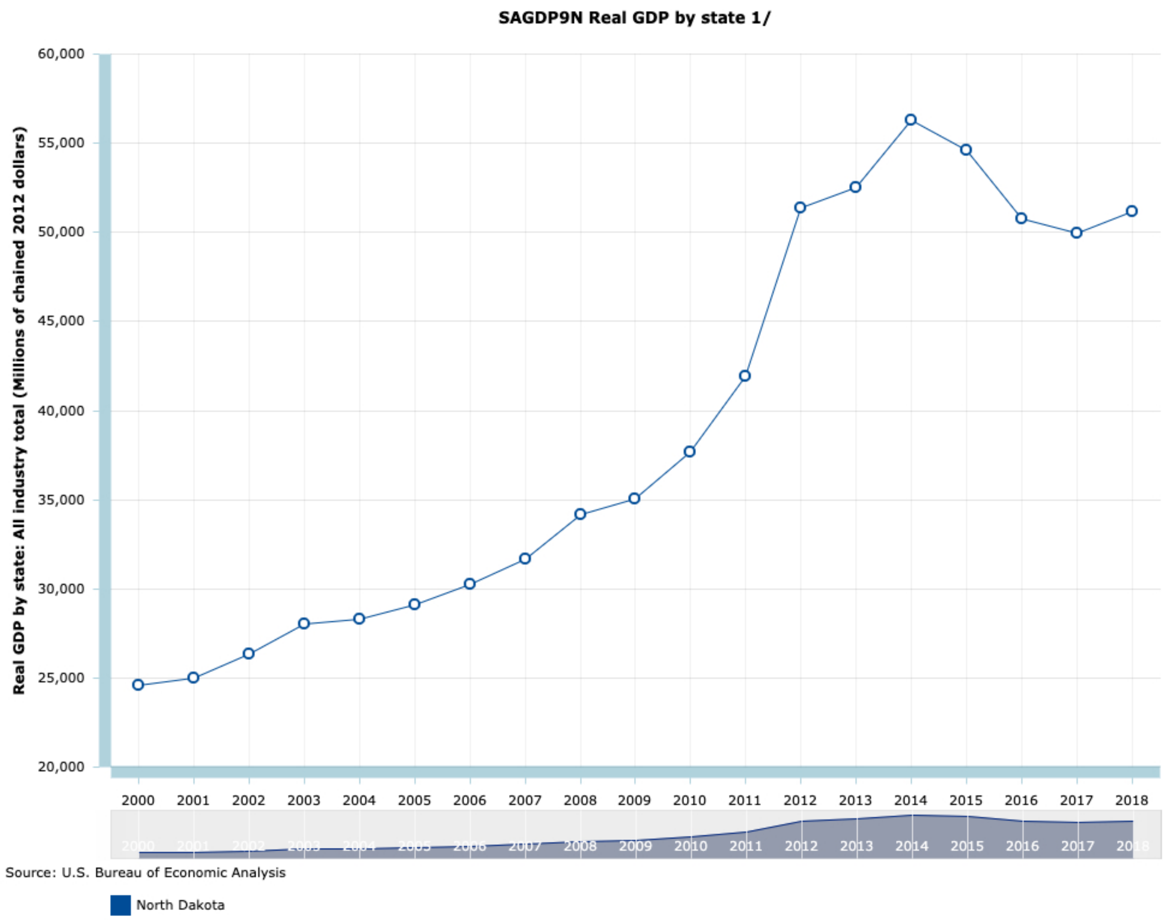
[88] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[89] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[90] Hussam, Shareef, *Public Banking for Infrastructure Finance*, Cornell University (2018), 2, http://cms.mildredwarner.org/summaries/hussam2018.
[91] Hussam, Shareef, *Public Banking for Infrastructure Finance*, Cornell University (2018), 3, http://cms.mildredwarner.org/summaries/hussam2018.
[92] *BND-FAQ*, Bank of North Dakota (2013), 9, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.
[93] *BND-FAQ*, Bank of North Dakota (2013), 9, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.
[94] *BND-FAQ*, Bank of North Dakota (2013), 9, http://library.nd.gov/statedocs/BND/BankofND20101101.pdf.
[95] *Bank of North Dakota 2018 Annual Report*, Bank of North Dakota (2018), 4, https://bnd.nd.gov/annual-report/.
[96] *Bank of North Dakota 2018 Annual Report*, Bank of North Dakota (2018), 4, https://bnd.nd.gov/annual-report/.
[97] *Bank of North Dakota 2018 Annual Report*, Bank of North Dakota (2018), 6, https://bnd.nd.gov/annual-report/.
[98] *Bank of North Dakota 2018 Annual Report*, Bank of North Dakota (2018), 7, https://bnd.nd.gov/annual-report/.

activities should be most effective. As such, it is very likely that the bank has caused these benefits in the local economy.



[99]

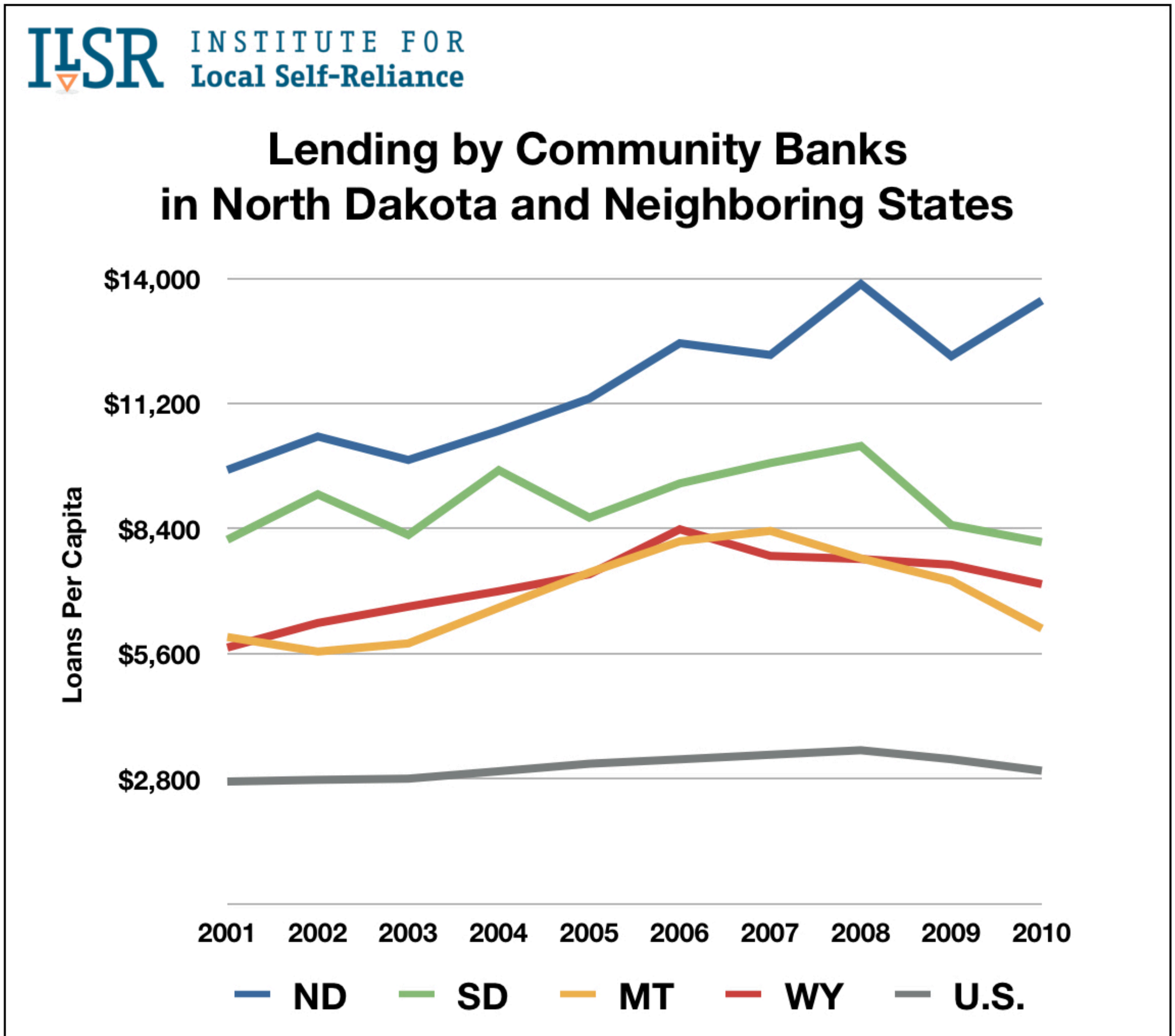
Above is a graph of North Dakota's Real Gross Domestic Product from 2000 to 2018. Real GDP is GDP adjusted for inflation, so all growth on this graph represents increases in productive economic activity. The data is represented in terms of millions of dollars. The North Dakotan economy's productive activity doubled in less than two decades. Notice the activity in the early 2000's and from 2008 to 2010. These were periods of severe economic and financial crisis in the US, the first from the bursting of the dot-com bubble, the second from the Great Recession. Yet, in both of these periods of economic downturn North Dakota continued to grow. But the period of the most growth is from 2011 to 2014, during which time North Dakota's oil production boomed. This extra oil income may have provided a majority of these benefits instead of the BND. So, to understand the influence of the BND on the economy, it will be helpful to look at some indicators where it would have had a more direct impact.

[99] *Real GDP by State*, Bureau of Economic Analysis (2019), https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1#reqid=70&step=1&isuri=1.

These indicators shows that the BND has made loans towards development, even in the midst of crisis, while also maintaining the strength of local community banks and the competitiveness of local credit markets. As a result, North Dakota's banking system is stronger than its neighboring states'. This influence illustrates the positive impact of the BND on North Dakotan's lives.

Even from 2007 to 2009, the BND's business lending increased by 35%.[100] Despite increased lending under risky economic circumstances, the BND had loan losses lower than the national average for similar sized banks.[101] The countercyclical loan activity bolstered local community banks and lending throughout the state. As a result, in the five years following the end of the crisis, North Dakota's loan amounts per capita were 175% higher than the US average.[102] During this same period, North Dakota's banks have maintained higher loan-to-asset ratios than neighboring states with similar economies such as Wyoming, South Dakota, and Montana.[103] A loan to asset ratio measures what percentage of a bank's assets are in loans and as such is a measure of how much of the bank's assets are committed to productive investments. This "key measure of direct economic impact" remained high in North Dakota due to the BND's countercyclical efforts, as these ratios dropped in North Dakota banks 33% to 45% less than banks in comparable states.[104]

[100] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 5, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[101] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 5, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[102] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 5, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[103] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 5, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[104] *Washington State Bank Analysis*, Center for State Innovation (2010), 1, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.



Source: Federal Deposit Insurance Corporation
Notes: Community banks are defined as those with $1 billion in assets or less in constant 2010 dollars.

[105]

The above chart further underlines the way in which the BND helped the North Dakotan economy through maintaining the health of its financial system. Two observations are of note in the above data representing loans per capita by community banks for North Dakota, neighboring states, and the US at large. First, North Dakotan community banks' loans per capita were already higher than all other measures before the financial crisis. Second, though there was a downturn in 2009, North Dakotan community banks rebounded in their loan activity much more quickly and to a much greater degree than other banks. While loans continued to decrease from 2009 to 2010 in all neighboring states and on average in the United States, they

[105] Mitchell, Stacy, *Public Banks: Bank of North Dakota*, Institute for Local Self-Reliance (2015), https://ilsr.org/rule/bank-of-north-dakota-2/.

not only increased during this same period in North Dakota, but also increased close to 2008 levels. Clearly, the BND had a positive impact on maintaining financial investment in North Dakota, even during a financial crisis and its aftermath.

The bank has also, due to its long history of supporting smaller banks, maintained competition in local credit markets. This competitiveness is important because it means that financial markets will yield the best outcomes for consumers of financial products—for all loan applicants from businesses to consumers and governments to private investors. In standard economic theory, the markets which operate the most efficiently, which provide the best price to consumers while supplying the optimal quantity of products to "clear" the market at this price, are the ones where each firm controls only a small share of the market and firms are numerous. These conditions lead firms to compete with each other to win customers, which drives prices down and forces firms to find the most efficient production methods. The same is true of finance; competitive financial markets mean lower interest rates for borrowers, as well as better services to borrowers and forces financial firms to find better ways of assessing investment opportunities. This, in turn, means more investment in good projects as well as more investment overall, making it so that the local economy continues to grow as investments yield growing enterprises and greater economic activity. So, maintaining a competitive financial market is an important way in which the BND improves local economic conditions.

And it clearly achieves this goal. The small state of North Dakota has more community banks than Hawaii, Maine, and New Hampshire combined.[106] These states, together, have more than six times as many residents as North Dakota. No bank has an overwhelming share of the market either. The largest bank in the state has only 10% of consumer deposits and the two biggest out-of-state banks, Wells Fargo and U.S. Bank, have seen decreasing market shares since 2007.[107] As the below graph indicates, North Dakota has far more banks per 100,000 people than its closest neighbors. Additionally, it has nearly 6 times more banks per capita than the US average. As a result, the BND has helped North Dakota maintain a financial market that meets the perfectly competitive standards of small and copious banks.

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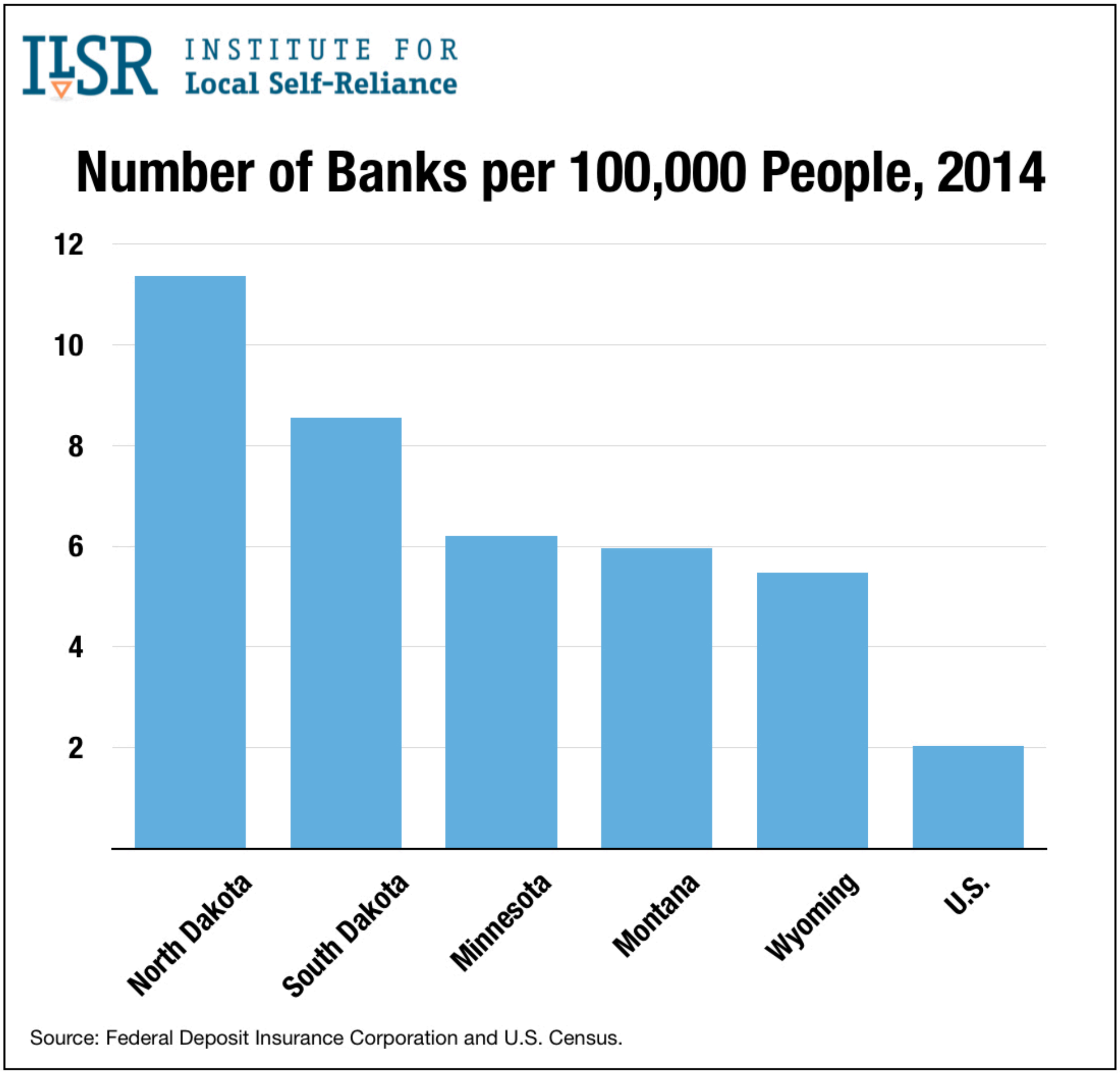
[106] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 6, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[107] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 6, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.



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In light of these strong financial indicators, it is likely that the economic gains experienced by North Dakota can be attributed in large part to the BND's activities. This case study has attempted to show how the BND's ownership, governance, operations, and activities have combined to produce these beneficial results. The BND sets a precedent for other American states seeking a public banking model, not only because it shares a common country with these states, but because it has achieved strong results for an extended period of time.

[108] Mitchell, Stacy, *Public Banks: Bank of North Dakota*, Institute for Local Self-Reliance (2015), https://ilsr.org/rule/bank-of-north-dakota-2/.

2. Sparkassen

The first major difference between Germany's public banking model and the BND model is in the number of banks. While the BND is the only public bank in North Dakota, Germany has an entire network of public banks. These banks are separate institutions and are not connected except by their voluntary association with each other. This voluntary association, however, is very important to these banks and has played a central role in their success in Germany. All public banks are members of the German Savings Bank Association or Deutscher Sparkassen- und Giroverband (DSGV). The DSGV is made up of 580 member institutions, all public financial institutions, and operates as the decentralized network that unifies the public banking system in Germany.[109]

At the core of the group is its Sparkassen or Savings Banks. These banks make up the German Savings Banks Finance Group (Sparkassen-Finanzegruppe) that is a major subset of the DSGV. There are 413 Savings Banks in Germany, with almost 14500 branches across the country.[110] There are also 7 Landesbanken, which are regional banks.[111] These banks represent the German Lander or states in the federated system. Additionally, the DSGV contains a number of smaller public financial institutions that specialize in specific areas, such as real estate, leasing, and equity investment.[112]

The Sparkassen and Landsbanken are the most important banks in the DSGV. Independent communities first founded Sparkassen in the 19th century to store their savings.[113] But, by the beginning of the 20th century, the banks had expanded to offer a full set of retail banking services.[114] In 1909 with the creation of cashless payments, the Landesbanken began to work with the savings banks.[115] The Landesbanken have since developed into wholesale banks, similar to larger private banks, which also provide important services to the savings banks and handle complex financial activities.[116]

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[109] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 3, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[110] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 3, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[111] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 14, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[112] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 14, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[113] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 5, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[114] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 5, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[115] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 5, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[116] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 5, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.

Public banks in Germany occupy a special legal status, which determines their ownership. Technically, the banks are not owned by any organization. They are incorporated under law as public institutions.[117] This means that they are not subject to private interests, but they are also insulated from political pressures. The banks maintain a degree of autonomy from ownership pressures to operate contrary to their mission. Additionally, the banks have no shares available for purchase. Local governments cannot sell the banks when desired.[118] The banks are stable public institutions; ones that are not threatened by privatization due to political sentiment or financial need on a local level.

Like with a DBA of the state, the public banks exist as legally public entities that cannot be sold to private interests. But, unlike the BND, these banks have a greater degree of separation from their local government, at least as it concerns ownership of the bank.

Instead of owning these banks, local public authorities serve as the "responsible public bodies" of the banks.[119] That is, local governments, or municipal special purpose associations of these local governments, govern the bank.[120] This is referred to as a municipal or public trusteeship and allows local governments or authorities to jointly run the banks.[121] Thus, the German system of establishing public banks as legally independent institutions guarantees that the local population controls the bank not through ownership, but through governance.[122]

As such, the governance of these banks is paramount to understanding their impact on local communities. There are strict rules surrounding savings bank governance designed to increase the public accountability of the banks. To start, the Sparkassen all operate on a "regional principle" which limits them to operating only in the region in which they are based.[123] This limit is established in the law incorporating the banks as public institutions.[124] Moreover, the banks are required by law to "operate under a public mandate."[125] The public mandate requires that the banks work in the interests of the public by promoting the public good. This includes: providing non-discriminatory services, emphasizing loans to small businesses, increasing

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[117] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 6, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[118] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 22, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[119] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 21, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[120] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 21, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[121] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 21, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[122] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 21, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[123] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 4, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[124] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 7, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[125] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 6, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.

competition in local financial markets, promoting savings amongst the populace, and sponsoring socially-beneficially programs.[126] Thus, these banks work to improve conditions in their home regions.[127] This constitutes the primary mission of these banks. Indeed, the banks are governed by the Sparkassengesetz, or savings bank laws of the state they are located in.[128] These are the laws which specify the public mandate for savings banks as well as the ways in which the banks must fulfill this mandate.[129]

Both the regional principle and the public mandate are reinforced by how high-level bank managers are selected. The managing municipal or public trusteeship is composed of representatives from the region as well as the local parliament.[130] This high-level management is called the supervisory board.[131] It is composed of the local populace, who also are the bank's customers, as well as bank employees, and local elected officials.[132] It hires and fires the managers of the bank, known as the management board, can determine payment for bank employees, and decides upon any important changes to the bank.[133] The head of the locality usually holds the chairman of the supervisory board, which is often a local mayor.[134]

The supervisory board plays a central role in ensuring that a savings bank carries out its public mandate to its region. This is so because it is composed of individuals with a direct interest in the fulfillment of the bank's mission. That is, both local politicians and the public have a desire for the bank to serve the region well. Additionally, the inclusion of bank employees on the board ensures that the bank is operated fairly and efficiently. Demands for public benefits from the public representatives are weighed against the perspective of bank insiders who have a better sense of how the bank operates and how changes to the bank may impact operations.

Banking professionals populate the management board.[135] Additionally, at least two of the members of the board must be licensed to work as bankers, although this usually applies to

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[126] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 6, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[127] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 4, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[128] Irigoyen, Claudia, *Sparkassen Savings Banks in Germany*, Centre for Public Impact (2017), 3, https://www.centreforpublicimpact.org/case-study/sparkassen-savings-banks-germany.
[129] Irigoyen, Claudia, *Sparkassen Savings Banks in Germany*, Centre for Public Impact (2017), 3, https://www.centreforpublicimpact.org/case-study/sparkassen-savings-banks-germany.
[130] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 7, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[131] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 21, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[132] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 21, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[133] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 21, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[134] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 22, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[135] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 21, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.

more members of the board than the minimum requirement.[136] Every savings bank has a management board and each management board handles the day-to-day business of the bank.[137] Furthermore, the management board must report to the supervisory board on important issues.[138] As a result, bankers with experience run the day-to-day operations of the bank while representatives of the public handle the overall direction and governance of the institution.[139] In this sense, the governance and operations of the Sparkassen are similar to the BND.

Another commonality between the Sparkassen and the BND is the local economic development focus of the banks. The Sparkassen are barred from conducting financial activities in more lucrative areas. That is, the banks are restricted to the local region where they are located. This means that they have a strong and long-term commitment to the health of the home region. And this intense focus on a singular region translates into more detailed knowledge of their customers, which leads to better risk management, as well as more stable lending patterns in local financial markets.[140] Banks have the time and the impetus to know their local market well. As a result, they have an "incentive for Savings Banks to operate very close to market, balance risks carefully and take a long-term perspective with their clients and the community as a whole."[141] And this extended local interaction gives these banks the opportunity to finely craft services and financial products to their region's needs. This improves the efficiency of Sparkassen investments relative to ready-made financial services from large private banks. A decentralized approach to banking emphasizes local conditions over broad market reach. Much like the BND, the Sparkassen emphasize local economic development by putting local assets to work as investments in local economies, preventing capital outflow from poorer areas and increasing the level of local economic activity.[142] Savings banks also help their municipalities pursue economic and social development not only by reinvesting in the community but also by supporting regional policies and sponsoring important cultural works.[143]

The savings banks have extensive interactions with the larger DSGV organization. Though the DSGV plays an important role in the operations of these banks, it does not do so at the expense

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[136] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 21, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[137] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 21, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[138] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 21, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[139] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 7, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[140] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 22, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[141] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 7, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[142] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 22, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[143] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 22, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.

of local autonomy. Local savings banks, their supervisory boards, and especially their managerial boards, have the final say on most operations of the bank and how they run the day-to-day business of the bank. This includes deciding upon the transactions that they will undertake and the amount of risk that they will take on.[144] Individual banks can choose to take on riskier or more conservative asset positions.[145] As such, there can be substantial variation in how the savings banks conduct their business.

Still, the banks through the DSGV have created strong safety measures and monitoring tools to ensure that each bank performs well.[146] The banks use a common framework for mutual support. For example, the banks insure each other through a Joint Liability Scheme, which can provide funds to banks in bad financial positions.[147] The Sparkassen also impose their own regional or national monitoring systems in which the DSGV monitors and audits individual banks.[148] This is self-governed monitoring, a process that is internal to the DSGV but external to the individual bank. As such, the DSGV and its monitoring arm is in a position to honestly and aggressively check individual member banks' activities. The DSGV as well as regional associations of Sparkassen create and use the monitoring tools, but they do so with input from the member banks.[149] There are a number of benefits to this federated system. First, there are uniform and effective standards across the entire group but they are formulated based on the knowledge and expertise of the savings banks.[150] The banks follow strict standards, but these standards are self-designed and imposed. Underwriting and risk standards are universal across the group.[151] Member banks cannot take on undue risk in any one transaction—higher risk that is not balanced by a sufficiently higher potential reward-- and they are even prohibited by law from engaging in certain high-risk financial transactions.[152] The banks in the group also pool their data from transactions and use this national-level dataset to perform better within the standards set by the DSGV.[153] They also insure individual banks from risk by mutually

[144] Irigoyen, Claudia, *Sparkassen Savings Banks in Germany*, Centre for Public Impact (2017), 6, https://www.centreforpublicimpact.org/case-study/sparkassen-savings-banks-germany.
[145] Irigoyen, Claudia, *Sparkassen Savings Banks in Germany*, Centre for Public Impact (2017), 6, https://www.centreforpublicimpact.org/case-study/sparkassen-savings-banks-germany.
[146] Irigoyen, Claudia, *Sparkassen Savings Banks in Germany*, Centre for Public Impact (2017), 5, https://www.centreforpublicimpact.org/case-study/sparkassen-savings-banks-germany.
[147] Irigoyen, Claudia, *Sparkassen Savings Banks in Germany*, Centre for Public Impact (2017), 5, https://www.centreforpublicimpact.org/case-study/sparkassen-savings-banks-germany.
[148] Irigoyen, Claudia, *Sparkassen Savings Banks in Germany*, Centre for Public Impact (2017), 5, https://www.centreforpublicimpact.org/case-study/sparkassen-savings-banks-germany.
[149] Irigoyen, Claudia, *Sparkassen Savings Banks in Germany*, Centre for Public Impact (2017), 6, https://www.centreforpublicimpact.org/case-study/sparkassen-savings-banks-germany.
[150] Irigoyen, Claudia, *Sparkassen Savings Banks in Germany*, Centre for Public Impact (2017), 6, https://www.centreforpublicimpact.org/case-study/sparkassen-savings-banks-germany.
[151] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 18, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[152] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 18, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[153] Irigoyen, Claudia, *Sparkassen Savings Banks in Germany*, Centre for Public Impact (2017), 6, https://www.centreforpublicimpact.org/case-study/sparkassen-savings-banks-germany.

guaranteeing each other's security.[154] Finally, they receive the benefits of specialized DSGV services, so that local banks can focus on local issues while the group's experts can focus on larger or more technical projects.[155] For instance, the DSGV achieves economies of scale in IT and back-office services, in addition to product development, regulatory compliance, and employee training while the Sparkassen focus on local lending and economic development.[156] So, banks and the DSGV coordinate to their mutual benefit. Indeed, one reason for the DSGV's strong credit ratings is "the high level of co-operation within the Savings Banks Finance Group."[157]

The Sparkassen are engaged in retail banking. Retail business is the main source of revenues for the Sparkassen.[158] These earnings also account for their capital base as they do not sell stocks and do not receive funding from local governments.[159] Their business model is simple. They hold deposits and use these deposits to make non-securitized loans to private individuals and small businesses.[160] They use the earnings from these loans to invest in other socially beneficial projects or to hold as capital.[161] Capital is the basis of their contingency funds, which they hold to cover losses from loan repayment failures.[162]

The savings banks rely on deposits to back investments in their local communities. Most of these deposits come from private individuals or organizations. While they do receive deposits from local governments, they are the primary bank for half of all German consumers, have 94 million accounts in total, and are the main bank for 40% of all German businesses.[163] This is an area where they clearly differ from the BND; whereas the BND mainly relies on deposits from public entities, the Sparkassen hold mainly private deposits.

