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Is A State Bank A Useful Economic Development Tool With Future Promise?

A Framework For Analysis

By **Robert S. Chirinko**

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It is not by augmenting the [financial] capital of the country, but by rendering a greater part of that capital active and productive than would otherwise be so, that the most judicious operations of banking can increase the industry of the country.

Adam Smith, The Wealth Of Nations, 1776 (Vol. 1, p. 340)

… the flow of credit is the lifeblood of our economy.

President Barack Obama, Speech To The Joint Session of Congress, February 24, 2009

I. Introduction

That banks play a major role in the economy has been recognized for many years. They perform three basic tasks – create money, facilitate transactions, allocate credit – that are essential for a well-functioning economy. The 2008-2009 Financial Crisis and the 1929-1939 Great Depression, as well as the above quotation from Adam Smith, remind us that healthy banks and a robust economy tend to go hand-in-hand.

There is a long-standing concern whether private banks operating in private markets are serving the public interest. In 2021, four states have introduced legislation to create a state bank; in 2019, similar legislation was enacted in California for municipal banks. The concern has been amplified by the disproportionate economic impact of the Pandemic on small businesses. Are the three critical tasks being discharged adequately? Can economic performance and citizen welfare be improved by creating a state bank? These two questions are explored in this paper with a particular focus on the possibilities for a state bank.[1] We develop a framework to evaluate state banking and review prior experiences with state banking and related alternatives to traditional private banking. Our overall goal is to shed some light on whether a state bank can be a useful tool to further state economic development and the welfare of state residents.

The paper proceeds as follows. Section II begins with a general discussion about the roles played by banks in performing their three basic tasks. We highlight how collecting deposits facilitates transactions on the one hand and allocating credit on the other. Deposits represent a source of funds that is cheap and stable. While money creation is also related to banking activities, it is largely controlled by the Federal Reserve System and is not relevant for considering the benefits of introducing a state bank in the 21st century.

Section III considers the widespread concern that transaction services and credit are underprovided to some communities. Underserved communities are often segregated areas comprising people of color

1 In broad terms, a state bank can be organized as an entity separate from and owned (in whole or in part) by the state or as part of the state's administrative apparatus. In the latter case, the state would be "doing business as" (DBA) a bank. These organizational structures have different implications for the risk being borne by the state and ultimately its taxpayers. Should the separate state bank face financial distress and need to be reorganized or liquidated, taxpayers would lose at most the value of their capital investments and deposits. However, under the DBA structure, all of the states' assets would be jeopardized.

with low average incomes, and hence the question looms as to whether underservicing is directly related to racism or a response to underlying economic conditions. While discrimination in terms of disparate outcomes among communities of color is clear, the difficult question is whether discrimination is driven by animus or economics (or some combination of the two). An answer to this question is important for evaluating a potentially constructive role for public banks. However, while financial transaction services have been limited in the past, this problem is being obviated by available technological developments, and thus there is little role for a state bank to provide transaction services to underserved communities. If there is a constructive role to be played by a state bank, it will be in credit allocation, an essential element in the economy as noted above by President Obama.

Section IV presents a general framework of the determinants of loan pricing by a bank, be it private or state. It explores under what circumstances a state bank can allocate credit at lower cost to the existing pool of actual and potential borrowers. Our analysis suggests that a private bank may have cost advantages due to lower operating costs and a lower cost of borrowed funds. State banks may benefit from lower default rates and greater access to state deposits, both of which lower its cost of lending.

Section V discusses the lessons to be gleaned from history. We study a wide variety of U.S. state and local banks, as well as German state banks. Of particular interest is the Bank of North Dakota, which has been in existence for 100+ years and is held by many as the prototype of a successful state bank. The section concludes with the lessons to be drawn from these banking experiences.

Section VI summarizes the results in this paper and presents the case for and the case against the creation of a state bank. We conclude with four questions central to determining whether a state bank is likely to be a useful economic development tool with future promise.

II. A Primer On Banking

What is a bank? It is an organization serving as an intermediary between various actors in the economy that addresses their financial problems. Perhaps its most important function is to transfer funds from those with a surplus to those in deficit. Mismatches are ongoing between those who have funds to lend and those who require funds to support spending. Retirees, wealthy households, profitable mature firms fall into the former category; students, low and middle income households, start-up firms, and most governments into the latter. Banks play the leading role in facilitating this flow of credit from savers to borrowers. In effecting this transfer, banks also become involved in providing financial transaction services and creating money.

To understand this transfer function, it is useful to begin by considering a world WITHOUT banks. There are two actors: savers, those with funds in excess of their spending requirements; borrowers, those in need of funds. How do funds transit from savers to borrowers? If the community is small and savers and potential borrowers know each other well, problems related to a lack of information and trust are absent. In this idealized world, savers can lend directly to borrowers. There is no need for a bank.

Alas, the above paragraph does not describe the larger, more complex world where information problems are endemic, unfettered trust is rare, and economic actors are not only households but also businesses and governments. While household savers may be glad to lend to their nieces and nephews as they attend college and acquire productive skills (as well as additional learning that leads to a fulfilling life), the stock of saved funds may exceed the needs of the family network. How do we know that our neighbor down the street or the fellow in the next town are creditworthy and honest?[2] The question becomes exponentially more difficult to answer when the number of households expands and businesses and governments become involved.

Enter a bank as the solution to these information problems. A bank obtains funds in several ways; here we focus only on deposits.[3] Households, firms, and governments are willing to deposit their funds at a bank and receive little to no interest because the bank account allows them to undertake their financial transactions efficiently. Some of those deposits will be used to make payments with checks, debit cards, electronic debits, or currency obtained from the bank.

A bit of "magic" occurs when deposits are taken from a large number of depositors. Even if there are no savers and the depositors spend their entire paycheck over the course of the month, the bank will have a stable core level of deposits. To understand this "magic", consider a depositor that is paid by its employer $5,000 (roughly the median U.S. household income) on the first day of the month, and then pays its mortgage on the 11th ($2,000), its credit card bill on the 21st ($2,500), and its utility bill and other miscellaneous expenses on the 31st ($500).[4] Over the course of the month, the average balance in this account is $2,742; on the last day, the balance is $0. Now consider the effect of allowing 30 additional depositors to have accounts at the bank with the same income and spending profile as the first household. The one difference is that each depositor is paid on a different day of the month, though its spending pattern thereafter remains the same, with payments occurring on the 12th, 22nd, and 1st day of the next month for the second depositor, etc. In this case, the average balance for all 31 households remains at $2,742. However, owing to the uneven pattern of deposits and payments, the remarkable result is that, from the bank's perspective, it has deposits of $2,742 on each day of the month. The stability of these "core deposits" in the checking accounts of households-as-spenders is one source of funds that can be used by banks to extend loans. State core deposits can be substantial and will be a critical factor in favoring the creation of a state bank. Moreover, depositors-as-savers contribute a second, more substantial source to support lending.[5]

Lending represents the primary use of funds by banks. In doing so, they gain expertise in advancing funds and assessing creditworthiness. They construct the required infrastructure: hiring programmers to write software and lawyers to navigate the legal complexities in extending loans, obtaining collateral, foreclosing when loans are not repaid, etc. By spreading depositors' funds over a wide variety of borrowers, banks diversify risk. Through its lending activities, banks are deeply involved in the business of allocating credit. They attenuate information problems that constrain prudent lending, as

2 The fundamental issue discussed here is an asymmetry of information. Potential borrowers know much more about their financial capacity and their intentions for using and returning the funds than savers-as-lenders. This issue has received an enormous amount of attention in the academic literature. In 2001, the Nobel Prize in Economics was awarded to George Akerlof, Michael Spence, and Joseph Stiglitz "for their analyses of markets with asymmetric information."

3 Funds are also obtained by borrowing directly from households or other banks and paying interest or by selling ownership shares (bank equity) and paying dividends, conditional on sufficient profitability.

4 All transactions are assumed to occur at the beginning of the day.

5 Saving deposits are 2.75 times greater than the checking deposits that constitute the core deposits in the above example. See the discussion of M2 below for details.

well as facilitating financial transactions.[6]

The checking and saving deposits also lead to the third fundamental task performed by banks – creating money. The money stock can be defined in many ways; one frequently-used definition is "M2", equal to currency (10%), checkable deposits (24%), and saving deposits (66%), the latter two held at banks and other depository institutions such as savings and loan associations, mutual savings banks, and credit unions.[7] It is widely accepted that changes in the stock of M2 affect unemployment, inflation, and GDP growth, among other macroeconomic variables. However, while approximately 90% of M2 is held at banks, changes in M2 are largely controlled by the monetary policies pursued by the Federal Reserve System that create reserves and influence their use by banks.[8] Banks are largely passive players in regards to money creation and monetary policy. Their role in money creation is not relevant for an understanding of public banks, and it will not receive any further consideration in this paper.

III. Underserved Communities: Transaction Services And Credit Allocation

A. The Problem Of Discrimination: Animus vs. Economics

There is a widespread concern that transaction services and credit are underprovided to some communities. In a 2013 survey reported in *Banking In Color* (National CAPACE, National Urban League, National Council of La Raza, 2014), 19% of survey respondents from Hispanic, African-American, and Asian American & Pacific Islanders communities did not have a banking relationship.[9] Underprovision can be measured in a number of different ways (relative to population) -- bank branches, ATM's, business loans, residential mortgages – and occurs when one or more of these metrics is relatively low in a certain geographic area or among a certain demographic group. Since transaction services and credit are central to wealth building and economic development, underservicing can have severely detrimental consequences.

Underserved communities (UC's) can occur in rural or urban areas. In the latter case, they are often segregated areas comprising people of color with low average incomes, and hence the question looms as to whether underservicing is directly related to race or a response to underlying economic conditions. Discrimination as measured by disparate

6 Banks also serve a vital role in transforming the maturities of assets and liabilities. Responding to depositors' preference for ready access to their funds and borrowers' preference for long-term commitments, banks create short-term/liquid liabilities (e.g., checking accounts) and long-term/illiquid assets (e.g., mortgages). As a result of this "asset transformation," banks are borrowing short and lending long, and thus are inherently fragile and risky. This fragility, coupled with their critical role in a well-functioning economy, is why banks are so heavily regulated.

7 The figures in parentheses are the percentages of the asset class in M2 for December 2020 as reported in the Board of Governors (2021).

8 The Federal Reserve System has an unlimited ability to create reserves, and this capacity is the primary reason why it is critical for the central bank to be independent of political influence. Note that the unlimited ability to create reserves does not translate into an unlimited ability to constructively support government spending, a point not fully appreciated by the proponents of Modern Monetary Theory.

9 On a personal note, the author has been made keenly aware of the difficulties when financial services are absent. While he usually has a full range of transaction services available, in the latter part of 2020, his checking account was abruptly closed due to a serious security violation. The disruptions were substantial until all transaction services were restored two weeks later.

outcomes among communities of color is obvious. The answer to the question -- is it animus or economics? – is much less obvious. That answer is important for evaluating the potential role of public banks. If racial discrimination reflects animus, then there will be a profitable investment opportunity that a prejudiced market has overlooked. If economics, then it must be recognized that offering transactions services and credit to the UC's is likely to lead to a sub-par return on those investments.[10]

The above animus vs. economics analysis focuses on the current situation and does not account for the effects of past racism that has resulted in relatively weaker economic conditions for affected groups.[11] When comparing the relative performance of private and public banks in providing banking services, current economic conditions need to be taken as given. It is a separate question as to whether public policies – perhaps through a state bank – should be directed to ameliorate the adverse economic effects of past racist practices.

The key challenge in answering the animus vs. economics question is the identification of an appropriate benchmark. To provide some appreciation of the attendant difficulties, consider the following two non-finance examples. Gneezy, List, and Price (2012) conduct an experimental field study of disparate outcomes in several markets. In the automobile repair market, they find that disabled individuals are quoted prices 30% higher than those received by the abled. On the surface, this is a particularly counter-intuitive result, since there is likely to be some sympathy towards the disabled. In additional experiments, they document that the disparate outcome is economic in the sense that the repair shop owners are exploiting the greater difficulty faced by the disabled in searching for competing offers. The disparate outcome in this case is due to economics, not animus. The ability to access a network and foster competition proves to be the determining factor.

As a second example of the challenges in distinguishing between different sources of disparate outcomes, consider the price of branded laundry detergent (e.g., All, Tide) in low income and high income areas. One might suspect that prices would be higher in high income areas, as those residents are less price sensitive and can absorb higher prices more easily, characteristics that merchants would recognize and exploit. However, missing in this analysis are two important factors: relative to low income areas, high income areas have more supermarkets, warehouse clubs, or other grocery stores and these tend to be large, national chains. The first factor results in more competition; the second factor, lower costs from more potent buying power by the large chains. Both factors drive-down the price of branded detergent. The source of the disparate outcomes against low income areas is economics, not animus.

These two examples illustrate the difficulties in assessing the root cause of disparate outcomes and the need to control for confounding factors. Returning to financial issues, we were not able to find any studies of financial transaction services that adjust for the confounding factors. There is an extensive literature on one class of loans – mortgages -- reviewed in the volume edited by Turner and Skidmore (1999) that gives a great deal of attention to confounding factors (such as loan-to-value ratios, other indebtedness, credit scores, and the ratio of housing and debt

10 In her analysis of Black banks in *The Color Of Money*, Baradaran (2017, pp. 4-5) makes a similar point about the poor returns from investing in UC's: "The very circumstances that created the need for these [black] banks – discrimination and segregation – permanently limited their effectiveness and would ultimately cause their demise. The catch-22 of black banking is that the very institutions needed to help communities escape deep poverty inevitably become victims of that same poverty."

11 Weaker economic conditions could be due to inferior schooling, denied job opportunities or, as emphasized by Massey and Deaton (1993), residential segregation.

expenses to income) and the complexity of the mortgage process (advertising and outreach, pre-application inquires, loan approval/denial and terms, and loan administration). That volume highlights the challenges of defining a benchmark and notes that "[t]he problem is that these studies have not produced a clear consensus on a set of conclusions." (p. 2).[12] Based on the totality of the evidence, the editors conclude:

> *… that minority homebuyers in the United States do face discrimination from mortgage lending institutions. Although significant gaps remain in what we know, a substantial body of objective and credible statistical evidence strongly indicates that discrimination persists. (p. 2)*

Audit studies (also labeled paired testing) provide a useful alternative assessment tool to statistical/econometric studies of mortgage data. In an audit study, two economically and, with one exception, demographically identical individuals (i.e., "pairs") apply for mortgage finance. The only important difference is the race or ethnicity of the applicants. Turner and Skidmore (1999, p. 2) summarize the evidence from audit studies as follows:[13]

Paired testing at the mortgage pre-application stage (conducted by the National Fair Housing Alliance) indicates that differential treatment discrimination occurs at significant levels in at least some cities. Minorities were less likely to receive information about loan products, they received less time and information from loan officers, and they were quoted higher interest rates in most of the cities where tests were conducted.

But, as with all empirical work in this area, concerns exist with the evidence and the methodology (Ladd, 1998, 57-58). Perhaps the most important limitation is that audit studies focus on the pre-screening stage, and they are not able to report on the application and approval stages.

In sum, definitive conclusions about racial discrimination qua animus are elusive. However, as discussed in the next sub-section, at least as regarding financial transaction services, resolution of that issue may not be important.

B. A Technological Solution To The Absence Of Transaction Services

Technological possibilities existing in the third decade of the 21st century are making financial transaction services widely available. Pew (2019) reports that 81% of adults have a smartphone; there is no meaningful difference among Whites (82%), Blacks (80%), and Hispanics (79%). Financial transaction services can now be accessed via the internet and ATM's. While 14% of bank branches have closed since 2008 (National Community Reinvestment Coalition, 2020), they are now largely irrelevant for providing financial transaction services. Indeed, this irrelevance may be a driving factor for branch closures. The availability of the internet, coupled with ATM's, is making transactions services more accessible, and their costs are lower because the competitive network has been expanded. The two non-finance examples presented in section III.A highlighted the downward pressure on prices created by competition and networks.

Table 1 documents the low cost of opening

12 See Bayer, Ferreira, and Ross (2018) for a recent, very careful econometric study of racial and ethnic differences in high-cost mortgages in seven diverse metropolitan areas that controls for a number of confounding variables, especially the role of high-risk lenders.