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[154] Irigoyen, Claudia, *Sparkassen Savings Banks in Germany*, Centre for Public Impact (2017), 6, https://www.centreforpublicimpact.org/case-study/sparkassen-savings-banks-germany.
[155] Irigoyen, Claudia, *Sparkassen Savings Banks in Germany*, Centre for Public Impact (2017), 6, https://www.centreforpublicimpact.org/case-study/sparkassen-savings-banks-germany.
[156] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 18, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[157] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 28, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[158] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 12, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[159] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 12, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[160] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 15, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[161] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 15, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[162] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 22, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[163] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 13, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.

The banks stake out diversified portfolios in their local financial markets by engaging in a wide array of lending activities.[164] They loan to both private consumers and businesses in markets as diverse as manufacturing and technology to residential loans. When making loans the banks seek low to moderate risk.[165] As they do not have to follow a demand to maximize profits, and they deal in simple financial instruments, they are usually unwilling to take on high-risk investments. Instead, they focus on loans that promise to help the borrower and the home region economically. As a result of their diversified portfolio and carefully controlled risk positions, the banks tend to have stable revenue growth year to year.[166] This growth has accumulated over time to the point where, now, the Sparkassen and Landesbanken combine to have a balance sheet of €2.7 trillion, €700 million more than Deutsche Bank.[167]

To understand the basis of the Sparkassen's success, one must understand their rigorous loan approval process. This process has allowed them to become the premiere consumer banks in Germany.

It starts with an interaction between the prospective borrower and the savings bank. Because savings banks have deep roots in their local communities, borrowers often have a preexisting relationship with the bank. This allows the bank to incorporate "soft facts"—information that might not be captured in a firm's balance sheet—into their approval process. Regardless of the relationship between the borrower and the bank, every loan approval begins with significant statistical analysis of the borrower's data.

The DSGV collects and sends its members information on companies in many industrial sectors that are further subdivided by business size and geographical region.[168] For each of the 75 sectors covered, there are thousands of accounts that have been analyzed to provide a useful comparison between the prospective borrower and sector averages in its region and for its size.[169] This information is used to create key performance indicators that serve as a reference point for evaluating the borrower.[170] The borrower is judged not only on its own financial health, but also by how it performs relative to other similarly situated firms.[171]

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[164] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 12, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[165] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 12, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[166] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 12, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[167] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 15, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[168] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 38, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[169] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 38, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[170] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 38, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[171] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 38, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.

Using further statistical analysis, the prospective borrower is given a rating that represents the chance that of a loan default.[172] The rating incorporates the quantitative data of the firm's balance sheet, as well as its performance relative to peer institutions, and qualitative information along with other credit ratings.[173] The rating is used to set the interest rate of the loan and other factors which signal the risk the bank sees in extending the loan to the borrower.[174]

The financial information of the firm and its comparison data are used to score the firm. These scores are then weighted according to their relative importance in determining the riskiness of the loan. The scores are multiplied by the weights to generate final weighted values which are used to generate the firm's overall quantitative component score. There is a similar process with the qualitative component. The bank assesses the business's management, planning and control, markets and products, and value added chains using a scoring rubric for each section to generate a qualitative component score.[175] The quantitative and qualitative scores are combined. Next, external credit ratings and past history with the company can be included to adjust this combined score upwards or downwards.[176] After adjustment, or non-adjustment, the bank uses this final score along with the details of the proposed loan to make a final application decision.[177]

Whether the loan is approved or rejected, the savings bank uses the process to aid the business in continuing to grow. The bank provides each loan applicant with a full report of the loan appraisal that includes the bank's opinion of the strengths and the weaknesses of the business.[178] This analysis is combined with recommendations for improvements.[179] This underlines the bank's commitment to economic development and helps to deliver on the bank's mission. As most of the bank's loan customers are small and medium enterprises (SMEs), by providing extensive analysis and recommendations on how to succeed in growing their business, the bank is providing a service that can boost growth throughout its economic region. The savings banks improve the health of local businesses even if they don't extend credit to

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[172] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 39, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[173] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 39, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[174] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 39, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[175] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 42, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[176] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 43, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[177] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 43, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[178] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 44, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[179] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 44, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.

these businesses. Furthermore, they make it more likely that firms that are rejected for a loan will be accepted for a loan in the future. Instead of a flat-out rejection, which does not tell the firm ways it can improve and expand its financial position, the Sparkassen give firms paths for improvement and the chance to receive loans in the future by improving its business performance.

The banks also help businesses in the long-term. They often work with SMEs in their home region over the course of their entire business lifecycle.[180] This includes €1.3 billion invested in over 10,000 startups annually.[181] Banks are also there to provide credit while businesses are growing, with over €81 billion in new loans to enterprises in 2015.[182] More than 80% of the Sparkassen's loans to firms are medium or long-term.[183] This frees businesses from immediate financial pressures and allows them to plan for the future.

The Sparkassen are the main supporters of SMEs in Germany. They account for 70% of SME financing and 42% of all business financing.[184] In 2014, the savings banks did over €1 trillion in business.[185] Indeed, the quantity of these loans nearly doubled from 2004 to 2011 moving from €36 billion to €67 billion in just seven years.[186] The import of their economic role is underlined by the fact that 99% of German businesses have annual revenues below €10 million.[187] These smaller firms are not targets for private finance capital because they do not offer the highest returns.[188] The savings banks take the place of larger banks by providing affordable financing with closely tailored services and terms to meet SMEs needs.

The Sparkassen's lending, in particular, has been central to Germany's strong economic growth and development in the wake of the financial crisis. Even as the German economy shrank by 5% in 2009, the savings banks increased their loans to businesses each year from 2009 to 2015.[189] Countercyclical lending sped up the German recovery and allowed businesses to survive the

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[180] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 13, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[181] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 13, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[182] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 13, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[183] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 13, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.
[184] Irigoyen, Claudia, *Sparkassen Savings Banks in Germany*, Centre for Public Impact (2017), 2, https://www.centreforpublicimpact.org/case-study/sparkassen-savings-banks-germany.
[185] Irigoyen, Claudia, *Sparkassen Savings Banks in Germany*, Centre for Public Impact (2017), 2, https://www.centreforpublicimpact.org/case-study/sparkassen-savings-banks-germany.
[186] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 14, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[187] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 14, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[188] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 14, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[189] *Inside the Savings Bank Finance Group*, Finanzgruppe Deutcher Sparkassen-und Giroverband (2016), 13, https://drive.google.com/file/d/1I2RYVgJ_V7rsq0-eQRq_nTZak8dr1eEm/view.

economic downturn. For instance, German manufacturing output, though it fell dramatically from middle-2008 to middle-2009, returned to pre-crisis levels by middle-2010.[190] Thus, one of Germany's most important industries rebounded in less than a year from the end of the crisis, while many other countries recovered slowly. Furthermore, the number of loans extended to business start-ups by the Sparkassen, though it fell in 2008, increased in 2009 and returned to pre-crisis levels by 2010.[191]

Finally, the Sparkassen provide a direct benefit to local governments. The local government taxes them because they are defined as local companies.[192] These revenues provide extra funds that local governments can use to pursue their own development strategies or policies.

However, the Sparkassen do earn lower profits than private banks. They tend to favor safer investments, with stable returns and modest profits. Thus, German banking profits are lower in comparison to other countries' banks.[193] But, German banks are comparatively efficient; they are just not as profit-oriented.[194] Instead of accumulating efficiency gains as increased profits, German banks pass these onto their customers, who uniquely benefit from their low-profit high-efficiency banking system.[195]

The DSGV has a strong credit rating. This is attributable to the above factors; notably, that the banks attain stable returns, have strong risk management and loan appraisal systems, have deep connections in their local markets, carry diversified investment portfolios, have a strong reputation as safe banks, and coordinate among themselves very well.[196]

Thus, the German public banking model has brought many benefits to German local economic markets and should be considered a success in public banking. But, it has achieved this success on a model very different from that of the BND. While the BND has worked to strengthen banks and has involved itself in more complex financial transactions as well as direct loans, the Sparkassen have focused on simple loans and operations designed to increase economic development. More complex operations have been left to the DSGV and the Landesbanken to handle, using their expertise and their greater area coverage to handle these issues.

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[190] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 15, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[191] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 26, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[192] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 22, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[193] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 30, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[194] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 30, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[195] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 30, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.
[196] Simpson, C.V.J., *The German Sparkassen*, Civitas (2013), 28, http://www.civitas.org.uk/content/files/SimpsonSparkassen.pdf.

Furthermore, while the BND has avoided competing for private deposits with smaller banks, the Sparkassen run largely based on deposits from individual consumers and businesses.

3. India's Public Sector Banks

India's Public Sector Bank (PSB) system is unique amongst public banks covered in these case studies in that they were not founded publicly and have no special public status under the law. Rather, these banks were already in existence before they came to be controlled by the public. The government nationalized fourteen banks in 1969, following legislation passed in 1967.[197] Six more banks were made public in 1980.[198] These nationalizations occurred through purchases of bank stocks in open stock markets. The government owns these banks in the sense that it owns a majority of their stock. Yet, there are also private shareholders of these stocks. In some cases private shareholders own close to 45% of these banks.[199]

The nationalizations were done to make the banks serve the interests of the public rather than private interests. Though the banks do still have private stockholders who can buy and sell the stock of the banks, the government, as the majority holder in each of these banks, has effective control over bank operations. But, as they were taking over private banks, the government inherited institutions that still operated on the private banking model. This necessitated changes in how the banks operated.

The takeover of the banks was meant to improve economic and social conditions. Social control of the banks was instituted with the goals of extending credit more widely, limiting corruption and misuse of banking assets, and boosting economic development through targeted financing.[200]

The following decades saw large gains from this approach. The entire Indian banking system was fundamentally changed as public sector banks focused on expanding credit and offering financial services to the un-banked.[201] PSBs also directed credit to important areas for economic development, such as agriculture and small businesses.[202] As a result, the string of nationalizations, starting in 1955 with the State Bank of India through 1980, placed PSBs in a

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[197] Singh, Charan, *An Essay on Banking and Macroeconomics: Role of Public Sector Banks in India*, Indian Institute of Management Bangalore (2016), 8, https://www.iimb.ac.in/sites/default/files/2018-07/WP%20No.%20530.pdf.
[198] Singh, Charan, *An Essay on Banking and Macroeconomics: Role of Public Sector Banks in India*, Indian Institute of Management Bangalore (2016), 8, https://www.iimb.ac.in/sites/default/files/2018-07/WP%20No.%20530.pdf.
[199] *Shareholding Pattern of Public Sector Banks*, Department of Financial Services (2013), https://financialservices.gov.in/sites/default/files/Shareholding%20of%20Govt%20of%20India%20final.pdf.
[200] Singh, Charan, *An Essay on Banking and Macroeconomics: Role of Public Sector Banks in India*, Indian Institute of Management Bangalore (2016), 8, https://www.iimb.ac.in/sites/default/files/2018-07/WP%20No.%20530.pdf.
[201] Singh, Charan, *An Essay on Banking and Macroeconomics: Role of Public Sector Banks in India*, Indian Institute of Management Bangalore (2016), 8, https://www.iimb.ac.in/sites/default/files/2018-07/WP%20No.%20530.pdf.
[202] Singh, Charan, *An Essay on Banking and Macroeconomics: Role of Public Sector Banks in India*, Indian Institute of Management Bangalore (2016), 8, https://www.iimb.ac.in/sites/default/files/2018-07/WP%20No.%20530.pdf.

central role in India's financial system.[203] The banks were charged with increasing development and expanding access to credit, and achieved both, leading to their growth in the Indian financial system. Today, they account for almost 70% of all banking activity in India.[204]

Though these banks adopted a strong developmental focus, one that prioritized both economic growth and profit, they were distinct from other public banks covered in this report. They had large numbers of private stockholders. This forced banks to pay attention to issues like profitability and stockholder confidence in the course of their operations. The banks needed to keep their shareholders, even the minority private shareholders, happy enough to continue to hold the stock. If PSBs had totally ignored profits or the wishes of these shareholders they may have been met with private holders selling off their shares *en masse*, leading to falling stock prices and lower valuations for the banks. Second, some of these banks focused on specific areas or markets for investment. Instead of grouping a wide variety of activities within one institution, many PSBs focused on niche issues. These ranged from specific market sectors, like agriculture or manufacturing to individual consumers and governments to servicing larger businesses.

These factors have created a unique governance system for the banks. Though the government has majority control of each banks' central board by virtue of its ownership of the majority of bank stock, the selection of these boards varies by bank. The boards are made up of government appointees, nominees from India's reserve banks, and the representatives elected by private shareholders. As such, governing boards amalgamate different interests. Government appointees tend to have political connections, while reserve bank nominees tend to be experts and picked through an apolitical process, and private representatives tend to represent the interests of private shareholders on the board.

Yet, the banks continued to grow in the early 2000's. The Indian economy was growing rapidly and the PSBs began to lend greater amounts to companies.[205] Increases in bank lending came with more relaxed lending standards. PSBs began to extend credit to bigger businesses without serious analysis of their financial positions.[206] Indeed, PSBs only adopted the use of credit scores in their evaluations of loans in 2007.[207] It had become normal to grant a loan on the basis of general information about a potential borrower, such as their past of loan repayments, their industry, or their relationship with the bank, rather than the viability of the prospective

[203] Singh, Charan, *An Essay on Banking and Macroeconomics: Role of Public Sector Banks in India*, Indian Institute of Management Bangalore (2016), 13, https://www.iimb.ac.in/sites/default/files/2018-07/WP%20No.%20530.pdf.
[204] Singh, Charan, *An Essay on Banking and Macroeconomics: Role of Public Sector Banks in India*, Indian Institute of Management Bangalore (2016), 16, https://www.iimb.ac.in/sites/default/files/2018-07/WP%20No.%20530.pdf.
[205] *Non-Performing Assets in Indian Banks*, Corporate Finance Institute (2018), https://corporatefinanceinstitute.com/resources/knowledge/other/non-performing-assets-in-indian-banks/.
[206] *Non-Performing Assets in Indian Banks*, Corporate Finance Institute (2018), https://corporatefinanceinstitute.com/resources/knowledge/other/non-performing-assets-in-indian-banks/.
[207] Srinivas, Arjun, *Public Sector Banks Slow to Adopt Credit Scores*, Live Mint (2019), https://www.livemint.com/industry/banking/state-run-banks-slow-to-adopt-credit-scores-1554391599986.html.

loan opportunity. Private Sector Banks (PVBs) had started using credit scores to evaluate credit worthiness earlier that same decade.[208]

These trends came to a head in the wake of the financial crisis. During the crisis businesses suffered falling revenues and profits while the government banned mining projects and slowed approvals of environmental permits for new infrastructure investments.[209] These economic pressures combined with new standards from the Reserve Bank of India (RBI) in 2009 pressured PSBs to take on riskier loans to aid the economy and development.[210] Specifically, RBI guidelines allowed some failing loans to be hidden as Standard Restructured Assets (SRAs).[211] Banks could then pretend as if their assets were greater than they were, allowing them to pursue more risky investments.

These failing loans would soon prove troublesome for the public banking system. In India these bad loans are termed NPAs or Non-Performing Assets. They are defined as loans that have an interest rate payment or installment overdue for a period of longer than 90 days.[212] These are monitored by the RBI, but with the change in guidelines in 2009 these loans became easier to hide from national oversight authorities.[213] By 2015, PSBs began to realize the extent of their vulnerability to bad loans. As a result, the Indian banking system has been struggling to decrease its share of NPAs and risky assets. This was true of private banks as well, but public banks were the worst offenders when it came to NPAs. From 2015 to 2018, PSBs accounted for 70% of Indian banking activity but held 87% of all NPAs.[214] In June 2018, public and private banks combined held nearly $150 billion in NPAs.[215] As late as March 2018, 11.5% of all bank assets were NPAs, though the RBI's Prompt and Corrective Action (PCA) framework helped banks decrease this ratio to 10.8% by September of the same year.[216]

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[208] Srinivas, Arjun, *Public Sector Banks Slow to Adopt Credit Scores*, Live Mint (2019), https://www.livemint.com/industry/banking/state-run-banks-slow-to-adopt-credit-scores-1554391599986.html.
[209] *Non-Performing Assets in Indian Banks*, Corporate Finance Institute (2018), https://corporatefinanceinstitute.com/resources/knowledge/other/non-performing-assets-in-indian-banks/.
[210] *EASE Reforms for Public Sector Banks*, Boston Consulting Group and Indian Banks' Association (2019), 11, https://media-publications.bcg.com/EASE-reforms-for-public-sector-banks.pdf.
[211] *EASE Reforms for Public Sector Banks*, Boston Consulting Group and Indian Banks' Association (2019), 11, https://media-publications.bcg.com/EASE-reforms-for-public-sector-banks.pdf.
[212] *Non-Performing Assets in Indian Banks*, Corporate Finance Institute (2018), https://corporatefinanceinstitute.com/resources/knowledge/other/non-performing-assets-in-indian-banks/.
[213] *Non-Performing Assets in Indian Banks*, Corporate Finance Institute (2018), https://corporatefinanceinstitute.com/resources/knowledge/other/non-performing-assets-in-indian-banks/.
[214] Bandyopadhyay, Tamal, *The Status of Public Sector Banks in India Today*, Live Mint (2018), https://www.livemint.com/Opinion/arQr1ZUW9EI51qwmF7lqJN/The-status-of-public-sector-banks-in-India-today.html.
[215] Bandyopadhyay, Tamal, *The Status of Public Sector Banks in India Today*, Live Mint (2018), https://www.livemint.com/Opinion/arQr1ZUW9EI51qwmF7lqJN/The-status-of-public-sector-banks-in-India-today.html.
[216] *India's Banking Sector: Turning a Corner?*, The Economist Intelligence Unit (2019), http://www.eiu.com/industry/article/1717543555/indias-banking-sector-turning-a-corner/2019-01-14.

The PCA framework, however, has only improved bank's positions at the expense of reduced economic investment. PSBs have continued to underperform private banks.[217] Lending has been cut back across the PSBs, with decreasing total amounts of loans throughout 2018.[218] Higher lending standards, less capital extension, and more attention to compensating for bad loans has also meant that bank profits have decreased dramatically.[219]

As a result, the RBI has intervened to improve the performance of the PSBs. It has overseen mergers between PSBs where smaller and less healthy banks are absorbed into larger and more stable PSBs.[220] These moves are expected to increase long-term diversity of investments to decrease risks in banks in the long-term and to increase overall stability in the financial sector.

Still, the state of Indian public banking is not promising and should serve as a warning to proponents of public banking in the US. Despite stable growth in deposits and abundant capital availability, Indian PSBs found themselves in a position where they have many useless assets.[221] There are a few reasons for this outcome, all of which should be carefully considered in the creation of a public state bank. First, the banks' economic development orientation itself exposed it to undue risks. That is, because the banks were concerned with social benefits, they made loans to sectors that are riskier than average. This is borne out by analysis of PSB assets in comparison to PSV assets. NPAs for PSBs are concentrated in the mining, textiles, infrastructure, and aviation sectors.[222] For instance, infrastructure loans were 17.6% of PSB assets and only 8.4% of PSV assets, while 30.9% of PSB NPAs were from infrastructure compared to only 18.2% for PSVs.[223] This is true across sectors important for development. Second, the banks were subject to political pressures that led them to grant inefficient loans. Because the management of the banks often includes direct government appointees there are concerns that these appointees used their position to extend bad loans to their constituents. Third, the banks were subject to private pressures that led them towards profit seeking and away from responsible public investments. Private stockholders have both representation in the board of these banks as well as the influence to make their voice heard in bank decision-making. As holders of bank stock, they can depress the bank's equity value if they are not confident in bank activities. As a result, these banks may have prioritized risky loans to generate

[217] *India's Banking Sector: Turning a Corner?*, The Economist Intelligence Unit (2019), http://www.eiu.com/industry/article/1717543555/indias-banking-sector-turning-a-corner/2019-01-14.
[218] *India's Banking Sector: Turning a Corner?*, The Economist Intelligence Unit (2019), http://www.eiu.com/industry/article/1717543555/indias-banking-sector-turning-a-corner/2019-01-14.
[219] *India's Banking Sector: Turning a Corner?*, The Economist Intelligence Unit (2019), http://www.eiu.com/industry/article/1717543555/indias-banking-sector-turning-a-corner/2019-01-14.
[220] *India's Banking Sector: Turning a Corner?*, The Economist Intelligence Unit (2019), http://www.eiu.com/industry/article/1717543555/indias-banking-sector-turning-a-corner/2019-01-14.
[221] Singh, Charan, *An Essay on Banking and Macroeconomics: Role of Public Sector Banks in India*, Indian Institute of Management Bangalore (2016), 13, https://www.iimb.ac.in/sites/default/files/2018-07/WP%20No.%20530.pdf.
[222] Singh, Charan, *An Essay on Banking and Macroeconomics: Role of Public Sector Banks in India*, Indian Institute of Management Bangalore (2016), 13, https://www.iimb.ac.in/sites/default/files/2018-07/WP%20No.%20530.pdf.
[223] Singh, Charan, *An Essay on Banking and Macroeconomics: Role of Public Sector Banks in India*, Indian Institute of Management Bangalore (2016), 13, https://www.iimb.ac.in/sites/default/files/2018-07/WP%20No.%20530.pdf.

profits for these shareholders while also pushing these loans towards certain risky industries to please their public owners.

Thus, these three causes point to the importance of having a unified, coherent, and logical institutional structure in place for a public bank. A public bank must be owned in a way that will avoid profit-seeking pressures that encourage risky behavior. But, the bank's governance must also be structured to avoid undue political pressure. Managers must have substantial autonomy to operate the bank in an efficient manner, but must also be accountable to the public to ensure that the mission of the bank is upheld. The activities of the bank must deliver on this mission, but must not do so at the expense of making bad investments.

In sum, the PSBs are in a bad position, although not one that they haven't rebounded from before.[224] They still serve a central role in the Indian economy and have been one of the main drivers of India's development over the past half-century. Yet, they contain some structural flaws that have allowed for reckless lending. Public banking advocates should learn from the successes and mistakes of this model to deliver sound public banking systems to the United States.

B. Political Opportunities for the Northeast-Midwest

The strong performance of North Dakota amidst the Great Recession and the clear way in which the BND's activities aided this performance inspired activists to begin pushing for the establishment of public banks in their own local communities. It helped that the downturn had been sparked by the reckless behavior of the same large private banks that hold most state funds as deposits. The combination of anger towards the large banks and the example of the BND increased momentum for the establishment of public banks across the US. This momentum has not yet culminated in the establishment of a state bank elsewhere. Yet, even in 2008 and 2009 7 bills were introduced related to state banking.[225] More bills followed in later state legislative sessions, calling for both feasibility studies and outright establishment of some form of public banking.[226]

The National Conference of State Legislatures collected, from 2010 to 2017, all bills regarding public banks, with the exception of infrastructure banks, in the states.[227] Below is a discussion of this information.

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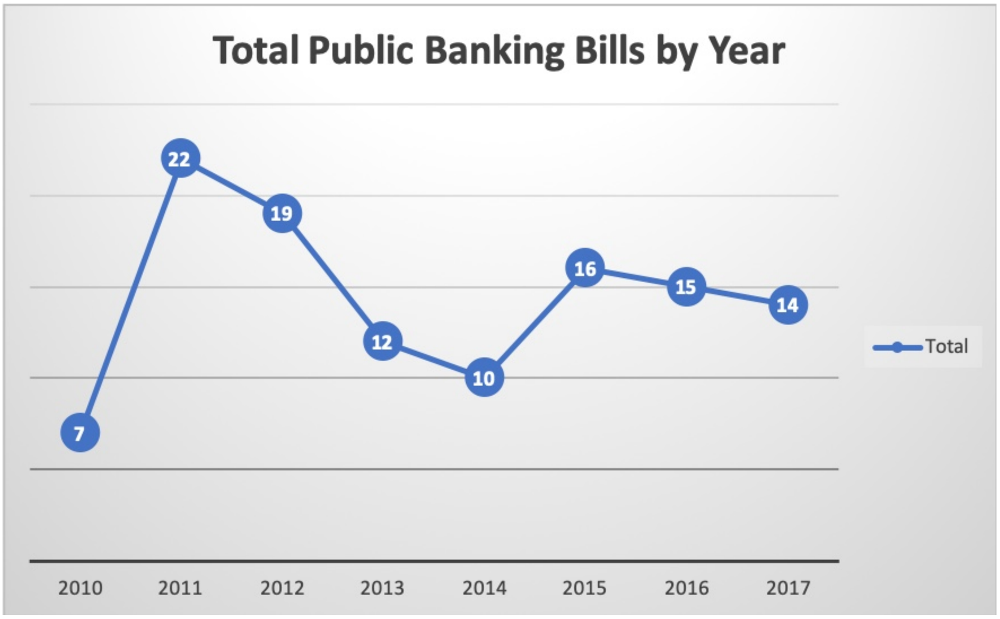
[224] Singh, Charan, *An Essay on Banking and Macroeconomics: Role of Public Sector Banks in India*, Indian Institute of Management Bangalore (2016), 13, https://www.iimb.ac.in/sites/default/files/2018-07/WP%20No.%20530.pdf.

[225] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 9, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[226] Figart, Deborah, *Exploring a Public Bank for New Jersey: Economic Impact and Implementation Issues*, Stockton University (2018), 8, https://stockton.edu/hughes-center/documents/2018-0326-exploring-a-public-bank-for-new-jersey-economic-impact-and-implementation.pdf.

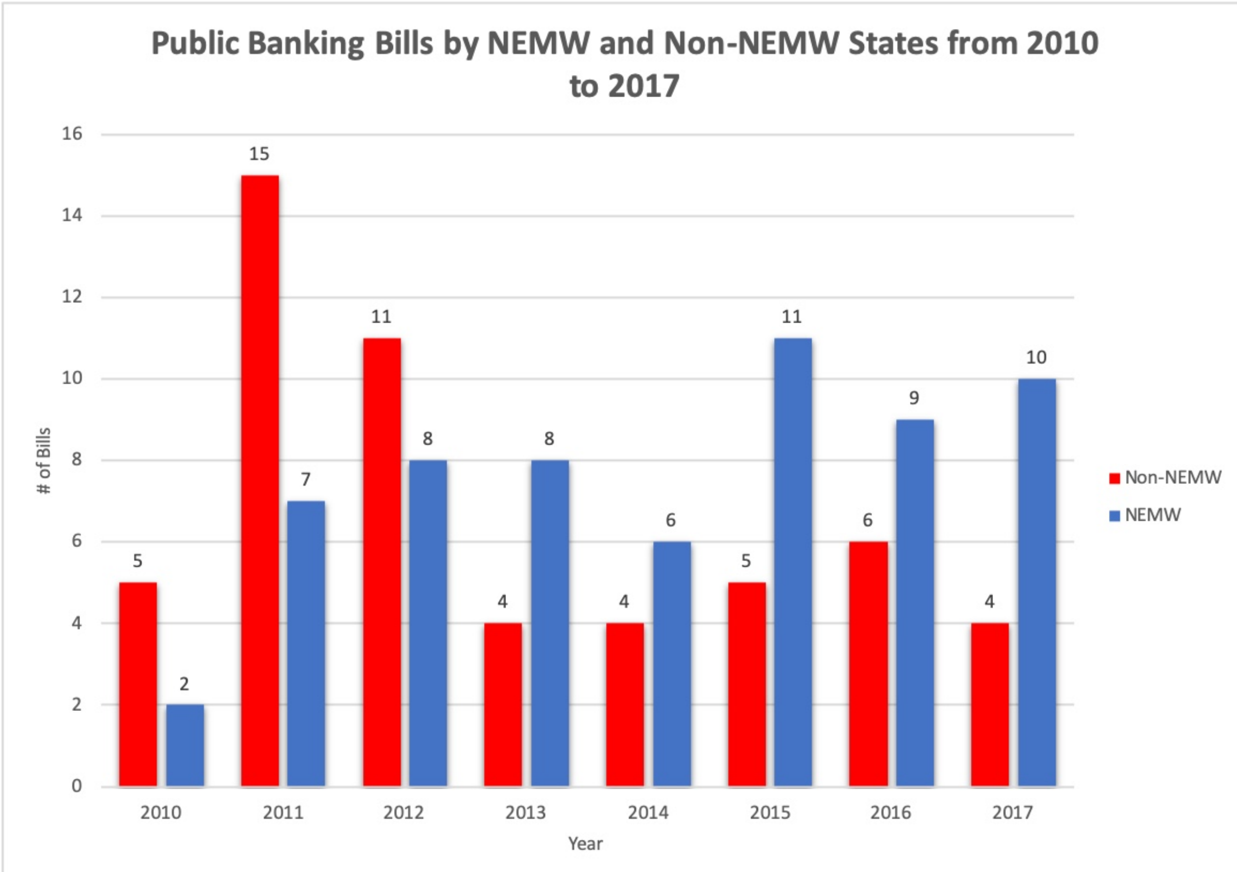
[227] *2010-2017 Legislation to Create State Owned Financial Institutions*, National Conference of State Legislatures (2017), http://tre.wa.gov/wp-content/uploads/State-by-State-Public-Banking-Efforts-NCSL.pdf.