13 In a survey of audit studies, Riach and Rich (2002, F480) report that "[c]ontrolled experiments, using matched pairs of bogus transactors, to test for discrimination in the marketplace have been conducted for over 30 years, and have extended across 10 countries. Significant, persistent and pervasive levels of discrimination have been found against non‐whites and women in labour, housing and product markets."

checking accounts with Chase, Citibank, and UnitedOne Bank. The latter is the largest Black-owned bank in the United States. The striking similarities among the services offered, monthly service fees, and waivers of the monthly service fees suggest a richly competitive environment for banking services. Financial transactions – depositing funds, making payments, and obtaining cash -- can be executed easily with access to the internet or ATM's. Requirements for waiving the monthly fee are low, especially for Citibank. While financial transaction services have been limited in the past, this problem can be and will be obviated by available technological developments, and thus there is little role for a state bank to provide transaction services to UC's.[14]

Table 1. Checking Accounts

Bank	**Services Offered**	**Monthly Service Fee**	**Waiver Of The Monthly Service Fee**
(1)	(2)	(3)	(4)
Chase Total Checking	Electronic payment tools; fee-free Chase ATM's	$12	Electronic deposits of $500 per month
Citibank Basic Banking Package	Electronic payment tools; fee-free Citibank ATM's	$12	One electronic direct deposit and one electronic direct payment per month or Account holder 62⁺ years of age
UnitedOne Bank BankBlack Checking	Electronic payment tools; fee-free UnitedOne ATM's at 30,000⁺ locations	$10	Electronic deposits of $500 per month and 10 VISA point-of-sale transactions

Sources: Websites for Chase, Citibank, and UnitedOne Bank, accessed January 20, 2020.

14 A marquee advertising event is the annual football Super Bowl; a 30 second commercial costs approximately $5.5 million plus production costs. It is interesting to note that, in 2021, two of the advertisers (Rocket Mortgage and Guarantee Mortgage) provide online applications for mortgages. Citibank views Rocket Mortgage as a significant competitive threat, and it has already "committed to spending significant sums … investing in new technology to try to compete with online competitors such as Rocket Mortgage and PayPal that make loans and provide payment services without relying on traditional industry players" (New York Times, February 11, 2021).

IV. Underserved Communities: Credit Allocation

A. Factors Determining The Cost Of Lending

The third banking task – allocating credit – is the primary function for which a state bank might have a unique and constructive role to play.[15] This sub-section presents a general framework of the determinants of loan pricing by a bank, be it private or state, and explores under what circumstances a state bank can allocate credit at lower cost to the existing pool of actual and potential borrowers. Profits from these projects can then fund meritorious projects not supportable by private lending.

Absent a cost advantage for a state bank, extending credit to UC's or projects with a high social but low market return via cross-subsidization is not sustainable.

Table 2 contains a list of three factors that determine loan costs – operating costs, loan defaults, and the cost of funds, the latter further divided among private deposits, state deposits, borrowed funds, and equity. The relative costs between private and state banks are discussed in column 2 and summarized in column 3.

Table 2. Factors Determining The Cost Of Lending

Factors	Discussion	Advantage
(1)	(2)	(3)
Operating Costs	Many private banks would be larger than a newly-established state bank. Economies of scale and scope suggest that private banks have a cost advantage.	Private
Loan Defaults	Lending is risky business, and loan defaults are expected. A state bank may be better embedded into neighborhoods, have superior knowledge about its customers, and hence may suffer fewer loan defaults. The lower are expected defaults, the lower is the cost of making a loan. This advantage may be attenuated if a state bank extends high-risk loans in UC's that are correlated with lower incomes.	State

--continued--

15 In broad terms, credit allocation can be direct via lending funds or indirect via subsidizing interest rates or guaranteeing credit issued by another party.

Table 2. Factors Determining The Cost Of Lending (continued)

Factors	Discussion	Advantage
(1)	(2)	(3)
Cost of Funds		
- private deposits	There is no obvious advantage enjoyed by one type of bank versus the other.	None
- state deposits	In the course of discharging its routine tasks, a state generates a large amount of core deposits (cf. the discussion about the "magic" of deposits in Section II). Usually they are deposited in a private bank. State deposits channeled to a state bank would be an important and inexpensive source of funds for a state bank. Transferring funds from a private to state bank may have an opportunity cost if the state receives banking and other services as compensation for the deposits. This opportunity cost would effectively raise the cost of state deposits at a state bank. However, private discussions with five financial officers in public institutions, private banks, and private businesses did not uncover any substantial benefits flowing from bank deposits.	State
- borrowed funds	Borrowings from investors in the form of certificates of deposit (CD's) or other financial instruments or from other banks would likely be backed either implicitly or explicitly by the full faith and credit of the state. Due to the fiscal stresses that exist in many states, the interest cost of CD's and other bonds would likely be higher than those for private banks. Independent of the risk premium due to fiscal stress, private banks, due to their large size, would also have access to borrowed funds at a relatively lower interest rate.	Private
- equity	It is frequently alleged that the amount of equity capital carried by private banks is a burdensome cost that a state bank can largely avoid. There is an element of validity to this concern. But the conclusion that private banks are disadvantaged does not bear-up under closer scrutiny. We label this allegation the "Excessive Equity Cost Misconception;" it is considered in detail in Section III.B.	None

In sum, our analysis suggests that a private bank may have cost advantages due to lower operating costs and a low cost of borrowed funds. State banks may benefit from lower default rates and greater access to state deposits, both of which lower its cost of making loans. Section V will examine the experiences of a number of public banks to gain further insight into the empirical relevance of these cost factors and other insights from history. But first we return to consider in detail the costs associated with equity capital.

B. The Excessive Equity Cost Misconception

This sub-section is an aside that considers the frequently alleged concern that the amount of equity capital carried by private banks is a burdensome cost that a state bank can largely avoid (Brown, 2013, p. 365; Mettenheim and Butzbach, Olivier, 2017, p. 40). To analyze the cost of equity, consider the following three scenarios of a bank needing $300 to fund its lending activities:

- **Scenario A:** The bank attracts $300 of checking account deposits through vigorous advertising and, perhaps, offering toasters for new accounts. It pays no interest on these deposits, but it does offer transaction services. Assume that the costs of providing these services, as well as the advertising and toasters, amounts to $30, or 10% of the funds obtained.
- **Scenario B:** The bank attracts $300 by issuing a certificate of deposit (CD) with a maturity of 30 days. The interest rate that the bank must pay for these funds is 10%.
- **Scenario C:** The bank attracts $300 by issuing bank equity. There is no maturity associated with equity, as the funds are permanently inside the bank. Bank equity is expensive, and investors require an expected return of 15% in the form of expected dividends and capital gains (the latter determined by profits retained within the bank).

Given the above data, it would seem that Scenario C should be avoided because of the relatively high expense associated with bank equity. This is the germ of truth in the Excessive Equity Cost Misconception. However, there are two important features that distinguish equity from the deposits or borrowings and are fundamental to a proper analysis of the true cost of equity. First, equity capital is permanently within the bank, while deposits and borrowings are free to exit. Permanent funding is a large benefit to the bank relative to potentially transient deposits and borrowings. During the 2008-2009 Global Financial Crisis, two of the most prominent casualties – Bears Stearns and Lehman Brothers – suffered an exodus of borrowed funds. The higher return paid on equity for its very long (infinite) maturity is, in effect, an insurance premium for the bank.

Equity finance confers a second insurance benefit. In its normal operations, a bank generates revenues against which there are many claimants – workers, vendors, depositors, borrowers, and, lastly, equityholders. This priority list shows that equityholders are the claimants on the residual funds available in the bank after all other claims have been satisfied. If no funds remain, then equityholders do not receive any dividends. This priority structure is a second form of insurance for banks that flows from equity. It is clearly undesirable for equity investors, who must be compensated for this risky, residual status with a higher expected return.

It might be argued that, since many state banks are backed by the full faith and credit of the state in which they operate, equity-as-insurance is not needed (Brown, 2013, pp. 378-379). This perspective is not sensitive to the fact that banks fail. Even the storied Bank of North Dakota and the German state banks (to be discussed in Section V) posed risks to the taxpayers backing these institutions. Risk is omnipresent in banking. Some group has to bear the potentially adverse effects of distress risk, be it taxpayers or equityholders.

Deposits, borrowings, and equity each add to the liability side of the bank's balance sheet. Each must receive a return in the form of some combination of transaction services, interest payments, dividends, and capital gains. Maturity and payment priority compensate for any differences in the nominal value of these payments.[16] In those cases where the state has contributed equity – either directly through a transfer during the start-up phase or indirectly through retained profits – but is not receiving any payments for these assets, the proper interpretation of these non-payments is as a subsidy from the state taxpayers to the state bank, not as a benefit of organizing a state bank.

V. Lessons From Prior Public Banking Experiences

This section reviews seven previous and ongoing experiences with public banking. We begin with the Bank Of North Dakota, which has been in existence for 100+ years and is held by many as the prototype of a successful state bank. We then examine the experiences of Massachusetts and Illinois, which had explored starting a state bank in 2010, and the five states that very recently introduced public bank legislative initiatives. Information for these various initiatives – which involve both state and municipal banks -- is summarized in Table 3, along with the URL's for relevant documents. (Unless otherwise noted, quotations and citations in this section are from the URL's at the bottom of Table 3.) The histories of one prominent non-public initiative and the state chartering of banks are reviewed. Public banks have been active in many countries outside the United States, and we review the history of the German state banks. The section concludes with lessons learned from this review.

Before proceeding to the reviews, we note that this section is not comprehensive in three dimensions. Thrift institutions – savings and loan associations, mutual savings banks, and credit unions – have been excluded because they tend to lend only to households. Three states that had examined the merits of introducing a state bank – Vermont (2010), Maine (2011), and Hawaii (2012) -- are not included in this review and Oregon (2010) is only mentioned in passing because these initiatives are somewhat dated and not as consequential as the Massachusetts study. Lastly, American Samoa has a state/territorial bank, but the island's size and unique location suggest that its experience will not be too instructive for Illinois.

A. Bank Of North Dakota, 1919[17]

The Bank of North Dakota (BND), the only state bank in the United States, was founded in 1919. At this time, agriculture was the dominant sector in North Dakota's economy, and there was concern that the farmers were being exploited by out-of-state grain dealers, farm suppliers, and Chicago, Minneapolis, and New York banks. A populist movement led to the creation of The Bank of North Dakota (as well as a state-owned flour mill, the North Dakota Mill and Elevator) to protect the farmers from these exploitive practices, which was due to a lack of competition and can be viewed as a market failure:

16 The returns on deposits, borrowings, and equity discussed in the text are, of course, arbitrary. As the bank draws on these various sources to optimize its balance sheet, the returns will change until, adjusted for the effects of maturity and priority (as well as taxes), they are approximately equal.

17 This sub-section draws heavily on the information contained on the Bank of North Dakota's website under About/History of BND, Harkinson (2009), and Kodrzycki and Elmatad (2011).

Table 3. Public Bank Legislation Initiatives

State	Public Bank		Status of Legislation
	State	**Municipal**	
(1)	(2)	(3)	(4)
A. North Dakota, 1919	xxx		Enacted
B. Massachusetts, 2010	xxx		Explored
C. Illinois, 2010	xxx		Explored
D. Recent U.S. State Initiatives, 2019 & 2021			
California		xxx	Enacted
New Mexico	xxx	xxx	Introduced/Explored
New York	xxx		Introduced
Oregon	xxx		Introduced
Washington	xxx	xxx	Introduced/Explored

Sources:

Public Banking Institute,
https://www.publicbankinginstitute.org/legislation-local-groups-by-state/

North Dakota, 1913
https://bnd.nd.gov/history-of-bnd/

Massachusetts, 2010
Commission (2011); the Commission's report relied heavily on Kodrzycki and Elmatad (2011).

Illinois, 2010,
Discussions with IGPA personnel.

California,
https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB857

New Mexico,
https://nmlegis.gov/Sessions/21%20Regular/bills/house/HB0236.pdf

New York,
A3309: https://www.nysenate.gov/legislation/bills/2021/A3309
S1055: https://www.nysenate.gov/legislation/bills/2021/s1055
S1762: https://www.nysenate.gov/legislation/bills/2021/S1762

Oregon,
https://olis.oregonlegislature.gov/liz/2021R1/Downloads/MeasureDocument/SB339/Introduced

Washington,
http://lawfilesext.leg.wa.gov/biennium/2021-22/Pdf/Bills/Senate%20Bills/5188-S.pdf?
https://www.capitolhillseattle.com/2018/11/what-it-would-take-to-create-a-seattle-muni-bank/

> *Purpose and establishment of Bank of North Dakota. For the purpose of encouraging and promoting agriculture, commerce, and industry, the state of North Dakota shall engage in the business of banking, and for that purpose shall maintain a system of banking owned, controlled, and operated by it, under the name of the Bank of North Dakota.*

The statement also highlights that distress risk is being borne by the State Of North Dakota, which is "doing business as" (DBA) the BND. Should the bank become financially distressed, all state assets would be vulnerable for providing financial support, especially since the deposits are not FDIC insured.[18]

A very important development was that the Bank had a very substantial and inexpensive source of funds:

> *All state funds and funds of all state penal, educational, and industrial institutions must be deposited in the Bank of North Dakota by the persons having control of such funds or must be deposited in accordance with constitutional and statutory provisions. All income earned by the Bank for its own account on state moneys that are deposited in or invested with the Bank to the credit of the state must be credited to and become a part of the revenues and income of the Bank.*

According to the BND's president, one of the two key elements to the Bank's success is

> *[o]ur funding model, our deposit model is really what is unique as the engine that drives that bank. And that is we are the depository for all state tax collections and fees. And so we have a captive deposit base, we pay a competitive rate to the state treasurer. And I would bet that that would be one of the most difficult things to wrestle away from the private sector—those opportunities to bid on public funds. (Harkinson, 2009, p. 4)*

In light of the last sentence and the concern that the BND would compete with private banks, the BND has maintained only one office (it has always been located in the state capitol, Bismarck) and currently has satellite lending offices in three North Dakota cities.

The other key element of success is the lending policy, which has changed focus over time: farms and municipalities (1930's), managing state investments and servicing local banks (1940's and 1950's), economic development and commercial loans (beginning in the 1960's). Again, the BND president:

> *[b]ut that's only one portion of it. We take those funds and then, really what separates us is that we plow those deposits back into the state of North Dakota in the form of loans. We invest back into the state in economic development type of activities. We grow our state through that mechanism.*
>
> *… we have specifically designed programs to spur certain elements of the economy. Whether it's agriculture or economic development programs that are deemed necessary in the state or energy, which now seems to be a huge play in the state. (Harkinson, 2009, pp. 4-5)*

The BND does not originate most loans (with the exception of student loans). Rather it frequently partners with North Dakota banks, serving as a "bankers' bank." Its major role seems to be more as a supplier of capital rather than a lead lender finding lending opportunities based on its knowledge of local conditions. It supports local banks with

18 Actual risk exposure is complicated to compute, as some of the bank's assets, such as student loans and some agricultural loans, may be guaranteed by the federal government or other parties.

participation loans and access to the federal funds market and the discount window. As indicated by the second part of the above quotation, the BND lends to certain borrowers viewed as key to spurring economic growth, a strategy akin to an industrial policy where a government agency attempts to pick winners. This strategy can be a difficult task to sustain on an ongoing basis. In 2009, the BND favored investments in the energy sector. Over the past two decades, the price of crude oil peaked in May 2008; in January 2020 (before the onset of the Pandemic), it had fallen by over 60%.

BND's profitability has been notably robust for many years. Table 4 contains financial ratios for the BND, and three categories of U.S. commercial banks depending on which government granted a charter and whether the bank is a member of the Federal Reserve System. Data for the BND are in column 1. Based on its total assets, BND is about the 200th largest bank in the United States, and comparisons to the national banks in column 2 is most appropriate. As shown in panel A, the return on assets is 2.1%, substantially higher than the 1.6% for federally-chartered banks and 1.3% for state-chartered banks. Similar differences exist for the return on equity.

Table 4. Financial Ratios, 2019
Bank Of North Dakota And U.S. Commercial Banks

Ratios	BND	U.S. Commercial Banks		
		National	State Member	State Non-Member
	(1)	(2)	(3)	(4)
A. Net Income Ratios				
Net Income / Assets	2.1	1.6	1.3	1.3
Net Income / Equity	14.4	11.6	10.0	9.6
B. Interest Expense / Liabilities Ratio	1.0	0.8	1.0	1.0
C. Liabilities And Equity Ratios				
Deposits / Assets	76.0	78.0	81.1	79.7
Borrowings / Assets	10.0	10.7	7.4	7.6
Equity / Assets	14.0	11.3	11.5	12.7
D. Asset Ratios				
Loans / Assets	67.4	67.8	55.8	76.1
Securities / Assets	30.6	27.2	27.7	17.7
Cash / Assets	2.0	5.0	16.5	6.2
Loan Loss Allowances / Loans	2.1	1.2	1.0	1.1
Number of Banks	1	835	753	3,012

Sources: The figures pertain to the 4,600 U.S. commercial banks insured by the FDIC (there are approximately 5,000 U.S. commercial banks) and are stated as percentages. Sources: Column 1: Bank of North Dakota (2019); columns 2, 3 and 4: Federal Financial Institutions Examination Council (2019). The BND does not pay income taxes. The net income figures used in column 1 of panel A have been adjusted downward for a 20% income tax rate, which is the approximate average income tax rate for the 4,600 U.S. commercial banks.