There are a few key takeaways from the data for public banking advocates. First, the introduction of public banking bills has become a regular occurrence across the US. The below graph shows the total number of bills introduced each year from 2010 to 2017.

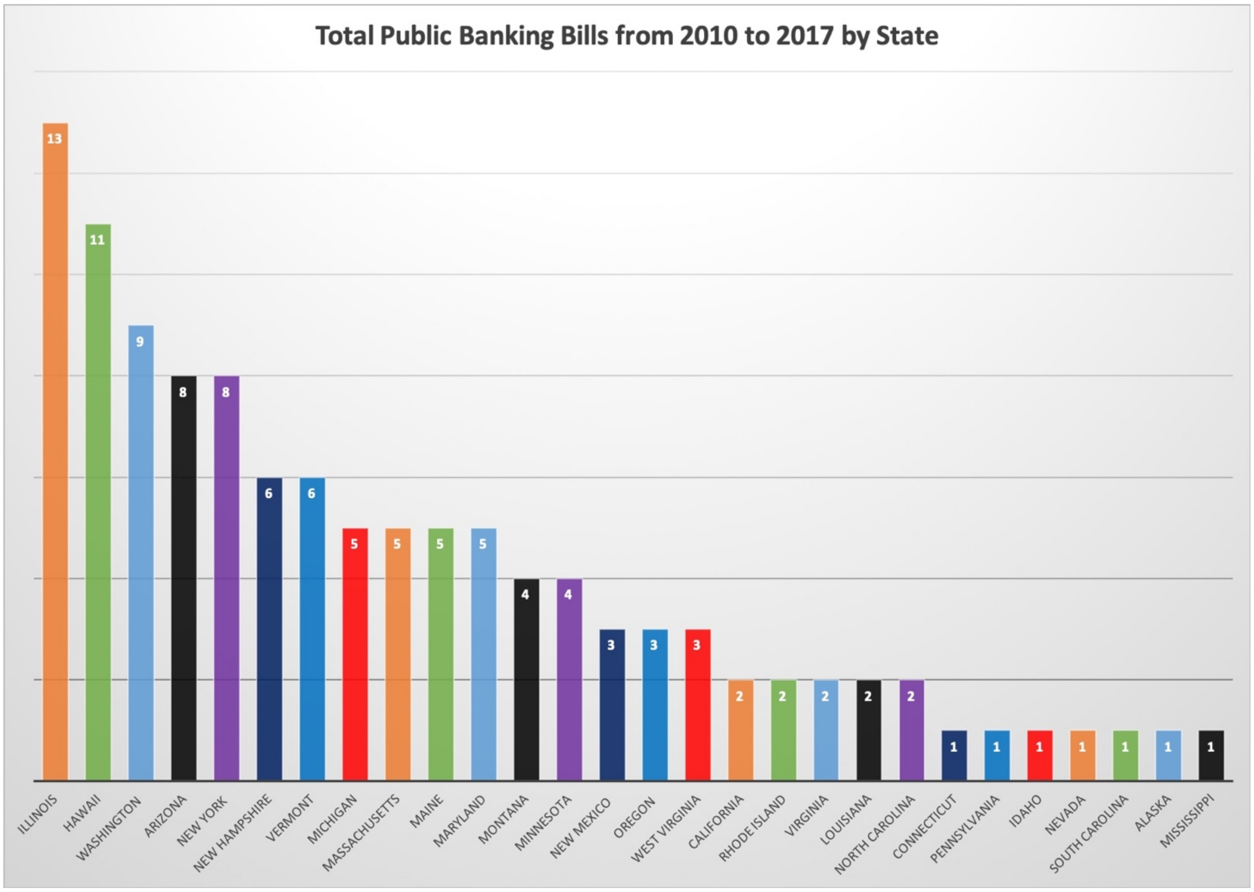


Bill introductions spiked in 2011 and remained in the double digits nationwide through to 2017. There was a high level of enthusiasm in 2011 and 2012, while the number of bill introductions dropped in 2014 and 2015. But, introductions increased again for the remainder of the measured time period.

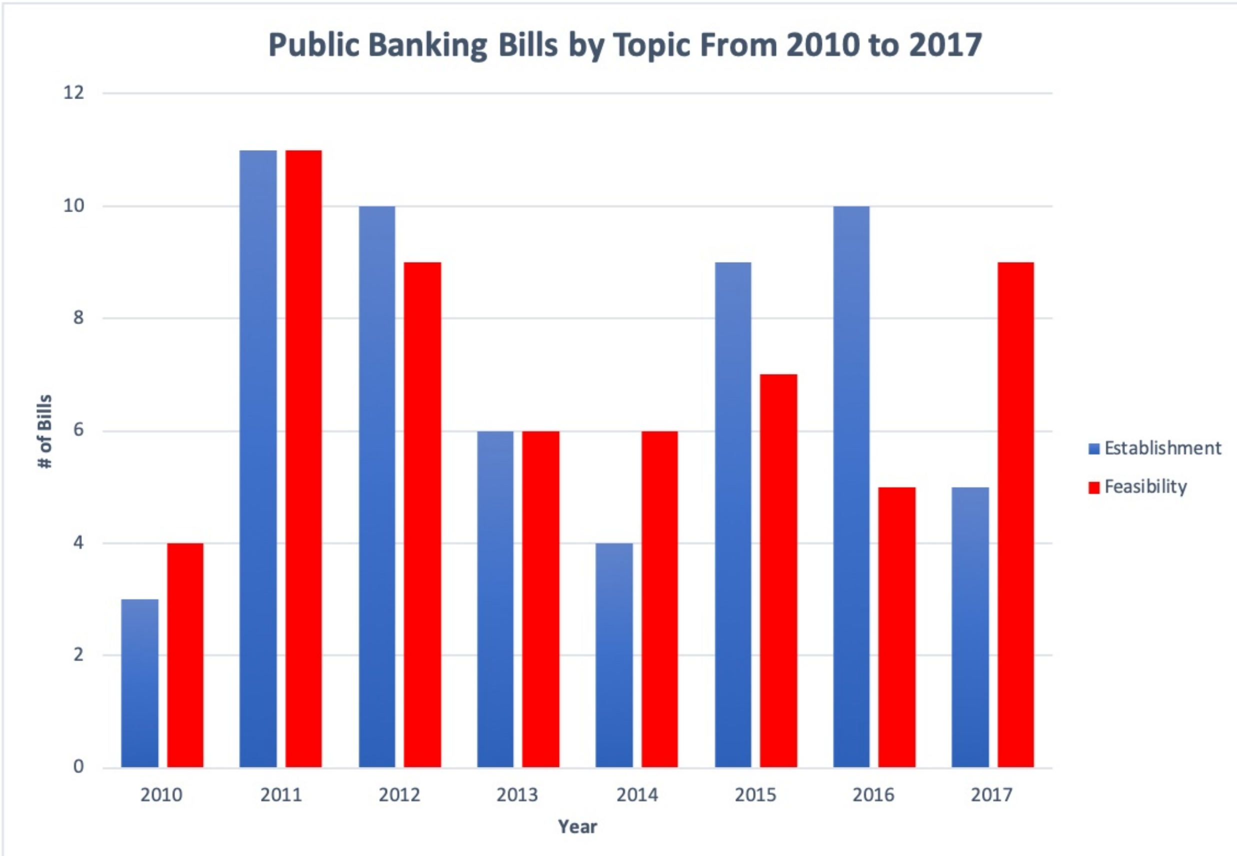
Another important trend is how the movement for public banking has spread to the Northeast-Midwest region. These states initially accounted for a small percentage of overall bill introductions. And up until 2012, more introductions came from non-NEMW states than from NEMW states. But, from 2013 to 2017, NEMW states accounted for the majority of bills introduced in support of public banking. From 2015 to 2017, an average of 10 bills were introduced regarding public banks in the NEMW states. As a result, the NEMW states accounted for 53% of all public banking bills introduced from 2010 to 2017.



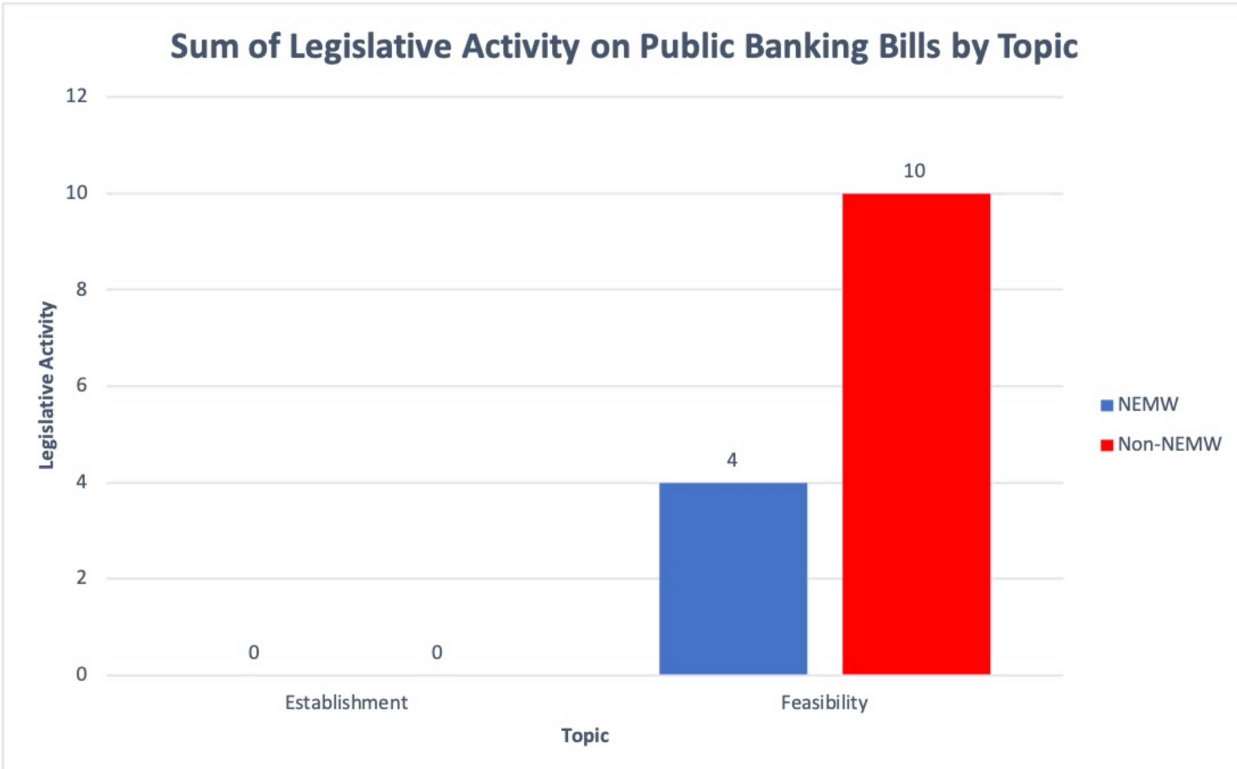
There have also been a number of NEMW states that have consistently introduced bills over repeated legislative sessions. Though Illinois has the most bill introductions with 13 over that time span, New York has 8 and other NEMW states like New Hampshire, Vermont, Michigan, Massachusetts, Maine, and Maryland have 5 or more bills introduced. Minnesota also has 4 introduced bills over this time span. Overall, 12 of the region's 18 states have had public banking bills introduced over this 7-year time span.



But, it's also important to distinguish the purpose of these bill proposals. Not all of the bills called for the establishment of state banks. Rather, many of the proposals would have established commissions or task forces to study the feasibility of state banking in their respective states. In general, about half of the bills were for the establishment of state banks while half were for feasibility studies. However, there do not seem to be clear trends in how these feasibility or establishment bills vary over time.



Yet, there is one crucial consideration for activists considering the political potential for public banking. Establishment bills had very little legislative success. I created a legislative activity measure for these bills which is scored as follows: if a bill or resolution passed one chamber it received 1 point, if it passed both it received 2, no additional points were given for being signed by the Governor. Under this measure, proposals to establish a state bank received 0 points, meaning that no proposals for creating state banks were passed in even one chamber. Feasibility bills and resolutions received 14 points. I further subdivided this into NEMW and non-NEMW states. Despite having a majority of proposals for public banks, NEMW states had relatively little legislative activity on these bills, accounting for only 29% of points assessed compared to the 71% for non-NEMW states. This indicates that, while there is serious consideration for public banking proposals in the NEMW states as represented by their bill introductions, there is not yet enough widespread support to get the bills passed regularly. The more important point is the divide between establishment and feasibility studies. Establishment bills have had little traction in state legislatures. This does not mean that activists and policymakers should avoid introducing these bills, but that they should also push for feasibility studies that have a greater chance of passing through state legislatures.



Feasibility studies can also increase the chances of later passage of state-bank establishment legislation in three ways. First, they can serve as a way to raise public awareness of the public banking option. The public is currently not aware of or well informed about public banking. Holding a study and publicizing its results can be a way to increase the salience of the public banking issue. Second, it can raise awareness and inform politicians and policymakers. It is likely that many politicians will not be aware of the potential for public banking in the states. As such, a study from a commission or task force that reports back to the state legislature can inform politicians about the benefits and costs of a public bank. Finally, a study will likely underline the benefits of a public bank. If most existing research is correct, then public banks should bring greater benefits than their costs to most states. A feasibility study would highlight this fact and would make the political argument for public banking stronger.

There are current bills on public banking in the following NEMW states: Connecticut, Illinois, Maine, Massachusetts, New Hampshire, New Jersey, New York, and Vermont.

Connecticut and Illinois are two examples of states that have pursued a dual establishment and feasibility strategy. Both states have two bills in progress in their houses of representatives, one which calls for the establishment of a state bank and one which calls for a feasibility study (H.B. 5970 and H.B. 5973 in CT and HJR 2 and HB 19 in IL). All of these bills are still in committee. However, both of Connecticut's bills were last acted on in February, whereas Illinois' bills were acted on in July and March, respectively.

Maine's feasibility bill introduced this year, which had 10 sponsors in the Senate, was killed in committee. Still, the number of sponsors indicates a sizable amount of political support in the Maine senate for the idea. New Hampshire's bill to establish a State Bank of New Hampshire was also designated as Inexpedient to Legislate in March by the state's Commerce committee despite bipartisan sponsorship.

Massachusetts and New Jersey bills to establish a state bank in their respective states have also been held up in committee. New Jersey's bill, however, was last acted on in January while the Massachusetts bill was sent to committee in May. Vermont's feasibility study bill, which enjoys 8 sponsors in the house, is also in committee but has more support than the bills from these other larger states.

Lastly, New York is the NEMW state with the most positive movement on the public banking issue in this set of state legislative sessions. The state has a bill for creating a commission to study the creation of a state bank that passed the Senate with the help of its five sponsors in June on a 43 to 19 vote. Since then it has been considered in the Assembly, with nine co-sponsors, as A06522. The bill has been reported to the Ways and Means committee and is waiting to move forward in the legislative process.

Current bills in 8 of the 18 states offer opportunities for political organization and lobbying on behalf of state banks, while a number of other NEMW states have had bills in the recent past which have been in support of public banking. Additionally, the entire region's largest and most important states have had these bills in the last decade with the exception of Ohio. New York, Illinois, Pennsylvania, Michigan, Massachusetts, and New Jersey have all considered or are considering public banking, while smaller states in the NEMW region have also had some movement in this direction.

III. Policy Breakdown

The NEMW states are suffering from three overarching issues. These issues are interlinked and can be solved through the creation of a state bank. This chapter will detail the issues facing these states and explain how state banking solves these issues.

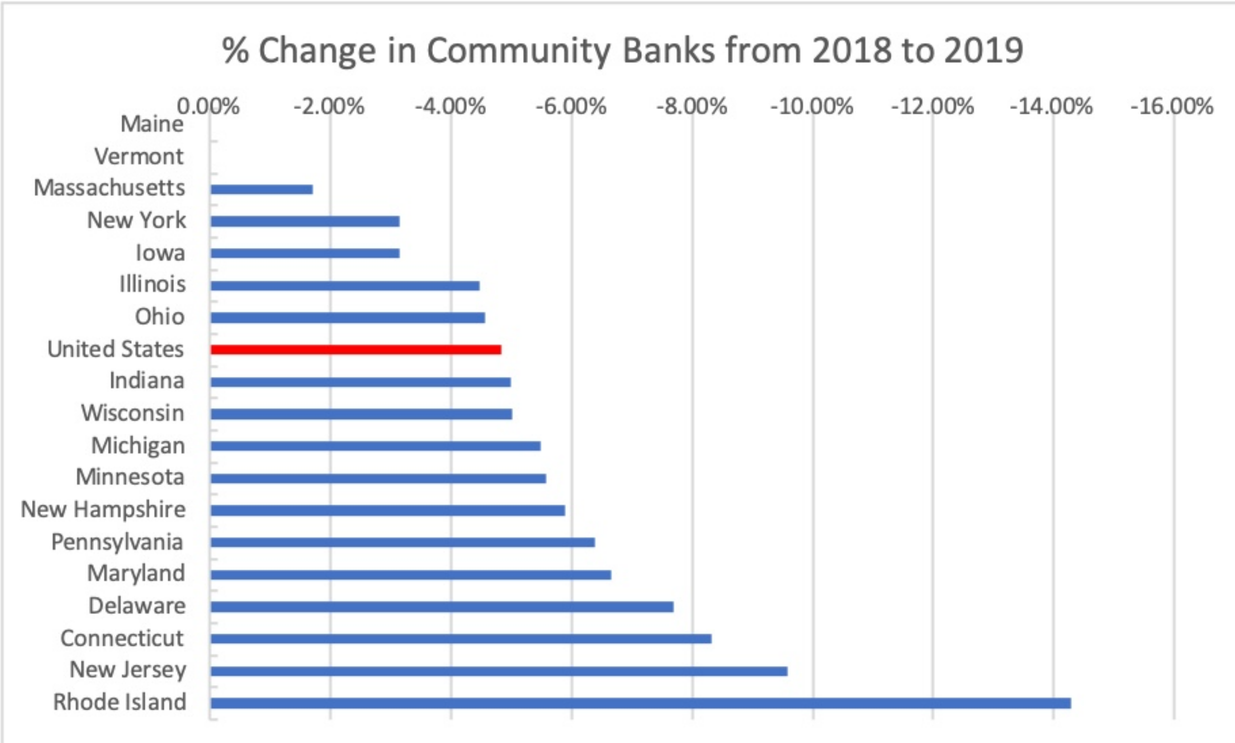
A. Uncompetitive Local Financial Markets

1. The Problem

The issues with NEMW states' credit markets begin with the disappearance of small or community banks. These are banks with a relatively small amount of assets on their books. They operate on a small scale and as such are usually closely tied to the communities where they operate. Usually, they work within only one state, and they often have only small number of branches concentrated within a certain region of the state.

For at least two decades, these banks have been struggling. Across the nation, community banks have lost market share to bigger commercial banks that often come from out of state. Over one in four small banks (banks with assets below $10 billion) went out of business between 2000 and 2014 nationwide.[228] Over 1000 such banks went out of business in the immediate aftermath of the Great Recession.[229] From 1994 to 2014, the number of community banks dropped from 10400 to less than 6000.[230] FDIC data shows that from 2018 to 2019, the number of community banks declined by 4.58%.[231] This trend has not left the NEMW states untouched. Below is a graph of the FDIC data representing the percentage decline in the number of community banks for the NEMW states from 2018 to 2019. The graph shows that only seven of the eighteen states saw a lesser decline than the nationwide average over this time. Additionally, only two states, two of the smallest in the region, Maine and Vermont, saw no decline in their number of state banks. This highlights the degree to which community banks have and continue to struggle in the NEMW states.

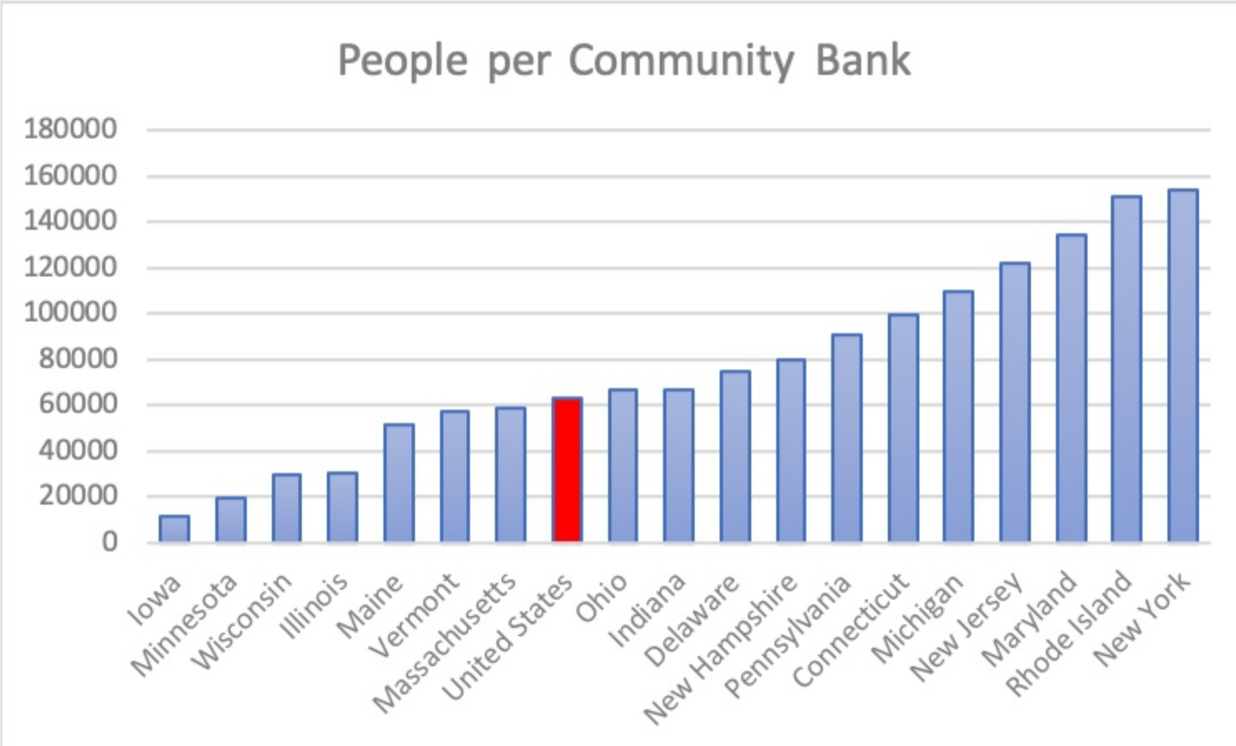
[228] Peirce, Hester; Miller, Stephen, *Small Banks by the Numbers, 2000-2014*, Mercatus Center (2015), https://www.mercatus.org/publication/small-banks-numbers-2000-2014.
[229] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 9, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[230] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 8, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[231] *Community Banks: Number by State and Asset Size*, Banking Strategist (2019), https://www.bankingstrategist.com/community-banks-number-by-state-and-asset-size.



[232]

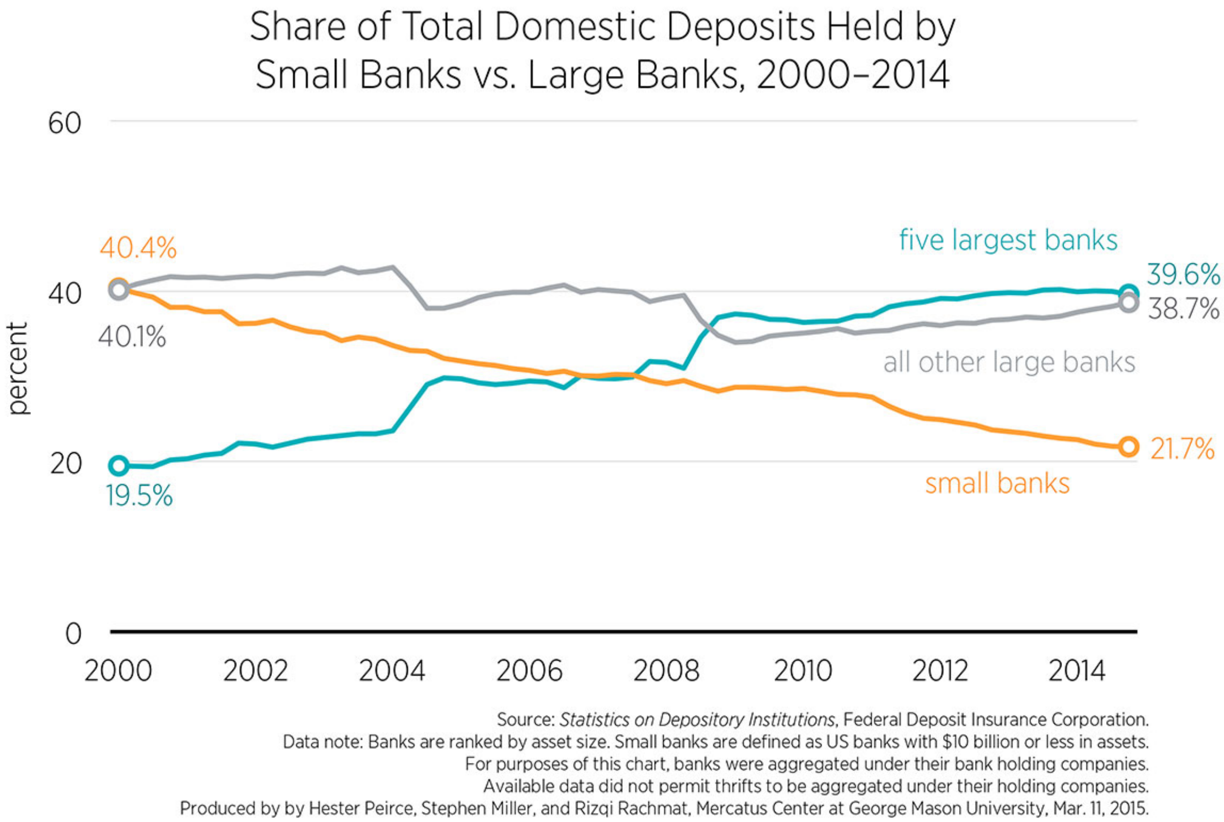
This continual decline, both across the US and particularly in the NEMW states, has resulted in far fewer small banks that operate on a local level. Again, using FDIC data, the report has charted the number of people per community bank in the NEMW states relative to the national average. This measure indicates the availability of local banking options for the populations of these states. A lower value means that there are more banks per person and so means that each person has more choice among these banks. As such, it is a helpful measure of the strength of local banks in these state economies. Again, less than 40% of NEMW states do better than the national average. This includes smaller states like Vermont and Maine and larger ones like Illinois and Massachusetts. However, states like New York, Michigan, Pennsylvania, and Ohio perform poorly on this measure. In sum, then, the number of community banks in the NEMW region has shrunk dramatically in the recent past and has continued to decline in the contemporary economic environment.