We explore two possible reasons for this impressive performance – a low cost of funds or lending acuity. (See the note to Table 4 concerning an adjustment for income taxes.) The first explanation is a prime suspect since virtually all state funds must be deposited with the BND. However, that conjecture does not bear-up under scrutiny. Panel B presents the interest expenses as a percentage of total liabilities, and this ratio is relatively higher for the BND. This is surprising since 12% of the BND's deposits do not earn interest, though this effect may be counterbalanced by the absence of FDIC insurance and an added risk premium embedded in BND deposit rates. Moreover, as shown in panel C, the BND relies relatively less on deposits. Low funding costs does not appear to be the reason for BND's high profitability.

The second reason for the favorable outcome relative to other banks may be prudent lending. Panel D examines the asset side of the balance sheets and shows that the BND does not extend more loans than any of the other three groups. It is striking that the funds set aside for loan losses are much larger for BND. This may imply an aggressive approach to lending and the holding of a high-risk portfolio of loans. Consequently, the higher profits, net of expected loan losses, compensates for extra risk-taking. That interpretation, however, would be contrary to the conservative approach to banking mentioned in BND documents.

An alternative interpretation is that the relatively high loan loss provision is consistent with the BND's conservative banking policies. However, that perspective would not explain its high profitability, instead implying that profitability should be relatively low.

A third possibility is that funds set aside to cover expected losses in energy sector loans. This interpretation is consistent with loan losses provisions becoming greater for the BND relative to commercial banks beginning in 2015. Prior to that year, the BND was setting aside fewer resources for loan losses.

Panel D also reveals that the BND holds very little cash, 2.0% of total assets, compared to 5.0% for national banks and 6.2% or 16.5% for state banks. The BND is a very large net purchaser of federal funds; these purchases are netted against the reported cash/assets ratio. By contrast, national banks are net buyers of federal funds. The difference seems to be traceable to the BND's role as a "bankers' bank" for North Dakota. From its founding charter, the BND shall be "helpful to and to assist in the development of state and national banks and other financial institutions and public corporations within the state…" (BND website, p. 2).[19] There is insufficient information in the BND annual report to assess the profitability for the BND in its role as an intermediary between North Dakota banks and the federal funds market. But it may be an important channel explaining the BND's enviably high profitability and in need of further investigation.

B. Massachusetts, 2010

Legislation enacted in 2010 "… authorized a Commission to study the feasibility of establishing a bank owned by the Commonwealth or by a public authority constituted by the Commonwealth."

The report listed four potential benefits of a Massachusetts state bank:

> *(1) stabilizing the state's economy, (2) providing local businesses improved access to credit, (3) augmenting the lending capacity of community banks, and (4) helping fund state government through profits. … [T]he report confirmed that the Bank of North Dakota helped support the lending capacity of community banks in the state. However, the report found that data*

19 Additional services provided to North Dakota banks include check clearing, liquidity management, and bond accounting safekeeping.

> *did not support the other stated benefits.*
>
> *The Commission finds no compelling rationale, at this time, to establish a state-owned bank in Massachusetts.*

Regarding placing state funds in a state bank, the Commission expressed concern about the amount of equity capital needed to start the bank and the financial capacity of a bank to service the state's transactions needs, especially concerning negative, intra-day balances. The Commission confirmed that that small businesses faced difficulties obtaining credit but believed that those needs would be better serviced by other state and quasi-state agencies.

C. Illinois, 2010

In 2010, interest in a state bank surfaced in the **State Of Illinois.** Illinois Representative Elaine Nekritz contacted the University of Illinois' Institute of Government & Public Affairs (IGPA) about the prospects of establishing a state bank. IGPA was not encouraging for several reasons:

- North Dakota is a thinly-banked state where a state bank might add value. Illinois, on the other hand, has a very broad and deep financial network.
- The report recognized that, in many instances, small businesses had difficulty in obtaining credit, but linked those problems high levels of risk. There was no obvious market failure regarding small business lending.
- A state bank would likely compete with community banks. The latter would be expected to resist vigorously.
- Concern was expressed about preventing the bank from operating for the political or personal advantage of public officials.

To the best of the author's knowledge, the issue was not pursued further.

D. Recent U.S. State Initiatives, 2019 And 2021

There is a great deal of recent interest by state legislatures in starting a public bank either at the state or municipal level. The Public Banking Institute maintains a website with a wealth of current information. This sub-section reviews five recent initiatives, four of which have been introduced to legislatures in 2021.

Among the five states examined in this sub-section, the **State Of California** is unique in having enacted legislation, Assembly Bill 857 on October 2, 2019. This bill repealed the prior prohibitions on municipalities and counties from opening a public bank and from depositing their funds in such an institution. The intent of the Legislature is,

> *… that this act authorize[s] the lending of public credit to public banks and authorize public ownership of public banks for the purpose of achieving cost savings, strengthening local economies, supporting community economic development, and addressing infrastructure and housing needs for localities. It is the intent of the Legislature that public banks shall partner with local financial institutions, such as credit unions and local community banks, and shall not compete with local financial institutions.*

Public credit is not defined in the legislation, but it would seem to refer to the funds held by various state agencies. The public bank is intended to undertake an aggressive lending program aiding local economies and communities that complements those undertaken by credit unions and local community banks. Before submitting an application for a public bank, a study must be conducted that details start-up costs, the required amount of initial capital, "a downside scenario that considers the effect of an economic recession on the financial results of the proposed public bank," and "how the proposed governance structure of the public bank would protect the bank from unlawful insider transactions and apparent conflicts of interest." The public banks authorized by this legislation are to be owned by municipalities and counties, not the State Of California.

Legislation (House Bill 236) has been introduced in **The State Of New Mexico** on February 2, 2021 to create The Public Bank Of New Mexico. The bank would receive a permanent deposit of $50 million from the state treasurer. These funds are not to be withdrawn, and thus are effectively equity capital. The state investment officer would also deposit $50 million from the severance tax permanent fund. The public bank would engage in normal lending by a bank with an emphasis on supporting the economic development of small businesses, presumably ones that have had difficulty obtaining credit from private banks. This lending is meant to complement existing lending programs, not necessarily pursue new credit initiatives:

> *The bank shall pursue a policy of supporting new and growing industries and businesses in New Mexico; provided that the bank shall develop lending programs that are approved by the board that ensure a diversified loan portfolio that makes financing available to communities throughout the state, and in pursuit of these policies may: (1) cooperate with small business development centers, regional economic development districts and parties that have demonstrated abilities and relationships in providing financial services to new and emerging businesses; and (2) make equity or debt investments in New Mexico businesses; provided that the investments are made pursuant to policies adopted by the board.*

Since the public bank would be created as a "governmental instrumentality," it would be an entity distinct from the State of New Mexico, and thus the latter would not be responsible for the bank's financial liabilities.[20] This separation may raise the cost of borrowed funds for the state bank.

The Public Bank Feasibility Study was undertaken by the **City Of Santa Fe** in 2016. Some weaknesses in city financial management were addressed by changes in the Santa Fe Treasury Office. As a result of this study, the city has a framework for establishing a municipal bank but has not moved forward with this initiative.

New York State has three bills pending in its legislature pertaining to the creation of a state bank (Assembly Bill 3309, Senate Bills 1055 and 1762). There is a great deal of similarity among the three bills; here we focus on the text of A3309. The mission statement and legislative intent are presented below (boldface added). They are similar to those from other states in. New York explicitly acknowledges the potential of using "the state's depository assets to generate additional benefit for the people and the economy of the state," and expresses concern about "institutional safety and soundness" and the need for "insulation from political influence":

> *The **mission** of the bank is to use New York's depository assets in ways that afford most efficient use of taxpayer revenues and public resources for the benefit of the people and economy of the state. The legislature intends for the bank to apply business strategies to manage taxpayer revenues while concurrently meeting identified needs*

20 Government sponsored enterprises (GSE's), such as Fannie Mae and Freddie Mac, are government instrumentalities, and their liabilities are not backed explicitly by the federal government. In general, the legal and financial liabilities of the sponsoring government are unclear, and claims for financial support from distressed creditors are subject to litigation.

and strategic opportunities across the state. In achieving its purpose of improving public infrastructure and increasing access to higher education, the legislature intends for the bank to adhere to the following priorities:

(a) institutional safety and soundness;

(b) long-term viability;

(c) social return and monetary return on investments;

(d) prudent and best banking and business practices;

(e) highest ethical, accountability, and transparency standards; &

(f) insulation from political influence.