[232] *Community Banks: Number by State and Asset Size*, Banking Strategist (2019), https://www.bankingstrategist.com/community-banks-number-by-state-and-asset-size.



The decline of smaller banks has led to more concentration in local financial markets. Larger banks, mainly from out-of-state, have seized larger and larger shares of deposits and assets in the states. As small banks saw their share of deposits halve from 2000 to 2014, the five largest banks in the country saw their share of deposits double.[233] As a result, by 2010 the five largest banks in the country had more deposits than the next 45 largest banks and one percent of banks had the majority of branch locations in the country.[234]

[233] Peirce, Hester; Miller, Stephen, *Small Banks by the Numbers, 2000-2014*, Mercatus Center (2015), https://www.mercatus.org/publication/small-banks-numbers-2000-2014.
[234] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 8, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.



This consolidation has hit the NEMW region hard. Using FDIC data, this report has calculated a Herfindahl-Hirschman Index (HHI) for deposits in each of the NEMW states. The HHI is used to calculate the level of competition in a particular market.[235] Regulators like the Federal Reserve and the Department of Justice use the HHI to block uncompetitive mergers between banks with substantial market share.[236] Additionally, these regulators use deposits to represent a bank's general financial sway within a market, so an HHI of deposits is meant to represent overall competitiveness in local financial markets.[237] The DOJ's standards designate markets with an HHI above 1000 as concentrated and those above 1800 as highly concentrated. The below map shows that 9 out of the 18 NEMW states have concentrated financial markets. Additionally, two other states, Michigan and Ohio, are close to having substantially concentrated local financial markets.

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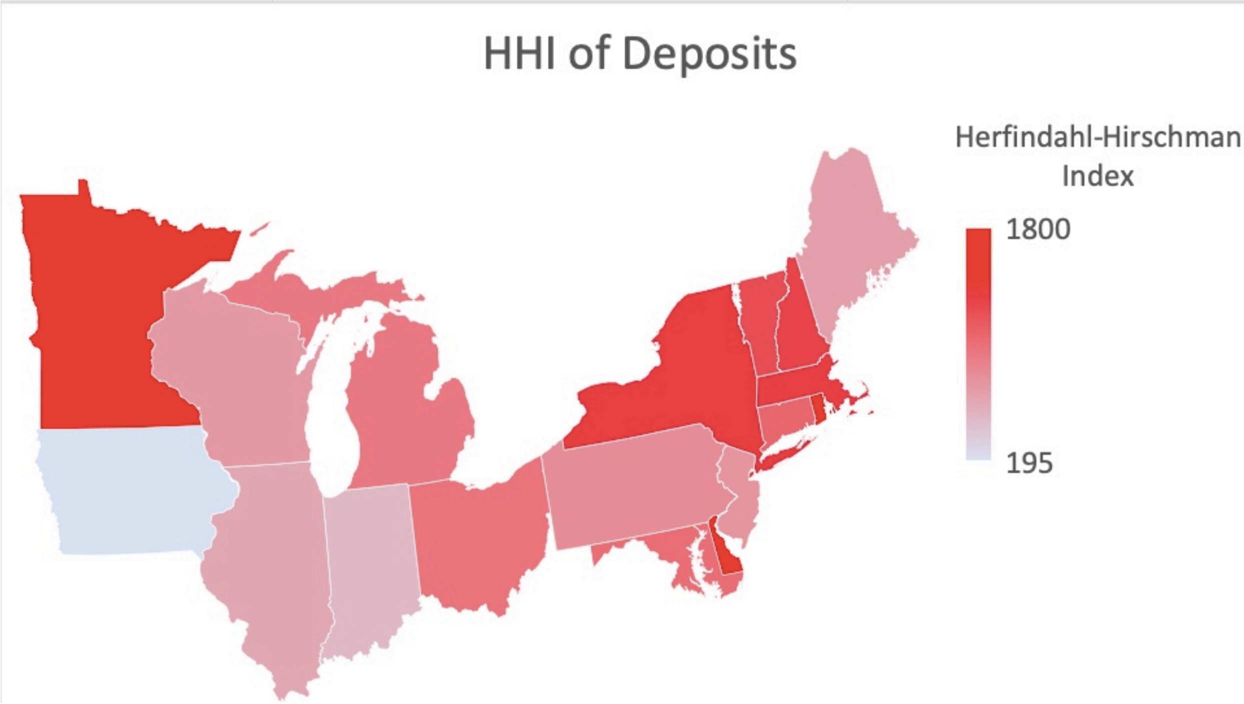
[235] *The ABCs of HHI: Competition and Community Banks*, Federal Reserve Bank of St. Louis (2018), https://www.stlouisfed.org/on-the-economy/2018/june/hhi-competition-community-banks.

[236] *The ABCs of HHI: Competition and Community Banks*, Federal Reserve Bank of St. Louis (2018), https://www.stlouisfed.org/on-the-economy/2018/june/hhi-competition-community-banks.

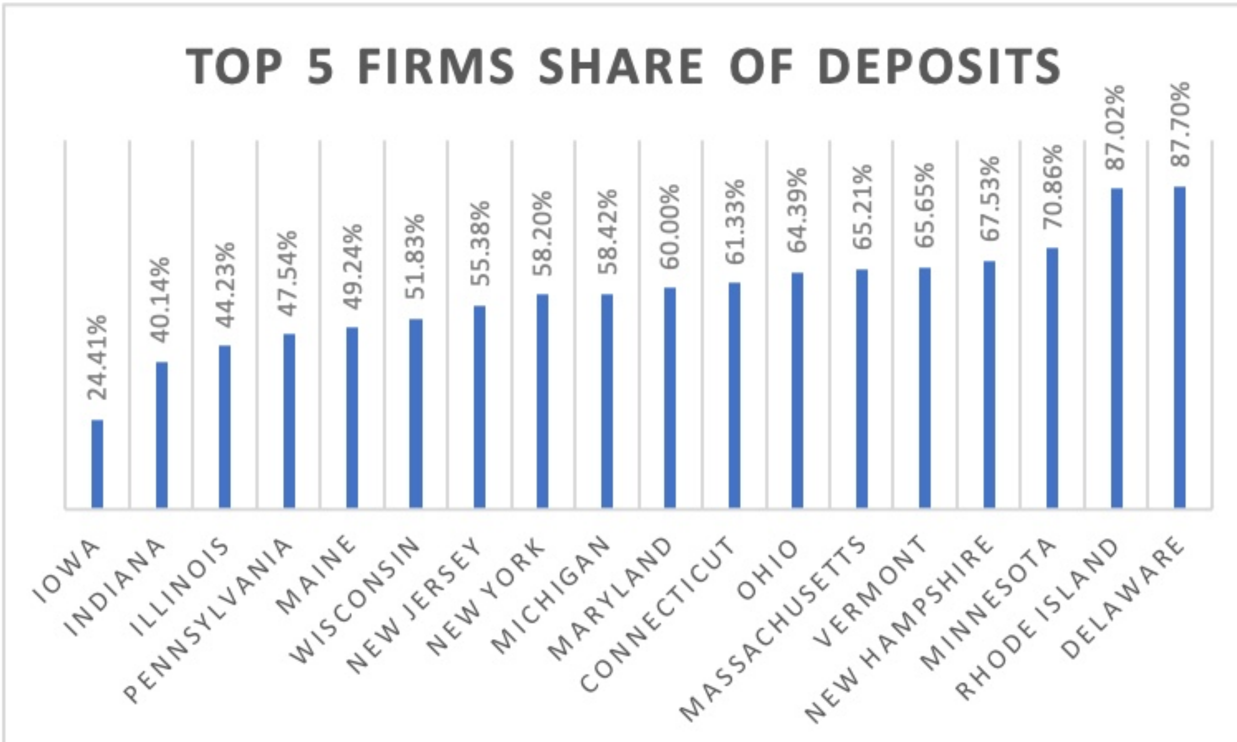
[237] *The ABCs of HHI: Competition and Community Banks*, Federal Reserve Bank of St. Louis (2018), https://www.stlouisfed.org/on-the-economy/2018/june/hhi-competition-community-banks.



[238]

But, these results may actually understate the degree of concentration in these states' financial markets. Squaring each firm's market share and taking the sum of these values determines the HHI. However, this construction could mean that one large firm with substantial market share equaling, say 50%, and the rest of deposits being shared among hundreds of small firms would be a higher HHI score than having 5 firms each with 20% market share. So, an alternative measure of concentration looks at the share of deposits held by the five largest deposit holders in the state. This measure can do a better job of identifying situations where a few large firms dominate a market together, at the expense of many smaller firms.

[238] *Deposit Market Share Reports*, Federal Deposit Insurance Corporation (2019), https://www5.fdic.gov/sod/sodMarketBank.asp?barItem=2.



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Using the same FDIC data, the report has calculated the market share of the five largest banks in each of these states. Thirteen states have a majority of their deposits held in only five firms. This includes major regional states such as Massachusetts, Ohio, Michigan, and New York. Additionally, only one state has fewer than 40% of its deposits housed in five banks, Iowa. This means that in all states, except Iowa, the largest banks in the state hold at least 8% of deposits on average. But, this number is likely higher in much of the region given that half of the states have over 60% of all deposits held by the top five firms.

Maryland's case is illustrative in this respect. Two out-of-state banks control more than a third of all deposits between them and of the five largest banks, none of them are chartered or based out of the state.[240] Additionally, these banks have an average of 12% of state deposits each, which indicates a substantial level of concentration. Yet, despite this situation, Maryland's HHI barely places it into the concentrated range with a score of 1006.

This concentration is indicative of what economists call imperfectly competitive markets. These are markets that are not monopolistic—they do not have only one firm—but which are also not perfectly competitive. That is, these are not markets with many small firms, each of which cannot substantially influence the market through its actions. Instead, these markets are

[239] *Deposit Market Share Reports*, Federal Deposit Insurance Corporation (2019), https://www5.fdic.gov/sod/sodMarketBank.asp?barItem=2.
[240] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 8, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

characterized by a few larger firms and many smaller firms. The larger firms exert a large amount of influence on both the price and quantity at which products are sold. As such, these markets are closest to oligopolistic markets—where a few large firms compete with each other.

In standard economic theory, this market structure is not socially efficient. That is, having a few large firms means higher prices and less goods for society. This is because the large firms can earn more by charging a higher price, even if it means selling a lower quantity of goods. As the concentration of financial markets progressed, then, we would expect to see lower rates of investment and worse access to credit for local businesses, governments, and consumers.

This economic intuition is supported by the data, both nationally and for the NEMW states. It took years for the biggest banks in America to return their lending back to 2007 levels. It took JP Morgan Chase and Wells Fargo until 2011 to get to that level, while Bank of America and Citigroup were still lending well below these amounts 3 years after the recession.[241]

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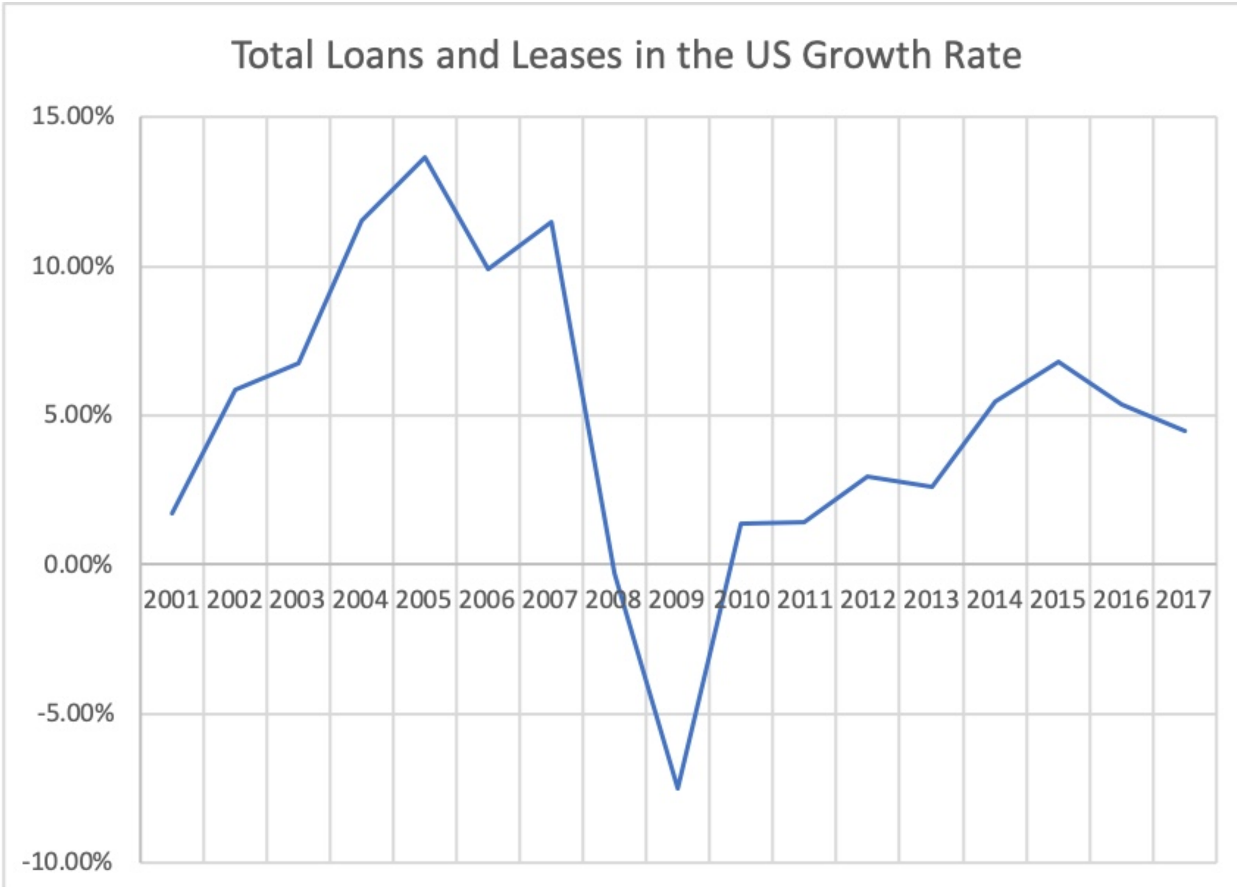
[241] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 8, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.



[242]

The above graph shows the growth rate of loans and leases in the United States from 2001 to 2017. This data includes loans for real estate, commerce and industry, consumers, construction, and lease financing earnings.[243] As such, this measure comprehensively captures the major component of bank's balance sheets that is directed towards productive investments.[244] As can be seen in the graph, loans and leases took a predictable dive in 2008 but have not fully recovered in almost a decade. Indeed, only one year from 2008 to 2017 has seen loan and lease growth greater than any year from 2003 to 2007. This peak year, 2015, has been followed by progressive years of declining loan and lease growth in 2016 and 2017.

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[242] *Historical Bank Data*, Federal Deposit Insurance Corporation (2019), https://banks.data.fdic.gov/explore/historical/?displayFields=STNAME%2CBANKS%2CASSET%2CDEP%2CNETINC%2CINTINC%2CEINTEXP%2CTPD&selectedEndDate=2017&selectedReport=CB&selectedStartDate=1934&selectedStates=0&sortField=YEAR&sortOrder=desc.

[243] *How does the Federal Reserve define "loans and leases," and how do they relate to "commercial and industrial loans"?*, Federal Reserve Bank of San Francisco (2004), https://www.frbsf.org/education/publications/doctor-econ/2004/november/loans-leases-commercial-industrial-bank-portfolio/.

[244] *How does the Federal Reserve define "loans and leases," and how do they relate to "commercial and industrial loans"?*, Federal Reserve Bank of San Francisco (2004), https://www.frbsf.org/education/publications/doctor-econ/2004/november/loans-leases-commercial-industrial-bank-portfolio/.

Still, the average loan and lease growth over this entire period was 4.92%. This value compares favorably with most of the NEMW states. 13 NEMW states had average loan and lease growth rates lower than the national average. In fact, one third of all NEMW states had, on average, negative rates over the entire period. This includes Michigan, Minnesota, New York, and Maryland. Maryland's story is, again, instructive. Even as Maryland lost over 150,000 jobs in the recession and even after large banks had returned to profit making, the largest banks still failed to return to their pre-crisis loan levels.[245] The states that had the largest growth rates were mainly smaller ones like Rhode Island, Delaware, and Maine, with Ohio being the only large state to see growth above the national average.

But what about lending to small and medium businesses? This group is important to economic growth and has a large demand for loans. Academic studies find that SMEs account for a large percentage of total employment, but are "constrained in their access to finance."[246] In the US, small businesses have created two thirds out of all jobs in the last two decades.[247] A study of SMEs across the world found that SMEs find it comparatively more difficult and more impactful on their performance to get financing.[248] A study focused on French SMEs found that a targeted credit program strongly increased loans taken out by SMEs.[249] This implies that SMEs had a demand for financing, but, due to the costs of obtaining credit from the open market, could not receive credit until targeted by a specific program.[250]

Yet, despite the importance of SME loans to these firms and to the economy overall, SME lending has declined along with other forms of lending. The financial crisis involved the largest drop-off in small business lending since 1942.[251] The resulting restriction of business activities led to further economic contraction as small businesses closed or halted expansion plans. Bank of America, for example, made only two Small Business Association loans in Maryland the entirety of 2010 whereas in 2007 it had made 312.[252] Indeed, the majority of small business

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245 *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 8, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

246 Dutt, Devika, *Does Greater Public Ownership in the Financial System Promote Superior Performance?*, Political Economy Research Institute (2017), 7, https://www.peri.umass.edu/component/k2/item/1036-does-greater-public-ownership-in-the-financial-system-promote-superior-performance.

247 Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 4, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

248 Beck, Thorsten; Demirguc-Kunt, Asli; Peria, Maria, *Bank Financing for SMEs: Evidence Across Countries and Bank Ownership Types*, Journal of Financial Services Research (2011), 2, https://link.springer.com/content/pdf/10.1007%2Fs10693-010-0085-4.pdf.

249 Bach, Laurent, *Are Small Businesses Worthy of Financial Aid? Evidence from a French Targeted Credit Program*, Review of Finance (2014), 3, https://academic.oup.com/rof/article/18/3/877/1573387.

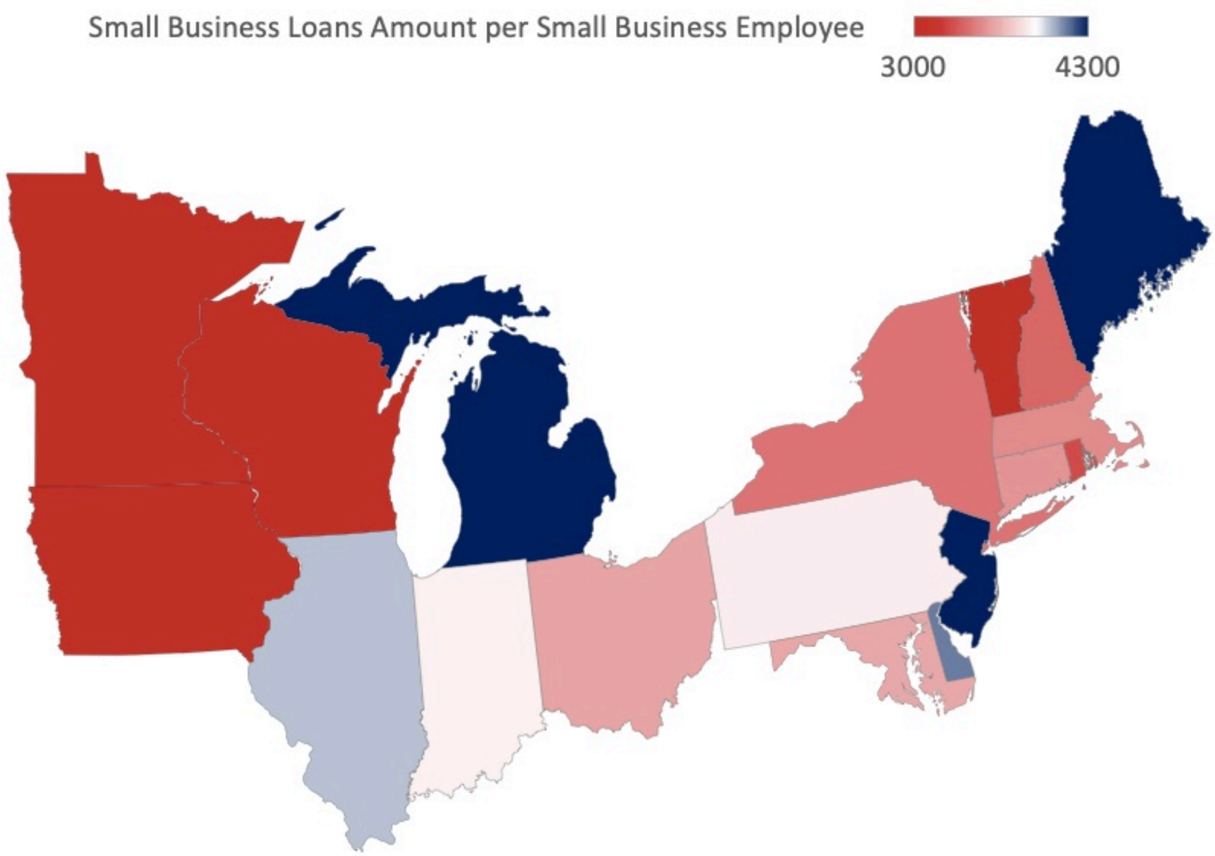
250 Bach, Laurent, *Are Small Businesses Worthy of Financial Aid? Evidence from a French Targeted Credit Program*, Review of Finance (2014), 40, https://academic.oup.com/rof/article/18/3/877/1573387.

251 Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 5, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

252 *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 8, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

loans came from community banks in the wake of the crisis, despite the fact that they only held one third of all deposits.[253]

Drawing on SBA data from 2016, the below graph shows small business loan amounts per small business employee. Essentially, the metric represents the amount of credit small businesses receive in a state while controlling for the number of small business employees in the state. As such, the measure shows the extent to which credit is made available to small businesses in a state.



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As the map shows, most states in the region are below the national average of $3911 per small business employee. Only 5 states are above the national average. This does include larger states like Illinois, Michigan, and New Jersey, but represents a low level of small business lending in the NEMW region. Overall, most large states are under the national average, such as New York, Ohio, and Pennsylvania.

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[253] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 9, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[254] *Small Business Lending in the United States, 2016*, Small Business Administration (2016), https://www.sba.gov/advocacy/small-business-lending-united-states-2016.

In short, there is good evidence that small business lending has decreased significantly in the US. This lending is most likely supply-driven—it is because of a lack of credit availability rather than a lack of small business demand. This lack of credit access is connected to concentration in local financial markets. As a result of this concentration, larger banks have offered fewer loans to smaller businesses which tend to be larger risks and less profitable than other, often more complex, financial opportunities elsewhere. These effects have played out especially strongly in the NEMW region, where many of the states face issues of concentration and low lending numbers.

Weak credit markets also impose costs on municipal and state governments due to lack of access to credit. Governments are borrowers as well. Often, they borrow to finance important investments that they believe will yield strong returns over time. This includes important investments in areas like infrastructure and the environment. However, weaker financial markets means that sub-national governments must pay higher interest rates or fees in order to receive financing for their investments. This both dissuades productive investments on the part of the government and leaches money out of public coffers.

If governments do decide to seek financing for investments, they are usually compelled to go to large banks. These banks generally have the expertise and the financial connections to help governments through financing. However, the prices that states and municipalities face are both highly volatile and likely higher than they need be.[255]

These effects are heightened in the midst of economic crisis. In these situations, credit availability further shrinks for governments. As the economy enters a downturn, many governments must cut spending due to decreasing revenues, when they should really engage in counter-cyclical spending. This spending would increase economic activity and put money back in locals' pockets. Counter-cyclical spending can generate a powerful positive cycle of economic activity, but this is only possible for many governments if they can receive financing in the short-term for investments.

States, for instance, often have to borrow at 5% interest rates, in addition to having to manage their credit rating, pay late fees, and handle interest rate swaps.[256] Meanwhile, municipalities have increasingly been forced to rely on this form of financing since the 1980's due to declining federal support.[257] They pay higher amounts and can often fall prey to complex financial instruments contained in their deals with Wall Street.[258]

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[255] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 10, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[256] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 11, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

[257] Beitel, Karl, *Municipal Banking: An Overview*, Roosevelt Institute (2016), 10, https://rooseveltinstitute.org/municipal-banking-overview/.

[258] Beitel, Karl, *Municipal Banking: An Overview*, Roosevelt Institute (2016), 10, https://rooseveltinstitute.org/municipal-banking-overview/.

In conclusion, then, the NEMW states face a number of issues that are interconnected. From a shrinking number of community banks to less competitive markets to less investment and access to credit for governments and businesses, these issues are all tied to the weakness of their financial markets. Any solution to these problems must strengthen the financial markets in these states.

2. The Public Banking Solution

Public banking through the establishment of a state bank can significantly strengthen the health of local financial markets.

The most important role played by the BND is as a bankers' bank and a partnership bank. In this role, the BND aids smaller banks within its state through a variety of different activities. In the process, the BND strengthens local community banks and allows them to compete with bigger banks.

A state bank for any other state could fill this same role. Any state bank could participate in partnership lending. As with the BND, this partnership banking activity would ensure that smaller banks had more ability to extend larger loans to their customers. Smaller banks would also be able to offer more attractive interest rates to their customers.

This would help community banks keep their most important customers even as they grow. A partnership-lending program from a state bank would help community banks build relationships with their customers over the course of their lending history. This could be especially lucrative to smaller banks in keeping their relationships with businesses.

A state bank would also aid smaller banks by providing them with additional liquidity for little cost. Like the BND does, a state bank could use letters of credit to free community bank reserves for other lending. A state bank could also ensure that local banks have access to credit through the Federal Reserve System.[259] Finally, a state bank could engage in direct bank stock lending. The BND currently has over $150 million in total bank stock from community banks in North Dakota.[260] These are purchases of shares of small banks that the BND has made in order to free funds for these banks in a variety of ways. These purchases can help banks manage mergers between each other or expand their lending activities.[261]

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[259] *Washington State Bank Analysis*, Center for State Innovation (2010), 2, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.
[260] *Washington State Bank Analysis*, Center for State Innovation (2010), 12, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.
[261] *Washington State Bank Analysis*, Center for State Innovation (2010), 12, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

Finally, a state bank could perform bankers' bank functions such as check clearing and bond accounting.[262] These are helpful, if small, services that a state bank could offer which would free small banks from focus on these issues. Instead, small banks would have more ability to prioritize their primary activity of productive investment, similar to the way the DSGV frees the Sparkassen from many complex tasks to focus on lending.

As a result, a state bank would improve competitiveness in local financial markets. Bigger banks would suddenly have competition for activities such as partnership loans, government deposits, and bond issues from the state bank. Additionally, smaller banks would be in a better position to compete with big banks for loans.

Indeed, the BND "has helped carve out and protect a free and competitive market for community banks" which more closely resembles a perfectly competitive market.[263] Although the North Dakotan financial market is not perfectly competitive, it is less oligopolistic than other state by virtue of the activities of the state bank. This means greater quantities of loans at lower rates as competition between firms drives prices down. A feasibility study for a Washington State Bank found that loan to asset ratios would be 5 to 7 percent higher with a state bank.[264] A state bank would also cut into big banks' market share by taking sizable state deposits out of larger banks.