The public bank would invest in infrastructure, lend to students, businesses, communities, and low income areas, and partner with extant institutions:

Legislative Intent.

The legislature finds that there are significant public infra-structure, higher education and business development needs of the state that are unmet. The legislature further finds that there are opportunities to use the state's depository assets to generate additional benefit for the people and the economy of the state. Therefore, the legislature intends to create the ***empire state public bank*** *as a legacy institution that amasses sufficient capital reserves to address opportunities now and in the future.*

The legislature intends that the public bank may:

(a) facilitate investment in, and financing of, public infrastructure systems that will increase public health, safety, and quality of life, improve environmental conditions, and promote community vitality and economic growth;

(b) assist students who are in need of additional low-cost student loans in order to finance the cost of higher education;

(c) provide businesses, communities and low income areas of our state access to low-interest capital; and

(d) leverage New York's financial capital and resources, and work in partnership with financial institutions, community-based organizations, economic development organizations, guaranty agencies, and other similar organizations.

The state bank would be funded by state deposits, and default risk borne by the state:

The Comptroller shall deposit state moneys in the Bank …

All deposits in the Bank are guaranteed by the state.

Legislation (Senate Bill 339) has been introduced in the **State Of Oregon** on January 11, 2021 to create the Bank of the State of Oregon with the following purposes:

(a) To support the economic development of this state by increasing access to capital for businesses and farms within this state in partnership with local financial institutions.

(b) To provide stability to the local financial sector, and not in any way to compete with community banks, credit unions or other financial institutions.

(c) To reduce the costs this state pays for basic banking services.

(d) To fund governmental operations with a portion of the bank's earnings.

Funding for the state bank would be from state deposits:

> *The State Treasurer shall deposit moneys the State Treasurer receives under ORS 293.265 with the bank in an amount the Bank of the State of Oregon Board determines is necessary to allow the bank to fulfill the bank's duties and functions under sections 1 to 11 of this 2021 Act.*

Default risk is borne by Oregon taxpayers:

> *Deposits in the Bank of the State of Oregon are guaranteed by the State of Oregon. … designated as "The State of Oregon, doing business as The Bank of the State of Oregon."*

The **State Of Oregon** had commissioned a 2010 study examining the possibility of starting a state bank. No recommendations were reached; rather a series of questions for further consideration were posed.

Washington State has Senate bill 5188 pending. A market failure by private banks in meeting the financing needs of local and tribal governments is stated, and the public bank/cooperative is intended to assist UC communities, especially with regard to housing:

> *The legislature finds that a Washington state public financial cooperative would provide opportunities for local and tribal government entities to competitively finance a broad array of public infrastructure and economic development projects, including housing, at competitive rates with low administrative costs. A state public financial cooperative will complement the existing banking system by filling gaps that the system cannot or will not fill, and it will be uniquely positioned to provide specialized technical assistance to the diverse needs of local and tribal government entities.*

The legislation is specific about the benefit of using state/local/tribal funds and is very sensitive to the potential risks from a bank on state finances. Like New Mexico, the Washington state bank would be a government instrumentality (cf. fn. 20). Substantial distance is created explicitly between the liabilities of the bank and state resources:

> *It is the purpose of this chapter to establish a Washington state public financial cooperative to act as a financial conduit that, without creating state debt, can receive funds from state, local, and tribal government entities, issue and make loans to those entities, and issue bonds in a manner that does not create state debt, to help facilitate access to needed capital by local and tribal government entities on reasonable terms and rates.*
>
> *Bonds issued under this chapter must be issued in the name of the cooperative. The bonds are not obligations of the state of Washington, may not create state debt, and are obligations only of the cooperative payable from the special fund or funds created by the cooperative for their payment. Such funds are not public moneys or funds of the state of Washington and at all times must be kept segregated and set apart from other funds.*

While bonds cannot be issued in the name of the state of Washington, the initial equity capital will come from a state appropriation, and hence the state will bear some distress risk.

The Washington State Treasurer conducted a comprehensive study of state banking and concluded that the risk/return tradeoff was not favorable (Davidson, 2018, p. 54):

The Office of the State Treasurer supports building upon Washington's existing structure of banking and does not support public banking because of the higher risk and lower return on investment compared to the current private banking system.

The city of **Seattle** commissioned a study in 2018, but it was generally unfavorable to moving forward with a municipal bank, especially regarding the complexity of the start-up process.

E. Chicago's ShoreBank

ShoreBank was a mission-driven, community bank that had a major positive impact in the area it served. Its mission was to invest in and revitalize inner-city communities. Founded in 1973, it focused its lending in the South Shore community in the southeastern part of Chicago. The area was in transition from a predominantly White to predominantly Black residents and, while income was declining, the community was not in a parlous condition. Despite its social mission and thus occasional extension of credit to high risk borrowers, ShoreBank was successful and apparently earned a rate of return on its assets comparable to similar financial institutions (Taub, 1988). This profitability was due in part to depositors attracted to its mission and, in part, to its superior knowledge of the community.

ShoreBank was in business for 35 years and had grown substantially, having assets of $2.6 billion prior to liquidation. There were two reasons for its financial distress (Taub, 2010). The bank had expanded from its original area to undertake similar mission-driven, community banking in Chicago's Westside, rural Arkansas, Cleveland, Detroit, the Upper Peninsula of Michigan, the Pacific Northwest, and with affiliates in 30 countries. The bank expanded beyond its competency. The Great Recession was a second contributing factor. As with most recessions, communities of color are more adversely affected, which had a severely negative effect on ShoreBank's cash flow. Its application for support from the federal Troubled Asset Relief Program (TARP) was denied, and it was liquidated by the FDIC in 2010.

F. U.S. State-Chartered Banks

State chartering of banks has a long and tortuous history in the United States. The Bank of North America was the first permanently-organized bank in what was to become the United States of America. Operations began in 1782, and its history reflects a fundamental tension in U.S. banking in the 18th and 19th centuries. It was initially charted in perpetuity by the Continental Congress in 1781, but then also charted by the State of Pennsylvania from 1782-1785, 1787-1801, and then with various renewals until 1864, at which point its charter was issued by the federal government (Knox, 1900, p. 35).

These multiple charters highlight a fundamental states' rights issue: does the power to charter bank operations reside with the federal or state governments? The federal government chartered two banks – the First Bank of the United States (1791-1811) and the Second Bank of the United States (1816-1836). Both ran into strenuous opposition from state banks and states' rights advocates and their charters were not renewed, the latter termination following from President Jackson's famous 1832 veto.

Before 1863, apart from these two federal banks and some banks in the District of Columbia, all banks were charted by states. They represented various mixtures of private and public ownership (Hoffmann, 2001, pp. 74-76). The number of state-chartered banks grew dramatically, starting with 3 in 1784 and then 28 (1800), 88 (1811), 307 (1820), 330 (1830), 901 (1840), 824 (1850), and 1,562 (1860) (Knox, 1900, Part II, Chapter I). For the period 1784 to 1860, state-chartered banks grew at an 8.6% compound annual rate.

These state-charted banks differed markedly from a state bank under consideration in this study. Only two state-chartered banks (Kentucky (1806-1830) and Vermont (1806-1812)) were truly public; they had no fixed equity capital and relied on the state's resources. Moreover, the financial environment in which they operated differed markedly from the third decade of the 21st century; a widely-accepted nationwide currency did not exist. State-chartered banks issued banknotes as currency, whose value fluctuated depending on the perceived solvency of the issuing bank. Bank regulation was weak and inconsistent, and many banks failed. Thus financial transactions were difficult to execute. Given the poorly developed financial system, there are few relevant lessons to be learned from this episode for the issues addressed in this paper.

After 1863, the exclusive reliance on states for chartering banks disappeared. In that year, President Lincoln signed the National Banking Act, which allowed chartering by the federal government. This law was enacted partly in response to the poor regulation and frequent failures of state-chartered banks and partly to assist in financing the Civil War. It also reflected Lincoln's desire to resolve the states' rights issue in favor of a more prominent role for the federal government.

Even after the 1863 Act, state chartering continued to exist and flourish. In 1898, there were approximately 4,000 state-chartered banks (Knox, 1900, p. 312). In 2017, there were approximately 5,000 state-chartered banks nationwide and 406 state-chartered banks in Illinois (Conference of State Bank Supervisors, website), almost all of which are community banks.