A state bank would increase overall lending in the state. A feasibility study in Vermont found that overall lending would increase in the state through the creation of a state bank because the public bank would target different project types from what many private banks do and because the public bank would avoid outflows of capital from the state.[265] This is especially true if the state bank, first, offers a lower interest rate for key investments than could be found on the market and, second, extends credit more widely than private banks have by increasing community bank liquidity and by targeting high social-good investments. The previously mentioned Washington state analysis also found that participation-lending activity would increase overall lending by 8.2% or $2.6 billion in the state.[266]

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[262] *Washington State Bank Analysis*, Center for State Innovation (2010), 2, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.
[263] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 6, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[264] *Washington State Bank Analysis*, Center for State Innovation (2010), 1, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.
[265] Figart, Deborah, *Exploring a Public Bank for New Jersey: Economic Impact and Implementation Issues*, Stockton University (2018), 19, https://stockton.edu/hughes-center/documents/2018-0326-exploring-a-public-bank-for-new-jersey-economic-impact-and-implementation.pdf.
[266] *Washington State Bank Analysis*, Center for State Innovation (2010), 1, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

The direct bank stock purchases can also increase investment. At even a conservative 10% leverage ratio, the BND's $150 million in these purchases would result in up to $1.5 billion in new loans.[267]

Academic studies of financial systems across the world also find that public banks increase overall investment. For instance, a study in Italy found that public banks tended to offer lower interest rates than private banks, which in turn means greater overall lending.[268] Another study demonstrated how having public banks that are tied to specific localities increased overall lending and development in the region. The study's model implied that bigger private banks pursued investment opportunities in more developed areas, leaving poorer areas without adequate financing.[269] Thus, smaller banks and public banks were the drivers of investment in poorer sub-regions due to their inability to pursue more lucrative investment opportunities elsewhere.[270]

Greater overall investment as a result of a public bank also means greater investment in small businesses. A public bank would increase investment in SMEs in two different ways. First, through aiding small community banks with partnership loans and increased liquidity, a public bank would thereby increase lending to small businesses. Second, a state bank could institute its own specific programs oriented towards small business investment. As one academic study notes, SME lending promotes economic development.[271] State banks following a public mandate to increase overall development can deliver on this goal through targeted lending to SMEs.[272]

Finally, a public bank can increase financing options for local and state governments. First, the bank could directly loan to these governments at favorable rates with a particular emphasis on investments important to the overall development of the region. This can be achieved by, for example, directly buying government bonds or through special loan programs for specific types

[267] *Washington State Bank Analysis*, Center for State Innovation (2010), 12, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.
[268] Yeyati, Eduardo; Micco, Alejandro; Panizza, Ugo, *Should the Government Be in the Banking Business? The Role of State-Owned and Development Banks*, Inter-American Development Bank (2004), 15, https://www.econstor.eu/bitstream/10419/88042/1/idb-wp_517.pdf.
[269] Hakenes, Hendrik; Hasan, Iftekhar; Molyneux, Phillip; Xie, Ru, *Small Banks and Local Economic Development*, Review of Finance (2015), 24, https://academic.oup.com/rof/article-abstract/19/2/653/1580484?redirectedFrom=fulltext.
[270] Hakenes, Hendrik; Hasan, Iftekhar; Molyneux, Phillip; Xie, Ru, *Small Banks and Local Economic Development*, Review of Finance (2015), 24, https://academic.oup.com/rof/article-abstract/19/2/653/1580484?redirectedFrom=fulltext.
[271] Behr, Patrick; Foos, Daniel; Norden, Lars, *Cyclicality of SME Lending and Government Involvement in Banks*, Journal of Banking and Finance (2017), 2, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2640679.
[272] Behr, Patrick; Foos, Daniel; Norden, Lars, *Cyclicality of SME Lending and Government Involvement in Banks*, Journal of Banking and Finance (2017), 2, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2640679.

of investments.[273] The bank would also have a line with the Federal Reserve and so would have access to very low rates in the discount window.[274] The bank could then pass these savings on to the state and local governments; instead of paying 5% interest rates governments could pay 1% and the state bank would still profit.[275]

Secondly, a public bank can ease access to credit for governments. For example, the bank could offer letters of credit on government bonds that would increase the numbers of buyers for these bonds.[276] This role is currently fulfilled by large banks, which charge higher rates for their services than a public bank would.[277] The state bank could also aid these municipalities with their bond issues by providing counsel, lower fees, and helping to identify the best investment opportunities. This would allow municipalities with little experience in financing investment to do so at much lower rates than they could receive from larger, profit-focused banks.

Overall, then, a state bank could address the problems of NEMW state local financial markets. It would do so by strengthening small banks, thereby reducing concentration in the market and increasing competition between firms. This increased competition would translate into higher overall investment, greater investment in SMEs, and greater access to investment funding for local governments.

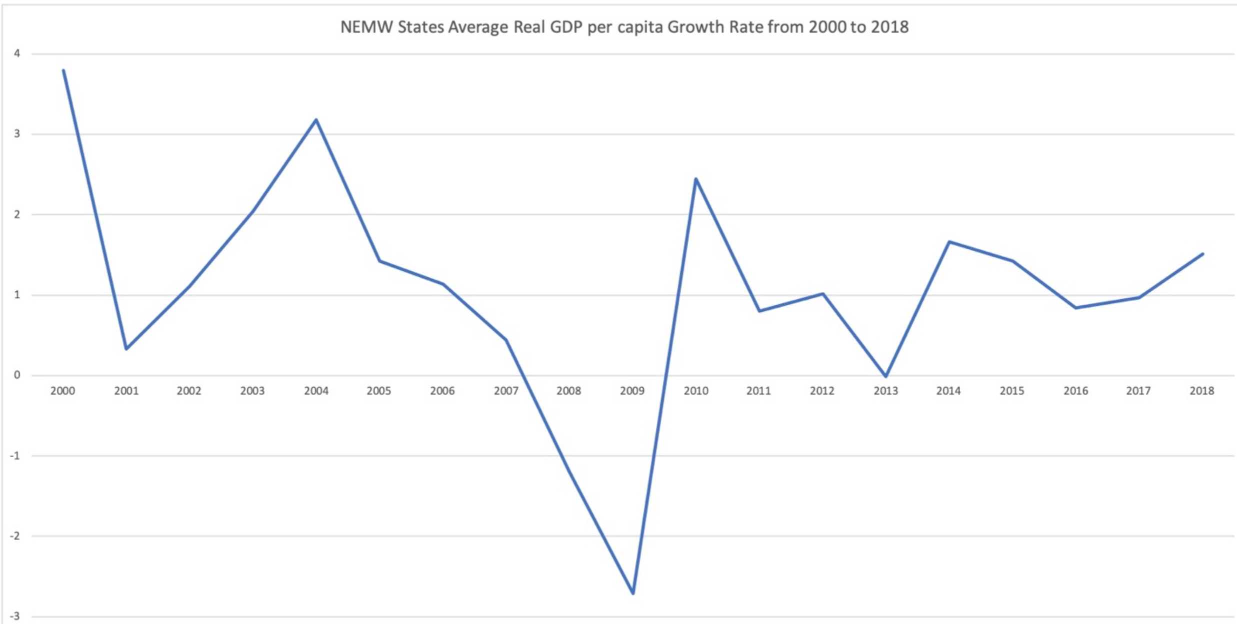
B. Lack of Development

Weak financial markets are an important causal factor behind lack of economic development in the NEMW region.[278] As such, the above section can also inform the solution to this section; by making financial markets more competitive a state bank would also increase economic development. However, the causes of development are myriad, and so the lack of development in these states is also an issue outside the weakness of their financial markets.

[273] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 4, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[274] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 17, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[275] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 11, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[276] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 11, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[277] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 11, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[278] Hakenes, Hendrik; Hasan, Iftekhar; Molyneux, Phillip; Xie, Ru, *Small Banks and Local Economic Development*, Review of Finance (2015), 3, https://academic.oup.com/rof/article-abstract/19/2/653/1580484?redirectedFrom=fulltext.

1. The Problem

Real GDP per capita is considered the most standard measurement of economic development. This measure summarizes productivity per person. It also demonstrates, quite clearly, the struggles of economic development faced in the NEMW region. The below graph shows an average of Real GDP per capita growth rate across the NEMW region.



[279]

Growth rates in the region were highest before 2007, peaking in 2000 and 2004. The recession had a predictable impact on growth starting in 2007, but the recovery was especially slow; positive growth only resumed in 2010. Since then, growth has remained under 2% per year each year. In 2013, growth was even slightly negative. These growth numbers occurred as the rest of the country was also suffering an economic contraction, but the NEMW region had a lower annual growth in 56% of years compared to the nation as a whole. Additionally, the NEMW region averaged growth .15% less than the national average, which adds up to a significant difference over 18 years. Only 7 of the 18 states in the region averaged growth rates over the period higher than the national average, with the largest states in that group including New York, Massachusetts, and Pennsylvania. But, Ohio, Michigan, and Illinois each averaged less than 1% growth over the entire time span.

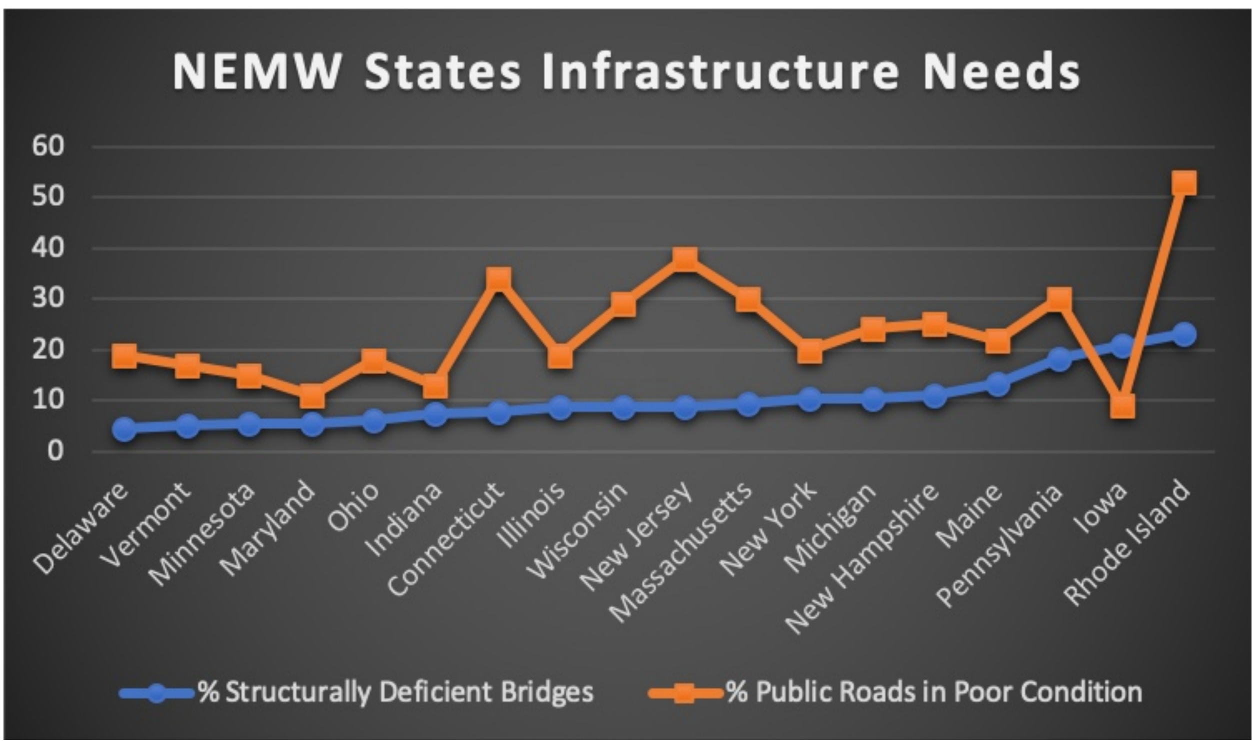
Another key area of economic development has to do with investment in the fundamentally productive elements of an economy. One of the most important of these areas is infrastructure. Infrastructure refers to the basic facilities and systems that serve the most essential needs of a

[279] *Regional Data*, Bureau of Economic Analysis (2017), https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1#reqid=70&step=1&isuri=1.

society. As such, having efficient, up-to-date, and sound infrastructure is a necessity for economic development. In this area, the NEMW states have large outstanding needs.

The American Society of Civil Engineers publishes a regular infrastructure report card on the state of the nation's infrastructure. This includes grading some states. Of the 11 NEMW states receiving a grade in 2017, the most recent report, none of them scored higher than a C.[280] The modal grade across these states was a C-. This implies that all states in the region have large amounts of work to do to meet the basic infrastructure standards agreed to by the experts.

The report also assesses each state along a number of factors measuring the health of infrastructure. The below graph represents two of these metrics, the percent of a state's bridges which are structurally deficient and the percent of a state's roads that are in poor condition. These metrics cover an important area of infrastructure to economic development: ground transportation. Poor roads mean poor transportation, which means higher costs of business and less overall economic activity. The below numbers, then, indicate a worrying lack of infrastructure investment, with on average over 10% of bridges structurally deficient and almost a quarter of all roads in poor quality.



Some of the worst offenders include large states like Michigan, New York, and Pennsylvania. Even the best performing states, like Maryland, Indiana, and Minnesota have around 10% of their vital ground transport infrastructure in poor condition.

[280] *Infrastructure Report Card*, American Society of Civil Engineers (2017), https://www.infrastructurereportcard.org/.

In water management infrastructure there is a similar need for investment. Using estimates from the same ASCE report, I've calculated that the NEMW region as a whole requires $264 billion in drinking water infrastructure investment and $125 billion in wastewater infrastructure investment over the next twenty years. Together, these two needs for water management total near $400 billion over 20 years, with an estimated need of $19.5 billion per year across these states.

Clearly, then, infrastructure investment is lacking in the NEMW region. The region requires greater investment and focus in order to provide the fundamental underpinnings for economic development. Lacking infrastructure makes it more difficult to conduct economic activity at any time and lower economic activity itself begets lower economic activity due to recessionary cycles in local economies.

2. The Public Banking Solution

A public bank can increase overall development in the state economy.

First, financial systems will improve as a result of the public bank's activities. An improved financial system means more investment and thus greater development. So, a solution to the first large problem facing these states is also a partial solution to the second problem facing these states.

A public bank would also fill a financial role not filled by regular private financial markets. That is, a government bank would be more willing to fund the long-term, fundamental projects for which the public sector requires funding. Short of just providing help with accessing funding for these endeavors, as the bank would do through improving local financial markets, the bank can also directly invest in the most important, large-scale projects of state governments. A study of worldwide banking systems showed that public banks are far more willing to make these essential investments than private banks.[281]

Studies also suggest that public banks have their most beneficial impacts on growth only in developed economies with highly developed financial systems.[282] This is the case in the NEMW region and so should imply that a state bank would bring growth to the region through financial activities.

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[281] Figart, Deborah, *Exploring a Public Bank for New Jersey: Economic Impact and Implementation Issues*, Stockton University (2018), 7, https://stockton.edu/hughes-center/documents/2018-0326-exploring-a-public-bank-for-new-jersey-economic-impact-and-implementation.pdf.

[282] Yeyati, Eduardo; Micco, Alejandro; Panizza, Ugo, *Should the Government Be in the Banking Business? The Role of State-Owned and Development Banks*, Inter-American Development Bank (2004), 24, https://www.econstor.eu/bitstream/10419/88042/1/idb-wp_517.pdf.

But, a state bank should also generate growth through its directly developmental aims. A state bank would have a "public purpose". This purpose would make the bank prioritize investments that benefit society as a whole, rather than pursuing the private profits of the bank. This focus on societal benefits should translate into economic development, as the bank chooses investment opportunities that promise to create greater societal benefits.

This developmental focus should mean increases in GDP, income, and employment throughout the state.[283] A feasibility study for a Vermont state bank found that even if the bank engaged in only $230 million in lending it would create net increases in state output, job creation, and savings on interest rate charges.[284] A study for Washington state found that a state bank would generate upwards of 7500 jobs in one quarter through increased lending activity to smaller businesses.[285]

A state bank provides these benefits through funding essential long-term projects, lending to key developmental sectors, and lending counter-cyclically to head off recessionary circles. It would invest with a long-term perspective, with the interests of the locality's future in mind. But, it could also promote investments in complex social problems, which often have indefinite costs and benefits associated with solving them.[286] Problems such as global warming or shifting demographics must be addressed, but are not attractive for private finance because of their scale and their potential costs in solving. However, a public bank, by working in the interests of the public, must address investment opportunities that will work towards solving these issues. In this way, a state bank addresses market failures in the construction of our current financial system. That is, it addresses areas where private interests will not compel substantial investment to meet society's needs.

A public bank can afford to do this by its operation in both profitable and less profitable activities. Like the BND, a public bank can use its profits from activities in more common markets, such as participating in partnership loans or direct loans to businesses, and use the earnings from these activities to invest in "economic development activities that may carry somewhat higher risks or where borrowers have difficulty accessing capital."[287] A study of the German Sparkassen demonstrates the developmental focus of public banks in action. The Sparkassen are efficient relative to international standards, but receive lower profits. This is

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[283] Figart, Deborah, *Exploring a Public Bank for New Jersey: Economic Impact and Implementation Issues*, Stockton University (2018), 7, https://stockton.edu/hughes-center/documents/2018-0326-exploring-a-public-bank-for-new-jersey-economic-impact-and-implementation.pdf.
[284] Figart, Deborah, *Exploring a Public Bank for New Jersey: Economic Impact and Implementation Issues*, Stockton University (2018), 13, https://stockton.edu/hughes-center/documents/2018-0326-exploring-a-public-bank-for-new-jersey-economic-impact-and-implementation.pdf.
[285] *Washington State Bank Analysis*, Center for State Innovation (2010), 12, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.
[286] Mazzucato, Mariana; Penna, Caetano, *Beyond Market Failures: The Market Creating and Shaping Roles of State Investment Banks*, Journal of Economic Policy Reform (2016), 5, https://www.tandfonline.com/doi/abs/10.1080/17487870.2016.1216416.
[287] *Washington State Bank Analysis*, Center for State Innovation (2010), 3, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

because their efficiency gains are passed onto consumers in the form of cheaper or better services. The study showed that these efficiency gains are associated with regional economic growth; in regions with a greater market share for the savings banks, there is a larger amount of economic growth as a result of increases in efficiency.[288] Whereas private banks would use efficiency gains to increase profits or market share, public banks can use these gains to subsidize more directly developmental investing, leading to greater economic growth in their respective operating regions.

One important area of long-term investment which may not be immediately productive, but which can offer great societal benefits is infrastructure. As noted, infrastructure is essential to development but vastly underinvested in by the NEMW region. Public banks can focus on improving state infrastructure. The BND has one such program. As a result, North Dakota may indicate how the NEMW region can improve its infrastructure. North Dakota received a C from the ASCE, tied for the highest of any of the NEMW region, which only 3 states received.[289] It also was near the average for percentage of bridges structurally deficient and well below the average for poor roads.[290] It had less than $750 million in combined water infrastructure needs for the next 20 years.[291] A state bank could deliver these same levels of infrastructure quality, or better, by focusing on directly developmental tasks and investing in the long-term health of its state.

The public mandate also leads banks to lend in a manner that helps the economy overall. Public banks can help to manage economic cycles. In managing these cycles, a state bank can limit their magnitude and can reduce their negative impacts on long-term economic growth. Government banks offer this stabilizing role in the economy through their lending activity. Public banks, according to multiple academic studies, provide credit in a manner that is either less pro-cyclical than private banks or sometimes even countercyclical.[292] They are able to mobilize their resources to limit decreases in investment and consumption in recessions, but also scale back on their lending in expansionary booms.[293] Whereas private banks tend to adjust lending at even higher percentages than GDP per capita growth (i.e., they are highly

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[288] Hakenes, Hendrik; Hasan, Iftekhar; Molyneux, Phillip; Xie, Ru, *Small Banks and Local Economic Development*, Review of Finance (2015), 20, https://academic.oup.com/rof/article-abstract/19/2/653/1580484?redirectedFrom=fulltext.

[289] *North Dakota Report*, American Society of Civil Engineers (2019), https://www.infrastructurereportcard.org/state-item/north-dakota/.

[290] *North Dakota Report*, American Society of Civil Engineers (2019), https://www.infrastructurereportcard.org/state-item/north-dakota/.

[291] *North Dakota Report*, American Society of Civil Engineers (2019), https://www.infrastructurereportcard.org/state-item/north-dakota/.

[292] Dutt, Devika, *Does Greater Public Ownership in the Financial System Promote Superior Performance?*, Political Economy Research Institute (2017), 11, https://www.peri.umass.edu/component/k2/item/1036-does-greater-public-ownership-in-the-financial-system-promote-superior-performance.

[293] Dutt, Devika, *Does Greater Public Ownership in the Financial System Promote Superior Performance?*, Political Economy Research Institute (2017), 11, https://www.peri.umass.edu/component/k2/item/1036-does-greater-public-ownership-in-the-financial-system-promote-superior-performance.

volatile) public banks tend to adjust, in percentage terms, lending by less than half of GDP per capita growth.[294]

A public bank also increases development through its focus on small business lending. These loans, however, are not directly developmental. But, these loans can often be important for developing a regional economy. Studies show that small businesses have continual issues with finding credit, especially in recessions, and so having a public bank that extends credit to these businesses provides them with more stable financial opportunities than they can get in the private market.[295] As small businesses play a central role in economic development, these investments can also increase development in the state. One study found that public bank lending to SMEs is 25% less sensitive to growth than private banks, which translates into a large economic difference.[296] What's more this lending is supply-driven, meaning that SMEs have demands for financing that are not met because of decisions made by banks in extending credit.[297] Public banks, then, can provide this credit where it is lacking from private firms.

As a result, small businesses will perform better in areas with public banks. Multiple studies confirm this intuition; public banks increase SME development and regions in Germany with greater Sparkassen market share see higher levels of new business registration.[298] This, in turn, will mean greater economic development in these regions.

Thus, a public bank can increase economic development in a region.

C. State Fiscal Health

This last issue is one that will be substantially addressed by solving the two above issues. However, a state bank would also directly benefit a state's fiscal health.

1. The Problem

Currently, the NEMW region is in a poor fiscal state. There are two basic measures of state fiscal health. The first is a state's budget deficit or surplus. This value represents the

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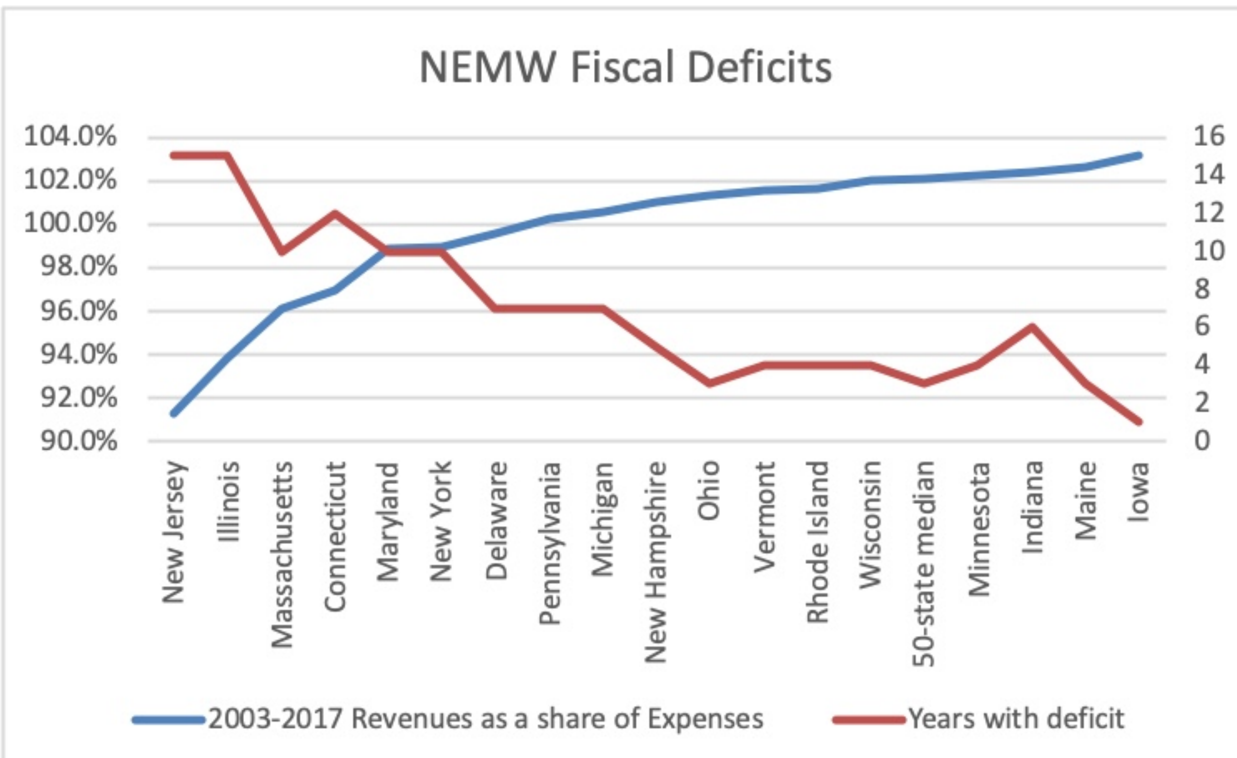
[294] Dutt, Devika, *Does Greater Public Ownership in the Financial System Promote Superior Performance?*, Political Economy Research Institute (2017), 12, https://www.peri.umass.edu/component/k2/item/1036-does-greater-public-ownership-in-the-financial-system-promote-superior-performance.
[295] Behr, Patrick; Foos, Daniel; Norden, Lars, *Cyclicality of SME Lending and Government Involvement in Banks*, Journal of Banking and Finance (2017), 2, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2640679.
[296] Behr, Patrick; Foos, Daniel; Norden, Lars, *Cyclicality of SME Lending and Government Involvement in Banks*, Journal of Banking and Finance (2017), 2, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2640679.
[297] Behr, Patrick; Foos, Daniel; Norden, Lars, *Cyclicality of SME Lending and Government Involvement in Banks*, Journal of Banking and Finance (2017), 2, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2640679.
[298] Hakenes, Hendrik; Hasan, Iftekhar; Molyneux, Phillip; Xie, Ru, *Small Banks and Local Economic Development*, Review of Finance (2015), 24, https://academic.oup.com/rof/article-abstract/19/2/653/1580484?redirectedFrom=fulltext.

relationship between a state's revenues and expenditures. When a state spends more than it collects, it runs a budget deficit. This measure shows, on a year-to-year basis, how well the state is managing its budget. It also serves as the determinant of a state's debt—the second basic measure of a state's fiscal health. Debt, here, refers to all unfunded obligations that a state is liable to repay. This is mainly from state borrowing to fund spending for which there is not available revenue. Debt accumulates over time as deficits continue and can only be retired through surpluses equal to the previous deficits plus interest paid for the borrowed funds.

The state deficit data shows that NEMW states have had mixed results. The below graph shows two values: first, the total revenues of the states from 2003 to 2017 as a share of their total expenses over this time and second their number of years with a deficit over this time. The first measure demonstrates how well the state is doing at funding all of its obligations. The second measure shows, on a year-to-year basis, how often a state failed to meet its budget needs.



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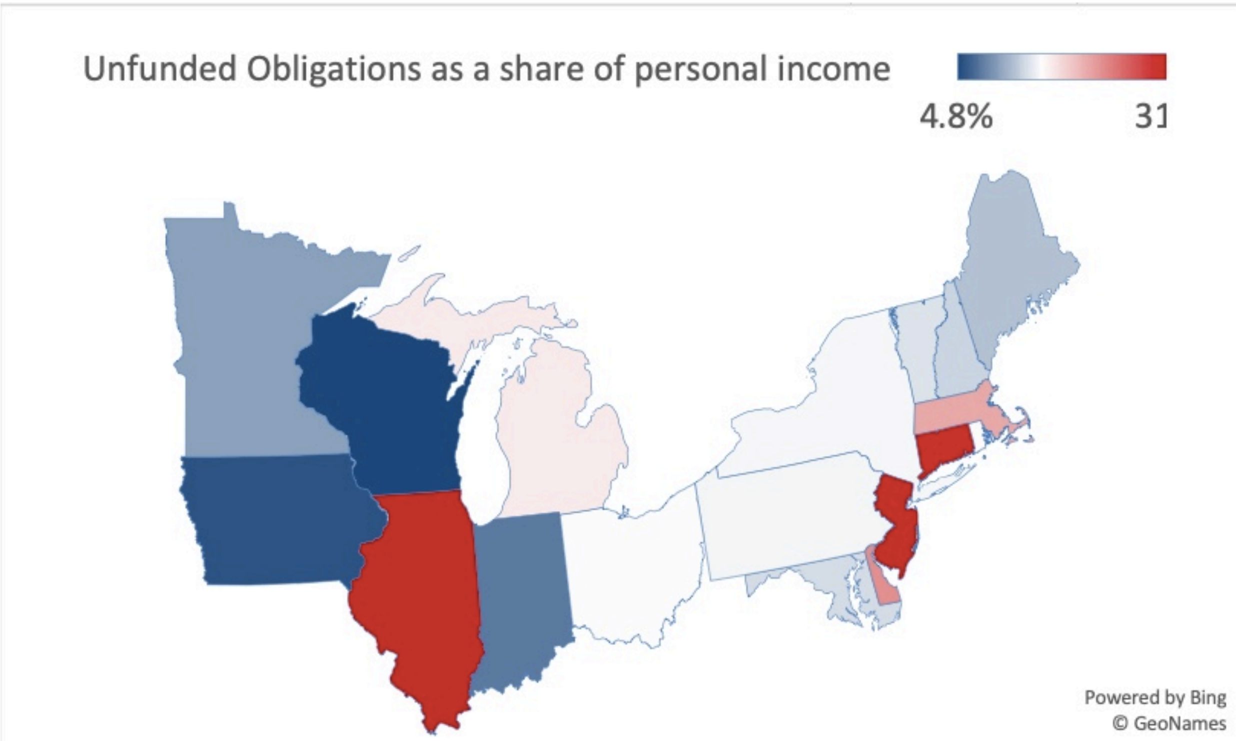
Seven of the eighteen states did not collect enough revenue to equal expenses over this time period. This includes large state like Illinois, Massachusetts, New York, and New Jersey. But, a majority of states did. However, only four relatively smaller states outperformed the median across all states in the US, which was 102.1% of expenses in revenue. Thus, 14 of the 18 NEMW states must be in the bottom half of states by this measure. The status of NEMW state deficits is even worse when it comes to number of years with a deficit. By this measure, all but two

[299] *Fiscal 50: State Trends and Analysis*, The Pew Charitable Trusts (2019), https://www.pewtrusts.org/en/research-and-analysis/data-visualizations/2014/fiscal-50#ind9.

states are below the national median. Additionally, 6 states spent at least two out of every three years in a deficit. And, two states, New Jersey and Illinois, spent each year with a deficit in the time period. Clearly, NEMW states have a difficult time managing their year-to-year budgets, at least compared to the rest of the nation.

The issue is no less serious when it comes to state debt. The NEMW region has a large amount of unfunded obligations that must eventually be repaid. The below map charts the amount of unfunded obligations states have as a share of the total personal income in the state. Note that this is not state revenues, but the income of all individuals in the state. As such, this measure is close but not the same as state GDP.



[300]

Here the NEMW region performs better but is by no means in good shape. In particular, three states have over 30% of their personal income owed as unfunded obligations. Illinois, New Jersey, and Connecticut are all double the 50-state median value of 14.8%. Only 7 states are above this level, though large states like New York, Ohio, and Pennsylvania are just below this threshold. Four states, all in the Midwest, are below 10% in Iowa, Wisconsin, Minnesota, and Indiana.

Yet, when we look at the total obligations of the NEMW states, the situation still seems dire. The NEMW region as a whole has nearly $1 trillion in unfunded obligations. Though Illinois, New Jersey, and New York together owe nearly half of this amount, other states still owe

[300] *Fiscal 50: State Trends and Analysis*, The Pew Charitable Trusts (2019), https://www.pewtrusts.org/en/research-and-analysis/data-visualizations/2014/fiscal-50#ind4.

sizable amounts of payments to lenders and pensions. This number is given additional weight by the fact that all states have unfunded obligations of only slightly over $2 trillion. Thus, the NEMW region as a whole holds nearly half of all unfunded obligations among American states.

These budget problems combine with state's restricted budgeting options to create serious problems for state's fiscal activities. This is because all states but Vermont have balanced budget requirements that require states, in some way, to cut spending when revenues fall.[301] Often these requirements can help states manage their budgets, but they can spell disaster when states need to maintain spending or investment in the face of falling revenues. This is what happens during recessions; when revenues fall, states must cut their spending. In 2008, this led to further economic contractions when increased spending was needed most.[302] In total, 46 states cut spending on public services during the recession as their respective economies continued to stagnate.[303] Thus, states in worse fiscal health not only have the state's own issues related to fulfilling their obligations, but they also are severely restricted in their possible spending options.

2. The Public Banking Solution

A public bank would give states this fiscal freedom to respond to crises while also helping them generally reduce their deficits and debts over time. Overall, then, a state bank would greatly improve the state's fiscal health.

North Dakota shows how a state bank can help its state manage its deficits and debt. Indeed, on its deficit, North Dakota surpasses the best NEMW state for both measures used. Its revenues were 120% of its expenditures from 2003 to 2017, compared to Iowa's 103.2%. Furthermore, North Dakota had only two years with a deficit.[304] Additionally, it has only $2.5 billion in unfunded obligations that translates to 6.5% of its personal income, better than all but two of the NEMW states.[305] It's true that North Dakota, during this period, had an oil boom which increased revenues, but the BND's impact is also unquestionable. Specific to managing deficits, the bank has helped the state manage budget crises. This prominently includes cases where federal money for spending needs like disaster relief, stimulus, or Medicaid

[301] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 10, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[302] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 10, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[303] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 5, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[304] *Fiscal 50: State Trends and Analysis*, The Pew Charitable Trusts (2019), https://www.pewtrusts.org/en/research-and-analysis/data-visualizations/2014/fiscal-50#ind9.
[305] *Fiscal 50: State Trends and Analysis*, The Pew Charitable Trusts (2019), https://www.pewtrusts.org/en/research-and-analysis/data-visualizations/2014/fiscal-50#ind4.

reimbursements is slow in coming.[306] The bank replaces these revenues in the short-term, allowing the state to spend immediately on urgent needs while also ensuring that the bank gets returns on these funds.

This help with deficit issues means that North Dakota's debt is lower as a result. Because it does not have to fund this borrowing through bonds or more expensive financing options, the state saves millions over time on debt repayments.[307] Estimates from Vermont's feasibility study on public banking found that the state would save $100 million over 20 years on interest costs associated with repaying borrowed funds.[308]

Of course, this is all before accounting for the ways that the bank would directly and indirectly increase revenues for the state. These increases in revenues would mean lower deficits, debts, and more options for fiscal activity even before the bank helped the state with financing in the short term. First, by both improving local financial markets and overall economic development, the bank will increase revenues for the state. As more economic activity takes place, with more competitive firms in the financial system and more small businesses, the state will collect greater taxes and fees on this increased economic activity.[309]

The state bank would also provide dividends directly to the state's general fund as a share of its annual profits. These additional funds will add to the state's fiscal opportunities, including reducing deficits, making debt payments, or having countercyclical expenses. As noted earlier, the BND has returned over $1 billion to the general fund since World War 2. In recent years, it has returned an average of $30 million to the state per year.

Taking these benefits together, a state bank should pay itself back to the state within a short time period. An analysis about the creation of a Washington state bank found that the bank would be a "revenue positive economic development tool" within three to five years of creation even after accounting for the opportunity cost of capital, lost tax revenues, and the costs of creating the bank.[310]

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[306] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 10, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[307] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 10, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[308] Figart, Deborah, *Exploring a Public Bank for New Jersey: Economic Impact and Implementation Issues*, Stockton University (2018), 21, https://stockton.edu/hughes-center/documents/2018-0326-exploring-a-public-bank-for-new-jersey-economic-impact-and-implementation.pdf.
[309] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 4, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[310] *Washington State Bank Analysis*, Center for State Innovation (2010), 18, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

Thus, a state bank would provide for the state's fiscal health by increasing revenues and helping the state manage its costs, which should result in lower deficits, debts, and greater fiscal freedom.

D. Efficiency

Lastly, the argument that a state bank can solve these various issues facing the NEMW states is premised on the idea that it can operate efficiently. It is clearly true that some state banks can operate efficiently, like the BND and the Sparkassen, but one might wonder to what extent this is true of public banks overall. One might worry that state banks will be too bureaucratized or confined to specific operations to operate as efficiently as private institutions. This view on public banking holds that the state would have the same problems motivating the bureaucrats who run a state bank as they would with providing incentives to private banks.[311] After all, if the state could specify exactly what it wanted the bank to do, then it could contract these services out to a private firm that could operate it efficiently.[312] But, this belief is ultimately unfounded. Not only because a private firm would not be able to fulfill a public purpose as well as a state bank, but also because those running the bank have an interest in benefitting their community.

There have been many studies in the academic finance literature on this issue. One, which looks at data from across 179 countries, found no significant difference between government owned banks and private ones in developed countries in terms of efficiency.[313] A study over seven years of data on Germany's system found that the Sparkassen actually enjoy a slight efficiency advantage relative to similarly sized private banks.[314] Other studies have government banks as performing less efficiently than their private alternatives.[315]

It is important to note that most of these studies of efficiency compare banks based on maximizing profits, or in some cases, minimizing costs.[316] Yet, a key element of most public

[311] Yeyati, Eduardo; Micco, Alejandro; Panizza, Ugo, *Should the Government Be in the Banking Business? The Role of State-Owned and Development Banks*, Inter-American Development Bank (2004), 11, https://www.econstor.eu/bitstream/10419/88042/1/idb-wp_517.pdf.

[312] Yeyati, Eduardo; Micco, Alejandro; Panizza, Ugo, *Should the Government Be in the Banking Business? The Role of State-Owned and Development Banks*, Inter-American Development Bank (2004), 11, https://www.econstor.eu/bitstream/10419/88042/1/idb-wp_517.pdf.

[313] Dutt, Devika, *Does Greater Public Ownership in the Financial System Promote Superior Performance?*, Political Economy Research Institute (2017), 14, https://www.peri.umass.edu/component/k2/item/1036-does-greater-public-ownership-in-the-financial-system-promote-superior-performance.

[314] Dutt, Devika, *Does Greater Public Ownership in the Financial System Promote Superior Performance?*, Political Economy Research Institute (2017), 16, https://www.peri.umass.edu/component/k2/item/1036-does-greater-public-ownership-in-the-financial-system-promote-superior-performance.

[315] Dutt, Devika, *Does Greater Public Ownership in the Financial System Promote Superior Performance?*, Political Economy Research Institute (2017), 14, https://www.peri.umass.edu/component/k2/item/1036-does-greater-public-ownership-in-the-financial-system-promote-superior-performance.

[316] Dutt, Devika, *Does Greater Public Ownership in the Financial System Promote Superior Performance?*, Political Economy Research Institute (2017), 16, https://www.peri.umass.edu/component/k2/item/1036-does-greater-public-ownership-in-the-financial-system-promote-superior-performance.

banks is that they do not simply maximize profits, but attempt to maximize societal welfare through their financial activities. In this sense, public banks could be acting efficiently when they invest in projects which offer lower returns but large public benefits.[317] Thus, to the extent that public banks are measured as having lower profitability than their private counterparts, this may be due to their focus on social welfare.[318] Indeed, it can make the entire practice of comparing private to public banks by this measure biased in favor of private banks. Even then, for studies that do apply the profitability criteria, there is mixed evidence on whether government banks are less efficient than private banks. This all implies that there is no good basis for disregarding public banks as less efficient than private banks.

There is, however, one well documented factor that can decrease the efficiency of public banks relative to private banks. This is political influence or the impact that politicians can have on the operations of the bank. The key idea is that when political factors drive bank decision-making, rather than factors directed by maximizing profits or societal welfare, this can lead to inefficiencies.[319] The "government effect" can loom large when political actors have the leeway to direct public funds towards their own ends; this happens mostly in countries with weak political institutions and in banking systems with weak governance and operations structures.[320] This is the only area where differences between the performances of government and private banks have been consistently found.[321]

As a result, the key to creating an effective state bank is to structure its ownership, high-level governance, and day-to-day management in such a way that operational autonomy is maintained for the bank's activities but so too is public oversight over the bank. In other words, "government should not provide excessive guidance" but it should be in a position to provide guidance when necessary.[322] As a result, then, the solutions offered by a state bank to the NEMW region's problems are fully realizable, so long as the bank is created in a smart and well-thought-out way. If this can be achieved then the states will benefit from the creation of a state bank.

The final recommendation of this report is this. Each state in the NEMW region should implement a state public bank because each state could benefit significantly from one. This is

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[317] Yeyati, Eduardo; Micco, Alejandro; Panizza, Ugo, *Should the Government Be in the Banking Business? The Role of State-Owned and Development Banks*, Inter-American Development Bank (2004), 17, https://www.econstor.eu/bitstream/10419/88042/1/idb-wp_517.pdf.

[318] Yeyati, Eduardo; Micco, Alejandro; Panizza, Ugo, *Should the Government Be in the Banking Business? The Role of State-Owned and Development Banks*, Inter-American Development Bank (2004), 19, https://www.econstor.eu/bitstream/10419/88042/1/idb-wp_517.pdf.

[319] Shen, Chung-Hua; Hasan, Iftekhar; Lin, Chih-Yung, *The Government's Role in Government-Owned Banks*, Journal of Financial Services Research (2014), 24, https://link.springer.com/article/10.1007%2Fs10693-013-0168-0.

[320] Shen, Chung-Hua; Hasan, Iftekhar; Lin, Chih-Yung, *The Government's Role in Government-Owned Banks*, Journal of Financial Services Research (2014), 33, https://link.springer.com/article/10.1007%2Fs10693-013-0168-0.

[321] Shen, Chung-Hua; Hasan, Iftekhar; Lin, Chih-Yung, *The Government's Role in Government-Owned Banks*, Journal of Financial Services Research (2014), 33, https://link.springer.com/article/10.1007%2Fs10693-013-0168-0.

[322] Shen, Chung-Hua; Hasan, Iftekhar; Lin, Chih-Yung, *The Government's Role in Government-Owned Banks*, Journal of Financial Services Research (2014), 33, https://link.springer.com/article/10.1007%2Fs10693-013-0168-0.

not to say that each state should follow the same model, indeed, the next section will discuss the sorts of implementation choices that would best suit each state. But, as the below chart demonstrates, a state bank could solve multiple issues for each state. Though each state has its own set of issues, a state bank can help with many of them. The below chart shows a simplified judgment of the state's needs based on the preceding data and explanations in this section. Red indicates an area of need while green indicates relatively strong performance. Each subject discussed above is listed here with a corresponding mark for each state depending upon the state's performance. This performance was discussed or displayed above in the earlier sub-sections. The result, though, is that all states have multiple areas of need and many of them have many areas of need. And, a state bank is the only policy option that can improve upon all of these areas at once. As such, a state bank could move towards solving these problems and so is recommended for all of these states.

IV. Implementation

This chapter will cover key implementation issues regarding the establishment of a state bank from capitalization and ownership to governance and activities. This is where the various models, the theoretical arguments, the empirical findings come together to inform how states should set about creating a public bank to suit their own situation.

A. Capitalization

Capitalization refers to the initial funding of the bank. This is the upfront investment made in creating the bank and determining its equity value. The initial funding that the bank receives is its capital and, along with the deposits of the bank, this capital allows the bank to extend credit and create other assets with these funds as reserves.

1. Initial Funding Source

How should this initial capitalization be funded? Numerous funding options are available and bring with them different consequences.

First, the bank could be capitalized from the state's general fund. That is, the bank could be funded entirely from a state's budget through a one-off appropriation of funds from the state's coffers.[323] This approach has the immediate drawback of a high upfront cost for the state. Obviously, the money used for the bank's capital could not be spent elsewhere and so would mean that spending in some other area would be missing. However, this approach means that the state has complete control of the equity of the state bank and as such is entitled to the entirety of its profits. Also, as noted before, a state bank will return value to the state in multiple ways. As a result, the bank will also contribute to the revenues of the state and so this would be an investment instead of a sunk cost. An analysis for a Washington State Bank found that the bank would increase state revenues and payback its upfront equity capitalization within 4 years.[324]

If a one-off appropriation is too expensive, a state could also capitalize its own state bank through returns on its deposits over time.[325] This would, again, allow the bank and its profits to be completely under the control of the state by funding the bank entirely through the state. But, this would also spread out the cost of creating the bank over time by merely using the revenues from the state's deposits currently held at private banks to create the funding for the public bank. One drawback would be the time this option would take to capitalize the bank, as returns to deposits may not be enough to finance the bank. Another drawback is that this option is no different in kind from the general fund option. All it does is spread out the cost of creating the bank over many years, but this does not require that the bank be created using deposit revenues. States expect these revenues to be available for general spending, and these revenues go into the general fund, so this spending is no different from taking from the general fund. Furthermore, if the idea was to spend over time, there is no reason to tie this spending to returns on deposits; capitalization should instead be planned ahead of time.

The bank could also be funded through the sale of bank stock. This approach brings with it its own distinct advantages and disadvantages. First, it means that the state has a much lower funding obligation for the establishment of the bank. The Washington State Bank analysis referenced above found that the state would have a 25% less funding requirement in order to

[323] Beitel, Karl, *Municipal Banking: An Overview*, Roosevelt Institute (2016), 6, https://rooseveltinstitute.org/municipal-banking-overview/.
[324] *Washington State Bank Analysis*, Center for State Innovation (2010), 1, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.
[325] Beitel, Karl, *Municipal Banking: An Overview*, Roosevelt Institute (2016), 6, https://rooseveltinstitute.org/municipal-banking-overview/.

provide the same level of capitalization to the bank through selling shares of the bank.[326] However, this lesser state share of funding for the bank has a few implications for how the state will benefit from the bank. First, while the state will continue to get a share of bank profits, it will no longer enjoy all of these profits. It will only be entitled to its share of bank stock's worth of profits.

This also means that it will be unable to negotiate annually with bank officials to determine this level of dividend versus recapitalization of profits. There is also uncertainty about the degree of funding obligation that will fall on the state for a given capitalization amount. It is unclear how much demand there would be for bank stock before the bank has been established given the novelty of the idea of state banking in American politics and the potential profitability of such an investment. As such, the state may not raise enough capital or as much as expected or it may be forced to sell a larger proportion of bank shares than desired in the capitalization of the bank. This could also undercut the main potential benefit of capitalization through stock sales, which is the potential increases in bank value over time. If the bank is on the stock market as it grows its stocks can appreciate over time, growing its value and providing additional opportunities to increase bank capital in the future. But, if the state has a smaller share of the bank's stock, these benefits will be undercut and will mainly accrue to private investors. More will be said on the additional complexities of stock funding in the ownership portion of this section, where owning a public bank through stock may raise additional problems for the state.

Finally, the bank could be funded through a bond issue. The most common form in proposals of state banks is a General Obligation (GO) bond issue. This is, in fact, how the BND was started. At its founding it was capitalized with a GO bond of $2 million, which in today's dollars would be close to $30 million.[327] From there the bank has grown to over $7 billion in assets.[328] Under this option, the state would not have to pay any amount for the establishment of the bank. Instead, the bank would be financed through its own debt issuance, starting the bank off with a sizable amount of capital but also with an equal amount of debt on its books. As such, this option is likely the most politically feasible. However, because it saddles the bank with large debts, it reduces the benefits of the bank to the state. The state will receive less in dividends from the bank because the bank will have fewer profits overall. Much of the pre-bond payment profits will have to go towards servicing the debt. The Washington bank analysis found that the bank's return on assets dropped to below the industry-average for much of the period of bond repayment.[329] There will be fewer leftover profits to be recapitalized for the bank.[330] This will

[326] *Washington State Bank Analysis*, Center for State Innovation (2010), 18, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

[327] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[328] *Bank of North Dakota 2018 Annual Report*, Bank of North Dakota (2018), 1, https://bnd.nd.gov/annual-report/.

[329] *Washington State Bank Analysis*, Center for State Innovation (2010), 17, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

[330] *Washington State Bank Analysis*, Center for State Innovation (2010), 17, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

mean that the bank will grow slower. The bank's growth will be worse in both the short and long-terms. In the short-term debt repayments will hinder its growth. And in the long-term its lower levels of capital due to this short-term repayment will mean there is less "capital to compound returned earnings off of."[331] That is, it will earn less in total because it will have less capital to use.

To help clarify this decision, this report used the model developed by the Center for State Innovation that conducted analyses of a Washington State Bank as well as an Oregon State Bank.[332] Because this report will use this model a few times in this section, it will be helpful to provide some more detail on the model. The model was built to show the growth of the bank over time as well as how the bank will benefit the state government as it grew. It also generates some information on the bank's activities that could be used, with some additional information, to estimate the economic impacts of the state bank. This report will not cover the economic impacts of the bank because this additional information is unavailable, but this report has expanded the model to include up to 30 years of growth of the bank. The report will use the model to show how certain decisions about the bank's implementation may affect its growth in capital, assets, and its returns to the state government.

The model is fairly simple. It involves 18 inputs of factors like original capitalization, the terms of the bond issue, capital ratios, the state's share of profits and deposits, the expected interest rates paid and received for activities as well as non-interest incomes and expenses, and some information about the state's financial markets. Using these inputs it generates 30 outputs, the most important of which are the state's dividend and the bank's capital, assets, and loans. To be clear, the model is an approximation of reality, one that is quite rough and so should not be taken to produce exact figures. However, it can show the size or the scale of a state bank's impact on the state and its own growth trajectory, especially when considering alternative choices. The parameter values for the inputs are also purposely conservative so as to avoid overestimating the impact of the bank in lieu of better information.[333] Each state should perform a more in-depth and specific study of its circumstances to get a more exact sense of the benefits of a state bank. Wherever the model is used in this section it is used with the same parameter values except those being varied for the point of comparison.

The report has used the model to compare how the general fund scenario versus the bond issue scenario affects the dividends received by the state. Below is a table with each state's estimated total dividend under the two scenarios ten and twenty years from the establishment of the state bank. The chart clearly shows the benefits of the general fund scenario in the medium to long-term for the state.

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[331] *Washington State Bank Analysis*, Center for State Innovation (2010), 18, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

[332] *Oregon State Bank Analysis – Revised*, Center for State Innovation (2010), http://cloud.snappages.com/8b4c3506d1b4d4ec3a752345750368b42852dd73/CSI-Oregon-State-Bank-Analysis-Revised-final-2.pdf.

[333] *Washington State Bank Analysis*, Center for State Innovation (2010), 1, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

State	GF Year 10 Total State Dividends	BI Year 10 Total State Dividends	GF Year 20 Total State Dividends	BI Year 20 Total State Dividends
Connecticut	$ 39,484,785	$ 17,832,288	$ 193,657,273	$ 59,056,796
Delaware	$ 13,288,568	$ 6,001,440	$ 65,175,175	$ 19,875,510
Illinois	$ 84,650,977	$ 38,230,437	$ 415,179,604	$ 126,611,186
Indiana	$ 39,744,955	$ 17,949,787	$ 194,933,302	$ 59,445,927
Iowa	$ 28,241,474	$ 12,754,536	$ 138,513,274	$ 42,240,346
Maine	$ 10,267,364	$ 4,636,991	$ 50,357,363	$ 15,356,740
Maryland	$ 53,928,556	$ 24,355,446	$ 264,498,262	$ 80,660,125
Massachusetts	$ 69,142,876	$ 31,226,602	$ 339,118,495	$ 103,415,955
Michigan	$ 67,700,118	$ 30,575,018	$ 332,042,333	$ 101,258,042
Minnesota	$ 46,641,317	$ 21,064,352	$ 228,757,233	$ 69,760,712
New Hampshire	$ 7,385,581	$ 3,335,508	$ 36,223,355	$ 11,046,501
New Jersey	$ 73,794,809	$ 33,327,528	$ 361,934,386	$ 110,373,779
New York	$ 195,457,092	$ 88,273,170	$ 958,639,826	$ 292,342,217
Ohio	$ 84,927,330	$ 38,355,245	$ 416,535,003	$ 127,024,523
Pennsylvania	$ 99,989,781	$ 45,157,814	$ 490,410,377	$ 149,553,203
Rhode Island	$ 11,016,752	$ 4,975,433	$ 54,032,815	$ 16,477,589
Vermont	$ 6,917,524	$ 3,124,122	$ 33,927,724	$ 10,346,436
Wisconsin	$ 58,497,084	$ 26,418,704	$ 286,905,090	$ 87,493,204

Both ten and twenty years after the bank's founding, the general fund scenario returns more than the bond issue scenario. After ten years, general fund capitalization returns slightly more than double the bond scenario. After twenty, the general fund returns more than three times as much as the bond scenario. Washington State Bank analysis produces an analogous result.[334] Additionally, this difference is larger than the initial capital that the general fund scenario would demand of the state. So, the state would receive a greater overall return from the general fund scenario compared to the bond scenario. If one considers real profits to the state, which accounts for the other uses of the state's money as well as the foregone tax revenue from the state bank and the lost interest on its deposits, the general fund scenario is still a net positive after only five years. This does, however, rest on some strong assumptions about how quickly the bank would begin full-scale operations. Still, the general fund scenario will clearly benefit the state in the long run even though it imposes costs on the state in the year of the bank's creation.

This same finding is true when looking at how the bank's assets would grow from its first year to the tenth and twentieth years of its operations. In both cases, the general fund scenario means that the bank will develop its assets to a much larger extent. The below table shows these results.

State	GF Year 10 Total Bank Asset Growth	BI Year 10 Total Bank Asset Growth	GF Year 20 Total Bank Asset Growth	BI Year 20 Total Bank Asset Growth
Connecticut	$ 763,593,931.33	$ 357,140,892.05	$ 3,902,844,307.07	$ 1,241,721,517.19
Delaware	$ 256,986,828.62	$ 120,195,435.63	$ 1,313,498,627.89	$ 417,900,223.71
Illinois	$ 1,637,060,264.14	$ 765,670,258.88	$ 8,367,263,109.47	$ 2,662,112,507.07
Indiana	$ 768,625,336.22	$ 359,494,132.90	$ 3,928,560,579.97	$ 1,249,903,357.63
Iowa	$ 546,160,204.30	$ 255,444,856.96	$ 2,791,507,575.73	$ 888,140,737.74
Maine	$ 198,559,940.28	$ 92,868,567.03	$ 1,014,869,946.87	$ 322,889,090.88
Maryland	$ 1,042,921,160.60	$ 487,785,167.43	$ 5,330,528,108.41	$ 1,695,950,678.38
Massachusetts	$ 1,337,150,014.87	$ 625,399,089.13	$ 6,834,376,373.52	$ 2,174,412,180.42
Michigan	$ 1,309,248,587.76	$ 612,349,298.98	$ 6,691,767,951.07	$ 2,129,040,156.13
Minnesota	$ 901,993,676.31	$ 421,871,904.65	$ 4,610,226,378.42	$ 1,466,780,850.78
New Hampshire	$ 142,829,307.18	$ 66,802,765.30	$ 730,022,235.06	$ 232,262,484.99
New Jersey	$ 1,427,113,460.17	$ 667,475,936.25	$ 7,294,193,176.56	$ 2,320,706,619.39
New York	$ 3,779,933,198.64	$ 1,767,914,409.84	$ 19,319,811,433.98	$ 6,146,754,438.07
Ohio	$ 1,642,404,627.23	$ 768,169,873.56	$ 8,394,578,959.15	$ 2,670,803,265.82
Pennsylvania	$ 1,933,696,489.17	$ 904,410,133.15	$ 9,883,415,811.37	$ 3,144,488,765.30
Rhode Island	$ 213,052,312.25	$ 99,646,801.43	$ 1,088,942,656.37	$ 346,455,923.17
Vermont	$ 133,777,593.13	$ 62,569,183.68	$ 683,757,552.71	$ 217,543,001.70
Wisconsin	$ 1,131,271,667.49	$ 529,107,626.32	$ 5,782,100,938.80	$ 1,839,622,230.70

[334] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 6, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

In fact, under the general fund scenario 5 state banks would overtake the BND in terms of asset size in just 20 years, although they would be serving much larger states and would begin with much larger capital infusions. Under the bond scenario, no state bank would overtake the BND in this time frame. These results also represent a similar pattern to state dividend growth, with asset growth being twice as big after ten years and three times as big after twenty years under the general fund scenario compared to the bond scenario.

These same results would hold, although to a lesser extent, under the stock scenario assuming the government provides some of the funding.[335] The government would receive lesser dividends, although asset growth would likely be similar, unless the sale of shares did not raise the expected amount of revenues. Yet, these results lead this report to recommend that states employ the general fund option where possible. This alternative will mean that the bank grows the quickest and will also quickly begin to return benefits to the state. The bank should become a net benefit within a decade, even before factoring in its economic effects. However, if this option were not available, either due to budget issues or due to political opposition, the next best option would be gradual funding from the general fund. If that is still off limits, selling stocks as detailed below or a bond issue should be considered by the state. In particular, states like New Jersey, Illinois, and Massachusetts, which hold large debts and have routinely run deficits, might consider financing the bank without the immediate commitment of state funds. But, even for these states, general fund capitalization should be strongly considered as the best way to return profits to the state in the medium to long-term and as the best way to increase the impact of the bank.