G. German State Banks

Public saving banks play a very prominent role in Germany. They are divided between local saving banks (*sparkassen*, owned by municipalities and counties) and state saving banks (*landesbanken*, owned by the *sparkassen* and the state (*land*) in which the *landesbanken* operates). The mission of the saving banks has changed markedly over time. Originally, it echoed those found in several of the U.S. public banking initiatives:

> *The savings banks were originally conceived not as commercial profit-making concerns but rather as state institutions with obligations to provide banking services to less well-off members of the community, to furnish credit on favourable terms to public authorities, and to finance local investment of benefit to the region in which the savings bank was located."* *(Edwards and Fischer, 1994, p. 103)*

In recent years, the local savings banks tend to have retail customers, lend to small business, and place their surplus funds with the state savings banks. The latter focus their lending on medium and large firms. The operations of the local savings banks tend to be restricted to the state in which they are located. No such restrictions apply to state savings banks; however, they are the house banks for their own state governments and provide banking services (e.g., payments processing, the investment of surplus funds) to the savings banks in their home regions.

State savings banks (hereafter, state banks) have moved far from their original mission, driven largely by competition over market share with the other two main groups in the German financial system – cooperative banks and commercial banks.[21] In 1969, a market-oriented reform plan was introduced by the president of the national association of savings banks and was enthusiastically endorsed by the Federal Economics Minister. In recent years, the operations of state banks are quite similar to those of private banks and include wholesale banking, securities trading, underwriting, and international business. As a result of a wave of consolidations, there are now only five German state banks, four of which are among the top nine banks in Germany (measured by assets in 2017). They are viewed by some policymakers and

21 Deeg (1999, Chapter 2) and Sinn (1999, Chapter 2 and Appendix 1) describe the historical evolution of state savings banks and other key players in the German banking system.

commentators as a counterweight to the monopoly power presumably enjoyed by large private banks.

The liabilities and equity of the state banks had been guaranteed by their home state until 2005. Sinn (1999, Sections 3.2 and 3.3) argues forcefully that this guarantee was responsible for their expansion. These guarantees clearly had value. In 2005, the guarantees were terminated (based on a 2001 agreement), and the debt ratings of the 10 state banks in existence at that time fell sharply. Fitch reports the following declines in rating notches for [n] state banks: a decline of 4 notches [for 2 state banks], 5 [5], 6 [2], 7 [1] (Körner and Schnabel, 2013, p. 13).[22] Sinn estimates that the cost of state bank loans is increased by approximately 20 basis points when the debt rating is lowered one notch on a 5-year bond, and increased by approximately 14 basis points for a 10-year bond. This state support may have led to a classic moral hazard problem, where a bank feels free to take undue risks because it is backstopped by the financial resources of the state. Many of the state banks have received financial assistance from their states. As a result of unprofitable real-estate speculation, the State Bank Of Berlin needed a capital injection of $2 billion and a loan guarantee of $26 billion (Hau and Thum, 2009, Section 2.2). The spectacular failure of the West State Bank (the state bank of North Rhine-Westphalia) cost taxpayers and savings banks $23 billion (Inverardi, 2012, p. 1).

H. Lessons Learned

While there are a wide range of issues discussed in this section, six appear particularly germane to the issue of starting a state bank:

1. **Deposits** held by the state treasurer are an attractive source of funds. However, it should be noted that not all state funds would be eligible for transfer to a state bank because of various laws dictating how government funds can be invested.

2. **Economic development** is a key motivating factor for starting a state bank. It takes the form of assistance to small businesses, students, and UC's, promoting infrastructure investments, or targeting critical sectors that will lead to sustained growth.

3. **Risk** is inherent with any bank, and financial distress characterizes many state banking experiences. The legislation introduced in the State Of Washington explicitly recognizes and emphasizes the inherent risks with a state bank and attempts to insulate taxpayers from the negative effects of a financially distressed state bank. Risk is impossible to avoid. Even in the Washington case, the initial equity capital injection by the state would be vulnerable and could lose value if the state bank becomes financially distressed.

4. **Equity** is one way to attenuate (but not eliminate) distress risk by providing a permanent source of funds. However, the equity required to start a bank might strain state finances. In 1919, the BND's startup capital was $2 million. This figure corresponds to $364 million in 2020 (inflated by the growth in nominal GDP). For the State Of Illinois, for example, since Illinois has a 2019 population that is 16.6 times larger than that of North Dakota, the comparable figure for an Illinois State Bank is $6 billion, 14% of Illinois' 2022 proposed budget.

5. **"Mission Creep"** and **political influence** are ongoing concerns. The histories of Chicago's ShoreBank and the German state banks highlight how risk-bearing, the associated moral hazard, and mission

22 The impact of this policy change cannot be assessed directly by examining changes in interest rates on state bank bonds (before and after the guarantee was removed) because of anticipation effects. The decision to remove guarantees effective July 18, 2005 was made four years earlier on July 18, 2001. State banks could and did issue bonds during the four-year interval and still enjoyed the benefits of the state guarantee.

creep can impede a state bank from fulfilling its original goals and can lead to financial distress. By contrast, the BND has an impressive record in this regard. Even though its board of directors (formally, The Industrial Commission) comprises three state politicians (governor, agriculture commissioner, and attorney general), the BND has largely stayed on mission over its 100+ year history.

6. **Private bank competition** is a potential concern. Forming partnerships, focusing on underserved market gaps, and providing liquidity and other banking services (to small banks) can attenuate concerns.

VI. Summary, Pro's, Con's, And Four Remaining Questions

A. Summary

This paper began its examination of state banking with two questions:

- Are the three critical banking tasks – creating money, facilitating transactions, allocating credit -- being discharged adequately?
- Can economic performance and citizen welfare be improved by creating a state bank?

On the first question, our analysis indicated that, since money creation is largely controlled by the Federal Reserve System, it is not relevant for considering the benefits of introducing a state bank. For the second banking task, while discrimination in terms of disparate outcomes among many communities, especially of color, is clear, the question that needs to be answered is whether this discrimination is driven by animus or economics. Our review of the evidence suggested that this is a very difficult question to answer conclusively. However, while financial transaction services have been limited in the past, this problem can be and is being obviated by available technological developments. Table 1 documented that financial transactions services can now be obtained at low cost via the internet and ATM's. Thus, there is little role for a state bank to provide transaction services to underserved communities. Whether a state bank may be able to provide unique and valuable benefits to the community depends on the third task, allocating credit and making loans. The key element is the cost of making loans, and our analysis delivered a mixed verdict between public and private banks.

The next two sub-sections address the second question by stating the case for and against a state bank and whether it would improve economic performance and citizen welfare with enhanced credit and lending.

B. The Case For A State Bank

There are several reasons why economic performance would be improved with the creation of a state bank. It would be well positioned to understand the pool of potential borrowers, and thus enjoy a lower default rate than private banks. The availability of state deposits provides a substantial and low-cost source of funds. Both factors would lower the cost of loans.

The resulting surplus could then be employed to support projects that would have a major beneficial impact on the community. A state bank would be in a position to undertake investments to begin to address the historic legacy of racism that creates large gaps in income and wealth in some UC's. The social return to these and other meritorious projects exceeds their private market return.

A state bank, like the BND and the German state banks, could provide liquidity and other banking services to smaller banks. In addition, a state bank could reduce credit risk by pooling loans from different small banks. Small businesses underfunding is an ongoing concern.[23]

The creation of a state bank would expand the competitive landscape. Households and firms seeking loans would have more banks to choose from and, as the non-financial examples in Section III.A documented, the ability to access alternatives is very important is securing a low cost loan.

The Bank of North Dakota presents a very impressive model of how a state bank can work to the benefit of the citizens of its state.

C. The Case Against A State Bank

There is no obvious market failure on the part of private banks in allocating credit and extending loans. Whether a state bank has superior information that will allow it to enjoy a lower default rate remains unproven. Existing studies showing a lower default rate for mission-driven banks may not control for the less risky pool of borrowers that work with community banks.

There are surely many meritorious projects that deserve support. However, the advantage of pursuing these policy goals via a state bank, rather than direct legislation, has not been established.

While state deposits would create a low-cost source of funds, they come with a hidden cost, the value of the services that were being provided by private banks. These costs must be quantified and considered in an overall evaluation of a state bank.

The lending market, especially with the advent of electronic banking, is sufficiently developed that an additional bank will have minimal impact on the competitive environment.