2. Initial Funding Amount

How much money should the bank receive initially?

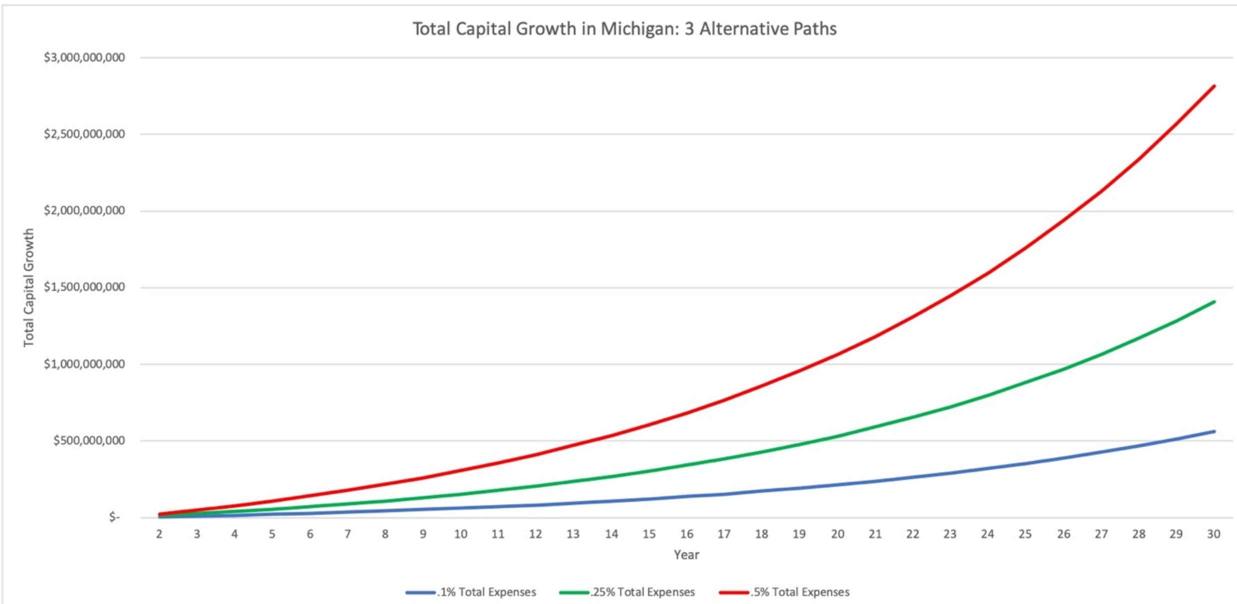
States might be tempted to provide only a small amount of funding for a bank to both save money and to see if the bank can grow itself to a larger size. But, this path is not advisable because it will limit the impact of the bank. Each of the NEMW states has immediate problems which a public bank is in a unique position to solve, but only if it has sufficient funding. Short-changing the bank will mean it will take exponentially longer for the bank to contribute to solving these problems.

As of now, this report has been assuming that a state bank would be capitalized with an amount equal to .1% of a state's yearly budget expenses, per Kaiser Family Foundation data.[336] Below the chart shows how a Michigan state bank's capital would grow under this scenario, as

[335] *Washington State Bank Analysis*, Center for State Innovation (2010), 21, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

[336] *Total State Expenditures*, Henry J Kaiser Family Foundation (2017), https://www.kff.org/other/state-indicator/total-state-spending/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D.

well as under scenarios where the bank was capitalized with .25% of a state's total expenditures and .5% of its total expenditures. The graph shows the clear exponential trajectory of growth and the large difference that a relatively small difference in initial funding can make when compounded over time.



In Michigan, the difference between .5% and .1% funding meant around a $200 million difference in the present. But this small difference, thirty years from the bank's founding, would mean a more than $2 billion difference in the bank's total capital growth. And this capital growth itself would signify a potentially $20 billion difference in the bank's total assets, depending on the ratios and other operational guidelines the bank subscribed to. This makes clear the impact of funding decisions at the establishment phase of the state bank. Unless there are very strong reasons to use the additional money in the present, that money should be invested in the bank.

State	.25% - .1% Year 20 Total State Dividend Difference	.5% - .1% Year 20 Total State Dividend Difference	.5% - .25% Year 20 Total State Dividend Difference
Connecticut	$ 88,585,194	$ 236,227,183	$ 147,641,989
Delaware	$ 29,813,265	$ 79,502,039	$ 49,688,774
Illinois	$ 189,916,780	$ 506,444,746	$ 316,527,966
Indiana	$ 89,168,891	$ 237,783,710	$ 148,614,819
Iowa	$ 63,360,519	$ 168,961,383	$ 105,600,864
Maine	$ 23,035,111	$ 61,426,962	$ 38,391,851
Maryland	$ 120,990,187	$ 322,640,500	$ 201,650,312
Massachusetts	$ 155,123,932	$ 413,663,818	$ 258,539,886
Michigan	$ 151,887,063	$ 405,032,168	$ 253,145,105
Minnesota	$ 104,641,068	$ 279,042,848	$ 174,401,780
New Hampshire	$ 16,569,752	$ 44,186,004	$ 27,616,253
New Jersey	$ 165,560,669	$ 441,495,117	$ 275,934,448
New York	$ 438,513,325	$ 1,169,368,868	$ 730,855,542
Ohio	$ 190,536,784	$ 508,098,090	$ 317,561,306
Pennsylvania	$ 224,329,805	$ 598,212,814	$ 373,883,008
Rhode Island	$ 24,716,383	$ 65,910,356	$ 41,193,972
Vermont	$ 15,519,654	$ 41,385,745	$ 25,866,091
Wisconsin	$ 131,239,806	$ 349,972,817	$ 218,733,010

The above table shows the differences in the total dividends that the state would receive twenty years from the bank's founding at the three different levels of initial funding. Clearly, more funding means more dividends for the state. In all cases, this increased funding at the initial stage is more than offset by dividend returns twenty years after the bank's establishment. In a large state like New York this funding difference can mean more than $1 billion being returned to the state in dividends over twenty years, or $50 million a year more in dividends to the state. This more than cancels the $400 million difference between the .5% and .1% funding options for the state. In fact, it pays this difference off in under 8 years. The remaining dividends can go towards other priorities of the state. And, of course, this effect only grows larger over time. So, the $1 billion dividend gain for New York after 20 years will only be larger after 40, 60, or 100 years.

Thus, the recommendation in this section is the same as in the last. Unless the state does not have the funds (like New Jersey and Illinois) or the political will to invest more money in the bank's capitalization, it should attempt to capitalize the bank as much as possible. The more invested in the present, the greater the returns in the future both to the state and for the whole state community as the bank's impact expands.

3. Funding Over Time

Lastly, the bank could see increasing funding over time. The state may wish to spread out its initial funding of the bank or to add extra funding to the bank at various times.

First, on the issue of initial funding. One alternative method for a state that could not afford or pass a bill that funded the bank all at once from the general fund is to spread out this funding over a few years.[337] The proposal to use the interest earnings on the state's deposits would be one such plan. This would lessen the single year load on the state to provide funding while also ensuring that the bank would receive a larger funding stream early. Although the bank would grow more slowly while awaiting additional funds, if it gets these funds within a few years of its foundations, it will still be able to accumulate substantial gains over time. This funding style would also give the bank time to ramp up its lending and operations and to sort out problems in its any operational processes. In this way, spreading funding out over a few years would provide a mini proof of concept for policymakers while also ensuring the bank makes high returns in the long run.[338] As such, especially if budget issues are a major concern, states are encouraged to consider this form of funding.

The state may also provide additional, one-off funding transfers to the bank after it has been established. This has never happened in the history of the BND and would likely not happen for most states, but it is an option for all states. Already, the state would have the ability to return bank profits back to the bank as new capital. But, if this amount proved insufficient for the state's aims or if states had available money that it wished to put to some useful purpose, putting the money in the bank would serve as a profitable investment for the state that would also deliver benefits to the community.

[337] *Washington State Bank Analysis*, Center for State Innovation (2010), 21, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.
[338] *Washington State Bank Analysis*, Center for State Innovation (2010), 22, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

B. Ownership

Once a state has decided how it would fund a state bank, it must decide how it would own this bank. In the case of a stock-based funding, this decision is already made for the state. Alternatively, other funding models give the state more latitude in this decision-making. The state must also decide how it will charter the bank.

1. Chartering the Bank

In the United States, two entities have the authority to charter banks: state governments or federal agencies.[339] The decision for states when attempting to create a state bank, then, is whether to charter its own bank or to charter the bank through a federal agency. On this issue, there are clear reasons for a state to charter its own bank. First, if it chartered from a federal agency the terms of the charter would be subject to the demands of the federal agency.[340] A state charter would allow the state to formulate the bank as it wished. Second, this would place the state bank under federal agency overview, which could restrict the possible activities that the state would wish the bank to undertake.[341] Finally, the state charter could make the bank comply with its own rules and regulations, as well as having final oversight over the bank.[342] This would mean that the bank would have complete control over the bank on the regulatory side, which is a clear advantage for the state.

2. Ownership Structure

Once the state charters its bank, it must decide how it would like to structure the ownership of the bank. Three models of ownership are doing business as or DBA (Bank of North Dakota), legally public entity (Sparkassen), and stock ownership (Public Sector Banks).

Establishing the bank as a DBA of the state means that the bank will be an extension of the state operating under a different name. This choice will have a few effects on the operation of the bank. First, it will make the state completely liable for any bank expenses but also fully entitled to any revenues of the bank. Thus, the state assumes additional risk in exchange for the profits of the bank. It would also avoid legal issues between the federal and state government given the precedence of the BND that operates as a DBA. Finally, it would allow the bank to

[339] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 24, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[340] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 27, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[341] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 27, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[342] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 27, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

count on its balance sheet all of the assets of the state.[343] This would allow the bank, especially early in its expansion, to extend greater amounts of credit than it otherwise could have because it would meet all national capital requirements.[344] This would also give the bank a close connection with the state, which could either lead to greater efficiency in its dealings with the state or undue political influence over its activities.

The Sparkassen system is premised on ownership that has an unclear legal basis in the United States. Instead of making the bank a part of the state, the bank is made a legally separate entity but one which is also legally public. It is unclear how such a legal status could be sustained in the US, but if it could be this ownership structure brings with it a few features. First, the bank would only be able to lend based on the assets it was given by the state or that it raised through a bond issue.[345] This would limit its activity, especially early on in its development. Second, the bank would maintain independence from political control and in doing so would solve the greatest impediment for public banks in achieving efficiency over their operations. Third, the bank would be founded in the public sphere by law, meaning that it could not be sold or privatized and it would only have incentives to further the public interest.[346]

Lastly, if the bank was funded through a stock issue it must be owned by the state through stock. Note that the state could still own the bank through stocks through any other funding mechanism – it would just own all stocks. This ownership structure gives the state the ability to sell bank stock to raise extra revenue; although this also means that political opponents can eliminate the bank if they take control of the state legislature. The state, though, could be limited by law to selling only non-controlling shares of the bank.[347] If only non-controlling shares of the bank were sold, the state would retain perpetual ownership and control of the bank's board, but private individuals would gain part of the bank's dividends. This would mean that the state would have less flexibility in deciding its share of dividends and in recapitalizing profits into the bank. However, this would still allow the state to control bank operations. Still this structure may effectively limit the state's control over the bank through the financial incentives facing the bank, the state, and private individuals. If the bank is on the stock market then, as with the PSBs, the bank will have incentives to return high enough dividends to stock holders to keep stock prices high in order to maintain the bank's value. The state, even if it had sole control of the bank, would have these same incentives because it would not want the bank's value to depreciate. This would limit the range of the bank's possible activities and likely force it into more profitable and risky activities at the expense of its mission-driven activities.

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[343] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 12, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[344] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 12, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[345] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 25, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.
[346] *Exploring the Sparkassen Model of Local Savings Bank in Ireland with the Savings Bank Foundation for International Cooperation*, Public Banking Forum of Ireland (2014), 4, https://webofdebt.files.wordpress.com/2014/11/sparkassen-model-in-ireland-oct-11.pdf.
[347] Beitel, Karl, *Municipal Banking: An Overview*, Roosevelt Institute (2016), 6, https://rooseveltinstitute.org/municipal-banking-overview/.

If controlling shares of the bank were also available on the market it would only compound these problems. On top of the issues associated with the non-controlling shares sold, private ownership of voting shares would give private interests say over the bank's governance through representation on the board of the bank as well as through increased market pressures to maximize profits. This is the same setup as the Indian PSBs. Although this setup allowed them to expand greatly throughout the late 1900's, it has also led to the recent problems facing these banks. This may also include out-of-state entities buying shares of the bank, which would defeat the community development aspects of the bank's mission. Under this setup, risky behavior and profit maximization are emphasized when the bank should be focused on community development and societal benefits.

Thus, this report recommends that states create banks as DBAs of the state. The BND has proven the legal availability of this route, as opposed to publicly legal entities, and it does not suffer the incentive problems associated with private shareowners of a public initiative.

C. Governance

This section will survey the key governance issues facing a public bank. This ranges from the high-level organization of its leadership and management to the day-to-day conducting of its business.

1. Beginning Operations

First, the state should start by understanding where all of its own deposits are held and the amounts of these deposits. This will be necessary in order for the bank to receive these deposits in the future and to have a sense of the volume of deposits it will have to fund its investment activities. It should also have a clear idea of which parts of the state will be required to deposit their funds into the bank. On this issue, there are a few distinct alternatives.

All executive branch agencies should be required to deposit their funds in the bank. These are the most obvious candidates considering they make up the majority of the state's budget and they currently deposit all funds they are not using into private institutions. The question is whether state authorities and other agencies as well as state-supported institutions like public colleges should be required to deposit their funds in the bank as well. It should be an imperative of the state to increase the impact of the state bank. This would mean having a large amount of the state's deposits in the state bank. Therefore, like North Dakota does, states should require their authorities and other agencies to deposit their funds in the state bank.[348] This will give the bank a greater amount of deposits with which to extend credit on and will

[348] Figart, Deborah, *Exploring a Public Bank for New Jersey: Economic Impact and Implementation Issues*, Stockton University (2018), 11, https://stockton.edu/hughes-center/documents/2018-0326-exploring-a-public-bank-for-new-jersey-economic-impact-and-implementation.pdf.

thus increase the positive effects of the bank. State-supported institutions, though, should retain discretion over their deposit placement choices, mainly because these institutions face unique challenges and administrative structures compared to other state agencies.

Next is the question of whether agencies will be required to deposit funds that have already been committed to a certain program. Here the clear answer seems to be to require all funds that are not to be used immediately to be put in the bank. Even funds that are committed to a certain spending purpose need not be withdrawn from the bank until the last moment. In this time, the bank can extend loans and perform other operations with these funds, while the state can receive interest on these deposits. The worry is that the bank would not have the liquidity to handle regular withdrawals of deposits. However, due to the close relationship between the state and the bank, the bank can made aware of these committed funds and when they will be withdrawn and adjust its activities so that all funds are available at the required time.

Finally, the state must decide how quickly the bank will receive state deposits and how quickly loan to asset ratios and capital ratios should increase to their standard levels. Both of these questions involve more specific answers than can be provided here. Each state should examine its volume of deposits, speed of the bank's establishment, and the perceived capability of the bank to handle these deposits. Similarly, the bank must consider the riskiness of its position given its amount of deposits and capital and should increase its ratios accordingly. Regardless, it will likely take some time to get the bank to full operations with regards to state deposits and capital ratios.

2. Management

As discussed at length earlier in this report, the key task for designing a state bank is to ensure that it balances two key goals that ultimately come down to management. These are balancing public accountability with banking efficiency. Bank officials should have sufficient autonomy from political demands to operate the bank efficiently, but these officials should also be held to the standard set out in the bank's mission to benefit the public.[349]

The first priority, then, for setting up the management of a state bank is its board of directors. In the BND this is the Industrial Commission, for the Sparkassen this is made up of employees, local politicians, and public representatives, and for the PSBs these are a variety of government and private representatives. Overall, the state must decide how this board will be chosen, who will be allowed on it, what authorities it will have, what restrictions will be on its powers, and whether it will have advisors or other experts to draw on.

Following the need for public accountability, the public should select these board members. This is the case for both the BND and the Sparkassen. The board can be selected in two

[349] Yeyati, Eduardo; Micco, Alejandro; Panizza, Ugo, *Should the Government Be in the Banking Business? The Role of State-Owned and Development Banks*, Inter-American Development Bank (2004), 26, https://www.econstor.eu/bitstream/10419/88042/1/idb-wp_517.pdf.

different ways. Either the board can be made up of politicians elected for other purposes, as it is in the BND, or they can be directly elected, like in some of the Sparkassen. While both systems have been shown to work, having direct elections of state bank board members would allow for greater political independence from state activities and more full representation of the public's interests on the board. Board members could be drawn from the natural regional constituencies of the state so that the bank's management would represent the interests of all state citizens. One benefit of this approach is that each area of the state will have individuals on the board with specific local knowledge and commitment to that locality. This will act as a check and balance against overtly politically motivated banking directives.[350] Furthermore, the leaders of the state will be chosen directly for the purposes of leading the bank, rather than assuming this duty while being elected for other major duties, like in the Industrial Commission.

The board's authority over aspects of bank management should be similar to that of the Industrial Commission in the BND. That is, the board should have the ability to manage high-level issues regarding the bank's long-term direction, but "bank managers should have operational independence."[351] While the board can set the targets for the banks to reach in a general sense, the bank management should handle the day-to-day operations of the bank that lead to those targets being met.[352]

The board's power over these managers should be limited. In the legislation creating the bank and the bank's charter, the restrictions on the board's power should be clearly delineated. This includes, most prominently, the non-involvement of the board in most day-to-day operations of the bank. The most important power of the board in affecting these operations would be to appoint the president of the bank. However, the board should not have the ability to influence other bank hiring activities or senior manager selection except for approving of senior vice-presidents of the bank. To further ensure operational autonomy for managers, they should serve longer terms than the terms of the bank board and these terms should generally not coincide with those of the bank board.[353] The bank board will have to work with managers to make changes to the bank. Additionally, the board should have limited options for removing the president, except in the case of an overwhelming majority of bank board members voting to remove him or her.

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[350] Yeyati, Eduardo; Micco, Alejandro; Panizza, Ugo, *Should the Government Be in the Banking Business? The Role of State-Owned and Development Banks*, Inter-American Development Bank (2004), 27, https://www.econstor.eu/bitstream/10419/88042/1/idb-wp_517.pdf.

[351] Yeyati, Eduardo; Micco, Alejandro; Panizza, Ugo, *Should the Government Be in the Banking Business? The Role of State-Owned and Development Banks*, Inter-American Development Bank (2004), 27, https://www.econstor.eu/bitstream/10419/88042/1/idb-wp_517.pdf.

[352] Yeyati, Eduardo; Micco, Alejandro; Panizza, Ugo, *Should the Government Be in the Banking Business? The Role of State-Owned and Development Banks*, Inter-American Development Bank (2004), 27, https://www.econstor.eu/bitstream/10419/88042/1/idb-wp_517.pdf.

[353] Yeyati, Eduardo; Micco, Alejandro; Panizza, Ugo, *Should the Government Be in the Banking Business? The Role of State-Owned and Development Banks*, Inter-American Development Bank (2004), 27, https://www.econstor.eu/bitstream/10419/88042/1/idb-wp_517.pdf.

However, the other major role of the board will be as the public's watchdog over the bank. The board will need to conduct oversight over the bank's activities to ensure that they meet the public's needs. This will require total transparency over the bank's operations. That is, the board should have complete access to bank information and meetings to ensure that the bank is operating according to its mandate. For this, an advisory committee should assist the board, like with the BND. This committee will fill in where the board lacks expertise. The committee should have strict requirements that most of its members be drawn from professional and local banking services. There may also be need for requirements that involve representatives from historically marginalized groups on the committee to speak on behalf of economically marginalized communities as it relates to the bank. In this role, the advisory committee would also have access to bank information and would be in a position to closely monitor the bank's operations and to report their findings to the board. The committee should be chosen anew each election cycle by the board to ensure alignment between their views on the bank. Thus, the public will be able to judge the bank's performance and hold it accountable but will not have the influence to push politically motivated loans or inefficient activities onto the bank.[354]

On a day-to-day basis, professional, licensed bankers will run the bank. The bank president will be the only position filled by the political board, while the board will approve only senior vice-presidents. Otherwise, the bank managers will have the leeway to operate the bank like a private organization, with the notable exception of constant oversight from the board and the advisory committee over its activities. But, as the bank leaders will not serve directly at the will of political figures their only worries from this oversight will be if they do not meet the public mandate of the bank. The bank should make an effort to hire from within and to elevate to senior leadership those individuals who have shown a commitment to and understanding of the bank's mission. The managers of day-to-day operations will thus be highly informed about the bank and will have substantial control over all parts of the bank with the exception of the long-term goals of the bank.

The managers will also have discretion over the employees they hire. These employees should be hired as they would at a private bank, with a rigorous application process and emphasis on skills and fit for the bank's needs over political loyalty or other criteria.

Lastly, there is the question of how the bank's mission will be incorporated into its management. Though there will be an oversight mechanism as detailed above, where exactly will this mission and other guidelines governing conduct be stated and how will they impact the operations of the bank?

First, the public purpose of the bank should be included in its founding charter and the legislation creating the bank. This purpose should also be included in the bank's business plan that will specify more specific ways in which this mission will be met. Next, the board and

[354] Mazzucato, Mariana; Penna, Caetano, *Beyond Market Failures: The Market Creating and Shaping Roles of State Investment Banks*, Journal of Economic Policy Reform (2016), 35, https://www.tandfonline.com/doi/abs/10.1080/17487870.2016.1216416.

advisory commission will oversee the delivery of results on this public mandate and will have the power to push the bank to meet these goals. Finally, the bank should have an ethics code requiring not only ethical behavior from its employees and managers but also requiring that they comport themselves in accordance with the mission of the bank.

The board and advisory committee should use these documents as part of their oversight of the bank. They should have the ability to press managers to uphold these documents and to push for alignment with these goals. These documents should also be subject to regular reviews and updating with the purpose of keeping the bank flexible in carrying out its mission. These reviews should be conducted by the board and subject to approval from the legislature in the case of the bank's mission and the leadership of the bank and bank employees with regards to the business plan and the code of ethics. These documents, then, can serve a central role in guiding the bank's management to fulfilling it's the bank's mission.

D. Operational Standards

The operational standards that the bank abides by are the key to ensuring that it meets its goal of delivering productive investments while maintaining strong returns and stable growth of its own assets. These standards will be reflected in the bank's business plan, as well as direction from the bank's board, but will be specifically set by the bank's management. The bank's managers should also have the flexibility to change these standards, within reason, to suit the bank's needs. Furthermore, the bank's board and advisory committee should oversee these standards – both how well the bank conforms to the applicable standards and whether these standards are in the best interest of the public.

The bank's loan approval process is the basis not only of the bank's expected returns on most of its assets but also on how well the bank manages risk and delivers on its public purpose. Loans are the lifeblood of the bank and as such their approval process should be highly rigorous.

A good loan approval process should draw on aspects of the BND and the Sparkassen, both of which have succeeded in developing strong loan approval systems. Like the BND, a state bank should not accept loans at interest rates below the market value, unless they are a for a specific program designed to increase investment in an underinvested area.[355] Also following the BND model, the bank should have strict lending limits that it adheres to.[356] In addition, any loan which does not meet the bank's underwriting standards should be automatically rejected or

[355] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[356] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

require additional review by more senior bank staff.[357] The bank should also copy the BND's model of escalating approval requirements according to the size of the loan.[358] This means that larger and larger loans require the review and approval of more and more senior staff. The uppermost managers of the bank as well as the bank's advisory committee and board should review all large loan applications.

But the process should also incorporate elements of the Sparkassen model. In particular, loan approvals should leverage a large amount of data, as well as detailed information about the loan applicant, to produce loan approval scores that combine quantitative and qualitative considerations. Like the Sparkassen, a state bank can use information on how the loan applicant compares to its peers to evaluate it quantitatively, and can use its local, personal knowledge of the applicant to incorporate "soft" information into the system. In so doing, the bank can also create helpful feedback for the loan applicant. This is helpful for small businesses and municipal governments applying for loans. These organizations can take steps to improve their credit-worthiness and increase the potential profitability of their investments with feedback. This would deliver on the bank's development goals and would increase the quality of the loans it creates.

The bank would have a strong process for determining the creation of these loans and so would have a higher proportion of good loans on its books. But, the bank will also have to manage its risk on a macro-level across its entire portfolio. As individual financial activities vary in their risks, potential rewards, timing, and required funding, having many good loans does not mean having a well-balanced portfolio. The bank must take steps to ensure that this portfolio leaves available liquidity for withdrawals and other financial activities, ensures against loan failures, and has ample capital reserves.

On the issue of liquidity management, the bank's managers must ensure that both expected and unexpected withdrawals will have sufficient deposits available for them. They will be aided in this task by their close relationship with the state government, which will allow them to time deposit availability to the needs of the government. This is no different from how private banks must manage their liquidity on a day-to-day basis, except that the public bank would have the added benefit of knowing when its largest depositor is expected to withdraw funds.[359] Suffice it to say, both the BND and the international examples covered above have been able to manage their liquidity as well as private banks.[360]

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[357] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[358] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[359] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 8, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[360] *FAQ On Public Banking*, Public Banking Institute (2019), 7, https://www.publicbankinginstitute.org/faq/.

The bank should also maintain a sizable amount of loan loss reserves. These reserves are held to account for failed loans in which the full amount of the loan is not repaid. These reserves cover for losses by holding an amount of additional funds in the bank's vault. Larger reserves thus mean that the bank is taking a less risky position with respect to bad loans. The drawback, however, of higher loan reserves is lower growth for the bank. The below chart represents the difference between a .6% and a 1.2% loan loss reserve ratio for a state bank.

	.6% Reserves Year 20 Total Loan Growth		1.2% Reserves Year 20 Total Loan Growth	
Connecticut	$	931,291,138	$	430,946,543
Delaware	$	313,425,168	$	145,034,659
Illinois	$	1,996,584,380	$	923,901,346
Indiana	$	937,427,518	$	433,786,097
Iowa	$	666,105,553	$	308,234,314
Maine	$	242,166,818	$	112,060,503
Maryland	$	1,271,963,009	$	588,589,366
Massachusetts	$	1,630,809,135	$	754,642,163
Michigan	$	1,596,780,117	$	738,895,543
Minnesota	$	1,100,085,638	$	509,054,669
New Hampshire	$	174,196,864	$	80,608,022
New Jersey	$	1,740,529,965	$	805,414,483
New York	$	4,610,065,829	$	2,133,266,225
Ohio	$	2,003,102,449	$	926,917,523
Pennsylvania	$	2,358,366,574	$	1,091,312,780
Rhode Island	$	259,841,942	$	120,239,506
Vermont	$	163,157,251	$	75,499,541
Wisconsin	$	1,379,716,673	$	638,451,399

Obviously, a higher reserve percentage cuts into the available funds for loans and means that the bank will accumulate assets more slowly. As is clear, this can have a large effect over time. However, given the goals of the bank, it is recommended that it avoid riskier behavior in exchange for stable growth. This means that a higher loan loss reserve should be preferred in most situations. This should be true particularly during the early years of the bank when it is unclear how well the bank's loans will perform. Over time, the bank will get a better sense of its loan failure rate and can adjust its reserves accordingly to maintain lower risks but allow for greater accumulation of assets. Indeed, the BND now, after a century of learning its trade, has a loan-loss allowance of 1.79%, which is lower than the 2.03% average for similarly sized banks.[361]

A similar issue faces the bank with deciding their capital ratios. These ratios are perhaps the most important way that the bank can manage its risks. These ratios determine how many assets the bank can create based on the deposits and capital that the bank holds. Thus, they compare the bank's equity to its risk un-weighted assets (leverage), to its risk weighted assets (capital), and its reserves to its deposits (reserve). These ratios have different regulated

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[361] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

minimums, ranging from 3% to 10% that all banks must abide by. But, banks also have the ability to maintain ratios above these standards. However, profit-seeking banks, due to their pursuit of profit-maximization, usually stay near these minimums. A public bank, because of its mission and purpose, would likely prefer to stay above these minimums and reduce its risks. This then allows the bank and its managers to decide on what capital ratios the bank will maintain.

A lower ratio means the bank can create more assets on the same amount of deposits and thus can receive a greater amount of profits.[362] This may be appealing to bank managers and policymakers, but it comes with increased risk if assets default. The below graph shows two scenarios: a low-risk scenario with a higher leverage ratio and a lower loan to asset ratio and high-risk scenario with the opposite.

State	Low Risk Year 20 Total Asset Growth		High Risk Year 20 Total Asset Growth	
Connecticut	$	1,241,721,517	$	2,040,315,271
Delaware	$	417,900,224	$	686,666,210
Illinois	$	2,662,112,507	$	4,374,208,489
Indiana	$	1,249,903,358	$	2,053,759,134
Iowa	$	888,140,738	$	1,459,334,549
Maine	$	322,889,091	$	530,550,155
Maryland	$	1,695,950,678	$	2,786,674,806
Massachusetts	$	2,174,412,180	$	3,572,851,332
Michigan	$	2,129,040,156	$	3,498,299,001
Minnesota	$	1,466,780,851	$	2,410,117,991
New Hampshire	$	232,262,485	$	381,638,466
New Jersey	$	2,320,706,619	$	3,813,232,749
New York	$	6,146,754,438	$	10,099,943,323
Ohio	$	2,670,803,266	$	4,388,488,573
Pennsylvania	$	3,144,488,765	$	5,166,817,485
Rhode Island	$	346,455,923	$	569,273,626
Vermont	$	217,543,002	$	357,452,377
Wisconsin	$	1,839,622,231	$	3,022,746,468

There is, again, a steep drop-off in the bank's growth, although not as steep as in the case of loan loss reserves. Yet, the same logic with loan loss reserves applies here; it is more aligned with the goals of the bank to allow for slower growth in assets if it means that the bank will maintain stable earnings, will not go under, and will not destabilize the local financial system by taking on undue risks. This is how the BND operates; it maintains capital ratios at around 8% to 10% for all capital measures.[363] Though this undoubtedly has slowed the bank's top-end growth rate, it has also ensured that the bank has continually grown, delivered on its mission, and returned benefits to the state community and the state government.

[362] *Washington State Bank Analysis*, Center for State Innovation (2010), 17, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.
[363] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

To ensure that all of these operational guidelines are met consistently, the bank must also have a rigorous auditing system. Auditing should be structured such that the bank will monitor itself while it is also monitored by outside groups.

The bank should have an internal credit review and auditing department. This would be an independent department tasked with constantly monitoring the bank's activities and reporting to senior management and the board on the issues with the bank.[364] This monitoring system has the advantage of immediate evaluation of the bank's activities.

However, internal monitoring raises an obvious problem. What if the internal monitors are unwilling to hold their bosses to account? The bank should have two other monitoring activities that are external to the bank's management. First, the bank's board and advisory committee must monitor the bank's operations. These groups will have access to the bank's activities and will hold the bank's activities accountable to the public. Second is monitoring by external organizations with expertise in these areas. This should include, like with the BND, annual audits from a non-affiliated CPA firm and from the state's financial institution agency.[365] The results of these audits should be public.

A system of internal and external monitoring is how the BND and the Sparkassen have been able to achieve steady growth and strong returns over their long histories. The importance of these systems cannot be understated because it is these systems that make the bank's other operational guidelines meaningful in the first place. Without rigorous auditing, the other standards of the bank can be ignored.[366]

Finally, the bank's guidelines should also provide for social responsibility standards in investment. This means that, like the Sparkassen, everything from the loan approval process to the programs created by the bank should be evaluated by their effects on the public. This ensures that the public purpose of the bank remains relevant to banking decisions. This public purpose, in addition to being included in the bank's founding documents, should also be included specifically in the bank's business plan and in its operational guidelines. These documents should note how the bank is specially situated to provide long-term capital to important public projects, to coordinate stakeholders, and to employ a wide variety of tools in supporting local development and government policies that advance the state's economy.[367]

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[364] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[365] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

[366] Beitel, Karl, *Municipal Banking: An Overview*, Roosevelt Institute (2016), 9, https://rooseveltinstitute.org/municipal-banking-overview/.

[367] Mazzucato, Mariana; Penna, Caetano, *Beyond Market Failures: The Market Creating and Shaping Roles of State Investment Banks*, Journal of Economic Policy Reform (2016), 5, https://www.tandfonline.com/doi/abs/10.1080/17487870.2016.1216416.

These guidelines should further underline that the bank's goal is not to maximize profits but to increase the welfare of the state's citizens in a sustainable, stable way.[368]

E. Insurance

The bank has two options for how it could insure its deposits. First, it could be a member of the FDIC, submit to its oversight, and be insured by the federal agency. Secondly, it could be insured by the state itself. While the FDIC option may appear appealing, it is problematic for a few reasons. Instead, a state bank should follow the BND model by being insured by the bank itself. Though this would be riskier for the bank, it is a workable option for a state bank because of its connections with the state itself.

FDIC insurance is problematic for two reasons. First, the FDIC only insures up to $250,000 per account holder, meaning that most state funds would be vulnerable in the bank.[369] Second, allowing federal oversight over a state bank, especially if owned through a DBA, would create state's rights issues, which may present a serious legal challenge to the creation of the state bank.[370] Indeed, this is how the BND has remained insured by the state. It was set up this way prior to the FDIC becoming mandatory in the 1990s and so was given an exemption from the requirement.[371] With the precedent of the BND, other states could claim this same exemption and appeal to their distinct legal status as compared to private banks.[372]

Being insured by the state does bring increased risk for the state. But, self-insurance has worked successfully not only in North Dakota for a century, but also in Germany for even longer. The Sparkassen self-insure through their umbrella group the DSGV. These systems can work in state banks because they reduce the risk to the state of a bank failure. Banks fail when they do not have funds available to clear withdrawals and other basic financial services. This is because banks make loans many times the value of their deposits and bet that they will earn enough from these loans to clear any withdrawals while also making a profit. Assuming that a bank's loans do not fail at a high rate, then, a bank fails when too many consumers want to remove their deposits at once.[373] This forces the bank to rein in its loans and eats away at its

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[368] *Exploring the Sparkassen Model of Local Savings Bank in Ireland with the Savings Bank Foundation for International Cooperation*, Public Banking Forum of Ireland (2014), 4, https://webofdebt.files.wordpress.com/2014/11/sparkassen-model-in-ireland-oct-11.pdf.

[369] Figart, Deborah, *Exploring a Public Bank for New Jersey: Economic Impact and Implementation Issues*, Stockton University (2018), 11, https://stockton.edu/hughes-center/documents/2018-0326-exploring-a-public-bank-for-new-jersey-economic-impact-and-implementation.pdf.

[370] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 25, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

[371] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 25, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

[372] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 25, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

[373] *Public Banking in America*, Public Banking Institute and Center for State Innovation (2011), 26, https://drive.google.com/file/d/1LGedFLXOEuUNKWSzJSFsScADb5dl3Kjz/view.

deposit base until it no longer can function. A state bank that holds mainly state deposits will be far less likely to suffer these circumstances because its insurer and its primary customer are the same. The state will know when the state bank has liquidity to provide for withdrawals just as it will know that attempting to remove too many deposits at once will cause the bank to fail and will thus cause the state to have to pay for the bank's losses. The state will not cause a bank run on its own bank and so it will not have to insure the deposits of its state bank. The BND has never required insurance from the state and shows how state insurance of the bank can be workable in this particular instance.

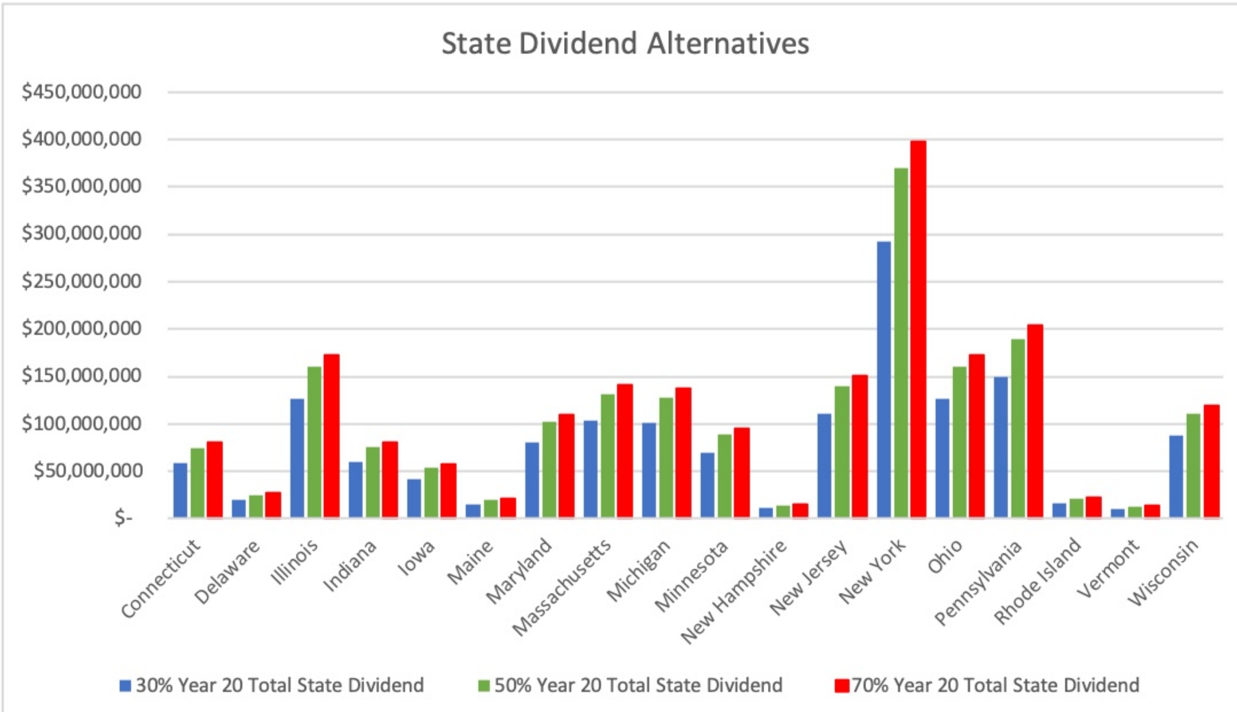
F. State Profit Dividend

There are two separate questions facing the state when it comes to determining its state profit dividend. First, how will this share of profits be decided? Second, how large of a share should the state take?

The first question, depending on how the bank is owned, may be determined for it. In particular, if the bank is owned through shares or is made legally public then the state will have no say in the profit share it receives, if any. However, if the bank is owned as a DBA, as this report recommends, or in some other arrangement, then the state may have the ability to set this share. This share may be set by legislation as a fixed rate each year or it may be determined through negotiation between the bank's officials and lawmakers. A fixed rate system would make the returns for the state more predictable but would overall be far too inflexible for the state's and the bank's needs. Some years the state may need a larger dividend, like in a recession, whereas in others it may need none at all. Having the share determined by negotiation between the bank officials and state policymakers maintains this flexibility. Additionally, this negotiation would ensure that all interested parties would have a seat at the table. This report recommends that this share be determined annually through agreement between the state's legislature, management, and board. The board should have the final authority to decide on a mediated amount between the two sides if they are unable to reach an agreement. This system should allow both the bank's needs and the state's needs to be sufficiently represented while also maintaining the flexibility to share profits with the state or to recapitalize these profits.

Secondly, there will likely be a temptation from the state to take a large share of the profits. After all, the state owns the bank and is entitled to all of its profits if it desires. However, this impulse is ultimately counterproductive; taking a larger share will mean not only slower growth of the bank, but also lower returns for the state in the long run.

The below graph shows the total state dividends that the state is estimated to receive by year 20 if it took a 30%, 50%, or 70% share of profits each year. This is, again, employing the Center for State Innovation model.



The results show small increases in the total amount received by the state by these higher margins. These higher rates are undercut by the fact that they take money out of the bank instead of recapitalizing it. This means that the bank grows slower in terms of capital, assets, and loans under the 70% scenario than it does under the 30%. As a result, total dividends are not much higher and, if the estimates were extended out another decade or two, they would show the state's total dividend for 70% and 50% begin to be overtaken by the 30% rate. This is because, under the 30% rate, the bank will grow to such a faster extent than the other options that it won't matter that the state is getting a smaller cut of the overall profits.

Currently, the BND transfers around half of its profits to the state, but it has existed for a century.[374] Especially early in the bank's development, the state should be cautious to draw capital out of the bank. If that capital is reinvested early on, through cumulative growth, it can have a large benefit for the state later on. Indeed, the Washington State Bank analysis shows the bank's return on assets rate would be above that of comparable banks and would be near that generated by the BND if the state allows bank capital to grow.[375] The same analysis found that in the bank's 40th year, "if the bank consistently returned most profits to the state, the year-by-year return would be only about $20mm compared to the $175mm in dividends if the

[374] Figart, Deborah, *Exploring a Public Bank for New Jersey: Economic Impact and Implementation Issues*, Stockton University (2018), 11, https://stockton.edu/hughes-center/documents/2018-0326-exploring-a-public-bank-for-new-jersey-economic-impact-and-implementation.pdf.
[375] *Washington State Bank Analysis*, Center for State Innovation (2010), 17, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.

state let the bank keep and accrue most of its profits."[376] In terms of real profits to the state, allowing the bank to recapitalize its profits would have a similar impact in the long-term.[377]

Thus, there are clear reasons for states to take a lower share of the bank's profits as a dividend. In lieu of taking the bank's profits, it can reinvest this money back into the bank and allow it to grow so that it will return greater amounts to the state in the long-term. But, so long as flexibility is maintained in the determination of this share of profits, there need not be arbitrary restrictions on this amount. Just as with North Dakota and the BND, the state can draw on bank profits in times of need and forgo its share in times of plenty to allow the bank to grow for the benefit of the state community as a whole. Unless there are pressing immediate needs, especially in the early years of the bank, the state should return bank profits back into the bank.

G. Activities

1. Deposits

The most important activity that bank can undertake is to secure deposits. Deposits can come from a variety of sources. Obviously, the state will be a major depositor, but funds could also be deposited from state trusts, local governments, businesses, and private consumers. This section will consider whether the bank should accept deposits from all of sources and whether it should compete for deposits in all of these areas.

First, a state bank should clearly accept deposits from the state's funds. This is, in fact, part of the purpose of creating a state bank; to funnel state funds back into the state's development. But, the bank should not accept state managed trusts.[378] These trusts have their own obligations and require higher returns to fund these obligations than can be paid by the bank on deposits. To take on these trusts would force the bank into riskier investments to earn higher dividends and undercut its central mission.

The situation is less clear when it comes to deposits from non-state entities. Although taking on additional deposits would allow the bank to increase its loans and to have a larger impact on the state community, it could also compete with community banks for these deposits. If it ended up getting too many of these deposits, it might begin to undercut community banks. However, in this scenario the bank would effectively replace these community banks, except it would leverage greater economies of scale, expertise, and a more explicit public purpose than is found in community banks.

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[376] *Washington State Bank Analysis*, Center for State Innovation (2010), 18, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.
[377] *Washington State Bank Analysis*, Center for State Innovation (2010), 18, http://leg.wa.gov/JointCommittees/Archive/IFTF/Documents/2011Aug22/CSI-Analysis.pdf.
[378] *FAQ On Public Banking*, Public Banking Institute (2019), 6, https://www.publicbankinginstitute.org/faq/.

The bank could be banned from taking in deposits from local governments, businesses, and consumers.[379] Yet, this would be a needlessly restrictive limitation on the bank's ability to grow its assets. If these groups wanted to deposit their money in the bank, then the bank should accept these deposits and use them to better deliver on its mission.

Whether the bank should advertise or compete for these deposits, however, is more contentious. These groups may be able to receive market-average rates on their deposits from the state bank.[380] Additionally, these funds would be put back towards benefitting the depositing groups. This might be an especially strong reason for local governments to deposit their money with the bank. But these benefits accrue less directly to businesses and consumers. Additionally, community banks have a much harder time holding local government deposits than they do from businesses or consumers due to the higher security reserve requirements associated with local government deposits. So, it may be beneficial for a state bank to compete for these deposits with private institutions, at least if there are not already municipal public banks in the area (which do not exist in the US currently). But, a state bank should avoid competing with community banks on deposits from private institutions unless the community banking system is unable to handle business in the region. This might be the case, for example, in Rhode Island, Delaware, and Minnesota. In these states, a state bank might find it more complementary to its mission to compete for private deposits largely housed in large private banks and to then use these deposits to support weaker community banks and to directly invest in the community. As always, this decision should be made with close attention to local conditions and needs.

2. Investments

The types of investments that the bank will engage in can be broadly grouped into four categories. The bank will make investments with or in community banks, for direct development, for consumers, and for the government.

Perhaps the banks primary role will be as a partnership bank, similar to the BND. In this role, the bank will engage in partnership loans and other investment activities designed to benefit community banks. In partnership loans the bank will join with smaller community banks to provide capital to expand community-banking activity and to allow community banks to retain their largest clients.[381] This is a practice that a state bank should make central to its activities. This is especially true when there are a large number of small community banks in the state, so

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379 Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 14, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

380 Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 18, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

381 Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

that a state bank can ensure strong competition in local financial markets. Even if there are few community banks in the state, the bank should supplement more direct lending activities with partnership loans in an effort to strengthen these community banks.

The bank can also increase the loan capacities of community banks in two other ways. First, the bank can engage in direct bank stock purchases. The bank would purchase the stock of community banks, providing them with immediate capital to aid these banks in creating new loans, merging with other community banks, or expansion.[382] The bank can also expand community bank liquidity for investments through issuing letters of credit. By guaranteeing the obligations of the community bank for a small interest rate, these letters of credit will allow the community bank to commit greater funds towards lending rather than holding them as reserves. Although not nearly as important as partnership loans, these activities are relatively inexpensive ways for the state bank to improve the conditions of local financial markets through expanding the power of community banks in the state. As such, the bank should engage in these activities, although it should not commit as much capital towards these opportunities as more productive loans. In particular, direct bank stock purchases may be relatively more expensive compared to the benefits received from cheap letters of credit.

The bank should also set aside a sizable amount of its available funds for investment in direct development. Although many loans to businesses may run through partnerships with community banks, the state bank can also provide direct loans to farmers and small businesses with an eye towards the development of the state economy. Furthermore, the bank can establish programs to prioritize investment in infrastructure and environmental opportunities to aid the state in developing these key areas.

As a share of its total direct investment funds, loans to farmers and small businesses should be relatively smaller. This is because the bank, through partnership loans with community banks, should already be financing these groups. However, direct loan programs can provide a further emphasis on the bank's mission to improve economic development in the state by targeting certain types of farmers and small businesses likely to improve the state's economy. In doing so, the bank can work with state economic development agencies to identify areas of need and use its ample capital to fund development.[383] This can also be expanded to community development associations as the BND does with the PACE program.[384]

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[382] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 12, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[383] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 16, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
[384] Figart, Deborah, *Exploring a Public Bank for New Jersey: Economic Impact and Implementation Issues*, Stockton University (2018), 11, https://stockton.edu/hughes-center/documents/2018-0326-exploring-a-public-bank-for-new-jersey-economic-impact-and-implementation.pdf.

More important direct development investment programs should focus on infrastructure and green initiatives. As detailed in the BND case study, the Infrastructure Loan Fund is one example of such a program and how it can be set up to aid the state in boosting economic development.[385] A public bank would also be well positioned to invest in green projects because of its public purpose.[386] This is because green projects have large benefits but not ones that accrue immediately or, usually, to any one organization. They are hard to monetize yet still societally beneficial. A state bank would have less concern with turning a large profit on these investments, so long as they resulted in greater economic development in the state. A state bank would also be well positioned to advance the long-term loans necessary for many infrastructure and green projects safe in the knowledge that it does not require immediate, large returns to satisfy its owners. Instead, like the BND does with the ILF, loans can be offered with repayment periods over decades at low, stable rates that encourage investment in key development issues.

If investments with community banks and in direct development should make up the largest shares of the bank's asset portfolio, loans to consumers should be substantially less important. These loans tend to have a lesser impact on social welfare. The BND is involved substantially in two types of consumer loans: student loans and residential loans. The BND loans directly to eligible students at favorable rates compared to what could be found in private markets. The BND also is responsible for creating the secondary loan market for mortgages as a way of incentivizing banks to offer more mortgages for consumers.[387] In the interests of maximizing the state bank's impact on the state community, these loans should be used more sparingly than in the BND. Not only are there more ample private alternatives in states with larger financial markets for both of these types of student loans, but there are also much larger roles for federal government involvement in these issues. Indeed, there is a chance that student loan markets will be dramatically changed in the next decade as the government seeks to respond to the student debt crisis. So, a state bank would be advised to focus more on investment activities where it can have a greater marginal impact on the state's well-being.

The state bank can also invest in governments in a variety of ways. First, instead of directly investing in infrastructure programs the state bank could be a leading buyer of municipal or state bonds funding infrastructure.[388] This would be a safer way for the bank to fund infrastructure while still guaranteeing a return on its investment. The bank could also directly loan money to the state in times of need. This could, for example, allow the state to cheaply

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[385] Hussam, Shareef, *Public Banking for Infrastructure Finance*, Cornell University (2018), 2, http://cms.mildredwarner.org/summaries/hussam2018.

[386] Mazzucato, Mariana; Penna, Caetano, *Beyond Market Failures: The Market Creating and Shaping Roles of State Investment Banks*, Journal of Economic Policy Reform (2016), 3, https://www.tandfonline.com/doi/abs/10.1080/17487870.2016.1216416.

[387] Figart, Deborah, *Exploring a Public Bank for New Jersey: Economic Impact and Implementation Issues*, Stockton University (2018), 11, https://stockton.edu/hughes-center/documents/2018-0326-exploring-a-public-bank-for-new-jersey-economic-impact-and-implementation.pdf.

[388] Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 13, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

borrow from the bank rather than from a private organization in the short-term while it waits for say, disaster relief or federal grant funding. The BND has filled this role before, with the Industrial Commission setting the rate at which the bank loans funds back to the state.[389] Both of these options, however, should be drawn on sparingly. The bank should not serve as the personal piggybank of the state, but should only assist it with funding when there is a demonstrable public benefit from the bank's funding.

Lastly, the bank could use its funds to buy non-infrastructure securities from municipalities and the state itself. These securities could help the bank lower its risk position across its portfolio and provide a regular stream of income to help manage liquidity for withdrawals and new investments.[390] Furthermore, by holding these securities from local and state governments, the bank would preclude state resources from leaving the state in the form of payments to out of state security holders.[391] State government payments would go back into the state bank rather than to out of state banks or organizations. Then, the state bank would reinvest these funds into the state for the benefit of the state.[392]

3. Other Activities

The bank will also engage in several other activities in addition to holding deposits and making investments.

The most important of these other activities would be bankers' bank services. In addition to creating partnership loans and providing liquidity to community banks, a public bank should also provide a variety of helpful services to these banks. These services will make it easier for community banks to compete in financial markets and so will help deliver on the bank's goal to increase competition in local financial markets. The bank would perform the same role that the BND does in this sense; it would provide low cost services for community banks ranging from check clearing, to currency provision, and access to a Federal Reserve account.[393] Community banks could still choose to go to one of the country's 22 private bankers' banks, but they would have greater choice with the creation of a public bankers' bank in the state bank.[394]

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389 Hussam, Shareef, *Public Banking for Infrastructure Finance*, Cornell University (2018), 2, http://cms.mildredwarner.org/summaries/hussam2018.

390 Beitel, Karl, *Municipal Banking: An Overview*, Roosevelt Institute (2016), 11, https://rooseveltinstitute.org/municipal-banking-overview/.

391 Beitel, Karl, *Municipal Banking: An Overview*, Roosevelt Institute (2016), 12, https://rooseveltinstitute.org/municipal-banking-overview/.

392 Beitel, Karl, *Municipal Banking: An Overview*, Roosevelt Institute (2016), 12, https://rooseveltinstitute.org/municipal-banking-overview/.

393 Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 13, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

394 Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 13, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

Another possible activity for the state bank would be to attempt to extend banking services to the un-banked and the under-banked. The un-banked and the under-banked are those individuals who do not have sufficient access to credit or essential banking services.[395] 38% of Americans are under-banked or un-banked and so there have been demands to extend banking to these individuals.[396] Some may think that a public bank would be in an ideal opportunity to fill this role for the benefit of the public. This would build on existing proposals for postal banking, which would offer banking services through US Postal Service branches to achieve economies of scale and proximity.[397]

However, a state bank, at least one in the mold of the model discussed here, would not fill this role very well. First, the bank would not have the infrastructure to extend these services easily. Indeed, part of the reason the bank can offer such strong returns is because it has low overhead; it has only one location, staff focused on banking, and offers a limited suite of services. If a state bank were forced to extend banking statewide to the un-banked this would entail much greater costs for the bank and would undercut its usefulness. This is, in fact, one reason why postal banking is a solution with growing popularity; it leverages the existing infrastructure of the postal service to extend these banking services at minimal additional cost. Secondly, extending credit to these individuals will most likely not return a profit.[398] It will probably be an initiative that costs money to the bank, but would result in an overall social benefit. Still, the bank should be a return-seeking entity – it makes investments not grants. Forcing a state bank into this position may cause the same problem seen in India, where Public Sector Banks have greatly extended services to the hundreds of millions of rural Indians, but as a result have taken on riskier investments to compensate for their losses in these areas. Overall, postal banking is an idea worthy of consideration, but not one that complements the purpose of a public state bank in the role discussed in this report.

H. Government Programs

Finally, it is necessary to briefly consider the role of the bank as it relates to other government programs.

Quite simply, the bank does not compete with other government programs. Rather, the bank works to supplement the activities of these programs with loans and other investments that return a profit to the bank.

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[395] Baradaran, Mehrsa, *It's Time for Postal Banking*, Harvard Law Review (2014), 1, https://harvardlawreview.org/2014/02/its-time-for-postal-banking/.
[396] Baradaran, Mehrsa, *It's Time for Postal Banking*, Harvard Law Review (2014), 2, https://harvardlawreview.org/2014/02/its-time-for-postal-banking/.
[397] Baradaran, Mehrsa, *It's Time for Postal Banking*, Harvard Law Review (2014), 3, https://harvardlawreview.org/2014/02/its-time-for-postal-banking/.
[398] Baradaran, Mehrsa, *Postal Banking's Public Benefits*, University of Georgia School of Law (2018), 9, https://digitalcommons.law.uga.edu/cgi/viewcontent.cgi?article=2198&context=fac_artchop.

The bank is "not an economic development program."[399] In the case of the BND, however, it is housed with North Dakota's economic development agency.[400] This allows the two groups to work together on delivering the state's economic development goals. Still, they approach these goals with a different set of tools for bringing about economic development; the bank as an investor seeking a return and the development program as a source of grant funding for vital projects. This includes infrastructure specific development programs, on which the public bank would provide an alternative through having a politically-independent and return-seeking approach.[401] The bank may serve a central role in coordinating and housing the various development agencies of state together to ensure greater teamwork amongst the state development arms.[402]

The bank will also not, as previously mentioned, replace the investment managers of the state. The trusts of the state and their allocation across different investments will not be managed by the bank. This would be retained by the state Treasurer as is the case in North Dakota and currently the case in all other states as well.[403]

The bank will also not replace any programs seeking to improve the environment. Although the bank will have programs to invest in sustainable and green opportunities, these will be ones where a return of is expected. Though the bank will have a public purpose, it will not be directly funding environmental projects but instead finding investment opportunities using loans backed largely by state funds. It will coordinate with environmental grant programs and will supplement the toolbox of the state's environmental improvement initiatives, but will by no means replace these programs.

V. Conclusion

This report has attempted to lay out some major models of public banking around the world and in the United States. It has focused on the problems facing the NEMW states and the ways in which a public bank could address these problems. Finally, it has detailed a set of

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399 Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 18, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
400 Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 18, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
401 Hussam, Shareef, *Public Banking for Infrastructure Finance*, Cornell University (2018), 3, http://cms.mildredwarner.org/summaries/hussam2018.
402 Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 18, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.
403 Judd, Jason; McGhee, Heather, *Banking on America: How Main Street Partnership Banks Can Improve Local Economies*, Demos (2011), 19, https://www.demos.org/sites/default/files/publications/Demos_NationalBankPaper.pdf.

recommendations for how a state should create a state bank to best achieve its goals and address the problems facing the state. The final recommendation of this report is that all NEMW states adopt a public bank and do so with close attention to their circumstances and needs. Public banking is not a panacea, but it can move states in the right direction.