The political history of some states raise serious concerns for any activities where politicians might influence lending decisions that may be based on non-economic criteria.

Moreover, a state bank would be tempted to direct funds to sectors or projects deemed to be critical for growth, effectively trying to pick winners and losers. Such industrial policies have had a mixed record of success.

“Mission Creep” is a force that affects many institutions in the public and not-for-profit sectors, and the histories of the Chicago ShoreBank and the German state banks give pause.

While the sustained profitability of the Bank Of North Dakota is impressive, the general applicability of this model is limited because the financial sector in many states is quite well developed and the population of North Dakota of 762,000 residents is quite small, only 7% larger than that for a typical congressional district. Among the six upper Midwest states, Illinois has the greatest number of congressional districts (18); Minnesota and Wisconsin the fewest (8).

D. A Useful Economic Development Tool With Future Promise?

The analysis contained in this paper suggests that the issues affecting the advisability of creating a state bank hinges on four questions examined in this concluding sub-section.

What Is The True Costs Of State Deposits?

Our analysis highlighted that a crucial factor favoring the creation of a state bank is the transfer of the state deposits from private banks. These deposits are a sizeable and stable source of funds, and are arguably the backbone of the success of the Bank of North Dakota.

The pool of funds available in, for example, Illinois is extensive, $7.4 billion as of December 31, 2020. These funds are placed in the Illinois Public Treasurers’ Investment

23 Small businesses are caught betwixt and between large and small banks. Large banks find small businesses unattractive because opportunities are limited to cross-sell products and information is costly to acquire. Small banks do not have the financial resources to fill the void. Why large banks do not seize these opportunities by, for example, creating a separate small business division is puzzling.

Pool, which is also known as The Illinois Funds and is described as follows (Illinois State Treasurer, 2020, p. 1):

> *…a local government investment pool operated by the Treasurer for state and local government agencies.*
>
> *This program provides a critical service for state and local agencies, enabling them to pool their money and invest in a safe, liquid investment vehicle that exceeds industry benchmarks.*
>
> *Created in 1975, The Illinois Funds was the first local government investment pool established in the nation.*
>
> *The Illinois Funds is comprised of over 1,500 participating entities, holding approximately 3,000 accounts with net assets of approximately $7 billion.*

These assets are invested in very liquid, short-term assets, and the Fund must conform to SEC Rule 2a-7, which stipulates that the average, dollar-weighted maturity of the portfolio be 60 days or less. As of the end of 2020, the average maturity of the Illinois Funds was 58 days. Thus, the return on these assets will be close to the return on money market funds.[24]

These deposits, however, are not necessarily "free money." If transferred to a state bank, they come with three costs:

The provision of financial transactions services for the state.

- The foregone value of non-transaction services received from private banks in which state funds had formerly been deposited, less any fees paid by the state. However, private discussions with five financial officers in public institutions, private banks, and private businesses did not uncover any substantial benefits flowing from bank deposits.
- The destabilizing effects of withdrawing state deposits from private banks, especially smaller institutions with limited access to alternative sources of finance.

Quantifying these three costs are important to confirm that state deposits are truly cheap money. When a full evaluation is completed, it is likely to show that there will a substantial net benefit to the state bank from state deposits. With lower costs in extending loans, a state bank will be able to pursue social lending on a sustainable basis.

How Vulnerable Are Taxpayers To State Bank Risk?

State banking is risky business. The histories examined in Section V document that failure is frequent and risk is omnipresent. The state faces three sources of risk:

- Liability risk. To attenuate liability risk, the state might commit its resources to guarantee the state bank's liabilities. In that case, this guarantee will lower funding costs. But this benefit must be balanced against the increased risk that the state and its taxpayers would now bear.
- Equity risk. Since the state bank is intended to be owned by the state, the initial equity capital must be provided by the state. To be comparable to the BND, an Illinois State Bank would need $6 billion of equity capital. This substantial sum is at risk, though the risk is capped by the value of the initial

24 As of December 31, 2020, the monthly effective yield was 0.094%. This figure may not provide an accurate assessment of the normal return on Illinois Funds assets given the historically low interest rates that prevailed in 2020. Nonetheless, the restriction imposed by Sec Rule 2a-7 ensures that the yield on Illinois Funds assets will be very low.

investment.

- Legal risk. This occurs if the state bank is legally connected to the state, especially if it operates under the "doing business as" structure.

The costs associated with these risks needs to be evaluated and quantified.

Why Will A State Bank Have Better Success Supporting Underserved Communities?

Perhaps the key motivation for a state bank is that it will be able to assist underserved communities (UC's), especially in providing loans and credit. Offering such assistance has been an ongoing policy goal for at least five decades. In 1964, President Johnson initiated actions in his War On Poverty and in the Economic Opportunity Act. The latter created work-training programs (including the Job Corps) and urban & rural community action programs. This same set of policy concerns has faced the Community Development Financial Institutions Fund (created in 1994), numerous enterprise zones, and many other federal, state, and local government policy initiatives. Unfortunately, geographically targeted or place-based programs "… often fail to benefit the places and people they are intended to aid" because they are poorly targeted and poorly tailored to community needs (Pew, 2021, p. 1).[25] Will a state bank be more successful in overcoming past obstacles, supporting underserved communities, and pursuing other meritorious policy goals?

How Can A State Bank Be Insulated From Political Interference?

There is a substantial concern about the politicization of credit and "mission drift." Political interference in public banks is widespread across the globe and leads to less growth and less development of the financial sector (La Porta, Lopez-de-Silanes, and Shleifer, 2002). In his chapter on "The challenge of keeping public banks on mission," Scherrer (2017, p. 244) is a bit pessimistic: "[p]lacing the mission drift in this larger framework precludes any easy panacea for keeping public banks to their public purpose." Jacob (2018, p. 11) begins his history of the BND (commissioned by the BND) by noting that "[t]he Bank of North Dakota is a financial institution, of course, but it is also a political institution." Nonetheless, I offer two possible approaches, one conventional, one radical.

The conventional approach is to follow the lead of the Bank of North Dakota. As the bank's president and chief executive, Eric Hardmeyer, states in an interview with *American Banker* (2011):

> *If you are going to have a state-owned bank, you have to staff it with bankers. If you staff it with economic developers you are going to have a very short-lived, very expensive experiment. Economic developers have never seen a deal they didn't like. We deal with that every day.*

It is still not clear how the politicians have been kept at bay in North Dakota.

The more radical approach appeals to naked economic interests.[26] A state bank is under consideration because there is the possibility that it will generate surplus funds that can be employed to address various social issues outside the scope of private markets. The radical idea is to have several state stakeholders with a financial interest in maximizing the size of this surplus. Consider the possibility of creating a consortium of six independently created state banks for the Upper Midwest states -- Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio -- that would undertake lending activity in the following manner:

25 See Bartik (2020) and Austin, Glaeser, and Summers (2018) for recent and comprehensive reviews of place-based policies and the possibilities for constructive policy actions.

26 A third approach would require projects to meet or exceed a rate of return target. Computing the rate of return depends on a number of arbitrary accounting assumptions. Hence, it can be easily manipulated and lead to unintended biases in decision-making.

1. Each state forms a state bank whose primary purpose is to allocate capital via lending.
2. The state banks are funded by state deposits and state-provided equity capital. Each state is assigned a share determined by its contribution of deposits and equity.
3. At the end of each fiscal year, the profits of all six state banks are aggregated and distributed according to shares. In a given state, these surplus funds will be further divided between an additional contribution of x% to equity (i.e., retained earnings or accumulated surplus) and y% to a special social account that is segregated from the deposits and equity provided by each state. (N.B., x% plus y% sum to one, they are the same for all six state banks in a given year, and can be changed in subsequent years.)
4. Based on its contributed deposits, equity, and accumulated surplus, each state bank proposes lending decisions but, importantly, the loans must be approved by at least four of the six state banks.
5. Each state bank can invest the special social account funds as they wish, perhaps in projects with a high social return but a low private return that would not meet the market test. The size of the special social account can be adjusted by altering y% in subsequent years.

This approval process provides financial incentives that states reject sub-standard, politicalized projects because they result in a lower aggregate surplus and hence lower shares to all states. Moreover, these questionable projects do not provide, to any important degree, political or other non-pecuniary benefits to those outside the state. The proposed approach may not deter corruption and mission creep fully. But some mechanism is needed if a state bank is to be sustainable and largely unaffected by political pressures, and hence a useful economic development tool with future promise.

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